1.1

*IBM Db2 Automation Expert for z/OS
User's Guide*

IBM

Note:

Before using this information and the product it supports, read the "Notices" topic at the end of this information.

Contents

About this information

IBM Db2 Automation Expert for z/OS (also referred to as Db2 Automation Expert) automates the running of utilities against a specified set of objects. Database administrators can use Db2 Automation Expert to oversee the most routine database administration tasks, without time-consuming manual interventions.

These topics provide instructions for installing, configuring, and using Db2 Automation Expert.

These topics are designed to help database administrators, system programmers, application programmers, and system operators perform these tasks:

- Plan for the installation of Db2 Automation Expert
- Install and operate Db2 Automation Expert
- Customize your Db2 Automation Expert environment
- Diagnose and recover from Db2 Automation Expert problems
- Design and write applications for Db2 Automation Expert
- Use Db2 Automation Expert with other Db2 products

Tip: To find the most current version of this information, always use IBMDocumentation, which is updated more frequently than PDF books.

Chapter 1. Db2 Automation Expert overview

IBM Db2 Automation Expert for z/OS (also referred to as Db2 Automation Expert) automates the running of utilities against a specified set of objects. Using Db2 Automation Expert, you can oversee most routine database administration and maintenance tasks, without time-consuming manual interventions, and focus on more complex job responsibilities that add value to your company.

Db2 Automation Expert can automatically run your utilities in your specified maintenance window, or it can generate batch JCL to be submitted manually or with a scheduler.

Using an online ISPF interface, you select the objects that you want and place them into an object profile. You then select utilities to run and place them into a utility profile. Once you create the object profile and the utility profile, you combine the two into a job profile.

You can optionally include exception profiles in the job profile, which allow you to select the conditions under which a utility should be run. For example, Db2 Automation Expert can generate a REORG utility, but only if a table space has too much embedded fragmented space. If you include an exception profile and associate a maintenance window with the job profile, Db2 Automation Expert can generate tasks, called actions, that are stored in a data repository and can be run when the assigned maintenance window opens.

When you build a job profile, Db2 Automation Expert generates actions that run utilities when the maintenance window opens. The maintenance window is defined and scheduled per your specifications, so maintenance can be run during off-peak times without intervention. Or, you can construct a batch job with the JCL to run the utilities; you can then run the job immediately or insert it into a job scheduler.

What's new in Db2 Automation Expert

This section describes recent technical changes to Db2 Automation Expert.

New and changed information is marked like this paragraph, with a vertical bar to the left of a change. Editorial changes that have no technical significance are not marked.

New and changed functions

This topic summarizes the recent enhancements and changes in Db2 Automation Expert.

2024-03-12

Description	Related APARs
The table in the topic "Db2 13 function level support" on page 2 was updated for Db2 FL 504 toleration and support.	None
Information was added to clarify how a symptom priority is calculated using a variance. The topic "Modifying priorities for Db2 Automation Expert symptoms " on page 315 was updated.	None
Maintenance window functionality requirements were corrected in the topic "Verify that your environment meets software requirements" on page 13.	None
Messages with prefixes DAJE, DAJS, DAJU, DAJV, DAJW, and DAJX were missing from the user guide and have been added to "Messages" on page 459.	None
New and updated messages for the Db2 Automation Expert API for IBM Z OMEGAMON® Data Provider were added to "Messages" on page 362.	None

Description	Related APARs
The steps to install the sample dashboard for streaming Db2 Automation Expert data were updated in the topic "Elastic sample dashboards " on page 361.	None
A step to update the Zowe started task was updated in "Installing and configuring the ad-hoc utility API for Db2 Automation Expert" on page 365.	None

Db2 13 function level support

When you activate new Db2 13 function levels in a Db2 subsystem or data sharing group, enhancements might become available that impact Db2 Automation Expert.

The levels of function level support are defined as follows:

Tolerated
The product works as it did on a previous release or function level of Db2 for z/OS, but it does not support the new features of this function level.

Supported
The product supports most, but not necessarily all, of the new function-level features that IBM deems the most significant for this product.

The following function levels are tolerated or supported by Db2 Automation Expert and are provided with the corresponding PTF, if any. For more information about a specific function level, click the link in the "Db2 function level" column.

Table 1. Db2 Automation Expert PTFs in support of Db2 13 function levels

Db2 13 function level	Toleration PTF	Support PTF
FL504	Base product 1.1.0 and UI94482 + UI94483 (PH57887 + PH58042)	Base product 1.1.0 and UI94482 + UI94483 (PH57887 + PH58042)
FL503	Base product 1.1.0 and UI94482 + UI94483 (PH57887 + PH58042)	Base product 1.1.0 and UI94482 + UI94483 (PH57887 + PH58042)
FL502	Base product 1.1.0 and UI94482 + UI94483 (PH57887 + PH58042)	Base product 1.1.0 and UI94482 + UI94483 (PH57887 + PH58042)
FL501	Base product 1.1.0 and UI94482 + UI94483 (PH57887 + PH58042)	Base product 1.1.0 and UI94482 + UI94483 (PH57887 + PH58042)
FL500	Base product 1.1.0 and UI94482 + UI94483 (PH57887 + PH58042)	Base product 1.1.0 and UI94482 + UI94483 (PH57887 + PH58042)
FL100	Base product 1.1.0 and UI94482 + UI94483 (PH57887 + PH58042)	Base product 1.1.0 and UI94482 + UI94483 (PH57887 + PH58042)

Db2 12 function level support

When you activate new Db2 12 function levels in a Db2 subsystem or data sharing group, enhancements might become available that impact Db2 Automation Expert.

The levels of function level support are defined as follows:

Tolerated

The product works as it did on a previous release or function level of Db2 for z/OS, but it does not support the new features of this function level.

Supported

The product supports most, but not necessarily all, of the new function-level features that IBM deems the most significant for this product.

The following function levels are tolerated or supported by Db2 Automation Expert and are provided with the corresponding PTF, if any. For more information about a specific function level, click the link in the "Db2 function level" column.

Table 2. Db2 Automation Expert PTFs in support of Db2 12 function levels		
Db2 12 function level	**Toleration PTF**	**Support PTF**
FL510	Base product 1.1.0 and UI94482 + UI94483 (PH57887 + PH58042)	Base product 1.1.0 and UI94482 + UI94483 (PH57887 + PH58042)
FL509	Base product 1.1.0 and UI94482 + UI94483 (PH57887 + PH58042)	Base product 1.1.0 and UI94482 + UI94483 (PH57887 + PH58042)
FL508	Base product 1.1.0 and UI94482 + UI94483 (PH57887 + PH58042)	Base product 1.1.0 and UI94482 + UI94483 (PH57887 + PH58042)
FL507	Base product 1.1.0 and UI94482 + UI94483 (PH57887 + PH58042)	Base product 1.1.0 and UI94482 + UI94483 (PH57887 + PH58042)
FL506	Base product 1.1.0 and UI94482 + UI94483 (PH57887 + PH58042)	Base product 1.1.0 and UI94482 + UI94483 (PH57887 + PH58042)
FL505	Base product 1.1.0 and UI94482 + UI94483 (PH57887 + PH58042)	Base product 1.1.0 and UI94482 + UI94483 (PH57887 + PH58042)
FL504	Base product 1.1.0 and UI94482 + UI94483 (PH57887 + PH58042)	Base product 1.1.0 and UI94482 + UI94483 (PH57887 + PH58042)
FL503	Base product 1.1.0 and UI94482 + UI94483 (PH57887 + PH58042)	Base product 1.1.0 and UI94482 + UI94483 (PH57887 + PH58042)
FL502	Base product 1.1.0 and UI94482 + UI94483 (PH57887 + PH58042)	Base product 1.1.0 and UI94482 + UI94483 (PH57887 + PH58042)
FL501	Base product 1.1.0 and UI94482 + UI94483 (PH57887 + PH58042)	Base product 1.1.0 and UI94482 + UI94483 (PH57887 + PH58042)
FL500	Base product 1.1.0 and UI94482 + UI94483 (PH57887 + PH58042)	Base product 1.1.0 and UI94482 + UI94483 (PH57887 + PH58042)

Db2 Automation Expert 1.1 - features and benefits

Db2 Automation Expert offers powerful and flexible features to help you to keep your Db2 maintenance tasks on schedule and your Db2 data optimized for performance and recoverability.

Automates routine maintenance tasks

Db2 Automation Expert can automate regular backup creation, object recovery, and other daily tasks needed to maintain data efficiency for applications.

Utility job control language (JCL) is generated based on your specified combinations of database objects, Db2 utilities, and exception conditions, which are added to profiles as follows:

- Object profiles contain customizable, reusable lists of Db2 objects. You can group related objects into one profile, such as all objects for a particular application.
- Utility profiles allow you to select one or more utilities to run on the objects in an object profile and to set options for those utilities.
- Exception profiles allow you to define when a utility in a utility profile is to be run against an object in an object profile.

You combine these profiles into job profiles that can evaluate whether objects need maintenance and control when, how, or if a utility is run. This frees you to focus on higher-value tasks.

Maintenance windows run utilities on your custom schedule

In addition, ongoing database monitoring and maintenance tasks can be automated by leveraging maintenance windows. Maintenance windows are periods of time that define when you want utilities to run. You create the time periods and the priority of the objects that will have utilities run on them in the maintenance window. When you build the job profile, instead of generating JCL, Db2 Automation Expert generates tasks, called actions, that are stored in a data repository. When the scheduled maintenance window opens, the actions that are in the repository are run based on priority. You can control which actions are run first when a maintenance window opens by using the action and symptom registry editors, along with object prioritization.

Db2 Automation Expert can add batch builds and utility execution jobs to the Db2 administrative task scheduler. You can use the Db2 Automation Expert interface to the Db2 administrative task scheduler to create new tasks, update and view existing tasks, delete tasks, and view the status and output of executed tasks.

Exception profiles AND/OR processing is powerful and customizable

Db2 Automation Expert exception processing generates maintenance JCL for only objects that need it. Maintenance procedures might consume less resources when you use Db2 Automation Expert to automate routine utilities, as you can specify to run jobs only for objects that meet defined criteria. For example, Db2 Automation Expert can generate a REORG utility only if a table space has too much embedded fragmented space. If it does not, that object can be skipped, thereby saving resources.

You can edit the exceptions logic to customize how exception processing evaluates multiple exception conditions. For example, you can add parentheses around exception conditions to group those exceptions into a logical set of conditions that are evaluated as an overall AND or OR. This gives you finer control over how exceptions are evaluated by exception processing to determine if and when an automated process should execute.

Best practice profiles help you get up and running

Sample best practice profiles are provided that follow Db2 best practices as defined by IBM Db2 for z/OS experts. The profiles provide a range of automation examples for different object types and schedules and can be used as a starting point or a template for creating your own profiles.

API streams data to dashboards using IBM Z OMEGAMON Data Provider

Db2 Automation Expert offers an API to IBM Z OMEGAMON Data Provider and streams data from real-time statistics tables to show the trends in your Db2 object's status over time. You can visualize trends in your Db2 objects' health, and get insight into when an object should be serviced. Sample dashboards for leading solutions are provided.

Ad-hoc utility API with Ansible playbook samples

Db2 Automation Expert can run ad-hoc utilities with a new API, using the Ansible platform or similar automation tool set. You provide the object lists and specify one of the supported utilities, and Db2 Automation Expert utilizes a best practice utility profiles to run the utility. Sample Ansible playbooks are provided to integrate into your workflows; see https://github.com/IBM/z_ansible_collections_samples/tree/main/zos_subsystems/db2

Smarter reorganization recommendations

Db2 table space reorganizations are frequently used to improve application performance, and real-time statistics can be useful in indicating whether a reorganization is needed. However, there are times when real-time statistics might indicate that a REORG is needed, but the application is accessing data in a way that is not impacted by disorganized data. Db2 Automation Expert can work with Db2 Query Monitor to leverage the SQL performance data that Db2 Query Monitor collects on your application objects. Using these products together helps your organization avoid unnecessary reorganizations, thereby reducing CPU cycles, memory use, disk space usage, and the impact on your applications.

Service updates and support information

Service updates and support information for this product, including software fix packs, PTFs, frequently asked questions (FAQs), technical notes, troubleshooting information, and downloads, are available from the web.

To find service updates and support information, see the following website:

https://www.ibm.com/products/db2/support

Product documentation and updates

Db2 Tools information is available at multiple places on the web. You can receive updates to Db2 Tools information automatically by registering with the IBM My Notifications service.

Information on the web

The most current version of this information is available on IBM Documentation.

IBM Redbooks® publications that cover Db2 Tools are available from the following web page:

http://www.redbooks.ibm.com

The IBM Db2 website shows how IT organizations can maximize their investment in Db2 databases while staying ahead of today's top data management challenges:

https://www.ibm.com/products/db2

Receiving documentation updates automatically

To automatically receive emails that notify you when new technote documents are released, when existing product documentation is updated, and when new product documentation is available, you can register with the IBM My Notifications service. You can customize the service so that you receive information about only those IBM products that you specify.

To register with the My Notifications service:

1. Go to http://www.ibm.com/support/mysupport
2. Enter your IBM ID and password, or create one by clicking **register now**.
3. When the My Notifications page is displayed, click **Subscribe** to select those products that you want to receive information updates about. The Db2 Tools option is located under **Software** > **Information Management**.
4. Click **Continue** to specify the types of updates that you want to receive.
5. Click **Submit** to save your profile.

How to send your comments

Your feedback helps IBM to provide quality information. Send any comments that you have about this book or other Db2 Tools documentation to comments@us.ibm.com. Include the name and version number of the product and the title and number of the book. If you are commenting on specific text, provide the location of the text (for example, a chapter, topic, or section title).

Accessibility features

Accessibility features help a user who has a physical disability, such as restricted mobility or limited vision, to use a software product successfully.

The major accessibility features in this product enable users to perform the following activities:

- Use assistive technologies such as screen readers and screen magnifier software. Consult the assistive technology documentation for specific information when using it to access z/OS interfaces.
- Customize display attributes such as color, contrast, and font size.
- Operate specific or equivalent features by using only the keyboard. Refer to the following publications for information about accessing ISPF interfaces:
  - *z/OS ISPF User's Guide, Volume 1*
  - *z/OS TSO/E Primer*
  - *z/OS TSO/E User's Guide*

These guides describe how to use the ISPF interface, including the use of keyboard shortcuts or function keys (PF keys), include the default settings for the PF keys, and explain how to modify their functions.

Chapter 2. Preparing to customize Db2 Automation Expert

Before you start to customize Db2 Automation Expert for the first time, determine all of the customization values that you need to specify during the customization process, and familiarize yourself with all of the customization tasks and migration recommendations.

Migrating from IBM Db2 Automation Tool for z/OS 4.3

If you are a Db2 Automation Tool V4.3 user, you can use a Tools Customizer-generated migration job to copy the Db2 Automation Tool data repository to Db2 Automation Expert 1.1. This makes available your Db2 Automation Tool profiles, performance windows for smarter reorganization recommendations, notification profiles, maintenance window components, and utility history for use with Db2 Automation Expert.

Before you begin

The following maintenance requirements must be met before migrating your Db2 Automation Tool 4.3 data to Db2 Automation Expert 1.1:

- All Db2 Automation Tool 4.3 (FMID H25H430) maintenance must be applied through PH56096 (UI93460).
- All FEC common code (PID: 5655T56) maintenance must be applied through PH55879 (UI93266).
- If you installed and used Db2 Autonomics Director V1.6 (FMID HAKP160) with Db2 Automation Tool 4.3, all maintenance must applied through PH48738 (UI83063).
- Requirements for Db2 Automation Expert are listed in "Verify that the software has been successfully installed" on page 15.

About this task

Note: Data migrated from Db2 Automation Tool 4.3 and subsequently updated in Db2 Automation Expert is not backward compatible with Db2 Automation Tool 4.3. However, the Db2 Automation Tool 4.3 repository is not changed during migration and can still be used with Db2 Automation Tool 4.3.

Procedure

1. Ensure all products and components have been brought up to the required maintenance level.
2. Install Db2 Automation Expert.

   For instructions, refer to the *Program Directory for IBM Db2 Automation Expert for z/OS* (publication GI13-5576-00).
3. Run Tools Customizer to configure Db2 Automation Expert.
4. Optional: Use the Discover exec to discover values from your installation of Db2 Automation Tool 4.3.

   For more information, see "Discovering Db2 Automation Expert information automatically" on page 77.
5. On the **Product Parameters** panel (CCQPPRD), select the step **Migrate Automation Tool tables to Automation Expert** and enter the qualifier for the Db2 Automation Tool 4.3 repository.

   For more information, see "Task: Create or update Db2 objects" on page 31.
6. Complete the remainder of customization tasks for Db2 Automation Expert.

   For more information, see Chapter 4, "Customizing Db2 Automation Expert," on page 73.
7. Generate the jobs.

   The job that migrates the Db2 Automation Tool 4.3 repository is based on template DAJTOPI.

8. Submit the Tools Customizer-generated jobs.

Checklist for Db2 Automation Expert customization tasks

The following checklist lists and describes each significant customization step. Use this checklist to guide you through the entire customization process.

Tip: Print the following checklist and the data set names and parameter values worksheets. Use the worksheets to record your values, and refer to them during the customization process.

Task	Link to detailed instructions	Status
Tools Customizer basics		
Before you begin the customization process, familiarize yourself with Tools Customizer terminology, data sets, and other basic information about Tools Customizer.	"Tools Customizer terminology" on page 729 and "Data sets that Tools Customizer uses during customization" on page 731	
Software requirements		
Verify that your environment meets the minimum software requirements. To install and use Db2 Automation Expert, your environment must be running a supported version of the z/OS operating system and of Db2 for z/OS. Additionally, ensure all maintenance has been applied when performing an upgrade.	"Verify that your environment meets software requirements" on page 13	
SMP/E installation		
Verify that Tools Customizer for z/OS has been installed correctly. Tools Customizer for z/OS is installed by using standard SMP/E processing.	"Verify that the software has been successfully installed" on page 15	
Verify that Db2 Automation Expert has been installed correctly. Db2 Automation Expert is installed by using standard SMP/E processing.	"Verify that the software has been successfully installed" on page 15	
Security requirements		
Confirm that you have the required authorizations to use Db2 Automation Expert.	"Verify security requirements" on page 15	
Authorize the FEC$TSOC program		
You must add the program FEC$TSOC to the AUTHPGM and AUTHTSF sections of member IKJTSO00 in SYS1.PARMLIB.	"Authorize the FEC$TSOC program" on page 19	
Set the MEMLIMIT parameter		
Db2 Automation Expert requires sufficient storage above the bar.	"Set the MEMLIMIT parameter" on page 19	
Add the IEFACTRT exit to the SMFPRMxx member of SYS1.PARMLIB		
The IEFACTRT exit is required for successful operation of the execution reports facility.	"Add the IEFACTRT exit to the SMFPRMxx member of SYS1.PARMLIB" on page 20	
Create an active WLM environment for integration with maintenance windows		

Task	Link to detailed instructions	Status
To use the maintenance windows feature of Db2 Automation Expert, the stored procedures that are created during customization must be associated with an active Workload Manager (WLM) environment.	"Create an active WLM environment" on page 20	
Apply all maintenance before migrating from Db2 Automation Tool V4.3		
If you plan to migrate from Db2 Automation Tool V4.3 to Db2 Automation Expert 1.1, all current maintenance must be applied to Db2 Automation Tool V4.3 before beginning the customization process.	"Migrating from IBM Db2 Automation Tool for z/OS 4.3" on page 7	
Gather data set names		
During the customization process, you must specify data set names for Tools Customizer, Db2 Automation Expert, and several other items.	"Worksheets: Gathering required DD names" on page 10	
APF authorization		
APF authorize the following data sets: • SDAJLOAD • SFECLOAD	"APF authorizing load libraries" on page 21	
Gather parameter values		
During the customization process, you must specify parameter values for Db2 Automation Expert, for Db2, and for your LPAR.	"Worksheets: Gathering parameter values for Db2 Automation Expert" on page 21	
Customize Db2 Automation Expert		
Start Tools Customizer by running a REXX EXEC from the ISPF Command Shell panel.	"Starting Tools Customizer" on page 67	
Set up Tools Customizer user settings. If you are running Tools Customizer for the first time, you must modify several user settings to suit your environment. Otherwise, if the user settings that you have already established are still appropriate, skip this step.	"Modifying Tools Customizer user settings" on page 68	
Complete the steps in the appropriate customization roadmap based on the type of customization that you are performing.		
Customizing Db2 Automation Expert for the first time Follow this roadmap if you do not have a customized version of Db2 Automation Expert, and you need to customize it for the first time.	"Roadmap: Customizing Db2 Automation Expert for the first time" on page 73	

Task	Link to detailed instructions	Status
Customizing a different version of Db2 Automation Expert Follow this roadmap if you previously customized a version of Db2 Automation Expert and you want to use the same parameter values to customize a different version.	"Roadmap: Customizing a new version of Db2 Automation Expert from a previous customization" on page 74	
Recustomizing Db2 Automation Expert Follow this roadmap if you already customized Db2 Automation Expert but want to change one or more parameter values.	"Roadmap: Recustomizing Db2 Automation Expert" on page 75	
Creating multiple configurations of Db2 Automation Expert		
You can create multiple configurations of Db2 Automation Expert on the same subsystem. For example, you can have a test and a production version of Db2 Automation Expert on the same subsystem. Follow the instructions in the topic to create multiple configurations.	Chapter 5, "Creating multiple configurations of Db2 Automation Expert," on page 95	
Additional customization instructions		
If you customized Db2 Automation Tool 4.3 skeletons , apply the same customizations to the new Db2 Automation Expert skeletons that were created during configuration.	n/a	

Worksheets: Gathering required DD names

Identify and record the DD names that will be used during the customization process and make sure that requirements for certain DDs are met.

DD names for Tools Customizer

Identify and record the following Tools Customizer DD names:

DD name	Description	Special requirements	Your DD name
SCCQDENU	Metadata library for Tools Customizer		
SCCQLOAD	Executable load module library for Tools Customizer		
SCCQMENU	ISPF messages for Tools Customizer		
SCCQPENU	ISPF panels for Tools Customizer		
SCCQSAMP	Sample members for Tools Customizer		
SCCQTENU	Table library for Tools Customizer	You must have write access to this data set.	

DD names of Db2 Automation Expert

Identify and record the following Db2 Automation Expert DD names. During the customization process, you will enter the following values on panel CCQPPRD.

DD name	Description	Special requirements	Your DD name
SDAJDBRM	DBRM library for Db2 Automation Expert		
SDAJLOAD	Executable load module library for Db2 Automation Expert	You must APF authorize this data set.	
SDAJMENU	ISPF messages for Db2 Automation Expert		
SDAJPENU	ISPF panels for Db2 Automation Expert		
SDAJSAMP	Sample members for Db2 Automation Expert		
SDAJDENU	Metadata library for Db2 Automation Expert		
SDAJSLIB	ISPF skeleton library for Db2 Automation Expert		

DD names of FEC (common code)

If the FEC (common code) data sets were installed into their own target libraries and not into the Db2 Automation Expert libraries, identify and record the following FEC DD names. During the customization process, you will enter the following values on panel CCQPPRD.

DD name	Description	Special requirements	Your DD name
SFECDBRM	DBRM library for FEC common code.		
SFECLOAD	Executable load module library for FEC common code.	You must APF authorize this data set.	
SFECMENU	ISPF messages for FEC common code.		
SFECPENU	ISPF panels for FEC common code.		
SFECSAMP	Sample members for FEC common code.		

DD names of other libraries

Identify and record the following DD names. During the customization process, you will enter the following values on the Setup panel.

DD name	Description	Special requirements	Your DD name
Discover output data set	Contains the output that is generated when you run the Db2 Automation Expert Discover EXEC. The Db2 Automation Expert Discover EXEC retrieves the metadata and values for the parameters from a previous customization of Db2 Automation Expert. The default name of the data set is DB2TOOL.CCQ110.DISCOVER. You can change the default value on the Tools Customizer Settings panel or the Discover Customized Product Information panel.	You must have write access to this data set.	
Data store data set	Contains product, LPAR, and Db2 parameter values, and Db2 entry associations. Tools Customizer uses this data set to permanently store all information that is acquired about the product, Db2 subsystems, and LPAR when you customize products on the local LPAR. The default name of the data set is DB2TOOL.CCQ110.DATASTOR. You can change the default value on the Tools Customizer Settings panel.	You must have write access to this data set.	

DD name	Description	Special requirements	Your DD name
Product customization Library	Contains the customization jobs that Tools Customizer generates for Db2 Automation Expert. To customize Db2 Automation Expert, submit the members of the data set in the order in which they are displayed on the Finish Product Customization panel. The data set naming convention is: `hlq.$LPAR-name$.xyzvrm` where: • *hlq* is the value of the Customization library qualifier field on the Tools Customizer Settings panel (CCQPSET) • *LPAR-name* is the four-character LPAR name • *xyzvrm* is the three-letter product identifier with the version, release, and modification level For example, the data set name might be DB2TOOL.PRODUCT.CUST. $MVS1$.XYZ420.	You must have write access to this data set.	

Set up your environment prior to customization

Prior to beginning the customization process, ensure that your environment meets all requirements, that you have installed all prerequisite software, and that you have considered how you want to customize optional features.

Verify that your environment meets software requirements

Prior to beginning the customization process, ensure that your environment is running the required versions of Db2 and meets implementation requirements for functions that you plan to use.

Db2 version support

Db2 Automation Expert supports the following versions of Db2 for z/OS, until end of support for the given Db2 version. See the topics "Db2 12 function level support" on page 2 and "Db2 13 function level support" on page 2 for information about specific Db2 function level toleration and support in Db2 Automation Expert.

- Db2 12
- Db2 13 with APAR PH51878 (UI90506) applied

Maintenance window functionality requirements

If you plan to use the maintenance window functionality in Db2 Automation Expert:

- If you plan to use the **Create and Auto-schedule** option for maintenance windows when setting job generation options, the Db2 administrative task scheduler is required. See "Administrative task scheduler requirements" on page 14 for additional requirements.
- The TSO user ID that schedules the maintenance window is the user ID that runs all utilities in the maintenance window. Therefore, the user ID that schedules the maintenance window must have the authority to run those utilities on the Db2 objects.
- The TSO user ID that schedules the maintenance window is the user ID that is used to the schedule the window via the Db2 administrative task scheduler. Therefore, the user ID that schedules the maintenance window also must have the authority to add scheduled tasks to the Db2 administrative task scheduler.

Administrative task scheduler requirements

If you plan to use the Db2 Automation Expert interface to the Db2 administrative task scheduler:

- The Db2 subsystems must be configured to enable Db2 administrative task scheduler capabilities.
- The ADMTPROC ZPARM keyword indicates the name of the JCL procedure to start the administrative task scheduler.
- RACF® must be configured to allow PassTickets for the Db2 administrative task scheduler task that includes READ authority to the profile in their APPL class.

Requirements for smarter reorganization recommendations

If you plan to use Db2 Automation Expert with Db2 Query Monitor to leverage the smarter reorganization recommendations feature, you must have Db2 Query Monitor V3.3.0 with APAR PI92519 or later installed and configured on the subsystem. In addition, complete the steps that are required for AT-TLS security in "Customizing AT-TLS security for smarter reorganization recommendations" on page 16.

Requirements for streaming data to analytics platforms using IBM Z OMEGAMON Data Provider

If you plan to stream real-time statistics data to external data visualization analytics platforms such as Elastic via the Db2 Automation Expert API with IBM Z OMEGAMON Data Provider, you must have installed either:

- OMEGAMON Data Provider 5.6 or later (FMID HKOA110) with APAR OA64880 applied
- If you do not already have OMEGAMON Data Provider installed as part of an OMEGAMON suite, the OMEGAMON Data Provider installation samples FMID JZOA11A is required.

Requirements for the Db2 Automation Expert ad-hoc utility API

If you plan to use the Db2 Automation Expert API callable service that can run ad-hoc Db2 utilities on table spaces and indexes, IBM Unified Management Server for z/OS 1.2.0 must be installed with APAR PH56865 applied. For more information, refer to software requirements for UMS in the UMS documentation.

Requirements for statistics monitor profiles

If you plan to use the Db2 Automation Expert statistics monitor profiles, the following Db2 stored procedures must also be configured, and users' authorization IDs must have execute authority on them:

- ADMIN_UTL_EXECUTE
- ADMIN_UTL_MONITOR

Note: If Db2 maintenance is applied to the Db2 ADMIN_UTL_MONITOR stored procedure, you might encounter SQL error -478, because the Db2 Automation Expert stored procedure for statistics maintenance (DAJ.ADMIN_UTL_MONITOR) depends on it. In that case, drop the Db2 Automation Expert DAJ.ADMIN_UTL_MONITOR stored procedure and recreate it after applying the maintenance. The procedure can be dropped by issuing SQL as follows: **DROP PROCEDURE DAJ.ADMIN_UTL_MONITOR**. Recreate the Db2 Automation Expert stored procedure by selecting and generating the jobs for the Tools Customizer step **Create or update Db2 objects**. Then run the generated job that is based on template DAJDDLJ. Refer to "Task: Create or update Db2 objects" on page 31 in the customization topics for instructions.

Requirements for image copies on IBM ESS devices

If you plan to use Db2 Automation Expert to build utility JCL for image copies of objects on IBM ESS devices, you must have IBM Enterprise Storage Server® devices with Advanced Copy Services, and the DFSSMS system data mover (SDM) API (macro ANTRQST) must be at level 5 or later.

Requirements for image copies from Db2 Recovery Expert system-level backups

If you plan to use Db2 Automation Expert to make image copies from Db2 Recovery Expert system level backups (SLBs), you must have Db2 Recovery Expert V2.2 with APAR PM06332 or later installed on the subsystem.

Verify that the software has been successfully installed

Before customizing, ensure that Tools Customizer and Db2 Automation Expert have been installed.

Verify that Tools Customizer has been installed successfully

IBM Tools Customizer for z/OS (5655-TC1) provides a standard approach to customizing IBM Db2 for z/OS tools. See the *Program Directory for IBM Tools Customizer* for z/OS, GI13-4653-00 for installation instructions.

Note: Applying APAR PH57636 is recommended.

Verify that Db2 Automation Expert has been installed successfully

See the *Program Directory for IBM Db2 Automation Expert for z/OS*, publication number GI13-5576-00, for installation instructions.

Verify security requirements

Db2 Automation Expert requires no extra security measures outside of standard Db2 security.

If your site uses ACF2 to restrict TSO command use, you may need to add the TSO commands that Db2 Automation Expert uses to the ACF2 Command Limiting table. The TSO commands that Db2 Automation Expert uses are: DAJ$MAIN, DAJ@BULD, and FECDBCX.

About multi-factor authentication support

The primary user interface to Db2 Automation Expert is through its ISPF application, which has multi-factor authentication (MFA) support through TSO logon processing. All authentication is done before Db2 Automation Expert is invoked and no additional MFA processing is necessary.

The Db2 services that are used by Db2 Automation Expert are invoked using the standard attachment facilities. For the stored procedures that can be accessed by REST services, the authentication is done by Db2.

For additional information, refer to the following related topics:

- TSO/E
- IBM Z Multi-Factor Authentication

Customizing AT-TLS security for smarter reorganization recommendations

If you plan to use Db2 Automation Expert with Db2 Query Monitor to leverage the smarter reorganization recommendations feature, you must configure and run AT-TLS. Db2 Automation Expert uses Application Transparent Transport Layer Security (AT-TLS) to secure transmissions between Db2 Automation Expert and the Db2 Query Monitor CAE server. Configuring and running AT-TLS enables SSL encryption to be performed on the TCP traffic going between Db2 Automation Expert and the Db2 Query Monitor CAE server.

Preparing to use AT-TLS

Note: Other SSL/TLS automatic configuration solutions exist. If you are not using RACF, consult the documentation for your security management software.

The steps for setting up AT-TLS for use with Db2 Automation Expert and the Db2 Query Monitor CAE server are listed below, along with a reference to each step's corresponding procedure.

1. Configure AT-TLS to ensure that a valid certificate is installed for the Db2 Query Monitor CAE server. See "Step 1: Configure AT-TLS" on page 16.
2. Verify that policy-based networking (PAGENT) is enabled. See "Step 2: Enable PAGENT" on page 17.
3. Establish rules for determining which traffic will be encrypted. See "Step 3: Define encryption rules" on page 17.
4. Ensure that Db2 Automation Expert users and the user ID under which PAGENT runs have access to the keyring. See "Step 4: Ensure that Db2 Automation Expert users and the user ID under which PAGENT runs have access to the keyring" on page 18.
5. Refresh the PAGENT started task to ensure that all changes are included. See "Step 5: Refresh the PAGENT started task" on page 18.

Step 1: Configure AT-TLS

A valid certificate must be installed and configured for Db2 Automation Expert to use with the Db2 Query Monitor CAE server.

1. Retrieve the Db2 Query Monitor certificate from one of the following:
   - If the Db2 Query Monitor CAE server will use the default Db2 Query Monitor certificate that is delivered with Db2 Automation Expert, use the certificate that is located in *highlevel*.SDAJSAMP(DAJPCERT).
   - If the Db2 Query Monitor CAE server is already using a certificate signed by a Secure Socket Layer (SSL) certificate provider (Geotrust, Digicert, and so on), acting as a Root Certificate Authority, use a web browser to retrieve a valid certificate using either of these methods:
     - Retrieve the root certificate from the certificate authority's certificate download page.
     - In the browser's location field, type the URL for the Db2 Query Monitor CAE server and then use the browser's certificate export feature to export the certificate to an uploadable file. You must export the Root CA.
2. Upload the certificate to its own variable block flat file on the mainframe.
3. Issue a command to define the certificate to your security management software. To add a certificate to RACF, issue the following command:

```
RACDCERT ADD('CERT.DATASET.NAME') CERTAUTH TRUST WITHLABEL('LABELNAME')
```

Where:

CERT.DATASET.NAME
> The name of the data set into which you uploaded the certificate.

LABELNAME
> The label that you want to use to help identify the certificate in RACF.

4. Identify the keyring that will house the certificate in a single addressable entity.

   - If you choose to use an existing keyring, skip this step and go to step "5" on page 17.
   - If you choose to create a new keyring for this purpose, issue the appropriate command for your security management software. This is the appropriate command for RACF:

   ```
   RACDCERT ID(SAFID) ADDRING (RINGNAME)
   ```

   Where:

   SAFID
   > The name of the System Authorization Facility (SAF) ID that was used to add the certificate.

   RINGNAME
   > the name of the keyring that you want to define to RACF. This name can be any name you choose.

5. Connect the certificate to the keyring by issuing the appropriate command for your security management software. For RACF, use the following command:

   ```
   RACDCERT ID(SAFID) CONNECT(CERTAUTH LABEL('LABELNAME') RING(RINGNAME)
   USAGE(CERTAUTH))
   ```

   Where:

   SAFID
   > The name of the System Authorization Facility (SAF) ID that was used to add the certificate.

   LABELNAME
   > The label that was used to add the certificate in RACF.

   RINGNAME
   > Either the name of the existing keyring, or the name of the new keyring that you created and added to RACF in Step "4" on page 17.

6. Issue the appropriate refresh command for your security management software. For RACF, use the following command:

   ```
   SETROPTS RACLIST(DIGTRING) REFRESH
   ```

Step 2: Enable PAGENT

AT-TLS requires policy-based networking (Policy Agent, or PAGENT) to be enabled. If you do not already have this enabled, see the "Policy-based networking" topic for your version of z/OS on IBM Knowledge Center.

Step 3: Define encryption rules

AT-TLS uses rules to determine which traffic to encrypt. Encryption of Db2 Query Monitor CAE server traffic requires a valid encryption rule.

If you do not already have an AT-TLS rules data set in place, refer to the "AT-TLS policy configuration" topic for your version of z/OS on IBM Knowledge Center.

Define a valid encryption rule for Db2 Query Monitor CAE server using the information in "Example of AT-TLS parameter setup" on page 18 as an example and a guideline.

As you define your encryption rule, keep the following general recommendations in mind:

- Because AT-TLS is invoked only if all conditions of a rule are met, it is recommended that you define the encryption rule to be as minimally restrictive as necessary.

- It is recommended that you use USERID as the primary method for determine which traffic AT-TLS encrypts. The USERID in your AT-TLS rule should be the SAF user ID of the Db2 Query Monitor CAE server.

Step 4: Ensure that Db2 Automation Expert users and the user ID under which PAGENT runs have access to the keyring

Db2 Automation Expert users who will use the smarter reorganization recommendations feature must be able to access the keyring. In addition, the RACF user ID under which the PAGENT task runs must be able to access the keyring.

Step 5: Refresh the PAGENT started task

After the AT-TLS encryption rules are in place, you must refresh the PAGENT started task to pick up any changes. Issue the following modify command:

```
F PAGENT,REFRESH
```

Where *PAGENT* is the name of the PAGENT started task.

Example of AT-TLS parameter setup

This topic provides an example of the parameter setup for a TTLS rule that enables an SSL/TLS encryption policy.

The example below shows rules that might be used to set values for AT-TLS parameters for this implementation.

```
TTLSRule                          CQM_CAE00
{
  RemoteAddr                      192.0.2.0 <== Note: Must be an IP address
  RemotePortRange                 50443
  Direction                       Outbound
  Priority                        4
  TTLSGroupActionRef              gAct1~CQMCAE
  TTLSEnvironmentActionRef        eAct1~CQMCAE
  TTLSConnectionActionRef         cAct1~CQMCAE
}
TTLSRule                          CQM_CAE01
{
  RemoteAddr                      192.0.2.1 <== Note: Must be an IP address
  RemotePortRange                 50443
  Direction                       Outbound
  Priority                        4
  TTLSGroupActionRef              gAct1~CQMCAE
  TTLSEnvironmentActionRef        eAct1~CQMCAE
  TTLSConnectionActionRef         cAct1~CQMCAE
}
TTLSGroupAction                   gAct1~CQMCAE
{
  TTLSEnabled                     On
  Trace                           4
}
TTLSEnvironmentAction             eAct1~CQMCAE
{
  HandshakeRole                   Client
  EnvironmentUserInstance         0
  TTLSEnvironmentAdvancedParmsRef eAdv1~CQMCAE
  TTLSKeyringParmsRef             CQMCAE_keyring
  Trace                           4
}
TTLSConnectionAction              cAct1~CQMCAE
{
  HandshakeRole                   Client
  TTLSCipherParmsRef              cipher-CQMCAE
  TTLSConnectionAdvancedParmsRef  cAdv1~CQMCAE
  CtraceClearText                 On
  Trace                           4
}
TTLSConnectionAdvancedParms       cAdv1~CQMCAE
{
```

```
  ResetCipherTimer                    0
  SecondaryMap                        Off
}
TTLSKeyringParms                      CQMCAE_keyring
{
  Keyring                             CQMSTC/CQMRNG23
}
TTLSEnvironmentAdvancedParms          eAdv1~CQMCAE
{
  ClientAuthType                      PassThru
  ApplicationControlled               Off
  SSLv2                               Off
  SSLv3                               Off
  TLSv1                               Off
  TLSv1.1                             On
  TLSv1.2                             On
}
TTLSCipherParms                       cipher-CQMCAE
{
  V3CipherSuites                      TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256
  V3CipherSuites                      TLS_ECDHE_ECDSA_WITH_AES_256_GCM_SHA384
  V3CipherSuites                      TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256
  V3CipherSuites                      TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384
}
```

Authorize the FEC$TSOC program

Add the program FEC$TSOC to the AUTHPGM and AUTHTSF sections of member IKJTSO00 in SYS1.PARMLIB.

Set the MEMLIMIT parameter

Verify that the MEMLIMIT setting for your site is at least 2G for Db2 Automation Expert

Db2 Automation Expert utilizes above the bar storage (storage above the 2-gigabyte bar). To control the amount of real and auxiliary storage that an address space can use for memory objects at one time, your site may have established an installation default MEMLIMIT that sets the total number of usable virtual pages above the bar for a single address space. If the default is not sufficient, Db2 Automation Expert cannot be started.

You should verify that the MEMLIMIT setting for your site is at least 2G for Db2 Automation Expert. This amount is recommended for scalability of a wide range of objects. Db2 Automation Expert only uses as much storage above the bar as it needs, and only as long as it is needed; the storage is released immediately after a job or process is complete.

To set the MEMLIMIT parameter, use one of the following methods:

• Set an installation default on the MEMLIMIT parameter in the SMFPRMxx PARMLIB member.

• Issue the SET SMF or SETSMF command.

• Add either the MEMLIMIT parameter or REGION=0 to the logon procedure TSO JCL or the job JCL.

• Specify MEMLIMIT in a IEFUSI exit routine; if you do so, this MEMLIMIT setting overrides all other MEMLIMIT settings.

The following example shows the MEMLIMIT parameter added to a TSO logon procedure:

```
//TSOPROC EXEC PGM=IKJEFT01,REGION=0M,DYNAMNBR=175,
// PARM='%LOGINIT',TIME=1440,MEMLIMIT=2G
```

See the IBM z/OS documentation for your version of z/OS for additional information about MEMLIMIT.

Add the IEFACTRT exit to the SMFPRMxx member of SYS1.PARMLIB

The IEFACTRT exit is required for successful operation of the execution reports facility. If the exit is not currently defined, add the IEFACTRT exit at either the SYS or SUBSYS level to the appropriate JES subsystem in the SMFPRMxx member of your site's SYS1.PARMLIB.

The DAJPROC member checks for IEFACTRT at the SUBSYS.JES level or SYS level upon startup. If the IEFACTRT entry is not found, Db2 Automation Expert job tracking will not work. If the IEFACTRT entry is found, the CSVDYNEX service will dynamically define the exit for Db2 Automation Expert job tracking.

In addition, ensure that type 30 SMF records are included in the SMF record types specified in SMFPRMxx.

Create an active WLM environment

When creating a Db2 Automation Expert stored procedure for use with maintenance windows, the stored procedure must be associated with an active Workload Manager (WLM) environment.

You can do this by using one of the following methods:

- When customizing Db2 Automation Expert using Tools Customizer, select the option to create a WLM address space for that stored procedure to use. Then run the generated JCL.
- Use an existing WLM PROC that is already active for your Db2 subsystem. If you choose to adapt an existing WLM PROC to run the Db2 Automation Expert stored procedures, the PROC must include the Db2 Automation Expert load library and the FEC load library. Additionally, the PROC must have a DD named DB2PARMS that points to the Db2 Automation Expert control file.

Each Db2 environment (SSID or data sharing group) must have separate PROCs and separate WLM environments.

The WLM PROC must be activated using the WLM panels. This is generally done by a systems programmer. When activating the WLM environment for use with Db2 Automation Expert, the following settings are required:

Application Environment Name
Enter the WLM ENVIRONMENT parameter in the DDL that defines the stored procedure(s).

Description
(Optional) Enter a description.

Subsystem Type
Must be set to DB2.

Procedure Name
Enter the name of the JCL PROC that defines the address space in which the stored procedure runs.

Start parameters
Required parameters are:

```
DB2SSN=ssid
APPLENV=applenv_name
```

Optional parameter:

```
NUMTCB=number
```

applenv_name must be the same value that was entered in the **Application Environment Name** field.

NUMTCB can be left unspecified and specified in the JCL PROC. The sample PROC provided handles the NUMTCB parameter in the PROC. If specified on the WLM panel, the panel specification takes precedence over the JCL PROC parameter.

Take into account the following considerations:

- Use the same name for the application environment name and the JCL PROC.

- Adopt a naming convention for the application environment name that includes the SSID as part of the name, such as *ssidxxxx* or *xxxxssid*. For example, for two WLM environments that are associated with Db2 Automation Expert on Db2 subsystem ID DB2A, then possible application environment and procedure names might be DB2ADAJ1 and DB2ADAJ2, respectively.

APF authorizing load libraries

Some of the programs in Db2 Automation Expert load libraries must be APF authorized to run.

Procedure

1. Include the following load libraries as part of your authorized list:

   - SDAJLOAD
   - If you installed FEC into a separate library from Db2 Automation Expert, APF authorize the FEC load library (usually, SFECLOAD).

2. Activate the changes at the next IPL, or immediately by issuing the following TSO/E command: `PARMLIB UPDATE(member-name-suffix)`, where *member-name-suffix* is the IKJTSOxx member of SYS1.PARMLIB.

Worksheets: Gathering parameter values for Db2 Automation Expert

During the customization process, you need to provide parameter values for Db2 Automation Expert, for Db2, and for your LPAR.

Use the worksheets in this topic to record the appropriate parameter settings for your purposes, and then use these worksheets during the customization process. The worksheets are organized based on the order of the customization panels in the Tools Customizer.

After the customization jobs are generated, they are grouped by the job sequence number. In this topic, the jobs use an 8-character member naming convention that follows the format of *ssjjjjdd*, where:

- *ss* is the job sequence number, which is an alphabetic character (A - Z) followed by a numeric character (0 - 9). For example, a job sequence number is A0, A1, ..., Z9.
- *jjjj* is derived from the job template name. The product assigns the job template name.
- *dd* is a set of two alphanumeric characters (AA - 99) that Tools Customizer assigns to identify a Db2 entry.

For example, the job shown as *ssCF2Add* in this topic might be generated as A4CF2AAA.

Customization values for the Discover EXEC

Description

Use the following worksheet to identify and record the customization values for the Tools Customizer Discover EXEC. The values in this worksheet are for extracting information from a product that has already been customized. During the customization process, you will enter these values on panel CCQPDSC.

Note: Complete this worksheet only if you are recustomizing a product that has previously been customized by using Tools Customizer.

Parameter	Sample or default value	Your value
Discover EXEC for extracting information from an already customized product		

Parameter	Sample or default value	Your value
Discover EXEC library The fully qualified data set name that contains the product Discover EXEC.	The metadata library that you specified on the Specify the Metadata Library panel (CCQPHLQ).	
Discover EXEC name The name of the Discover EXEC.	DAJDISC	
Discover output data set The name of the data set for the output from the product Discover EXEC.	The name of the discover output library that you entered on the settings panel.	
Information for Discover EXEC section		
Discover level This parameter specifies whether to discover from Db2 Automation Tool 4.3 (PREV) or Db2 Automation Expert (CURR). On an upgrade, the value should be PREV.	PREV	
New Automation Expert load library This parameter specifies the newest Db2 Automation Expert load library that was installed as part of the SMP/E process.	DB2TOOL.DAJ110.SDAJLOAD	
New FEC load library This parameter specifies the new FEC load library if FEC was not installed into the same libraries as Db2 Automation Expert.	DB2TOOL.FEC130.SFECLOAD	
Discover control file This parameter specifies the Db2 control file that the discover process will read values from. If Db2 Automation Expert 1.1 is being installed and **Discover level** is set to PREV, this is the control file used in Db2 Automation Tool 4.3. If the **Discover level** field is set to CURR, it is the control file currently being used by Db2 Automation Expert.	DAJ.DB2.CONTROL	

Parameter	Sample or default value	Your value
Discover Configuration ID The Db2 Automation Expert three-character configuration name that is associated with the discovery process. The configuration ID is displayed on panel DAJ$MAIN, the main driver panel when Db2 Automation Expert is invoked in ISPF. If the **Discover level** field is set to PREV, this is the configuration ID used in Db2 Automation Tool 4.3. If the **Discover level** field is set to CURR, this configuration ID must be the ID in use for Db2 Automation Expert.	DAJ	
Discover startup CLIST data set This parameter specifies the data set in which the CLISTs are located. If the **Discover level** field is set to PREV, this is the data set containing the CLISTs for Db2 Automation Tool. If the **Discover level** field is set to CURR, specify the data set currently in use by Db2 Automation Expert.	DB2TOOL.DAJ110.SDAJSAMP	
Discover startup CLIST 2 This parameter specifies the name of the second of two startup CLISTs . If the **Discover level** field is set to PREV, specify the second CLIST that is used in Db2 Automation Tool 4.3. If the **Discover level** field is set to CURR, specify the second CLIST that is in use for Db2 Automation Expert.	DAJV11C	

Product to Customize section

Description
> The parameters that are listed in the Product to Customize section are read-only. They contain information that was provided on other panels, by Tools Customizer, or by the Db2 Automation Expert metadata data set.

Parameter	Discovered?	Source of this value
Product metadata library This value is the library that you specified on the **Specify the Product to Customize** panel. This field is scrollable. Place your cursor anywhere on the field and press PF11 to view its full contents.	No	This value is specified on the **Specify the Product to Customize** panel (CCQPHLQ).
LPAR The **LPAR** field displays the LPAR on which you are customizing Db2 Automation Expert.	No	This value is supplied by Tools Customizer.
Product name This value displays the product that is being customized. In this example, IBM Db2 Automation Expert should be displayed in this field. This field is scrollable. Place your cursor anywhere on the field and press PF11 to view its full contents.	No	This value is provided by the product metadata file.
Version The **Version** field displays the version, release and maintenance level of the product you are customizing in the format *version.release.maintenance*.	No	This value is provided by the product metadata file.

Customization library section

Description

The customization library section defines where the generated customization jobs are placed.

Parameter	Discovered?	Source of this value
Customization lib The fully qualified name of the data set that will contain the generated jobs. The default data set name is the concatenation of Customization Library Qualifier in the Tools Customizer Settings panel with LPAR and product component information. If the data set name exceeds 42 characters, enclose the name in quotation marks.	No	This value is derived from the user-specified customization library qualifier on Tools Customizer Settings panel (CCQPSET).
Vol The volume name in which the Customization Library data set will reside. If left blank, the volume name will be decided by the system.	No	None

Common parameters section

Description

The parameters in this section are used by multiple steps of the customization process; refer to the parameter descriptions for details. During the customization process, you will enter these values on panel CCQPPRD.

Parameter	Required?	Discovered?	Default value	Your value
Startup CLIST library This parameter specifies the CLIST library in which to store the newly created Db2 Automation Expert CLISTs. These CLISTs are used to define the ISPF environment and to invoke the Db2 Automation Expert ISPF interface.	Yes	Yes	DB2TOOL.DAJ110. CLIST	
Automation Expert load library This parameter specifies the load library for the new release of Db2 Automation Expert. This library can optionally contain the FEC load modules.	Yes	Yes	DAJ.V110. SDAJLOAD	
Automation Expert message library This parameter specifies the library name for the Db2 Automation Expert product messages.	Yes	Yes	DB2TOOL.DAJ110. SDAJMENU	
Automation Expert panel library This parameter specifies the library for the Db2 Automation Expert panels.	Yes	Yes	DB2TOOL.DAJ110. SDAJPENU	
User skeleton library This parameter specifies the skeleton library in which user-defined skeletons are stored. Db2 Automation Expert utilizes user-defined skeletons when the library is defined in the CLIST concatenation.	No	Yes	None	
Automation Expert skeleton library This parameter specifies the Db2 Automation Expert library that contains the product skeletons.	Yes	Yes	DB2TOOL.DAJ110. SDAJSLIB	
FEC common code load library This parameter specifies the library name for the FEC common code load modules if FEC was installed in a separate library from the Db2 Automation Expert load modules.	No	Yes	None	
FEC message library This parameter specifies the library for the FEC messages. This data set is optional if the FEC modules were installed into the same data sets as the Db2 Automation Expert messages.	No	No	None	

Parameter	Required?	Discovered?	Default value	Your value
FEC panel library This parameter specifies the library for the FEC panels. This data set is optional if the FEC modules were installed into the same data sets as the Db2 Automation Expert panels.	No	No	None	
EMC load libraries This parameter specifies the EMC Symmetrix load library if you plan to use Db2 Automation Expert with Db2 Recovery Expert, and the EMC load library (not the SCF load library) is not in the z/OS LNKLST. If the data set name is longer than 42 characters, it must be enclosed in quotation marks.	No	No	None	
Control file This parameter specifies the control file that Db2 Automation Expert-specific information will be stored in. This file is a KSDS VSAM file, and can be shared with other Db2 tools.	Yes	No	DAJ.DB2. CONTROL	
Configuration ID This parameter identifies the work environment. You can run multiple configurations of Db2 Automation Expert on the same LPAR, Db2 subsystem, or both. All of these configurations can use the same control file. See Chapter 5, "Creating multiple configurations of Db2 Automation Expert," on page 95 for more information.	Yes	No	DAJ	
Automation Expert SAMPLIB data set This parameter specifies the Db2 Automation Expert sample library.	Yes	No	DB2TOOL.DAJ110. SDAJSAMP	
Owner of plans and packages This parameter specifies the owner to be used in the plan and package binds. This is a global value and is used for all Db2 subsystems where a subsystem-specific value is not specified. If all of your Db2 subsystems use the same value, it can be defined once here.	Yes	No	DAJUSER	

Parameter	Required?	Discovered?	Default value	Your value
Qualifier for repository object names This parameter specifies the qualifier for the Db2 Automation Expert repository objects. This value is used for object names in SQL, binding packages, and in the DDL that creates repository objects. This is a global value and is used for all Db2 subsystems where a subsystem-specific value is not specified. If all of your Db2 subsystems use the same value, it can be defined once here.	Yes	No	DAJ	
Automation Expert DBRM library The Db2 Automation Expert library that contains the product-supplied DBRMs. The DBRMs are inputs to the bind process.	Yes	No	DB2TOOL.DAJ110. SDAJDBRM	
Automation Expert customization package name This parameter specifies a temporary package name that is required for customization. **Restriction:** The temporary package name must be different from the product package names that are specified on the Db2 Parameters panel. The provided default value of DAJ11TMK is recommended.	Yes	No	DAJ11TMK	
Automation Expert customization plan name This parameter specifies the temporary plan name that will be used during customization. **Restriction:** The temporary plan name must be different from the product plan names that are specified on the Db2 Parameters panel. The provided default value of DAJ11TMK is recommended.	Yes	No	DAJ11TMP	

Task: Configure the product CLISTs

Description

This task builds the jobs to configure the startup CLISTs. During the customization process, you enter these values on panel CCQPPRD.

This task is *required*.

Jobs generated

This task generates the following jobs based on the template that is listed:

Job name	Template	Description
ssV11	DAJV11	Configures and adds startup CLIST 1 to CLIST library.
ssV11C	DAJV11C	Configures and adds startup CLIST 2 to CLIST library.
ssEXECS	DAJEXECS	Adds Db2 Automation Expert required EXECs to CLIST library.

Required authority

The user ID that configures or updates CLISTS must have write access to the startup CLIST library.

Step or parameter	Required?	Discovered?	Default value	Your value
Configure Startup CLISTs Step to configure the CLISTS.	Yes	–	Selected	
Startup CLIST 1 The name of the first startup CLIST.	Yes	No	DAJV11	
Startup CLIST 2 The name of the second startup CLIST.	Yes	No	DAJV11C	
Copy the CLISTs This step copies the required product CLISTs into the specified data set.	Yes	–	Selected	
FEC SAMPLIB This parameter specifies the FEC sample library where the FECTSOC CLIST resides and is only required if FEC was not installed into the same libraries as Db2 Automation Expert	No	No	None	

Task: Create the control file

Description

This task creates a new control file. The control file is a required VSAM KSDS used by Db2 Automation Expert to store certain product and Db2 related values. It is not necessary to create a new one if one exists. Db2 Automation Expert can share a control file with other Db2 tools that use the same type of control file. During the customization process, you enter these values on panel CCQPPRD.

This task is *optional*.

Jobs generated

This task generates the following jobs based on the template that is listed:

Job name	Template	Description
ssCNTFL	DAJCNTFL	Creates the control file.

Required authority
> The user ID that runs the job to create the control file must have the authority to create the control file data set.

Step or parameter	Required?	Discovered?	Default value	Your value
Create a new control file Step to create the control file.	No	–	Selected	
Volume serial number for control file This parameter specifies the volume serial number to use when creating the control file. If this parameter is left blank, SMS will select the appropriate volume.	No	No	None	

Task: Update the control file

Description
> This task updates the Db2 Automation Expert control file. During the customization process, you enter these values on panel CCQPPRD.
>
> This task is *required*.

Jobs generated
> This task generates the following jobs based on the template that is listed:

Job name	Template	Description
*ss*CF2A*dd* or *ss*CF2B*dd*	DAJCF2A or DAJCF2B	Updates the control file (SSID-specific and data sharing group-specific parameters).
*ss*CF2C	DAJCF2C	Updates the control file with TEMPLATEDD global default values.
*ss*CF1A	DAJCF1A	Updates the control file with parameters for Db2 Recovery Expert.
*ss*CF1B	DAJCF1B	Updates the control file with parameters for Db2 High Performance Unload.

Required authority
> The user ID that runs the jobs to update the control file must have write authority to the control file data set.

Step or parameter	Required?	Discovered?	Default value	Your value
SSID-specific information Step to update the control file with SSID-specific parameters.	Yes	–	Selected	

Step or parameter	Required?	Discovered?	Default value	Your value
Omegamon Data Provider Broker Name This parameter specifies the OMEGAMON Data Provider broker name that is used to identify the broker instance on an LPAR. This will allow data from Db2 Automation Expert to be sent to the OMEGAMON Data Provider server, which in turn transforms and sends the data to modern analytic platforms. The default name ODP_BROKER is recommended.	Yes	No	ODP_BROKER	
Omegamon Data Provider Store Name This parameter specifies the OMEGAMON Data Provider internal in-memory stores that are used to store data that users send to the broker. The default name OMEGAMON is recommended.	Yes	No	OMEGAMON	
Specify TEMPLATEDD values This step updates the control file with global defaults for TEMPLATEDD values. These values can be overridden in individual utility profiles.	No	--	Not selected	
Db2 Recovery Expert information Specify this step if you want to use Db2 Recovery Expert with Db2 Automation Expert. This step updates the control file with parameters required by Db2 Automation Expert to integrate with Db2 Recovery Expert.	No	--	Not selected	
Db2 Recovery Expert control file This parameter is applicable only if you plan to use Db2 Recovery Expert with Db2 Automation Expert. If Db2 Recovery Expert has a separate control file from Db2 Automation Expert, specify the name. If this field is left blank, it is assumed that Db2 Recovery Expert uses the same control file as Db2 Automation Expert.	No	Yes	None	

Step or parameter	Required?	Discovered?	Default value	Your value
Db2 Recovery Expert load libraries This parameter is applicable only if you plan to use Db2 Recovery Expert with Db2 Automation Expert. Specify the names of the data sets that make up the current load library concatenation for Db2 Recovery Expert.	No	Yes	DB2TOOL.ARY310. SARYLOAD	
Db2 HPU information This step updates the control file with parameters required by Db2 Automation Expert to integrate with IBM Db2 High Performance Unload.	No	--	Not selected	
Db2 HPU load libraries This parameter is applicable only if you use Db2 HPU with Db2 Automation Expert. Specify the names of the data sets that comprise the current load library concatenation for Db2 HPU.	No	Yes	DB2TOOL.HPU510. SHPULOAD	
Db2 HPU ver/rel/mod This parameter specifies the version, release, and modification values of Db2 High Performance Unload. It is required if you plan to use HPU with Db2 Automation Expert.	No	Yes	510	

Task: Create or update Db2 objects

Description

This set of tasks creates the Db2 Automation Expert repository objects for your version of Db2. During the customization process, you enter these values on panel CCQPPRD.

The repository jobs determine whether repository objects need to be created or updated based on the version and release of Db2 Automation Expert, and the Db2 version on which Db2 Automation Expert is being installed. Ensure that the mode and levels are correct for each SSID. Run the generated job on the LPAR appropriate for the subsystem.

DDL changes to the Db2 Automation Expert repository are not common. However, missing columns or objects can result in unpredictable behavior if those items are required for functionality. If in doubt, submit the DDL and allow Db2 Automation Expert to update the repository.

This task is *required*.

Jobs generated

This task generates the following jobs based on the template that is listed.

Note: If you provide the data sharing group name for the Db2 subsystem, these jobs are only generated once per data sharing group.

Job name	Template	Description
*ss*DELE*dd*	DAJDELE	Drops the Db2 Automation Expert repository.
*ss*DDLJ*dd*	DAJDDLJ	Creates and updates the Db2 Automation Expert repository in execute mode.
*ss*TOPI*dd*	DAJTOPI	Migrates profiles from Db2 Automation Tool 4.3.
ss#IDC*dd*	DAJ#IDC1	Creates user-managed index files on SYSIBM.SYSCOPY.
*ss*DDL2*dd*	DAJDDL2	Create optional STOGROUP-defined indexes on SYSIBM.SYSTABLES, SYSIBM.SYSTABSTATS, SYSIBM.SYSTABLES_HIST, SYSIBM.SYSTABSTATS_HIST, and SYSIBM.SYSCOPY.
*ss*DDLZ*dd*	DAJDDLZ	Prepares the previous version of the repository so that the job to copy the repository can successfully run.

Required authority

The user ID that runs these jobs to create Db2 objects must have SYSADM authority on the Db2 subsystems.

Step or parameter	Required?	Discovered?	Default value	Your value
Drop repository This step generates a job to drop all Db2 Automation Expert repository objects. If this step is selected, you must edit the Db2 parameters for each subsystem that you want to drop the repository from and set the Drop Automation Expert repository parameter to Y. ⚠️ **Attention:** Submitting the DDL generated by this step will delete all existing profiles and all record of prior usage. Before submitting the DDL to drop the database, you must uncomment the DROP statements in the DDL.	No	–	Not selected	
Execute repository changes This step executes the DDL either to create a new repository or to update an existing repository for the new version of Db2 Automation Expert that is being installed.	Yes	–	Selected	

Step or parameter	Required?	Discovered?	Default value	Your value
Migrate Automation Tool tables to Automation Expert This step generates a job to migrate existing Db2 Automation Tool 4.3 table rows to Db2 Automation Expert 1.1. This will allow existing Db2 Automation Tool users to continue to use profiles that have been saved in the past.	No	No	Not selected	
Qualifier for previous repository object names This parameter specifies the table qualifier used for previous repository table names. This value is used when data is copied from one repository to another. This is a global value and can be used for all Db2 subsystems where a subsystem-specific value is not specified. If all of your Db2 subsystems use the same value, you can set it here and not set it for each subsystem.	Yes	No	DLC	
Create optional user-managed index files This step creates index files for a user managed index on SYSIBM.SYSCOPY. **Note:** If you are migrating from Db2 Automation Tool 4.3, and created this index as part of customization, you do not need to run this step.	No	–	Not selected	
Volume serial number for SYSCOPY index Specify the volume of the VSAM data set to be used for the optional SYSCOPY index. Or, leave this field blank and allow SMS to select the volume.	No	No	None	

Step or parameter	Required?	Discovered?	Default value	Your value
Create optional indexes This step creates optional indexes on catalog tables SYSIBM.SYSTABLES, SYSIBM.SYSTABSTATS, SYSIBM.SYSTABLES_HIST, SYSIBM.SYSTABSTATS_HIST, and SYSIBM.SYSCOPY. These indexes speed up access to these tables when performing certain maintenance and utility functions. Adding these indexes enables Db2 to use the additional index to access the tables instead of table space scans. **Note:** If you are migrating from Db2 Automation Tool 4.3, and created these indexes as part of customization, you do not need to run this step.	No	--	Not selected	

Task: Maintenance window setup

Description
> This task prepares the maintenance window environment for use with Db2 Automation Expert. During the customization process, you select this task on panel CCQPPRD.

> This task is *optional*.

Jobs generated
> This task generates the following jobs based on the template that is listed.

> **Note:** If you provide the data sharing group name for the Db2 subsystem, these jobs are only generated once per data sharing group.

Job name	Template	Description
*ss*USL*dd*	DAJUSL	Prepares Db2 Automation Expert for use with maintenance windows.
*ss*WLM3*dd*	DAJWLM3	Defines the maintenance window WLM address space.

Required authority
> The user ID that runs these jobs must have SYSADM authority on the Db2 subsystems.

Step or parameter	Required?	Discovered?	Default value	Your value
Register with Maintenance Windows This step generates a job that prepares Db2 Automation Expert for maintenance window execution.	Yes	--	Selected	

Step or parameter	Required?	Discovered?	Default value	Your value
Create Maintenance Window Enactor WLM PROC This step creates JCL that can be used to run a WLM address space in which the maintenance window stored procedure is run.	No	No	Not selected	

Task: Create notifications WLM PROC

Description

This task creates a WLM address space for use by notifications. This should only be done if a separate WLM address space is desired for the notifications stored procedure. During the customization process, you enter these values on panel CCQPPRD.

This task is *optional*.

Jobs generated

This task generates the following job based on the template that is listed.

Note: If you provide the data sharing group name for the Db2 subsystem, these jobs are only generated once per data sharing group.

Job name	Template	Description
*ss*WLM4*dd*	DAJWLM4	Creates the notifications WLM PROC.

Required authority

The user ID that runs this job must have SYSADM authority on the Db2 subsystems.

Step or parameter	Required?	Discovered?	Default value	Your value
Notifications WLM address space This step creates JCL to run a WLM address space for the notifications stored procedure.	Yes	--	Selected	

Task: Automation Expert plans and packages

Description

This task binds the plans and packages that are required for using Db2 Automation Expert, optionally frees plans and packages before a rebind, and grants execute authority on the plans. During the customization process, you enter these values on panel CCQPPRD.

This task is *required*.

Jobs generated

This task generates the following jobs based on the template that is listed.

Note: If you provide the data sharing group name for the Db2 subsystem, these jobs are only generated once per data sharing group.

Job name	Template	Description
*ss*FREE*dd*	DAJFREE	Frees the plans and packages.
ss#BND*dd*	DAJ#BND	Binds plans and packages.
*ss*GRAN*dd*	DAJGRANT	Grants execute authority to use Db2 Automation Expert.

The user ID that runs the *ss*FREE*dd*, *ss*#BND*dd* and the *ss*GRAN*dd* jobs must have SYSADM authority on the Db2 subsystems.

Step or parameter	Required?	Discovered?	Default value	Your value
Free This step frees the Db2 Automation Expert plans and packages before they are rebound.	No	--	Not selected	
Bind This step binds the plans and packages that are required for this release of Db2 Automation Expert.	Yes	--	Selected	
GRANT execute authority This step grants execute authority to the Db2 Automation Expert plans.	Yes	--	Selected	

Task: Export and import profiles

Description
This task creates batch jobs to export Db2 Automation Expert profiles from one SSID and import them to another SSID. Profiles are selected by a filter. The filter specifies profile creator, profile name, and profile type. The name and creator strings can contain wild card characters. Valid wild card characters include Db2 wild card characters (% and _) and * (which is treated as %). Specify the profile filters on the **Db2 Parameters** panel for the subsystem that you want to export or import. Profiles are converted from previous releases when required.

When selecting the export and import profiles task, if you enter the GENERATEALL command on the **Customizer Workplace** panel (CCQPWRK), an export and import job is generated for every subsystem that is associated. If you only want to export profiles from one subsystem and import into another, do the following:

1. Update the **Product Parameters** panel.
2. Select the **Export and import profiles** task and select the export step.
3. Update the **Db2 Parameters** panel for the SSID from which you want to export profiles. Specify the export fields in the **Export Import Parameters** section.
4. On the **Customizer Workplace** panel, enter the G (generate) line command next to the SSID from which you want to export the profiles. The export job is created.
5. Run the export job.
6. Update the **Product Parameters** panel.
7. Select the **Export and import profiles** task and select the import step.
8. For each SSID that you want to import profiles to, update the **Db2 Parameters** panel. Specify the import fields in the **Export Import Parameters** section.
9. On the **Customizer Workplace** panel, enter the G (generate) line command next to each SSID that you want to import profiles to. The import jobs are created.
10. Run the import jobs.
11. Update the **Product Parameters** panel and deselect the export and import tasks.

This task is *optional.*

Jobs generated
This task generates the following jobs based on the template that is listed.

Note: If you provide the data sharing group name for the Db2 subsystem, these jobs are only generated once per data sharing group.

Job name	Template	Description
*ss*EXP*dd*	DAJEXP	Exports profiles to a data set.
*ss*IMP*dd*	DAJIMP	Imports profiles from a data set.

Required authority
The user ID that runs the *ss*EXP*dd* and *ss*IMP*dd* jobs must have execute authority on Db2 Automation Expert plans.

Step or parameter	Required?	Discovered?	Default value	Your value
Export and import profiles Select this task to create batch jobs to export Db2 Automation Expert profiles on one SSID and import them on another SSID.	No	--	Not selected	
Export profiles to file This step exports profiles selected by a profile filter to an export data set. This export data set can be used as an import source to import the profiles to another SSID. The export data set must be a physically sequential (PS) data set with LRECL of 4096. This data set can optionally be a member of a PDS.	No	--	Not selected	
Import profiles from file This step imports profiles from an export data set. The profiles must have been previously exported to that data set. The data set must be a physically sequential data set (PS) with an LRECL of 4096. It can be a member of a PDS.	No	--	Not selected	

Task: Job tracking started task

Description
Db2 Automation Expert uses a started task to track job execution results and to enable the restartability feature for Db2 Automation Expert-generated utility jobs. During the customization process, you enter these values on panel CCQPPRD.

This task is *optional*.

Jobs generated
This task generates the following jobs based on the template that is listed:

Jobname	Template	Description
*ss*PROC	DAJPROC	Generates the job tracking started task procedure.
*ss*PARMS	DAJPARMS	Generates the job tracking started task parameter file.

Required authority
The user ID that runs the *ss*PROC and *ss*PARMS jobs to create the job tracking task procedure and parm file must have write access to the libraries where the started task and started task PARMLIB member will be written.

Step or parameter	Required?	Discovered?	Default value	Your value
Create the job tracking started task This step creates the job tracking started task and its associated parameters.	No	–	Not selected	

Task: API support

Description
This task creates the Db2 Automation Expert address space procedures that are required for the ad-hoc utility API. During the customization process, you enter these values on panel CCQPPRD.

This task is *optional*.

Jobs generated
This task generates the following jobs based on the template that is listed:

Jobname	Template	Description
*ss*PRUTG	DAJPRUTG	Creates the Generate Utilities address space procedure.
*ss*PRUTX	DAJPRUTX	Creates the Execute Utilities address space procedure.
*ss*CF1E	DAJCF1E	Update the control file with the APIs.

Required authority
The user ID that runs the job to update the control file must have write authority to the control file data set. The user ID that runs the jobs to create the address space procs must have write authority to your site's PROCLIB data set.

Step or parameter	Required?	Discovered?	Default value	Your value
Create the Generate Utilities address space proc This step creates the Generate Utilities address space procedure.	No	–	Not selected	
Create the Execute Utilities address space proc This step creates the Execute Utilities address space procedure.	No	–	Not selected	
Update control file with API parms This step creates the API values required for Db2 Automation Expert.	No	–	Not selected	

Task: OMEGAMON Data Provider support

Description
This task creates the Db2 Automation Expert JCL job that sends real-time statistics data through OMEGAMON Data Provider for publishing to analytics platforms, such as Elastic. During the customization process, you enter these values on panel CCQPPRD.

This task is *optional*.

Jobs generated
This task generates the following jobs based on the template that is listed:

Jobname	Template	Description
*ss*ODPC	DAJODPC	Creates the JCL to collect and send data via OMEGAMON Data Provider to analytics platforms.

Step or parameter	Required?	Discovered?	Default value	Your value
Omegamon Data Provider Load Library Enter the OMEGAMON Data Provider load libraries.	No	–	None	

Task: REORG Avoidance setup

Description
This task configures parameters that are required for using the smarter reorganization recommendation feature with Db2 Automation Expert and Db2 Query Monitor. During the customization process, you enter these values on panel CCQPPRD.

This task is *optional*.

Jobs generated
This task generates the following jobs based on the template that is listed:

Jobname	Template	Description
*ss*CFIC	DAJCF1C	Updates the control file with parameters that are required for smarter reorganization recommendations.

Required authority
The user ID that runs the jobs to update the control file must have write authority to the control file data set.

Step or parameter	Required?	Discovered?	Default value	Your value
REORG Avoidance setup Step to update the control file with parameters that are required for smarter reorganization recommendations.	No	–	Not selected	
Host address This parameter enables Db2 Automation Expert to communicate with Db2 Query Monitor for the smarter reorganization recommendation feature. This address is the host URL (server) that will be used to communicate with Db2 Query Monitor.	No	--	CAESERVER. COMPANY.COM	

Step or parameter	Required?	Discovered?	Default value	Your value
HTTPS port This parameter enables Db2 Automation Expert to communicate with Db2 Query Monitor for the smarter reorganization recommendation feature. This is the secure HTTP port number used in that communication.	No	Yes	443	

Task: Install the sample profiles

Description

This task installs sample profiles for use with Db2 Automation Expert. These profiles are optional, but can help you quickly set up job profiles to perform Db2 maintenance. During the customization process, you enter these values on panel CCQPPRD.

This task is *optional*.

Note: Installing the sample profiles also installs the best practice utility profiles that might be called by the Db2 Automation Expert ad-hoc utility API. If you plan to use the Db2 Automation Expert API, you should install the sample profiles.

Jobs generated

This task generates the following jobs based on the template that is listed:

Jobname	Template	Description
*ss*IMPS*dd*	DAJIMPS	Installs the sample profiles.

Required authority

The user ID that runs the *ss*IMPS*dd* job to install the sample profiles must have SYSADM authority on the Db2 subsystems and read access to the Db2 Automation Expert sample library (SDAJSAMP).

Step or parameter	Required?	Discovered?	Default value	Your value
Install sample profiles This step creates a batch job that loads the Db2 Automation Expert repository tables with the sample profiles.	No	–	Selected	
Sample profile creator name This parameter specifies the creator name to be used for the sample profiles that are loaded into the Db2 Automation Expert repository tables. This value is required if installing the sample profiles.	No	No	DAJUSER	

Step or parameter	Required?	Discovered?	Default value	Your value
Sample profile update option This parameter specifies the update option that is assigned to the sample profiles. The following values are valid: • U - any user can view, update, or export the profile • V - Only the profile creator can update the profile, but any user can view or export it • N - Only the profile creator can view, update, or export the profile	No	No	V	
Automation Expert export data set This parameter specifies the Db2 Automation Expert export library. This data set contains the sample profiles that you can optionally import. If the data set name is longer than 42 characters, it must be enclosed in quotation marks.	No	No	DB2TOOL.DAJ110. SAMPEXP	

Task: Add Automation Expert to the Db2 Admin Launchpad

Description

This task customizes the EXEC that, when executed, adds Db2 Automation Expert to the Db2 Administration Tool Launchpad. During the customization process, you enter these values on panel CCQPPRD.

This task is *optional*.

Jobs generated

This task generates the following jobs based on the template that is listed:

Jobname	Template	Description
*ss*ADBI	DAJADBI	Creates the *ss*ADBI EXEC that, when run, adds Db2 Automation Expert to the Db2 Administration Tool Launchpad.

Required authority

The user ID that runs *ss*ADBI job must have write access to the Db2 Automation Expert CLIST library and must have the required authorities to modify the Db2 Administration Tool Launchpad.

Step or parameter	Required?	Discovered?	Default value	Your value
Create the REXX to add Automation Expert to the Launchpad This step creates the REXX exec and stores it in the CLIST library. It then runs the REXX EXEC to add Db2 Automation Expert to the Launchpad.	No	–	Selected	

Step or parameter	Required?	Discovered?	Default value	Your value
Db2 Administration Tool high-level qualifier This parameter specifies the high-level qualifier of the Db2 Administration Tool data sets.	No	No	ADBHILVL	
ADBDMTI EXEC data set This parameter specifies the data set that contains the Db2 Admin Tool ADBDMT EXEC.	No	No	ADBHILVL. SADBEXEC	
Db2 Admin version This parameter specifies the version of Db2 Administration Tool that is installed at your site.	No	No	12	

Db2 Parameters section

Description

This section contains Db2 parameters. During the customization process, you enter these values on panel CCQPDB2.

Parameter	Required?	Discovered?	Default value	Your value
Group attach name If a subsystem is the member of a data sharing group, this parameter indicates the group attach name.	No	No	None	
General Db2 Information - common				
Mode This parameter indicates the mode in which the Db2 subsystem is running. The following values are valid: • CM is conversion mode on all listed Db2 versions. For Db2 12 and later, CM can only be specified when the Db2 function level is 100. If the Db2 function level is 500 or greater, NFM must be specified. • NFM is new function mode on all listed Db2 versions.	Yes	No	NFM	

Parameter	Required?	Discovered?	Default value	Your value
Level number This parameter indicates the version, release, and modification level of the Db2 subsystem. The following values are valid: • 121 is valid only for modes CM or NFM. • 131 is valid only for modes CM or NFM.	Yes	No	None	
Db2 current function level The current function level of the Db2 subsystem. This field is valid only for Db2 level 121 or later.	No	Yes	blank	
Db2 Libraries - common				
Load library The data set name of the Db2 load library.	Yes	Yes	DSN.SDSNLOAD	
Run library This parameter indicates the data set name of the Db2 run library where DSN1TIAD is located.	Yes	No	DSN.RUNLIB.LOAD	
Exit library This parameter indicates the names of the data sets that make up the current Db2 exit library concatenation for Db2 .	Yes	Yes	DSN.SDSNEXIT	
Bootstrap data set This parameter indicates the names of the Db2 bootstrap data sets.	Yes	Yes	DSN.SDSNBSDS	
Db2 Buffer Pools - common				
Name of the 4 KB bufferpool This parameter indicates the name of the 4 KB buffer pool to be used for customization. The value must be 8 characters or fewer.	Yes	No	BP0	
Name of the 8 KB bufferpool This parameter indicates the name of the 8 KB buffer pool to be used for customization. The value must be 8 characters or fewer.	Yes	No	BP8K0	
Name of the 16 KB bufferpool This parameter indicates the name of the 16 KB buffer pool to be used for customization. The value must be 8 characters or fewer.	Yes	No	BP16K0	

Parameter	Required?	Discovered?	Default value	Your value
Name of the 32 KB bufferpool This parameter indicates the name of the 32 KB buffer pool to be used for customization. The value must be 8 characters or fewer.	Yes	No	BP32K	
Db2 Utilities - common				
SYSAFF for Db2 utilities This parameter indicates the SYSAFF job parameter to use for running Db2 batch utility jobs. The value must be 8 characters or fewer.	No	No	None	
Plan name for the DSNTIAD utility This parameter indicates the plan name for the DSNTIAD utility. The value must be 8 characters or fewer.	Yes	No	DSNTIAD	
Db2 Tools Objects - common				
Storage group name This parameter indicates the name of the storage group that will be used for creating Db2 objects for customization. The value must be 128 characters or fewer.	Yes	No	SYSDEFLT	
SQL authorization ID The SQL authorization ID that will be used to create Db2 objects.	No	No	DB2USER	
Automation Expert Db2 Parameters				
SQL authorization ID for GRANT The name of the SQLID used in SET CURRENT SQLID statements for the job that issues GRANT EXECUTE for Db2 Automation Expert plans. This value overrides SQL authorization ID (but only for the job that issues GRANT EXECUTE on the plans).	No	No	None	
Target authorization ID for GRANT This parameter specifies the authorization ID that will be granted authority to execute the Db2 Automation Expert plans. There is no default value. If this field is left blank, the grant statements will be commented out in the generated job.	No	No	None	

Parameter	Required?	Discovered?	Default value	Your value
Repository table space 4KB buffer pool This parameter indicates the name of the 4 KB buffer pool to be used for Db2 Automation Expert repository table spaces. If left blank, the value in the **Name of the 4 KB buffer pool** field is used.	No	No	None	
Repository index 4KB buffer pool This parameter indicates the name of the 4 KB buffer pool to be used for Db2 Automation Expert repository index spaces. If left blank, the value in the **Name of the 4 KB bufferpool** field is used.	No	No	None	
Storage group name for table spaces The name of the storage group that will be used for creating Db2 Automation Expert table spaces. If blank, the value in the **Storage group name** field is used.	No	No	None	
Storage group name for index spaces The name of the storage group that will be used for creating Db2 Automation Expert index spaces. If blank, the value in the **Storage group name** field is used.	No	No	None	
Owner of Automation Expert plans and packages This parameter is the BIND owner for plan and package binds. This value is subsystem-specific. If specified, it overrides the global value specified in the product parameters.	Yes	No	None	
Schema for repository object names This parameter identifies the schema used for the Db2 Automation Expert repository table names. This value is used when repository objects are created, altered, referenced in SQL, or bound into packages. This value is subsystem-specific and is optional. If specified, this value overrides the global qualifier specified in the product parameters.	No	No	None	

Parameter	Required?	Discovered?	Default value	Your value
Schema for previous repository object names This parameter specifies the schema to be used for a previous copy of the Db2 Automation Expert repository tables. This value is used when data is copied from one repository to another. It is subsystem-specific. If specified, it overrides the global value specified in the product parameters.	No	No	None	
Model DSN for GDG base If your site is managed by SMS, and you are required to include a model DSCB in your JCL, specify a model DSCB name. The GDG base must already exist. This parameter is optional if your data sets are managed by SMS. If you provide the base name, Db2 Automation Expert will use it.	No	Yes	None	
Db2 ZPARMs member The ZPARM load module member name for this specific Db2 subsystem. This module typically resides in the Db2 SDSNEXIT library.	Yes	Yes	DSNZPARM	
Plan for online navigation The name of the plan that includes most Db2 Automation Expert functions, except for the job building function.	Yes	Yes	DAJP1101	
Plan for building jobs The name of the plan that includes the function for building Db2 Automation Expert jobs.	Yes	Yes	DAJP1102	
Database for repository objects The database name for Db2 Automation Expert repository objects.	Yes	No	DAJDB	
VCAT for SYSCOPY index This parameter specifies the VCAT to use for VCAT-defined shops for creating the optional index on SYSIBM.SYSCOPY. This value is required if the optional index create steps are selected.	No	No	VCAT	

Parameter	Required?	Discovered?	Default value	Your value
Default WLM environment The WLM environment is required only if no valid default WLM environment has been set up. If specified, it is used for a Db2 Automation Expert native SQL stored procedure.	No	No	None	
Table space PRIQTY This value is the primary quantity (PRIQTY) value used to create Db2 Automation Expert table spaces.	Yes	No	200	
Table space SECQTY This value is the secondary quantity (SECQTY) value used to create Db2 Automation Expert table spaces.	Yes	No	200	
Index space PRIQTY This value is the primary quantity (PRIQTY) value used to create Db2 Automation Expert indexes.	Yes	No	100	
Index space SECQTY This value is the secondary quantity (SECQTY) value used to create Db2 Automation Expert indexes.	Yes	No	100	
Drop Automation Expert repository This parameter is only displayed if the Drop repository step on the Product Parameters panel (CCQPPRD) is selected. If this parameter is set to Y, a job is generated that contains DDL to drop the repository from that subsystem. If set to N, then a no-op (IEFBR14) job is generated. ⚠ **Attention:** Submitting the DDL generated by this step will delete all existing profiles and all record of prior usage. Before submitting the DDL to drop the database, you must uncomment the DROP statements in the DDL.	No	No	N	

Parameter	Required?	Discovered?	Default value	Your value
Db2 HPU load libraries This parameter is applicable only if you use Db2 HPU with Db2 Automation Expert. Specify the names of the data sets that comprise the current load library concatenation for Db2 HPU. This value is subsystem specific. If specified, it overrides the global value specified in the product parameters.	No	Yes	None	
Db2 HPU ver/rel/mod This parameter specifies the version, release, and modification values of Db2 High Performance Unload. It is required if you plan to use HPU with Db2 Automation Expert. This value is subsystem specific. If specified, it overrides the global value specified in the product parameters.	No	Yes	None	
Automation Expert User Exits				
User exits with SQL The names of the user exits that contain SQL and that must be bound into packages.	No	No	None	
User exit package list The package list name for any user exits that are used at this site.	No	No	None	
Automation Expert Shared Profile Packages				
Catalog history package list The name of the catalog history package list (PKLIST). This package stores RUNSTATS statistics in the Db2 catalog. **Restriction:** The catalog history package list must be different from the temporary customization package name that is specified on the Product Parameters panel. The provided default value of DAJC430C is recommended.	Yes	Yes	DAJC110C	

Parameter	Required?	Discovered?	Default value	Your value
Shadow catalog package list The name of the shadow catalog package list (PKLIST). This package stores RUNSTATS statistics in the shadow history tables.	Yes	Yes	DAJC110S	
Repository package list The package list name for most Db2 Automation Expert functions. This includes maintaining RUNSTATS statistics in Db2 Automation Expert.	Yes	Yes	DAJC110	
Automation Expert Shared Profile Devices				
Work file device type The default work file unit device to be used in generated jobs. Sample values are SYSDA and DISK.	Yes	Yes	SYSALLDA	
Sort work file device type The sort work file unit device to be used when utility JCL is generated. Sample values are SYSDA and DISK.	Yes	Yes	SYSALLDA	
Automation Expert Profile Build Message DD Names				
Build informational DD The DDNAME to be used for informational messages when a job is built. All generated xxxBnnnI messages will be written to this DD.	Yes	Yes	DAJERROR	
Build warning DD The DDNAME to be used for warning messages when a job is built. All generated xxxBnnnW messages will be written to this DD.	Yes	Yes	DAJERROR	
Build error DD The DDNAME to be used for error messages when a job is built. All generated xxxBnnnE messages will be written to this DD.	Yes	Yes	DAJERROR	
Automation Expert Shared Profile Miscellaneous				

Parameter	Required?	Discovered?	Default value	Your value
Job tracking started task name The name of the job tracking started task. It is the job tracking started task that will track jobs for this subsystem. This value will be stored in the parameter called SUBSYS in the parmlib member that the started task uses.	No	Yes	None	
Max primary space allocation The maximum amount of space that can be allocated for a primary allocation. You can specify up to 999999 tracks, cylinders, or megabytes. The value that you specify will be converted to cylinders when the job is built. This value affects primary space allocation for image copy DDs and temporary DDs that are used in REORGs, and it also affects utility jobs that are built with TEMPLATE syntax.	Yes	Yes	999999	
Size unit for max primary space allocation The unit for the primary space allocation. Valid values are T for tracks, C for cylinders, and M for megabytes.	Yes	Yes	C	
Secondary allocation percentage The amount of space that can be allocated for a secondary allocation. This value is expressed as a percentage of primary allocation. This value affects secondary space allocation for image copy DDs and temporary DDs that are used in REORGs, and it also affects utility jobs that are built with TEMPLATE syntax. Valid values are 1 - 999.	Yes	Yes	050	
Utility region size The default REGION size, in megabytes, to be used when generating utility JCL. The region size is set on the job step and the value is used for all job steps. If you include a REGION parameter in your job card, the job card REGION parameter overrides the REGION parameter on the EXEC statement.	Yes	Yes	1024	

Parameter	Required?	Discovered?	Default value	Your value
Db2 fetch buffer size The size of the Db2 fetch buffer in MB. The fetch buffer is used for the Db2 multi-row fetch capability and can improve SQL performance. Valid values are 1 - 256 MB.	Yes	Yes	0004	
Parallel MVS™ catalog locates The number of parallel processing tasks to be created when doing MVS catalog LOCATE operations. Valid values are 1 - 99.	Yes	Yes	10	
Terminate utility if an abend occurs This parameter indicates whether to terminate a utility if an abend occurs when the utility is run. This value can be changed after configuration by using option 0 on the Db2 Automation Expert main menu.	Yes	Yes	N	
Generate STEPLIB DDs This parameter indicates whether STEPLIB DDs are to be included in the JCL. If you specify N, STEPLIB DDs are not included. When N is specified, the Db2 product libraries must be contained in the LNKLST set.	Yes	Yes	Y	
Gen image copy DSNs in GMT This parameter indicates whether to use Greenwich Mean Time (GMT) or local time when image copy data set names are created. Valid values are Y (Greenwich Mean Time) and N (the local time). If you want date and time variables in templates to be resolved at job run time rather than job build time, specify Y.	Yes	Yes	Y	
Indexes of DEFINE NO table spaces This parameter indicates whether to include indexes when exploding a table space that was defined with DEFINE NO and does not yet exist. Even though the table space does not exist, if the index exists, this setting allows Db2 Automation Expert to process the index.	Yes	Yes	N	

Parameter	Required?	Discovered?	Default value	Your value
Enable administrative task scheduler support This parameter indicates whether to enable Db2 Automation Expert support for Db2 administrative task scheduler. This support is available only if the Db2 administrative task scheduler is installed.	Yes	Yes	N	
Administrative task scheduler max history The number of task executions that Db2 Automation Expert retrieves from the Db2 administrative task scheduler when a task execution status list is viewed. Db2 Automation Expert uses this value only to determine how many task executions to retrieve. It does not define the Maximum history parameter to the Db2 administrative task scheduler. This parameter is used only if the Db2 administrative task scheduler product is installed and enabled.	Yes	Yes	0010	
Administrative task scheduler userid A user ID that is used when scheduling a Db2 administrative task scheduler task. This value is only applicable when Enable administrative task scheduler is set to Y. The value can be a TSO user ID or DFLTUID. DFLTUID tells the Db2 administrative task scheduler to use its default user ID. Any user ID that is entered here, including the default user ID, must have at least MONITOR1 privileges.	No	Yes	None	
Altered object adjustment Specify how to process objects that were defined in an object profile as non-partitioned, but have since been altered to be partitioned objects. This value is required. Valid values are A (all) and P (partitioned).	Yes	Yes	A	

Parameter	Required?	Discovered?	Default value	Your value
Segment size for repository table spaces The segment size (number of pages per segment) for the Db2 Automation Expert repository segmented table spaces. Valid values are multiples of 4 in the range of 4 - 64.	Yes	No	4	
Event notifications This value controls whether a user is notified when a selected event occurs. Valid values are OFF and ON. Selected events include when a batch job build begins and when a batch job build ends. This value is required.	Yes	No	OFF	
Sysout Class for SMTP output This value is defined as part of the JES set up on the LPAR for this subsystem ID. Ask your systems programmer for a valid value for your site. This value is ignored unless **Event notifications** events is set to Y.	Yes	No	A	
z/OS Host Name This parameter is a JES node (system name). This is the JES name of the LPAR for the current subsystem ID. This name can be located in any job log, or ask your systems programmer. This value is ignored unless **Event notifications** is set to Y.	Yes	No	JESNODE	
SMTP task name This parameter is the SMTP task name used for sending and receiving event notification email notifications. This value is ignored unless **Event notifications** is set to Y.	Yes	No	SMTPTASK	
Automation Expert Shared Profile Sort Parameters				
Primary sort work space This parameter indicates an override amount for the calculated primary sort work space, specified in cylinders.	No	Yes	None	

Parameter	Required?	Discovered?	Default value	Your value
Secondary sort work space This parameter indicates an override amount for the calculated secondary sort work space, specified in cylinders.	No	Yes	None	
Number of sort work DDs This parameter indicates an override amount for the calculated number of sort work DD statements.	No	Yes	None	
Automation Expert Stored Procedure Parameters				
Maintenance Window PROC member This parameter specifies two values for the Maintenance Window Enactor stored procedure. It is the PROC name and the data set member name of the JCL that runs the address space for the Maintenance Window Enactor stored procedure. It is recommended that this PROC name be the same as the associated WLM environment name. If this value is not specified, and the Create Maintenance Window Enactor WLM PROC step is selected, the specified WLM environment name will be the PROC name.	No	No	None	
Maintenance Window Enactor WLM environment This is the WLM environment name for the Maintenance Window Enactor stored procedure. This name is defined to WLM in WLM panels as well as in the stored procedure DDL. If it references an already existing WLM environment, the Create Maintenance Window Enactor WLM PROC step is not required. If the Create Maintenance Window Enactor WLM PROC step is selected, it is recommended that the WLM PROC name not be specified. Then, this value will default to the PROC name.	No	No	WLMENV	

Parameter	Required?	Discovered?	Default value	Your value
Maintenance Window Enactor WLM NUMTCB This parameter specifies the maximum number of concurrent stored procedures that can be active at one time in the Maintenance Window Enactor WLM address space. This is required when the Maintenance Window Enactor stored procedure is used.	No	No	8	
Notifications PROC member This parameter specifies two values for the notifications stored procedure It is the PROC name and the data set member name of the JCL that runs the address space for the notifications stored procedure. It is recommended that this PROC name be the same as the associated WLM environment name. If this value is not specified, and the create notifications address space step is selected, the specified WLM environment name will be the PROC name	No	No	None	
Notifications WLM environment This is the WLM environment name for the notifications stored procedure. This name is defined to WLM in WLM panels as well as in the stored procedure DDL. If it references an already existing WLM environment, the create notifications WLM PROC step is not needed. If the create notifications WLM PROC step is selected, it is recommended that the WLM PROC name not be specified. Then, this value will be the PROC name.	No	No	WLMENV	
Notifications WLM NUMTCB This parameter specifies the maximum number of concurrent stored procedures that can be active at one time in the notifications WLM address space. This is required when a notifications WLM address space job is being generated.	No	No	8	
Automation Expert Smart Automation Parameters				

Parameter	Required?	Discovered?	Default value	Your value
Rebuild entire symptom registry This parameter specifies whether to add new symptoms to the existing symptom registry or to remove the existing symptoms from the symptom registry and rebuild the entire registry. Note that removing existing symptoms also removes all customizations of symptom priorities.	Yes	No	N	
Image copy TEMPLATEDD Parameters				
Image copy TEMPLATEDD data set This parameter specifies the TEMPLATEDD data set used for global image copy TEMPLATEDD values. It must be a PDS.	No	Yes	None	
Image copy TEMPLATEDD member name This parameter specifies the member where the TEMPLATEDD values for image copy are defined.	No	Yes	None	
LP TEMPLATEDD template name This parameter specifies the name of the TEMPLATE statement within the image copy member where the template information for the local primary copy data set is defined. This value immediately follows the TEMPLATE keyword. See the Db2 Utility Guide and Reference for TEMPLATE syntax information.	No	Yes	None	
LB TEMPLATEDD template name This parameter specifies the name of the TEMPLATE statement within the image copy member where the template information for the local backup copy data set is defined. This value immediately follows the TEMPLATE keyword. See the Db2 Utility Guide and Reference for TEMPLATE syntax information.	No	Yes	None	

Parameter	Required?	Discovered?	Default value	Your value
RP TEMPLATEDD template name This parameter specifies the name of the TEMPLATE statement within the image copy member where the template information for the remote primary copy data set is defined. This value immediately follows the TEMPLATE keyword. See the Db2 Utility Guide and Reference for TEMPLATE syntax information.	No	Yes	None	
RB TEMPLATEDD template name This parameter specifies the name of the TEMPLATE statement within the image copy member where the template information for the remote backup copy data set is defined. This value immediately follows the TEMPLATE keyword. See the Db2 Utility Guide and Reference for TEMPLATE syntax information.	No	Yes	None	
FlashCopy® TEMPLATEDD template name This parameter specifies the name of the TEMPLATE statement within the image copy member where the template information for the FlashCopy data set is defined. This value immediately follows the TEMPLATE keyword. See the Db2 Utility Guide and Reference for TEMPLATE syntax information.	No	Yes	None	
COPYTOCOPY TEMPLATEDD Parameters				
COPYTOCOPY TEMPLATEDD data set This parameter specifies the TEMPLATEDD data set used for global COPYTOCOPY TEMPLATEDD values. It must be a PDS.	No	Yes	None	
COPYTOCOPY TEMPLATEDD member name This parameter specifies the member where the TEMPLATEDD values for COPYTOCOPY are defined.	No	Yes	None	

Parameter	Required?	Discovered?	Default value	Your value
LP TEMPLATEDD template name This parameter specifies the name of the TEMPLATE statement within the COPYTOCOPY member where the template information for the local primary COPYTOCOPY data set is defined. This value immediately follows the TEMPLATE keyword. See the Db2 Utility Guide and Reference for TEMPLATE syntax information.	No	Yes	None	
LB TEMPLATEDD template name This parameter specifies the name of the TEMPLATE statement within the COPYTOCOPY member where the template information for the local backup COPYTOCOPY data set is defined. This value immediately follows the TEMPLATE keyword. See the Db2 Utility Guide and Reference for TEMPLATE syntax information.	No	Yes	None	
RP TEMPLATEDD template name This parameter specifies the name of the TEMPLATE statement within the COPYTOCOPY member where the template information for the remote primary COPYTOCOPY data set is defined. This value immediately follows the TEMPLATE keyword. See the Db2 Utility Guide and Reference for TEMPLATE syntax information.	No	Yes	None	
RB TEMPLATEDD template name This parameter specifies the name of the TEMPLATE statement within the COPYTOCOPY member where the template information for the remote backup COPYTOCOPY data set is defined. This value immediately follows the TEMPLATE keyword. See the Db2 Utility Guide and Reference for TEMPLATE syntax information.	No	Yes	None	
REORG TABLESPACE TEMPLATEDD Parameters				

Parameter	Required?	Discovered?	Default value	Your value
REORG TABLESPACE TEMPLATEDD data set This parameter specifies the TEMPLATEDD data set used for global REORG TABLESPACE TEMPLATEDD values. It must be a PDS.	No	Yes	None	
REORG TABLESPACE TEMPLATEDD member name This parameter specifies the member where the TEMPLATEDD values for REORG TABLESPACE are defined.	No	Yes	None	
LP TEMPLATEDD template name This parameter specifies the name of the TEMPLATE statement within the REORG TABLESPACE member where the template information for the local primary copy data set is defined. This value immediately follows the TEMPLATE keyword. See the Db2 Utility Guide and Reference for TEMPLATE syntax information.	No	Yes	None	
LB TEMPLATEDD template name This parameter specifies the name of the TEMPLATE statement within the REORG TABLESPACE member where the template information for the local backup copy data set is defined. This value immediately follows the TEMPLATE keyword. See the Db2 Utility Guide and Reference for TEMPLATE syntax information.	No	Yes	None	
RP TEMPLATEDD template name This parameter specifies the name of the TEMPLATE statement within the REORG TABLESPACE member where the template information for the remote primary copy data set is defined. This value immediately follows the TEMPLATE keyword. See the Db2 Utility Guide and Reference for TEMPLATE syntax information.	No	Yes	None	

Parameter	Required?	Discovered?	Default value	Your value
RB TEMPLATEDD template name This parameter specifies the name of the TEMPLATE statement within the REORG TABLESPACE member where the template information for the remote backup copy data set is defined. This value immediately follows the TEMPLATE keyword. See the Db2 Utility Guide and Reference for TEMPLATE syntax information.	No	Yes	None	
DISCARD TEMPLATEDD template name This parameter specifies the name of the TEMPLATE statement within the REORG TABLESPACE member where the template information for the discard data set is defined. This value immediately follows the TEMPLATE keyword. See the Db2 Utility Guide and Reference for TEMPLATE syntax information.	No	Yes	None	
SYSPUNCH TEMPLATEDD template name This parameter specifies the name of the TEMPLATE statement within the REORG TABLESPACE member where the template information for the SYSPUNCH data set is defined. This value immediately follows the TEMPLATE keyword. See the Db2 Utility Guide and Reference for TEMPLATE syntax information.	No	Yes	None	
SYSREC TEMPLATEDD template name This parameter specifies the name of the TEMPLATE statement within the REORG TABLESPACE member where the template information for the SYSREC data set is defined. This value immediately follows the TEMPLATE keyword. See the Db2 Utility Guide and Reference for TEMPLATE syntax information.	No	Yes	None	

Parameter	Required?	Discovered?	Default value	Your value
FlashCopy TEMPLATEDD template name This parameter specifies the name of the TEMPLATE statement within the REORG TABLESPACE member where the template information for the FlashCopy data set is defined. This value immediately follows the TEMPLATE keyword. See the Db2 Utility Guide and Reference for TEMPLATE syntax information.	No	Yes	None	
REORG INDEX TEMPLATEDD Parameters				
REORG INDEX TEMPLATEDD data set This parameter specifies the TEMPLATEDD data set used for global REORG INDEX TEMPLATEDD values. It must be a PDS.	No	Yes	None	
REORG INDEX TEMPLATEDD member name This parameter specifies the member where the TEMPLATEDD values for REORG INDEX are defined.	No	Yes	None	
FlashCopy TEMPLATEDD template name This parameter specifies the name of the TEMPLATE statement within the REORG INDEX member where the template information for the FlashCopy data set is defined. This value immediately follows the TEMPLATE keyword. See the Db2 Utility Guide and Reference for TEMPLATE syntax information.	No	Yes	None	
REBUILD INDEX TEMPLATEDD Parameters				
REBUILD INDEX TEMPLATEDD data set This parameter specifies the TEMPLATEDD data set used for global REBUILD INDEX TEMPLATEDD values. It must be a PDS.	No	Yes	None	
REBUILD INDEX TEMPLATEDD member name This parameter specifies the member where the TEMPLATEDD values for REBUILD INDEX are defined.	No	Yes	None	

Parameter	Required?	Discovered?	Default value	Your value
FlashCopy TEMPLATEDD template name This parameter specifies the name of the TEMPLATE statement within the REBUILD INDEX member where the template information for the FlashCopy data set is defined. This value immediately follows the TEMPLATE keyword. See the Db2 Utility Guide and Reference for TEMPLATE syntax information.	No	Yes	None	
Export Import Parameters				
Export profile creator name This parameter specifies the creator name. It is used in the filter that determines the profiles that are exported in the generated export job. This value can contain Db2 wild card characters (%,_). * is equivalent to %.	Yes	No	%	
Export profile name This parameter specifies the profile name. It is used in the filter that determines the profiles that are exported in the generated export job. This value can contain Db2 wild card characters (%,_). * is equivalent to %.	Yes	No	%	
Export profile type This parameter specifies the profile type to be exported. Valid values are J (job profiles), O (object profiles), E (exception profiles), and U (utility profiles). **Note:** Exporting a job profile also exports the included object, exception, and utility profiles.	Yes	No	J	

Parameter	Required?	Discovered?	Default value	Your value
Export data set This parameter specifies the data set name that is used as the recipient of the exported profiles. This same data set name is used as the input to the Import profiles job. This data set must be a physically sequential (PS) data set with LRECL = 4096. If the data set name is longer than 42 characters, it must be enclosed in quotation marks. The default value is The data set can be a PDS if a member name is also specified in the Export member name parameter.	Yes	No	DAJ.EXPORT.DSN	
Export member name This parameter specifies the member name of the export/import data set when that data set is a PDS.	No	No	None	
Import profile creator name This parameter specifies the creator name to be used for the profiles being imported. It replaces the profile creator name(s) that were exported. If not specified, the profile creator names that were exported remain the same.	No	No	None	
Import update option This parameter specifies the update option to be used with the imported profiles. If this value is not specified, the update options of the exported profiles remain the same after import. Valid values are U (any user can view or update or the profile), V (only the profile creator can update the profile, but any user can view it), and N (only the profile creator can view or update the profile).	No	No	None	
Import replace option This parameter indicates whether a previously existing profile with the same name and type should be replaced with the imported profile. Valid values are Y (replace existing profiles) and N (keep existing profiles).	Yes	No	N	

LPAR Parameters section

Description

This section contains LPAR parameters. All parameters are required. During the customization process, you will enter these values on panel CCQPLPR.

Parameter	Required?	Discovered?	Default value	Your value
Job Entry Subsystem (JES)				
JES version The version of the job entry system (JES) that is installed on the LPAR.	Yes	No	2	
ISPF Libraries - common				
Message library The data set name of the ISPF message library.	Yes	Yes	ISP.SISPMENU	
ISPF table input library The data set name of the ISPF table input library.	Yes	Yes	ISP.SISPTENU	
Language Environment® Libraries - common				
Load library The data set name of the Language Environment load library.	Yes	No	CEE.SCEELLIB	
Automation Expert LPAR Parameters				
Automation Expert PROCLIB This parameter specifies the data set name where you want to store JCL procedures (PROCS) used with Db2 Automation Expert. This data set is used if the job tracking started task will be created or if a WLM address space will be created for Db2 Automation Expert stored procedures.	No	No	DAJ.PROCLIB	
Job tracking started task PROC member This parameter specifies the member name of the job tracking started task. The member name can be the same name as the job tracking started task ID.	No	No	DAJPROC	
Job tracking started task Parms data set This parameter specifies the data set where the job tracking started task parameters are located. The data set can be sequential or a PDS. If it is a PDS, the member name must be included in parentheses.	No	No	DAJ.PARMLIB (DAJPARM)	

Parameter	Required?	Discovered?	Default value	Your value
Job tracking started task ID This parameter specifies the name of the job tracking started task. Use a unique name for each job tracking task that will run on the LPAR. To prevent confusion, specify a name other than the name of a Db2 subsystem. **Tip:** This parameter can be the same as the job tracking started task PROC member name.	No	No	DAJT	
Job tracking started task AUTHID This parameter specifies the authorization ID of the job tracking started task and will be used to connect to Db2 when saving data to the repository. This ID must be a valid RACF user that can insert and update rows in the job tracking tables. This user ID cannot be a RACF GROUP name, but must be at the RACF USER level. You can use RACF STARTED class profiles that specify a RACF user and group name to assign to the started task. If you use RACF STARTED class profiles that specify a RACF user and group name, do not specify this parameter.	No	No	DB2USER	
Utility Generation address space PROC member This parameter specifies the member name of the Utility Generation address space procedure name required for Db2 Automation Expert APIs.	No	No	DAJPRUTG	
Utility Execution address space PROC member This parameter specifies the member name of the Utility Execution address space proc name required for Db2 Automation Expert APIs.	No	No	DAJPRUTX	

Db2 version migration and fallback

When a Db2 subsystem that is being used with Db2 Automation Expert is migrated to a later version, or must be reverted to a prior version, follow these steps.

After your subsystem has been migrated to a later version of Db2, you can port your repository statistics to the new subsystem. For example, you can port the statistics repository from a Db2 12 subsystem to a Db2 13 subsystem. Information about migration is also provided in this topic.

Db2 version migration and fallback instructions

These steps must be performed when a Db2 subsystem that has been customized for use with Db2 Automation Expert is migrated to a later Db2 version, or must be reverted to a previous Db2 version.

About this task

For member names described in this procedure, *ss* is a job sequence number and *dd* is a set of alphanumeric characters assigned by Tools Customizer. Refer to "Worksheets: Gathering required DD names" on page 10 for additional information.

Procedure

1. Start Tools Customizer.
2. Run the Discover command to ensure that the Tools Customizer datastore is up to date.
3. For each Db2 subsystem that has been customized:
   a) On the Customizer Workplace panel, edit the Db2 entry.
   b) On the **Db2 Parameters** panel, change the Mode and Level number fields to the new Db2 mode and level. Change other Db2-specific fields, such as library or BSDS names, as required. Save and exit the **Db2 Parameters** panel.
   c) On the Customizer Workplace panel, regenerate the customization jobs for the subsystem.
   d) Submit the SSID-specific update control file job (member name *ss*CF2*dd*).
   e) For Db2 migrations only, submit jobs to update the repository (member name *ss*DD**dd).
      Skip this step for fallback.
   f) For fallback only, submit the job to free previously bound plans and packages from the fallback subsystem (member name *ss*FREE*dd*).
   g) Submit the bind job (member name *ss*#BND*dd*).

Porting repository statistics from one Db2 subsystem to another

You can use the DAJRSTAT job that is provided in SDAJSAMP to unload Db2 Automation Expert repository RUNSTATS statistics from one Db2 subsystem and load another Db2 subsystem with the statistics.

About this task

You can also use this job to migrate statistics between Db2 versions; for example, you can migrate the statistics repository from a Db2 12 subsystem to a Db2 V13 subsystem.

Procedure

- Edit and run the DAJRSTAT sample job; the instructions are contained in the member.

  Information about the number of unloaded repository RUNSTATS statistics rows is displayed during the unload phase. Information is also provided about the number of RUNSTATS statistics rows that are loaded during the load phase.

Chapter 3. Starting and preparing Tools Customizer for use

Use the provided REXX EXEC to start Tools Customizer. The first time that you use Tools Customizer, you must modify the settings that Tools Customizer uses to customize Db2 Automation Expert.

Starting Tools Customizer

Start Tools Customizer by running a REXX EXEC from the ISPF Command Shell panel.

Before you begin
Tools Customizer must be SMP/E installed. You must know the high-level qualifier of where the Tools Customizer libraries reside. The high-level qualifier is considered to be all the segments of the data set name except the lowest-level qualifier, which is SCCQEXEC.

> ⚠️ **Attention:** Ensure that Tools Customizer load libraries are not APF authorized. APF authorizing Tools Customizer libraries results in an abend.

About this task
To run the REXX EXEC, you must either change the placeholder in the EXEC for the high-level qualifier of the Tools Customizer EXEC library or pass the high-level qualifier as a parameter when you run the EXEC. The REXX EXEC is in the CCQTCZ member of the EXEC library.

Procedure
1. Optional: Change the placeholder for the high-level qualifier in the REXX EXEC:
   a) Find the EXEC library data set for Tools Customizer. The name of the data set is *high_level_qualifier*.SCCQEXEC.

   b) Edit data set member CCQTCZ and replace the `<TCZ  HLQ>` string with the high-level qualifier of the EXEC library data set.
   For example, if the name of the Tools Customizer EXEC library is CCQTCZ.USABSAND.SCCQEXEC, replace `<TCZ  HLQ>` with `CCQTCZ.USABSAND`.

   You have to change the placeholder for the high-level qualifier only once. When you run the REXX EXEC, you do not have to pass the high-level qualifier as a parameter.
2. Run the REXX EXEC (CCQTCZ):
   a) From the **ISPF Primary Option Menu**, select option 6.

   The **ISPF Command Shell** panel is displayed.

   b) Specify the EX command to run the REXX EXEC.
   For example, if the Tools Customizer EXEC library is CCQTCZ.USABSAND.SCCQEXEC and you changed the placeholder for the high-level qualifier in the REXX EXEC, specify:

   ```
   EX 'CCQTCZ.USABSAND.SCCQEXEC(CCQTCZ)'
   ```

   If you did not change the placeholder for the high-level qualifier in the REXX EXEC, specify:

   ```
   EX 'CCQTCZ.USABSAND.SCCQEXEC(CCQTCZ)' 'CCQTCZ.USABSAND'
   ```

   You can also specify a trace data set name and a user profile when you run the REXX EXEC.

- The default trace data set name is *USERID*.CCQ.TRACE. To specify a different trace data set name, append the trace data set name to the command. For example, to specify a trace data set name of CCQTCZ.MYTRACE, enter:

```
EX 'CCQTCZ.USABSAND.SCCQEXEC(CCQTCZ)' 'CCQTCZ.USABSAND, CCQTCZ.MYTRACE'
```

- To specify a user profile other than your own, append the user profile name to the command. For example, to specify a user profile of SHRPROF, enter:

```
CCQTCZ.USABSAND.SCCQEXEC(CCQTCZ)' 'CCQTCZ.USABSAND, ,CCQTCZ.SHRPROF'
```

Tools Customizer will use the settings from the specified profile. This profile will be updated when you exit Tools Customizer, but your own profile will remain unchanged.

Results
The **IBM Customizer Tools for z/OS** main menu panel is displayed.

What to do next
If you are running Tools Customizer for the first time, you must modify the Tools Customizer user settings. If you have already set the Tools Customizer user settings, either customize or recustomize Db2 Automation Expert.

Modifying Tools Customizer user settings

Before you can customize Db2 Automation Expert with Tools Customizer, you must review the settings that Tools Customizer uses. You might have to change the default values to suit your environment. In most cases, you can change the Tools Customizer values at any time. For example, after you have customized Db2 Automation Expert and are customizing a different product or solution pack, you might have to change the settings.

Procedure

1. On the **IBM Tools Customizer for z/OS** main panel (CCQPHME), specify option 0, **User settings for Tools Customizer**.

   The **Tools Customizer Settings** panel (CCQPSET) is displayed, as shown in the following figure:

```
CCQPSET              Tools Customizer Settings                  14:03:51
Command ===>
Enter the settings for customizing a product or press End to save and exit.

Commands: SAVE  OPTIONS

 Product Customization Settings

  *Customization library qualifier . . DB2TOOL.PRODUCT.CUST
     Volume serial  . . . . . . . . .
  *Use DB2 group attach  . . . . . . . YES (YES/NO)

 Tools Customizer Library Settings

  *Metadata library . . . . . DB2TOOL.CCQ110.SCCQDENU
  *Discover output data set . DB2TOOL.CCQ110.DISCOVER
     Volume serial  . . . . .
  *Data store data set  . . . DB2TOOL.CCQ110.DATASTO1
     Volume serial  . . . . .

 User Job Card Settings for Customization Jobs

 ===> //        JOB
(ACCOUNT),'NAME',
```

*Figure 1. The **Tools Customizer Settings** panel (CCQPSET)*

Note: An asterisk next to a field indicates that the field is required.

2. Review the values for the following required fields. Use the default value or specify your own value.

You must have appropriate READ and WRITE access to the data sets that are specified.

Customization library qualifier

The high-level qualifier that is used as the prefix for the customization library. The customization library is a data set in which the generated jobs to customize Db2 Automation Expert are stored. WRITE access to this qualifier is required.

For each product to be customized, the first value that is specified for the qualifier is always used, even if you change it after you have generated the customization jobs. For example, if you customize a product and then specify a new qualifier for recustomization, although the new qualifier is saved and displayed, the original value is used.

To maintain multiple instances of Tools Customizer, specify a unique customization library qualifier for each instance of Tools Customizer.

Data set names that exceed 42 characters must be enclosed in single quotation marks (').

Volume serial

The volume name in which the customization library will reside. If you don't specify a volume name, it will be assigned by the system.

Use DB2 group attach

Determines the value that is used in the CONNECT statements in the generated customization jobs. Specify YES for data sharing environments, which causes the group attach name to be used. Specifying NO, in most cases, causes the SSID to be used in the Db2 CONNECT statement.

Important: This field has no effect when you are customizing a product on a Db2 subsystem that is not a member of a data sharing group. In this case, the Db2 subsystem ID (SSID) is always used in the CONNECT statements in the generated customization jobs.

When you are customizing a product on a Db2 subsystem that is a member of a data sharing group, how the Db2 subsystem is defined and the value of the **Use DB2 group attach** field determines the value that is used in the CONNECT statements in the generated jobs. The following table shows whether the SSID or the group attach name is used:

*Table 3. The effect of the value of the **Use DB2 group attach** field in a data sharing environment*

Db2 subsystem definition	Value of the Use DB2 group attach field	Value that is used in the CONNECT statements
The Db2 subsystem is defined with an SSID.	Yes	Group attach name
	No	SSID[1]
The Db2 subsystem is not defined with an SSID.	Yes or No	Group attach name

Note 1: If you generate jobs for multiple Db2 subsystems that are defined with an SSID and belong to the same data sharing group, the SSID of the first Db2 subsystem that is selected is used.

For example, assume that on the **Customizer Workplace** panel, you generated jobs for the following Db2 subsystems:

- DB2C, which is a stand-alone Db2 subsystem
- DB2A, which is a Db2 subsystem that is a member of data sharing group DSG1
- A Db2 subsystem that was not defined with an SSID that is a member of data sharing group DSGA

The following figure shows how these Db2 entries might be listed on the **Customizer Workplace** panel:

```
Associated DB2 Entries and Parameter Status
  Line commands: G - Generate jobs  E - Edit  B - Browse  C - Copy  R - Remove
  Cmd SSID GrpAttch Lvl Mode User ID Date       Status             Message
      DB2C  --      121 NFM  SYSADM  2017/11/09 Ready to Customize
      DB2A  DSG1    121 NFM  SYSADM  2017/11/09 Ready to Customize
      --    DSGA    121 NFM  SYSADM  2017/11/09 Ready to Customize
---------------------------- End of DB2 entries ----------------------------
```

The following table shows which values are used in the CONNECT statements in the generated
jobs, based on the value of the **Use DB2 group attach** field.

Table 4. Value that is used in the CONNECT statements in the generated jobs			
SSID	**GrpAttch**	**Value of the Use DB2 group attach field**	**Value that is used in the CONNECT statements**
DB2C	--	Yes	SSID
		No	SSID
DB2A	DSG1	Yes	Group attach name
		No	SSID
--	DSGA	Yes	Group attach name
		No	Group attach name

Tools Customizer metadata library
> The name of the data set that contains the metadata that is used to display the Db2 and LPAR
> parameters. The parameters that are displayed on the **LPAR Parameters** panel and the **DB2
> Parameters** panel depend on the parameters that you define and the tasks and steps that you
> select on the **Product Parameters** panel for the product that you are customizing. For example,
> the Db2 parameters that are required, based on the selected tasks and steps, are displayed on the
> **DB2 Parameters** panel, and you can edit them. If they are not required, they are not displayed.
> Read access to this data set is required. Data set names that exceed 42 characters must be
> enclosed in single quotation marks (').

Discover output data set
> The name of the data set in which the output from the Db2 Automation Expert Discover EXEC
> is stored. Each product has its own Discover EXEC. The Discover EXEC retrieves the product,
> LPAR, and Db2 parameters from a previously customized product. Write access to this data set is
> required. Data set names that exceed 42 characters must be enclosed in single quotation marks
> (').

> **Volume serial**
>> The volume name in which the discover output data set will reside. If you don't specify a
>> volume name, it will be assigned by the system.

Data store data set
> The name of the data set where Tools Customizer stores information about product, LPAR, and Db2
> parameter values. Information about which products are associated with which Db2 entries (Db2
> subsystems, Db2 group attach names, and Db2 data sharing members) is also stored in this data
> set. Data set names that exceed 42 characters must be enclosed in single quotation marks ('). The
> specified data store data set can be used with only one invocation of Tools Customizer at a time.
> Data set names that exceed 42 characters must be enclosed in single quotation marks (').

> **Volume serial**
>> The volume name in which the data store data set will reside. If you don't specify a volume
>> name, it will be assigned by the system.

User job card settings for customization jobs
> The job card information to be inserted into the generated jobs for customizing a product. The
> default value is the job statement information from the **ISPF Batch Selection** panel.

The first line of the job card automatically begins with the following information:

```
//        JOB
```

where characters 3 - 10 are reserved by Tools Customizer for the job name and includes a blank space after JOB. This name cannot be edited. Information that you specify on the first line of the job card cannot exceed 57 characters. This character limit includes a continuation character. All other lines of the job card cannot exceed 72 characters.

3. Press End to save and exit.

If the Discover output data set and the data store data set that you specified do not exist, Tools Customizer creates them.

Important: If the ISPF sessions unexpectedly ends before you exit Tools Customizer, the fields on the **Tools Customizer Settings** panel (CCQPSET) will be repopulated with default values, and you will be required to review them or specify new values again.

Results
The values are saved, and the **IBM Tools Customizer for z/OS** main menu panel (CCQPHME) is displayed again.

What to do next
You are ready to customize or recustomize Db2 Automation Expert or to change parameter settings.

Changing display options

You can choose which types of information to show on Tools Customizer panels. You can also copy your user profile to another data set so that it can be shared with other users.

About this task
By using the OPTIONS command, you can choose to show or hide the following information on Tools Customizer panels:

- The instructions on all panels

- The Product to Customize section on the **Customizer Workplace** panel (CCQPWRK)

- The Usage Notes section on the **Product Parameters** panel (CCQPPRD)

The OPTIONS command also allows you to copy your user profile to another data set so that it can be shared with other users. By sharing a copy of your profile, other uses can customize the same products that you initially customized or started to customize.

Procedure

1. On any Tools Customizer panel, issue the OPTIONS command.

The **Miscellaneous Options** panel (CCQPOPT) is displayed, as shown in the following figure. By default, all panel display options are preselected with a slash (/), which means that they will be displayed.

```
CCQPOP1                        Miscellaneous Options
Command ===>

_____


Enter a / to select options and press Enter. To cancel, press End.

Panel Display Options
  /   Show the panel instructions
  /   Show the Product to Customize section
  /   Show the Usage Notes section

User Profile Sharing Option
  _   Copy user profile to another data set
```

*Figure 2. The **Panel Display Options** panel (CCQPOPT)*

2. To hide the panel instructions, the Product to Customize section, or the Usage Notes section, remove the slash from the appropriate option or options.

3. To copy your user profile to another data set so that it can be shared with other users:

   a) Type a slash in the **Copy user profile to another data set** field and press Enter.

   b) Specify the fully qualified name of the data set into which you want to copy the current user profile.

   If the data set name exceeds 42 characters, enclose the name in quotation marks. ALTER or UPDATE authorization to this data set is required.

   c) Optionally specify a volume name in which the user profile data set will reside. If you don't specify a volume name, it will be assigned by the system.

4. Press Enter to save your changes.

Chapter 4. Customizing Db2 Automation Expert

Using Tools Customizer to customize Db2 Automation Expert consists of identifying the product to customize; defining any required Db2 Automation Expert, LPAR, and Db2 parameters; generating the customization jobs; and submitting the jobs.

Customization roadmaps describe the steps that you must complete to customize Db2 Automation Expert. Separate roadmaps are provided for the three most common types of customizations.

Use the following table to determine which roadmap corresponds to your environment.

Table 5. Customization roadmaps

Environment description	Roadmap
You do not have a customized version of Db2 Automation Expert, and you need to customize it for the first time.	"Roadmap: Customizing Db2 Automation Expert for the first time" on page 73
You have already customized a version of Db2 Automation Expert, and you want to use the same parameter values to customize a different version.	"Roadmap: Customizing a new version of Db2 Automation Expert from a previous customization" on page 74
You have a customized version of of Db2 Automation Expert, but you want to change one or more parameter values.	"Roadmap: Recustomizing Db2 Automation Expert" on page 75

Roadmap: Customizing Db2 Automation Expert for the first time

This roadmap lists and describes the steps that are required to customize Db2 Automation Expert for the first time.

If you are customizing a previous version of Db2 Automation Expert, see "Roadmap: Customizing a new version of Db2 Automation Expert from a previous customization" on page 74.

Before you complete these steps, ensure that the following prerequisites have been met:

- All of the product customization steps that must be done before Tools Customizer is started are complete.
- The LPAR ISPF libraries that are required to submit the jobs are known.
- Tools Customizer is started.
- The Tools Customizer settings have been reviewed or modified, and saved.

Complete the steps in the following table to customize Db2 Automation Expert for the first time.

Table 6. Steps for customizing Db2 Automation Expert for the first time

Step	Description	Instructions
1	Specify the product metadata library for the product that you want to customize. The name of this library is *hlq*.SDAJDENU.	"Specifying the metadata library for the product to customize" on page 76
2	Create new Db2 entries and associate them with Db2 Automation Expert.	"Creating and associating Db2 entries" on page 79
3	Define the required parameters.	"Defining parameters" on page 81
4	Generate the customization jobs for the product or for the Db2 entries on which Db2 Automation Expert is ready to be customized.	"Generating customization jobs" on page 87

Table 6. Steps for customizing Db2 Automation Expert for the first time (continued)

Step	Description	Instructions
5	Submit the generated customization jobs.	"Submitting customization jobs" on page 88

The following table lists some of the common administrative tasks that you might need to do during the customization process.

Table 7. Administrative tasks

Description	Instructions
Browse the different types of parameters.	"Browsing parameters" on page 89
Copy an existing Db2 entry to the list of Db2 entries on which Db2 Automation Expert can be customized.	"Copying Db2 entries" on page 90
Remove one or more Db2 entries from the associated list.	"Removing Db2 entries" on page 91
Delete one or more Db2 entries from the master list.	"Deleting Db2 entries" on page 92
Display a list of customization jobs that have been previously generated.	"Displaying customization jobs" on page 92
Maintain the customization jobs in the customization library.	"Maintaining customization jobs" on page 92

Roadmap: Customizing a new version of Db2 Automation Expert from a previous customization

This roadmap lists and describes the steps for customizing a new version of Db2 Automation Expert based on the existing customization values of a previous version of the same product.

Use this roadmap even if the previous version of Db2 Automation Expert was not customized by using Tools Customizer.

Before you complete these steps, ensure that the following prerequisites have been met:

- All of the product customization steps that must be done before Tools Customizer is started are complete.
- Tools Customizer is started.
- The Tools Customizer settings have been reviewed or modified, and saved.

Complete the steps in the following table to customize a new version of Db2 Automation Expert from a previous customization.

Table 8. Steps for customizing a new version of Db2 Automation Expert from a previous customization

Step	Description	Instructions
1	Specify the product metadata library for the product that you want to customize. The name of this library is *hlq*.SDAJDENU.	"Specifying the metadata library for the product to customize" on page 76
2	Use the Db2 Automation Expert Discover EXEC to discover information about the version of Db2 Automation Expert that you previously customized manually.	"Discovering Db2 Automation Expert information automatically" on page 77

Table 8. Steps for customizing a new version of Db2 Automation Expert from a previous customization (continued)

Step	Description	Instructions
3	Define the required parameters.	"Defining parameters" on page 81
4	Generate the customization jobs for the product or for the Db2 entries on which Db2 Automation Expert is ready to be customized.	"Generating customization jobs" on page 87
5	Submit the generated customization jobs.	"Submitting customization jobs" on page 88

The following table lists some of the common administrative tasks that you might need to do during the customization process.

Table 9. Administrative tasks

Description	Instructions
Browse the different types of parameters.	"Browsing parameters" on page 89
Copy an existing Db2 entry to the list of Db2 entries on which Db2 Automation Expert can be customized.	"Copying Db2 entries" on page 90
Remove one or more Db2 entries from the associated list.	"Removing Db2 entries" on page 91
Delete one or more Db2 entries from the master list.	"Deleting Db2 entries" on page 92
Display a list of customization jobs that have been previously generated.	"Displaying customization jobs" on page 92
Maintain the customization jobs in the customization library.	"Maintaining customization jobs" on page 92

Roadmap: Recustomizing Db2 Automation Expert

This roadmap lists and describes the steps to change parameter values and regenerate customization jobs for Db2 Automation Expert after you have customized it for the first time.

The new customization jobs will replace the customization jobs that were previously generated and stored in the customization library. Part of the recustomization process includes selecting or deselecting optional tasks or steps, changing the definitions of parameters that have already been defined, or both. Use the method in this roadmap instead of deleting customization jobs from the customization library.

Before you complete these steps, ensure that the following prerequisites have been met:

- All of the product customization steps that must be done before Tools Customizer is started are complete.
- Tools Customizer is started.

Complete the steps in the following table to recustomize Db2 Automation Expert.

Table 10. Required steps for recustomizing Db2 Automation Expert

Step	Description	Instructions
1	Specify the product metadata library for the product that you want to recustomize. The name of this library is *hlq*.SDAJDENU.	"Specifying the metadata library for the product to customize" on page 76

Table 10. Required steps for recustomizing Db2 Automation Expert (continued)

Step	Description	Instructions
2	Edit the specific tasks, steps, or parameters that need to be changed.	• "Defining Db2 Automation Expert parameters" on page 81 • "Defining LPAR parameters" on page 83 • "Defining Db2 parameters" on page 85
3	Generate the customization jobs for the product or for the Db2 entries on which Db2 Automation Expert is ready to be customized.	"Generating customization jobs" on page 87
4	Submit the new generated customization jobs.	"Submitting customization jobs" on page 88

The following table lists some of the common administrative tasks that you might need to do during the customization process.

Table 11. Administrative tasks

Description	Instructions
Browse the different types of parameters.	"Browsing parameters" on page 89
Copy an existing Db2 entry to the list of Db2 entries on which Db2 Automation Expert can be customized.	"Copying Db2 entries" on page 90
Remove one or more Db2 entries from the associated list.	"Removing Db2 entries" on page 91
Delete one or more Db2 entries from the master list.	"Deleting Db2 entries" on page 92
Display a list of customization jobs that have been previously generated.	"Displaying customization jobs" on page 92
Maintain the customization jobs in the customization library.	"Maintaining customization jobs" on page 92

Specifying the metadata library for the product to customize

You must specify a metadata library for the product that you want to customize.

About this task

The product metadata library contains the information that determines which tasks, steps, and parameters are required to customize Db2 Automation Expert. This information controls what is displayed on the **Product Parameters** panel, the **LPAR Parameters panel**, and the **DB2 Parameters** panel.

After Db2 Automation Expert has been SMP/E installed, the default name of the product metadata library is *high_level_qualifier*.SDAJDENU, where *high_level_qualifier* is all of the segments of the data set name except the lowest-level qualifier.

Procedure

1. Specify option 1 on the **Tools Customizer for z/OS** panel.

   The **Specify the Product or Pack Metadata Library** panel is displayed. This panel contains a list of the product metadata libraries that you specified most recently. If you are using Tools Customizer for the first time, this list is empty, as shown in the following figure:

```
CCQPHLQ              Specify the Product or Pack Metadata Library        15:12:22
 Command ===>                                              Scroll ===> CSR

 Type the name of the metadata library for the product or the pack in the
 Metadata library field, or select the library in the list of previous
 libraries and press Enter to populate the field. Press Enter to continue.

 The default name of the metadata library after the product or pack has been
 SMP/E installed is <hlq>.SxxxDENU, where <hlq> is the high-level qualifier for
 the product or the pack, and xxx is the three-character prefix for the product
 or the pack.

 Product or pack metadata library . DAJ.ALIAS.SDAJDENU

 Name                        Version  Metadata
 Library

 =>
 =>
 =>
 =>
```

*Figure 3. The **Specify the Metadata Library** panel*

2. Use one of the following methods to specify the product metadata library:

   - Type the name of a fully qualified partitioned data set (PDS) or an extended partitioned data set (PDSE) in the **Product or pack metadata library** field. Double quotation marks (") cannot be used around the name. Single quotation marks (') can be used but are not required. If you are customizing Db2 Automation Expert for the first time, you must use this method.

   - Place the cursor in any column of the Recent Metadata Libraries list, and press Enter to populate **Product or pack metadata library** field. Press Enter again to select product or pack for customization.

Results

If you are customizing Db2 Automation Expert for the first time, the **Run Discover EXEC** panel is displayed. Otherwise, the **Customizer Workplace** panel is displayed.

What to do next

- Complete the steps that correspond to your environment:

  Customizing Db2 Automation Expert for the first time
  Do not run the Db2 Automation Expert Discover EXEC. Press End. The **Customizer Workplace** panel is displayed. If your environment requires associated Db2 entries, ensure that they are created and associated. If your environment does not require associated Db2 entries, skip this step, and edit Db2 Automation Expert parameters.

  Customizing Db2 Automation Expert from a previous or current customization
  Press Enter to run the Db2 Automation Expert Discover EXEC. The **Discover Customized Product Information** panel is displayed. Specify the required information for running the EXEC.

Discovering Db2 Automation Expert information automatically

You can use the Db2 Automation Expert Discover EXEC to discover information from a previous or current customization of Db2 Automation Expert.

About this task

Tip: Using the Db2 Automation Expert Discover EXEC to discover information from a previous or current customization saves time and reduces errors that can occur when parameters are specified manually.

Db2 Automation Expert provides the Discover EXEC that you will run. Therefore, the information that can be discovered depends on Db2 Automation Expert.

Parameter values that are discovered and parameter values that are specified manually are saved in the data store. If parameter values for the product that you want to customize exist in the data store, Tools Customizer issues a warning before existing values are replaced.

Procedure

1. On the **Customizer Workplace** panel, issue the DISCOVER command.

   If you chose to run the Db2 Automation Expert Discover EXEC on the pop-up panel after you specified the product to customize, skip this step.

   Tip: You can run any Tools Customizer primary command by using either of the following methods:

   - Place the cursor on the name of the primary command, and press Enter.
   - Type the primary command name in the command line, and press Enter.

   The **Discover Customized Product Information** panel is displayed, as shown in the following figure:

```
CCQPDSC          Discover Customized Product Information            10:19:51
Command ===>                                          Scroll ===> CSR

For the product you are customizing, the Discover EXEC retrieves product
information from an already customized product. Specify the required
information. To save your information and run the Discover EXEC, issue the RUN
command. To save your information and stay on this panel, issue the SAVE
command. To verify the syntax of your information without saving it, press
Enter. To save and exit, press  End.

Commands: RUN  SAVE

                                                         More:     +
Discover EXEC for Extracting Information from an Already Customized product
 *Discover EXEC library  . . . DAJ.ALIAS.SDAJDENU
  Discover EXEC name . . . . : DAJDISC
 *Discover output data set . . DAJ.TCZ.DISCOVER

Information for Discover EXEC
 *Discover level . . . . . . . . . . . . . PREV (PREV, CURR)
 *New Automation Expert load library
    DB2TOOL.DAJ110.SDAJLOAD
  New FEC load library . .
 *Discover control file  . DAJ.DB2.CONTROL
 *Discover Configuration ID  . . . . . . . DAJ
 *Discover startup CLIST data set
    DB2TOOL.DAJ110.SDAJSAMP
 *Discover startup CLIST 2 . . . . . . . . DAJV11C
```

*Figure 4. The **Discover Customized Product Information** panel*

2. Either accept the default values for the following input fields that Tools Customizer generates, or replace the default values with your own values:

   Discover EXEC library
   The fully qualified data set name that contains the Db2 Automation Expert Discover EXEC.

   Discover EXEC name
   The name of the Db2 Automation Expert Discover EXEC.

   Discover output data set
   The fully qualified data set where output from the Db2 Automation Expert Discover EXEC is stored.

3. Either accept or change the default values in the **Information for Discover EXEC** fields.

   These fields are generated by Db2 Automation Expert. They show the information that is required to run the Db2 Automation Expert Discover EXEC.

4. Issue the RUN command to run the Db2 Automation Expert Discover EXEC.

   Alternatively, save your information without running the Db2 Automation Expert Discover EXEC by issuing the SAVE command.

If you issue the RUN command to run the Db2 Automation Expert Discover EXEC, the parameter information is discovered for Db2 Automation Expert, and the **Customizer Workplace** panel is displayed.

Results

The discovered parameter values for Db2 Automation Expert replace any existing values.

What to do next

The next step depends on your environment:

- If Db2 entries were not discovered, or if you need to customize Db2 Automation Expert on new Db2 entries, create and associate the entries.
- If Db2 entries were discovered and you want to customize Db2 Automation Expert on only these entries, define the parameters.

Related tasks

Creating and associating Db2 entries
You can create new Db2 entries and associate them with Db2 Automation Expert.

Defining parameters
To customize Db2 Automation Expert, you must define Db2 Automation Expert parameters, LPAR parameters, and Db2 parameters, if your customization requires Db2 entries.

Creating and associating Db2 entries

You can create new Db2 entries and associate them with Db2 Automation Expert.

About this task

The list of associated Db2 entries is on the **Customizer Workplace** panel.

Procedure

1. Issue the ASSOCIATE command on the **Customizer Workplace** panel.

   The **Associate DB2 Entry for Product** panel is displayed, as shown in the following figure:

   ```
   CCQPDAD                   Associate DB2 Entry for Product              16:36:42
   Command ===>                                              Scroll ===> PAGE

   Select any of the following DB2 entries to add them to the Customizer
   Workplace panel. You use the Customizer Workplace panel to choose the DB2
   subsystems, data sharing members, and group attach names on which to
   customize the product.

   Commands:  CREATE - Create new DB2 entries

   DB2 Entries
     Line commands: A - Associate  C - Copy  D - Delete
     Cmd SSID GrpAttch
         *    *
   ---------------------------- End of DB2 entries ----------------------------
   ```

   *Figure 5. The **Associate DB2 Entry for Product** panel*

2. Create Db2 entries.

   If you need to associate Db2 entries that are already in the master list, skip this step and go to step 3.

   a) Issue the CREATE command to create one Db2 entry, or issue CREATE *nn* to create multiple Db2 entries, where *nn* is the number of new entries to be created.

      The **Create DB2 Entries** panel is displayed, as shown in the following figure:

```
CCQPCDB                    Create DB2 Entries                    Row 1 of 1
 Command ===>                                          Scroll ===> PAGE

 Specify the SSID, the group attach name, or both in the appropriate columns
 for each new DB2 entry and press Enter. To create additional entries, issue
 the Inn line command, where nn is the number of entries to be inserted, and
 press Enter. To cancel, press End.

 New DB2 Entries
   Line commands: I - Insert into list   R - Remove from list
   Cmd  SSID  GrpAttch  Message

------------------------- End of DB2 entries --------------------------
```

*Figure 6. The **Create DB2 Entries** panel*

b) In the appropriate columns, specify a Db2 subsystem ID, Db2 group attach name, or Db2 data sharing member name for the Db2 entry that you want to create, and press Enter.

Valid values are 1 - 4 characters. You can use symbolic characters. You cannot use blanks.

Tips:

- To insert multiple Db2 entries, specify the I*nn* line command, where *nn* is the number of Db2 entries to be inserted.

- You will define specific parameters for these new Db2 entries, such as parameters that define a subsystem as primary, on the **DB2 Parameters** panel. This panel is displayed after you select these new Db2 entries and issue the line command to generate the jobs, after you issue the primary command to generate the jobs for all associated Db2 entries, or when you manually edit the Db2 parameters.

The **Associate DB2 Entry for Product** panel is displayed, and the new Db2 entry is displayed in the master list, as shown in the following figure:

```
CCQPDAD                Associate DB2 Entry for Product       Row 1 to 3 of 3
Command ===>                                          Scroll ===> CSR

Select any of the following DB2 entries to add them to the Customizer
Workplace panel. You use the Customizer Workplace panel to choose the DB2
subsystems, data sharing members, and group attach names on which to
customize the product.

Commands:  CREATE - Create new DB2 entries

DB2 Entries
  Line commands: A - Associate  C - Copy  D - Delete
  Cmd SSID GrpAttch
      *    *
      DBAA  --
      DBAB  --
      DBAC  --
----------------------------- End of DB2 entries -----------------------------
```

Figure 7. Associate DB2 Entry for Product panel

c) Repeat steps b and c for each Db2 entry that you want to create.

d) When you have created all the Db2 entries, associate them with Db2 Automation Expert, or press End to display the **Customizer Workplace** panel.

3. Associate Db2 entries.

a) Specify A against one or more Db2 entries in the master list, and press Enter to associate them with Db2 Automation Expert.

Results

The **Customizer Workplace** panel is displayed with the associated Db2 entries displayed in the associated list.

What to do next

Define the parameters.

Related concepts

Tools Customizer terminology

Tools Customizer uses several unique terms that you should be familiar with before you begin to use Tools Customizer.

Defining parameters

To customize Db2 Automation Expert, you must define Db2 Automation Expert parameters, LPAR parameters, and Db2 parameters, if your customization requires Db2 entries.

About this task

You must define the Db2 Automation Expert parameters first for the following reasons:

- If you ran the Db2 Automation Expert Discover EXEC, you must review the values that were discovered.
- If you select optional tasks and steps on the **Product Parameters** panel that affect the Db2 entry on which you will customize Db2 Automation Expert, additional parameters might be displayed on the **DB2 Parameters** panel.
- If other steps must be completed in a specific sequence, customization notes on the **Product Parameters** panel will display the correct sequence.

Defining Db2 Automation Expert parameters

Db2 Automation Expert parameters are specific to Db2 Automation Expert.

About this task

If you ran the Db2 Automation Expert Discover EXEC, you must review the parameters that were discovered.

Procedure

1. Specify E next to the **Product parameters** field on the **Customizer Workplace** panel, and press Enter.

   The **Product Parameters** panel is displayed, as shown in the following figure. If other steps must be completed in a specific sequence before you define the Db2 Automation Expert parameters, a note labeled **Important** will display the correct sequence on this panel.

```
CCQPPRD              Product Parameters                              10:25:20
Command ===>                                          Scroll ===> CSR

  Complete the following tasks to customize the products. The required tasks,
  required steps within a required or selected task, and required parameters
  are preceded by an asterisk (*). Ensure that values are specified for the
  required parameters. Press End to save and exit.


  Commands: SAVE  VERIFYOFF
  Line Commands: / - Select

  Product customization library  : TWUSR.DAJCUST.LIB.$SS01$.DAJ110
                                                            More:     +
  Common parameters
   *Startup CLIST library  . DB2TOOL.DAJ110.CLIST
   *Automation Expert load library
      DAJ.V110.SDAJLOAD
   *Automation Expert message library
      DB2TOOL.DAJ110.SDAJMENU
   *Automation Expert panel library
      DB2TOOL.DAJ110.SDAJPENU
    User skeleton library  .
   *Automation Expert skeleton library
```

*Figure 8. The **Product Parameters** panel*

You can use the following primary commands on this panel:

SAVE
 Saves the specified product or component parameter values.

VERIFY / VERIFYOFF
 Use the VERIFY and VERIFYOFF commands to turn on and off parameter verification of product or component parameters. Before you can generate customization jobs, you must verify that all required parameters are set to a valid value. The product or component parameter status of `Verify Values` on the Customize Workplace panel indicates that the values have not been verified.

 Enter these commands either by typing them in the command field and pressing Enter or by positioning the cursor on the command and pressing Enter. When VERIFY is active, VERIFYOFF is displayed so that you can toggle between the two states. By default, verification is turned on when you display the **DB2 Parameters** panel, and the verification state is reset to VERIFY every time you exit the Customization Workplace panel by pressing PF3.

 Turning verification off is useful when you need to exit the panel before you have entered all of the required parameters, but you want to save the parameters that you have specified. When you disable verification, it is disabled only for the Product or Component Parameters Values panel.

2. Select any required tasks and steps, and specify values for any parameters. After you select a task or step with a slash (/), put the cursor in the selected field and press Enter.

 If tasks, steps, and parameters are required, they are preselected with a slash (/). Otherwise, they are not preselected.

 All of the required parameters have default values, which you can either accept or change.

 Tips:

 • In the command line, specify the KEYS command, and map EXPAND to one of the function keys.

 • For a detailed description of all input fields, put the cursor in the field, and press F1 or the key that is mapped to Help.

 • The following elements apply to specific fields:

   – **Add** is displayed when parameters can have multiple values but currently have only one value. To specify multiple values in these fields, place the cursor on **Add**, and press Enter. Use the displayed panel to add or delete additional values.

- **List** is displayed when the complete list of valid values for the fields is too long to be displayed on the panel. To see the complete list of values, place the cursor on **List**, and press F1 or the key that is mapped to Help.
- **More** is displayed when input fields contains multiple values. To see all of the values in the field, place the cursor on **More**, and press Enter.

3. Optional: Select other tasks and steps with a slash (/) and press Enter to activate the input fields. Either accept or change the default values that are displayed.
4. Press End to save your changes and exit, or issue the SAVE command to save your changes and stay on the **Product Parameters** panel.

Results
The **Customizer Workplace** panel is displayed, and the status of the product parameters is Ready to Customize.

What to do next
If the status of other parameters on the **Customizer Workplace** panel is Incomplete, Verify Values, or Discovered, edit these parameters.

Related tasks

Defining LPAR parameters
LPAR parameters are parameters on the local LPAR that are required to customize Db2 Automation Expert.

Defining Db2 parameters
Db2 parameters are parameters for a Db2 entry.

Defining LPAR parameters

LPAR parameters are parameters on the local LPAR that are required to customize Db2 Automation Expert.

Procedure

1. Specify E next to the **LPAR parameters** field, and press Enter.

The **LPAR Parameters** panel is displayed, as shown in the following figure:

```
CCQPLPR            LPAR Parameters                              10:34:05
Command ===>                                       Scroll ===> CSR

Ensure that values are specified for the required LPAR parameters. Press End
to save and exit.

Commands: SAVE  VERIFYOFF
                                                       More:     +

Job Entry Subsystem (JES) - common
 *JES version  . . . . . . . . . . . . . 2

ISPF Libraries - common
 *Message library  . . . . ISP.SISPMENU                         Add
 *ISPF table input library ISP.SISPTENU                         Add

Language Environment Libraries -common
 *Load library . . . . . . CEE.SCEELLIB                         Add

Automation Expert LPAR Parameters
 *Automation Expert PROCLIB
    DAJ.PROCLIB
  Job tracking started task PROC member  . . DAJPROC
 *Job tracking started task Parms data set
    DAJ.PARMLIB(DAJPARM)
 *Job tracking started task ID . . . . . . . DAJT
 *Job tracking started task AUTHID . . . . . DB2USER
  Utility Generation address space PROC member
    DAJPRUTG
  Utility Execution address space PROC member
    DAJPRUTX
```

*Figure 9. The **LPAR Parameters** panel*

You can use the following primary commands on this panel:

SAVE
> Saves the specified product or component parameter values.

VERIFY / VERIFYOFF
> Use the VERIFY and VERIFYOFF commands to turn on and off parameter verification of LPAR parameters. Before you can generate customization jobs, you must verify that all required parameters are set to a valid value. The LPAR parameter status of `Verify Values` on the Customize Workplace panel indicates that the values have not been verified.

> Enter these commands either by typing them in the command field and pressing Enter or by positioning the cursor on the command and pressing Enter. When VERIFY is active, VERIFYOFF is displayed so that you can toggle between the two states. By default, verification is turned on when you display the LPAR Parameters panel, and the verification state is reset to VERIFY every time you exit the Customization Workplace panel by pressing PF3.

> Turning verification off is useful when you need to exit the panel before you have entered all of the required parameters, but you want to save the parameters that you have specified. When you disable verification, it is disabled only for the LPAR Parameters Values panel.

2. Specify values for all required parameters that are displayed.

Many parameters have default values, which you can either accept or change.

Tips:

- In the command line, specify the KEYS command, and map EXPAND to one of the function keys.
- For a detailed description of all input fields, put the cursor in the field, and press F1 or the key that is mapped to Help.
- The following elements apply to specific fields:

  - **Add** is displayed when parameters can have multiple values but currently have only one value. To specify multiple values in these fields, place the cursor on **Add**, and press Enter. Use the displayed panel to add or delete additional values.

– **List** is displayed when the complete list of valid values for the fields is too long to be displayed on the panel. To see the complete list of values, place the cursor on **List**, and press F1 or the key that is mapped to Help.

– **More** is displayed when input fields contains multiple values. To see all of the values in the field, place the cursor on **More**, and press Enter.

The following LPAR parameters can contain 1 - 64 values:

- LPAR macro library
- Message library
- Panel library
- Skeleton library
- ISPF table input library
- ISPF user profile library
- File tailoring output library
- Link list library
- Command procedures library
- Macro library
- Link-edit library
- Load library
- Started task library name

3. Press End to save your changes and exit, or issue the SAVE command to save your changes and stay on the same panel.

Results

The **Customizer Workplace** panel is displayed, and the status of the LPAR parameters is Ready to Customize.

What to do next

If the status of other parameters on the **Customizer Workplace** panel is Incomplete, Verify Values, or Discovered, edit these parameters.

Related tasks

Defining Db2 Automation Expert parameters
Db2 Automation Expert parameters are specific to Db2 Automation Expert.

Defining Db2 parameters
Db2 parameters are parameters for a Db2 entry.

Defining Db2 parameters

Db2 parameters are parameters for a Db2 entry.

About this task

If you did not run the Db2 Automation Expert Discover EXEC, you must create and associate one or more Db2 entries before you can define the Db2 parameters. For more information, see "Creating and associating Db2 entries" on page 79.

Procedure

1. Specify E next to one or more Db2 entries in the associated list, which is in the Associated Db2 Entries and Parameter Status section on the **Customizer Workplace** panel, and press Enter.

The **DB2 Parameters** panel is displayed, as shown in the following figure:

```
CCQPDB2          DB2 Parameters                                    10:36:53
Command ===>                                            Scroll ===> CSR

Ensure that values are specified for the required DB2 parameters. Press End
to save and exit.

Commands: SAVE  VERIFYOFF
                                                            More:     +
 DB2 subsystem ID  . . . . . . . . . . . . : SS01
 Group attach name . . . . . . . . . . . .

General DB2 Information - common
 *Mode . . . . . . . . . . . . . . . . . NFM (CM, NFM)
 *Level number . . . . . . . . . . . . .    (121, 131)
  Db2 current function level . . . . . . .

DB2 Libraries - common
 *Load library . . . . . . DSN.SDSNLOAD                          Add
 *Run library  . . . . . . DSN.RUNLIB.LOAD                       Add
 *Exit library . . . . . . DSN.SDSNEXIT                          Add
 *Bootstrap data set . . . DSN.SDSNBSDS                          Add

DB2 Buffer Pools - common
 *Name of the 4 KB buffer pool . . . . . . BP0
```

*Figure 10. The **DB2 Parameters** panel*

You can use the following primary commands on this panel:

SAVE
Saves the specified product or component parameter values.

VERIFY / VERIFYOFF
Use the VERIFY and VERIFYOFF commands to turn on and off parameter verification of Db2 parameters. Before you can generate customization jobs, you must verify that all required parameters are set to a valid value. The Db2 parameter status of `Verify Values` on the Customize Workplace panel indicates that the values have not been verified.

Enter these commands either by typing them in the command field and pressing Enter or by positioning the cursor on the command and pressing Enter. When VERIFY is active, VERIFYOFF is displayed so that you can toggle between the two states. By default, verification is turned on when you display the **DB2 Parameters panel**, and the verification state is reset to VERIFY every time you exit the Customization Workplace panel by pressing PF3.

Turning verification off is useful when you need to exit the panel before you have entered all of the required parameters, but you want to save the parameters that you have specified. When you disable verification, it is disabled only for the **DB2 Parameters Values** panel.

2. Specify values for all parameters that are displayed.

   Tips:

   - In the command line, specify the KEYS command, and map EXPAND to one of the function keys.
   - For a detailed description of all input fields, put the cursor in the field, and press F1 or the key that is mapped to Help.
   - The following elements apply to specific fields:

     – **Add** is displayed when parameters can have multiple values but currently have only one value. To specify multiple values in these fields, place the cursor on **Add**, and press Enter. Use the displayed panel to add or delete additional values.

     – **List** is displayed when the complete list of valid values for the fields is too long to be displayed on the panel. To see the complete list of values, place the cursor on **List**, and press F1 or the key that is mapped to Help.

     – **More** is displayed when input fields contains multiple values. To see all of the values in the field, place the cursor on **More**, and press Enter.

   Many parameters have default values, which you can either accept or change.

3. Press End to save your changes and exit, or issue the SAVE command to save your changes and stay on the same panel.

Results
The status of the Db2 entries that you selected on the **Customizer Workplace** panel is Ready to Customize.

What to do next
If the status of other parameters on the **Customizer Workplace** panel is Incomplete, Verify Values, or Discovered, edit these parameters.
Related tasks
Defining Db2 Automation Expert parameters
Db2 Automation Expert parameters are specific to Db2 Automation Expert.

Defining LPAR parameters
LPAR parameters are parameters on the local LPAR that are required to customize Db2 Automation Expert.

Generating customization jobs

To generate customization jobs for Db2 Automation Expert and any associated Db2 entries, issue the GENERATEALL command, or select one or more Db2 entries on which to customize Db2 Automation Expert.

Procedure

Generate the customization jobs by using one of the following methods.

- If you want to generate customization jobs at the product level and for any associated Db2 entries, issue the GENERATEALL command, and press Enter.
- If you want to generate customization jobs for specific Db2 entries, select the Db2 entries by specifying the G line command against them, and press Enter. The available Db2 entries are in the associated list in the Associated Db2 Entries and Parameter Status section.

Important: Regenerating customization jobs will replace any existing jobs, including jobs that you might have manually modified after they were generated.

Results
If the status is Incomplete or Discovered for Db2 Automation Expert parameters, LPAR parameters, or Db2 parameters, Tools Customizer automatically starts an editing session for the types of parameters that are required. The session continues until the panel for each type of required parameter has been displayed.

What to do next
If an automatic editing session is started, accept the displayed parameter values or define values for the required types of parameters, select optional parameters, tasks, or steps for your environment, and save the parameter values. Otherwise, the customization jobs are generated, and you can submit them.

Tip: If the customization jobs are generated, but you are not ready to submit them, you can see them later by issuing the JOBLIST command on the **Customizer Workplace** panel. The JOBLIST command displays the **Finish Product Customization** panel, which you can use to submit the jobs.

Submitting customization jobs

Submit the customization jobs to customize Db2 Automation Expert.

Before you begin

Ensure that the correct jobs are generated.

About this task

The following figure shows part of the **Finish Product Customization** panel. The table on this panel shows the customization jobs that are generated by Tools Customizer. They are grouped by job sequence number.

```
CCQPCST                     Finish Product Customization          Row 1 to 9 of 32
Command ===>                                                      Scroll ===> CSR

For a first-time customization, submit the jobs in the members in the order
in which they apply to the DB2 entries. Otherwise, submit only the necessary
jobs that were generated after changes were made. To submit jobs, browse
the members and issue the TSO SUBMIT command.

Line Commands: E - Edit  B - Browse

    Product customization library:    TWUSR.DAJCUST.LIB.$SS01$.DAJ110

 Cmd Member    New SSID GrpAttch Template Date       Description
     *         *   *    *        *        *
 -   -------- --- ---- ----      -------- ---------- ------------------------->
     A0V11     YES --   --       DAJV11   2023/10/09 Configures startup CLIST 1
     A1V11C    YES --   --       DAJV11C  2023/10/09 Configures startup CLIST 2
     A2EXECS   YES --   --       DAJEXECS 2023/10/09 Copies required CLISTs
     A3CNTFL   YES --   --       DAJCNTFL 2023/10/09 Creates control file
     A4CF2AAA  YES SS01 --       DAJCF2A  2023/10/09 Update control file SSID sp
     A6CF2CAA  YES SS01 --       DAJCF2C  2023/10/09 Update control file TEMPLAT
     A7CF1A    YES --   --       DAJCF1A  2023/10/09 Update control file RE
     A8CF1B    YES --   --       DAJCF1B  2023/10/09 Update control file HPU
     A9DELEAA  YES SS01 --       DAJDELE  2023/10/09 Drop Automation Expert repo
```

*Figure 11. The **Finish Product Customization** panel*

The member-naming conventions depend on whether the customization jobs are for Db2 entries, and LPAR, or the product.

The New field indicates if the job member is newly created/updated. It is either YES or NO. YES indicates the job member is newly created or updated, and it needs to be submitted for customization. NO indicates the job member is not newly created/updated, it does not need to be submitted for customization.

Customization jobs for Db2 entries

The members use the following naming convention:

```
<job_sequence_number><job_ID><DB2_entry_ID>
```

where

job_sequence_number

Two alphanumeric characters, A0 - Z9, that Tools Customizer assigns to a customization job. The number for the first template in the sequence is A0, the number for the second template is A1, and so on.

job_ID

Characters 4 - 7 of the template name, if the template name contains five or more characters. Otherwise, only character 4 is used. Db2 Automation Expert assigns the template name.

DB2_entry_ID

Two alphanumeric characters, AA - 99, that Tools Customizer assigns to a Db2 entry.

For example, the XYZBND*DB2_entry_ID_1* and XYZBND*DB2_entry_ID_2* jobs are generated from the XYZBNDGR template, and the XYZ4*DB2_entry_ID_1* and XYZ4*DB2_entry_ID_2* jobs are generated from the XYZ4 template. If the jobs are generated on two Db2 entries, the following member names are listed sequentially: A0BNDGAA, A0BNDGAB, A14AA, A14AB.

Customization jobs for an LPAR or the product
    The members use the following naming convention:

```
<job_sequence_number><job_ID>
```

where

job_sequence_number
    Two alphanumeric characters, A0 - Z9, that Tools Customizer assigns to a customization job. The number for the first template in the sequence is A0, the number for the second template is A1, and so on.

job_ID
    Characters 4 - 8 of the template name, if the template name contains five or more characters. Otherwise, only character 4 is used. For example, for the XYZMAKE template, the job ID is MAKE. For the XYZM template, the job ID is M. Db2 Automation Expert assigns the template name, and it is displayed in the Template column.

For example, the XYZBNDGR job is generated from the XYZBNDGR template, and the XYZ4 job is generated from the XYZ4 template. The following member names are listed sequentially: A0BNDGR, A14.

Procedure

1. Submit the generated customization jobs by following the process that you use in your environment or by using the following method:

   a) Specify B or E against a customization job or the product customization library, and press Enter.

       An ISPF browsing or editing session is started.

   b) Browse the customization job or each member in the library to ensure that the information is correct.

   c) Run the TSO SUBMIT command.

2. Press End.

Results

Db2 Automation Expert is customized, and the **Customizer Workplace** panel is displayed. The status is Customized for the Db2 entries on which Db2 Automation Expert was customized.

What to do next

You can generate more customization jobs for other Db2 entries, view a list of customization jobs that you previously generated, or recustomize Db2 Automation Expert.

Browsing parameters

You can browse the product or component parameters, the LPAR parameters, and the Db2 parameters in read-only mode.

Procedure

1. On the **Customizer Workplace** panel, specify B next to the **Product parameters** field, the **LPAR parameters** field, or the Db2 entry that you want to browse, and press Enter.

   The panel that corresponds to your specification is displayed.

2. Press End to exit.

Copying Db2 entries

You can copy associated and not associated Db2 entries to other Db2 entries or to new Db2 entries.

About this task

Go to the step that applies to your environment:

- To copy an associated Db2 entry to another associated Db2 entry or to an entry that is not associated, go to step 1.
- To copy an associated Db2 entry to a new entry, go to step 2.
- To copy a Db2 entry that is not associated to a new entry, go to step 3.

Procedure

1. To copy an associated Db2 entry to another associated Db2 entry or to an entry that is not associated, complete the following steps:

   a) Specify C against a Db2 entry in the associated list of Db2 entries on the **Customizer Workplace** panel, and press Enter.

      The **Copy Associated DB2 Entry** panel is displayed.

   b) Select one or more Db2 entries to which information will be copied by specifying the / line command, and press Enter.

      The Associated column indicates whether the Db2 entry is associated.

      Tip: To copy information into all of the Db2 Entries in the list, issue the SELECTALL primary command, and press Enter.

      The **Copy DB2 Parameter Values** panel is displayed.

   c) Specify an option for copying common and product-specific Db2 parameter values.

      Common Db2 parameter values apply to all Db2 entries for all products that you have customized by using Tools Customizer. Product-specific Db2 parameter values apply only to the product that you are currently customizing.

      - To copy the common Db2 parameter values and the product-specific Db2 parameter values, specify option 1, and press Enter.
      - To copy only the product-specified Db2 parameter values, specify option 2, and press Enter.

      In some cases, the Db2 parameter values might contain the Db2 subsystem ID as an isolated qualifier in data set names. For example, in the DB01.DB01TEST.DB01.SANLLOAD, data set name, the DB01 subsystem ID is isolated in the first and third qualifiers but is not isolated in the second qualifier. When the Db2 subsystem ID is an isolated qualifier in data set names, the **Change DB2 Subsystem ID in DB2 Parameter Values** panel is displayed. Otherwise, the **Customizer Workplace** panel is displayed.

   d) If the **Change DB2 Subsystem ID in DB2 Parameter Values** panel is displayed, specify an option for changing the subsystem IDs. Otherwise, skip this step.

      - To change the subsystem ID in isolated qualifiers in data set names, specify option 1, and press Enter.
      - To use the same subsystem ID in all values, specify option 2, and press Enter.

      The **Customizer Workplace** panel is displayed with the copied associated entry in the list.

2. To copy an associated Db2 entry to a new entry, complete the following steps:

   a) Specify C against a Db2 entry in the associated list of Db2 entries on the **Customizer Workplace** panel, and press Enter.

      The **Copy Associated DB2 Entry** panel is displayed.

   b) Issue the CREATE command.

      The **Create DB2 Entries** panel is displayed.

c) Specify the SSID, the group attach name, or both in the appropriate columns for each new Db2 entry, and press Enter.

> **Tip:** To add rows for additional entries, specify the I*nn* line command, where *nn* is the number of entries to be created, and press Enter.

> The **Copy Associated DB2 Entry** panel is displayed with the new entries in the list. The new entries are preselected.

d) Press Enter to complete the copy process.

> The **Customizer Workplace** panel is displayed with the copied entries in the list.

3. To copy a Db2 entry that is not associated to a new entry, complete the following steps:

a) Issue the ASSOCIATE command on the **Customizer Workplace** panel.

> The **Associate DB2 Entry for Product** panel is displayed.

b) Select one or more Db2 entries by specifying the / line command, and press Enter.

> The **Copy a DB2 Entry** panel is displayed.

c) Specify the SSID, the group attach name, or both in the appropriate columns for the new Db2 entry, and press Enter.

> The **Associate DB2 Entry for product** panel is displayed with the copied entry in the list.

d) If you want to associate the copied entry, specify A against it, and press Enter.

> The **Customizer Workplace** panel is displayed with the copied entries in the list.

What to do next
Edit any of the parameters or generate the jobs.
Related concepts
Tools Customizer terminology
Tools Customizer uses several unique terms that you should be familiar with before you begin to use Tools Customizer.

Removing Db2 entries

You can remove Db2 entries from the associated list.

About this task
When you remove Db2 entries from the associated list, any customization jobs for the entries are removed from the list of jobs on the **Finish Product Customization** panel, and they are deleted.

Procedure

On the **Customizer Workplace** panel, specify R next to one or more Db2 entries that you want to remove, and press Enter.

The selected Db2 entries are removed from the associated list and added to the master list on the **Associate DB2 Entry for Product** panel, and the customization jobs are deleted.

Related concepts
Tools Customizer terminology

Tools Customizer uses several unique terms that you should be familiar with before you begin to use Tools Customizer.

Deleting Db2 entries

You can delete Db2 entries from the master list.

About this task

When you delete Db2 entries from the master list, any associations and all customization jobs for products that are customized on the entries will be deleted.

Procedure

1. On the **Customizer Workplace** panel, issue the ASSOCIATE command.

   The **Associate DB2 Entry for Product** panel is displayed.
2. Specify D next to one or more Db2 entries that you want to delete, and press Enter.

   If the entry is associated with any products, the **Delete Associated DB2 Entry** panel for the first Db2 entry that you selected is displayed. Otherwise, the **Delete DB2 Entry** panel is displayed.
3. To delete the Db2 entries, press Enter.

   If the Db2 entries are associated with any products in the table on the **Delete Associated DB2 Entry** panel, any associations and all customization jobs for the products that are customized on it are deleted. Otherwise, only the Db2 entries are deleted. If you selected multiple Db2 entries to delete, the next Db2 entry that you selected is displayed on either the **Delete Associated DB2 Entry** panel or the **Delete DB2 Entry** panel. Otherwise, the **Associate DB2 Entry for Product** panel is displayed.

What to do next

If you selected multiple Db2 entries to delete, repeat step 3 until all selected entries are deleted. Then, continue the customization process.

Displaying customization jobs

You can view a list of the members that contain the customization jobs before or after you submit the jobs.

About this task

The customization jobs that you generate for one Db2 entry are also displayed when you customize Db2 Automation Expert for another Db2 entry later.

Procedure

On the **Customizer Workplace** panel, issue the JOBLIST command.

The **Finish Product Customization** panel is displayed. This panel shows the list of jobs that you have previously generated. They are grouped by job sequence number. Use this panel to browse or edit the generated jobs before you submit them.

Maintaining customization jobs

Instead of deleting customization jobs outside of Tools Customizer, you can maintain the correct jobs for Db2 Automation Expert by completing the steps for recustomization.

About this task

You cannot delete or rename customization jobs from the customization library by starting an ISPF browse or edit session from the **Finish Product Customization** panel. If you try to delete customization

jobs by using this method, the CCQC034S message is issued. If you try to rename customization jobs, the CCQC035S message is issued.

If you delete or rename customization jobs from the customization library by using ISPF outside of Tools Customizer, Tools Customizer will not recognize that the jobs were deleted, and the **Finish Product Customization** panel will still display them. If you browse or edit jobs that were deleted from the library outside of Tools Customizer, the CCQC027S message is issued.

Procedure

To maintain the correct customization jobs in the customization library, complete the steps for recustomization.

Using Tools Customizer in a multiple-LPAR environment

Currently, Tools Customizer supports only the local LPAR; however, you can propagate customizations to additional LPARs by using either of two different methods.

About this task

In a multiple-LPAR environment, Tools Customizer identifies the LPAR to which you are logged on. Tools Customizer uses this LPAR name for several different parameter settings, one of which is the data store. When you use the data store during the customization of Db2 Automation Expert that is on a different LPAR, Tools Customizer issues message CCQD586S, which indicates that the product has already been customized based on values from the data store on the first LPAR. This message is issued to prevent the data store from becoming corrupted.

This behavior occurs in the following conditions:

• Tools Customizer is installed on a DASD device that is shared by multiple LPARs.

• After a product is customized by using Tools Customizer, the data store is copied to another LPAR.

Procedure

To customize products running against a Db2 subsystem on an LPAR where Tools Customizer is not installed, consider using one of the following methods:

Install one instance of Tools Customizer on one LPAR
If you intend to reuse the customization values for all the instances of your products on all LPARs, use this method.

    a. Associate all the Db2 entries in this one instance of Tools Customizer. The LPARs on which the Db2 subsystems reside do not matter.

    b. Generate the customization jobs for each Db2 entry.

    c. Copy the generated customization jobs to the LPAR to run against the specific Db2 entries. Some LPAR-specific edits might be required. You can make these edits in the customized jobs that you copied. Note that this situation is one of the few situations where you might need to make manual changes to the jobs that are customized by Tools Customizer.

Install one instance of Tools Customizer on each LPAR
If you do not want to reuse previous customization values and you want to start new customizations, use this method.

    Important: This method will likely not be the preferred approach for most organizations because most organizations tend to use similar or identical customization values for each product instance on all LPARs.

Chapter 5. Creating multiple configurations of Db2 Automation Expert

Db2 Automation Expert 1.1 allows multiple configurations of itself to be installed on the same subsystem. Each configuration has its own CLIST, data repository, and set of plans and packages. The configurations share the same set of Db2 Automation Expert execution libraries; each configuration is identifiable by a three-character user indicator in the CLIST. This allows an installation to, for example, have a test version of Db2 Automation Expert in the same subsystem as a production version.

About this task

If multiple configurations are desired, you must completely customize one configuration using IBM Tools Customizer and then repeat the customization process using Tools Customizer for each subsequent configuration. Each configuration must have a unique DAJ configuration value as specified on the Tools Customizer Product Parameters panel; this value becomes the user indicator parameter (USERIND) in the product CLISTs.

The following procedure illustrates the process for two configurations.

Procedure

1. Make a separate copy of the product metadata data set (*hilevel.*SDAJDENU) for each configuration that will be created.

   For product configuration number 1, create a copy of the product metadata data set; for example, it could be named DB2TOOL.PRD.CFG01.SDAJDENU. For product configuration number 2, create a copy of the product metadata data set called (for example) DB2TOOL.PRD.CFG02.SDAJDENU.

2. Customize product configuration number 1:

   a) Start Tools Customizer.

   b) On the Tools Customizer main menu, select Option 0 (Settings) and enter the desired customization library qualifier. This value should be different for each configuration. For example, it could be called DB2TOOL.PRD.CFG01, following the naming convention in this example. Save and exit.

   c) On the Tools Customizer main menu, select option 1.

   d) On the Specify the Product to Customize panel, enter DB2TOOL.PRD.CFG01.SDAJDENU in the Product metadata library field.

   e) If you want to discover information from a previous installation of Db2 Automation Expert, run Discover. The DAJ configuration value will be input as a Discover parameter. If you do not run Discover, the DAJ configuration value defaults to "DAJ".

   f) On the Product Parameters panel, take note of the DAJ configuration value for this configuration. Subsequent configurations will require a different value.

   g) Generate customized jobs against each SSID. Tools Customizer will generate the jobs in DB2TOOL.PRD.CFG01.$*lpar*$.DAJ430.

3. Customize product configuration number 2:

   a) Navigate to the Tools Customizer main menu (CCQPHME).

   b) On the Tools Customizer main menu, select option 0 (Settings) and enter a different customization library qualifier; for example, DB2TOOL.PRD.CFG02 (continuing the example naming convention). Save and exit.

   c) On the Tools Customizer main menu, select option 1.

   d) On Specify the Product to Customize panel, enter the data set name for the second configuration's copy of the metadata, DB2TOOL.PRD.CFG02.SDAJDENU, in the Product metadata library field.

e) If you want to discover information from a previous installation of Db2 Automation Expert, run Discover. The DAJ configuration value will be input as a Discover parameter. If you do not run Discover, the DAJ configuration value defaults to "DAJ".

f) On the Product Parameters panel, ensure that the DAJ configuration value is different from the configuration value specified in product configuration number 1.

g) Generate customized jobs against each SSID. Tools Customizer will generate the jobs in DB2TOOL.PRD.CFG02.$*lpar*$.DAJ430.

What to do next
You can repeat this procedure for as many configurations as you required. Each configuration must have its own set of metadata files and a unique DAJ configuration value.

Chapter 6. Starting and configuring Db2 Automation Expert

This topic contains information about launching Db2 Automation Expert and editing setup options, and provides a basic orientation for the product.

Starting Db2 Automation Expert

Start Db2 Automation Expert by running the DAJV11 CLIST.

When the CLIST is executed, the Db2 Automation Expert main menu is displayed, as shown in the following figure:

```
AUTOXPRT V1R1 --- IBM Db2 Automation Expert for z/OS  --- 2023/10/16  13:39:32
Option  ===>
-------------------------------------------------------------------------------
                                                            More:      +
        Options: 0 - Setup                    Db2 Subsystem ID: SS01
                                              Current SQLID . :
                 Profile Management           Userid  . . . . : TWUSR
                 1 - Object Profiles           z/OS Release  . : 0205
                 2 - Utility Profiles          Db2 Release . . : 1315
                 3 - Exception Profiles        Db2 Func Level  : V13R1M503
                 4 - Job Profiles

                 Ad-Hoc Utility Build         Configuration ID: DAJ
                 5 - Quick Build

                 Reports
                 6 - Execution Reports

                 Additional Utilities
                 7 - Db2 Command Processor
                 8 - Dataset Manager
                 9 - Stand Alone Utilities
                 10 - Db2 Admin Scheduler

                 Maintenance Windows
                 11 - Automation Console

                 Reorg Avoidance
                 12 - Reorganization Avoidance

                 Utility History
                 13 - Utility History

                 X - Exit
```

Figure 12. Db2 Automation Expert main menu

Db2 Automation Expert main menu options

The following options can be accessed from the IBM Db2 Automation Expert for z/OS main menu:

Setup
Customize setup parameters for Db2 Automation Expert.

Object Profiles
Select the objects you want to be processed.

Utility Profiles
Select the utilities you want to execute and set options for the utilities.

Exception Profiles
Specify conditions under which the utilities will execute.

Job Profiles

Put the objects, utilities, and exceptions together into jobs, and build jobs.

Quick Build

Perform a quick build of a job.

Execution Reports

Track job profiles and execution results.

Db2 Command Processor

Use the Db2 Command Processor.

Dataset Manager

Use the Dataset Manager facility to view and move Db2 data sets.

Stand Alone Utilities

Create utility JCL for stand-alone utilities such as UNLOAD and Db2 High Performance Unload.

Db2 Admin Scheduler

Add Db2 Automation Expert utility execution jobs and batch builds to the Db2 administrative task scheduler.

Automation Console

Configure and control automated running of utilities and statistics.

Reorganization Avoidance

Manage performance windows and monitored job profiles for smarter reorganization recommendations.

Utility History

(Db2 13 and later) View and delete rows from the SYSIBM.SYSUTILITIES catalog table.

X

Exit Db2 Automation Expert.

The SSID selection function

On the Db2 Automation Expert main menu and the **System Parameters** panels, you can enter **?** in the **SSID** field to get a list of valid Db2 subsystems that exist in the active Db2 control data set.

To access this panel, enter **?** in the **SSID** field and press Enter. The **SSID Selection** panel is displayed, as shown in the following figure:

```
FECSLST ----------------        SSID Selection       ----- 2023/10/16  13:52:16
Option  ===>                                               Scroll ===> CSR

Select with S line command or just place cursor and press ENTER; To Exit: PF3
-------------------------------------------------------------------------------
                                          Row 1 of 8                  CPOS
Cmd SSID Status
    SS01 Active
    SS02 Active
    SS03 Active
    SS04 Inactive
    SS05 Active
    TS01 Active
    TS02 Inactive
    VS01 Inactive
***************************** Bottom of Data **********************************
```

*Figure 13. **SSID Selection** panel*

This panel list all Db2 subsystems that have been defined in the Db2 control data set, which is configured in the System Parameters section of Db2 Automation Expert setup. Next to each SSID is the subsystem's current status. To select a subsystem, enter **S** next to the SSID and press Enter. To cancel, press PF3.

Db2 Automation Expert setup options

Customization of Db2 Automation Expert is primarily accomplished with IBM Tools Customizer. However, you might want to change options after customization. The **Setup** option on the Db2 Automation Expert main menu can be used to configure some features and functions.

On the Db2 Automation Expert main menu, enter **0** and press Enter to access the **System Parameters** panel. The following provides a description of the parameters on the **System Parameters** panel.

Current User Ind
This field displays the user indicator that is specified in the CLIST used to start Db2 Automation Expert. The system parameters that you enter on this screen and the other setup screens are specific to this configuration of Db2 Automation Expert. You cannot change this field; it is set when the Db2 Automation Expert CLIST is started.

Model DSN for GDG Base Model
If your site is not SMS-managed, and you are required to include a model DSCB in your JCL, enter a model DSCB name here. The model DSCB must exist. This field is optional if your data sets are SMS managed; Db2 Automation Expert uses the model DSCB if provided. You can provide a different model DSCB for each subsystem you configure.

Db2 Control Dataset
This field displays the name of the Db2 control data set. You cannot change this field.

Db2 Subsystem ID
Enter the Db2 subsystem identifier (SSID) for the subsystem you want to configure. To get a list of available subsystems, enter ? and press Enter.

Configuration options

On the **System Parameters** panel, enter one of the following values in the **Command** field:

1 - ZPARM, BSDS, and Load Library Information
Configure options specific to a particular Db2 subsystem, including ZPARMs, BSDS, and load library information.

2 - Db2 Automation Expert
Configure Db2 plan names for Db2 Automation Expert.

3 - Db2 Shared Profile Support
Configure job generation options and other information specific to Db2 Automation Expert.

4 - DAJ Recovery Expert Support
Configure options to make image copies from Db2 Recovery Expert system level backups.

Note: Settings under this option apply to all Db2 subsystems that are configured for Db2 Automation Expert.

5 - DAJ HPU Utility Support
Configure options for generating Db2 High Performance Unload jobs.

Note: Settings under this option apply to all Db2 subsystems that are configured for Db2 Automation Expert.

6 - DAJ TEMPLATEDD Support
Configure default TEMPLATEDD data sets, member names, and template names. This information is used to create TEMPLATEDD control statements that define data set naming conventions and allocation parameters for some Db2 utilities.

7 - DAJ Query Monitor Support
Configure Db2 Query Monitor settings for the smarter reorganization recommendation feature.

8 - Best Practice Utility Profiles
Specify the default utility profiles that are used in the Db2 Automation Expert ad-hoc utility API.

The topics that follow provide additional information about each of these options.

Entering ZPARM, BSDS, and load library information

This topic describes how to enter ZPARM, BSDS, and load library information for a Db2 subsystem.

Procedure

1. To update information particular to a subsystem, enter **1** in the command line on the **System Parameters** panel and press Enter.

   The **Update Db2 Subsystem Parameters** panel is displayed, where you can enter the subsystem parameters. The following provides a description of each parameter.

   Db2 ZPARMs Member
   Enter the eight-character load module member name generated for this Db2 subsystem.

   Db2 Bootstrap DSN #01 and #02
   Enter the fully qualified data set names of the bootstrap data sets for this Db2 subsystem.

   Db2 Loadlib1 through Loadlib5
   Enter the names of the data sets that comprise the current load library concatenation for Db2. This concatenation is usually a subsystem-specific DSNEXIT library, the base DSNEXIT library for the current Db2 version, and the base DSNLOAD library for the current Db2 version. If necessary, two extra library spaces are provided.

2. Press Enter, then PF3 to exit this panel and return to the System Parameters panel.

Entering Db2 Automation Expert specific information

This topic describes how to enter specific configuration settings for Db2 Automation Expert.

About this task

Enter **2** in the command line on the **System Parameters** panel and press Enter. The **Update Parameters for Db2 Subsystem** panel is displayed. Enter Db2 Automation Expert-specific parameters on this panel. The following provides a description of each parameter.

Plan names
Enter the plan names for Db2 Automation Expert. These must be the same plan names that you specified in the bind members for the subsystem.

The plans are listed as follows:

- **Plan 1 Name**: Allows users to use most Db2 Automation Expert functions, except for job building.
- **Plan 2 Name**: Allows users to build Db2 Automation Expert jobs.

Example:

If the plans and packages were bound in the bind step as follows:

```
 BIND PLAN   (DAJ110S1)              -
      PKLIST (DAJC110R.*             -
              DAJC110C.*             -
              DAJC110S.*             -
             )                       -
.
.
 BIND PLAN   (DAJ110S2)              -
      PKLIST (DAJC110R.*             -
              DAJC110C.*             -
              DAJC110S.*             -
             )                       -
```

Then the plan names should be entered on the screen as shown in the following figure:

```
DAJPNL2  V1R1  Update Parameters for Db2 Subsystem SS01   2023/10/16  14:25:48
Command ==>

 Current User Ind: DAJ

 Enter or Update Specific Db2 Parameters

  Plan 1 Name DAJ110S1
  Plan 2 Name DAJ110S2
```

*Figure 14. Example of correct entry of plan names on **Update Parameters for Db2 Subsystem** panel*

Press Enter, then PF3 to exit the panel.

Entering job generation defaults and other product parameters

This topic describes how to enter job generation defaults and other product parameters required for Db2 Automation Expert.

Procedure

1. Enter 3 in the command line on the **System Parameters** panel and press Enter.

   The **Shared Profile Parameters** panel is displayed, as shown in the following figure:

```
AUTOXPRT  V1R1 ---- Shared Profile Parameters for SS01 --- 2023/10/17  10:29:39
Command ==>                                             Scroll ===> CSR
                                                           More:     +
Enter or Update Specific Shared Profile Support Parameters   User Ind: DAJ
 Catalog/History PackageList . . DAJ110C
 Shadow Catalog PackageList  . . DAJ110S
 Repository PackageList  . . . . DAJ110R
 Work File Unit Device . . . . . SYSDA    (SYSDA, DISK, etc.)
 Sort Work File Unit Device  . . SYSDA    (SYSDA, DISK, etc.)
 Build Informational Message DD  DAJERROR (8 character name)
 Build Warning      Message DD  DAJERROR (8 character name)
 Build Error        Message DD  DAJERROR (8 character name)
 Job Tracking Started Task Name  ST11     (Automation Expert Tracking STC name)
 Max Primary Space Allocation    999999   (1-999999) T (Trks/Cyls/Mbytes)
 Secondary Allocation Percent    010      (1-999) % of Primary Allocation
 Utility REGION Size . . . . . . 0008     (0-2047)   M (Megabytes)
 Db2 Fetch Buffer Size . . . . . 0004     (1-256)    M (Megabytes)
 Parallel MVS Catalog Locates    25       (1-99)
 Terminate Utility if an ABEND   N        (Y/N)
 Generate STEPLIB DDs  . . . . . Y        (Y/N)
 Gen Image Copy DSNs in GMT  . . Y        (Y/N)
 Explode IXs with DEFINE NO TSs  N        (Y/N)
 Execute RTS -ACCESS DATABASE    N        (Y/N)
 Enable Admin Scheduler Support  Y        (Y/N)
   Admin Scheduler Max History   0010     (1-9999)
   Admin Scheduler user ID . . .          (blank, DFLTUID, user ID)
 Altered Object Adjustment . . . P        (A - All; P - Partition)
 ODP Broker Name . . . . . . . . ODP_DAJ
 ODP Store Name  . . . . . . . . OMEGAMON
 SSID specific HPU values (overrides):
   HPU LOADLIB1  VENDOR.INZ51.SINZLINK
   HPU LOADLIB2
   HPU LOADLIB3
   HPU Version                   510      (510; 430)

 Entering the following fields will override the calculated amount of Sort
 Work DD's space quantities and/or the number of DD's generated in the job
  Primary Sort Work Space . . . .          (1-99999)  C (Cyls)
  Secondary Sort Work Space . . .          (1-99999)  C (Cyls)
  Number of Sort Work DDs . . . .          (1-99)
```

*Figure 15. **System Parameters** screen: Shared Profile Support parameters*

These Shared Profile Support-specific parameters set defaults when building Db2 Automation Expert jobs. Some of these values can be overridden a per job basis using a field on the **Job Generation Options** panel.

2. Enter the Db2 Shared Profile Support-specific parameters on this screen.

   The following provides a description of each parameter.

   Catalog/History PackageList
   Enter the package list name for the Db2 catalog and the Db2 catalog history tables. This must be
   the same package list as specified for the Db2 catalog and the Db2 catalog history tables in the
   bind job. For example, if plans and packages were bound as follows:

   ```
   BIND PACKAGE (DAJC110C) -
        MEMBER (DAJ#EDAY) -
   .
   .
   BIND PACKAGE (DAJC110C) -
        MEMBER (DAJ#ERSI) -
   .
   .
   BIND PLAN   (DAJ110S1)             -
        PKLIST (DAJC110R.*            -
               DAJC110C.*            -
               DAJC110S.*            -
   ```

   Then this field should be entered as follows:

   ```
      Catalog/History PackageList ==> DAJC110C
   ```

   Shadow Catalog PackageList
   (optional) Enter the package list name for a Db2 shadow catalog, if you are using a shadow catalog.
   This must be the same package list as specified for the Db2 shadow catalog in the bind job. For
   example, if plans and packages were bound as follows:

   ```
   BIND PACKAGE (DAJC110S) -
        MEMBER (DAJ#ERSH)  -
   .
   .
   BIND PACKAGE (DAJC110S) -
        MEMBER (DAJ#ERTI) -
   .
   .
   BIND PLAN   (DAJ110S1)             -
        PKLIST (DAJC110R.*            -
               DAJC110C.*            -
               DAJC110S.*            -
   ```

   Then this field should be entered as follows:

   ```
      Shadow Catalog PackageList ==> DAJC110S
   ```

   Repository PackageList
   (optional) Enter the package list name for the Db2 Automation Expert modules, including the Db2
   shared profile support repository. This must be the same package list as specified in the bind job.
   For example, if plans and packages were bound as follows:

   ```
   BIND PACKAGE (DAJC110R) -
        MEMBER (DAJ#CL8) -
   .
   .
   BIND PACKAGE (DAJC110R) -
        MEMBER (DAJ#ERSI) -
   .
   .
   BIND PLAN   (DAJ110S1)             -
        PKLIST (DAJC110R.*            -
               DAJC110C.*            -
               DAJC110S.*            -
   ```

   Then this field should be entered as follows:

   ```
         Repository PackageList ==> DAJC110R
   ```

Work File Unit Device
Enter the default work file unit device that will be used when generating utility JCL. Valid values are any tape or esoteric unit.

Sort Work File Unit Device
Enter the default device type for sort work data sets. Valid values are any tape or esoteric unit.

Build *message_type* Message DD
Use these fields to route Db2 Automation Expert batch build processing messages to one, two, or three unique DDs based on the type of the build message generated. You can specify the same DD for all message types, give unique DDs to each message type, or give unique names to two of the three message types.

   Build Informational Message DD
   Enter the DD name to be used for informational messages. All generated DAJBnnnI messages will be written to this DD.

   Build Warning Message DD
   Enter the DD name to be used for warning messages. All generated DAJBnnnW messages will be written to this DD.

   Build Error Message DD
   Enter the DD name to be used for error messages. All generated DAJBnnnE messages will be written to this DD.

Job Tracking Started Task Name
(Optional) Enter the name of the job tracking task that will gather information for this Db2 subsystem. The job tracking task name is defined in the SUBSYS parameter of the task's DAJPARMS member.

Max Primary Space Allocation
Enter the maximum amount of space that can be allocated for a primary allocation. You can specify up to 999999 tracks, cylinders, or megabytes. The value you enter may be converted when the job is built using the following criteria:

- For image copies with templates, the value is converted to cylinders and used in the template with the MAXPRIME keyword; Db2 requires that the MAXPRIME value be expressed in cylinders in a template.

- For image copies without templates, the value is converted to tracks and that value is used in the DD statement.

- For work files (such as SYSREC, SYSUT1, and SORTOUT), the value is converted to cylinders and that value is used in the DD statement.

- For reallocation, it is converted to kilobytes and that value is used in the Db2 ALTER SQL.

Secondary Allocation Percent
Enter the amount of space that can be allocated for a secondary allocation. This value is expressed as a percentage of primary allocation. Enter a value from 1 to 999 . This value affects secondary space allocation for image copy DDs and temporary DDs used in REORGs, and also affects utility jobs built with TEMPLATE syntax.

Utility REGION Size
Enter the default REGION size (in megabytes) to be used on the EXEC statement of each job step. This value is used for all job steps. If you include a REGION parameter in your job card, the job card REGION parameter overrides the region parameter on the EXEC statement.

Db2 Fetch Buffer size
Specify the size of the Db2 fetch buffer. The fetch buffer is used for the Db2 multi-row fetch capability and can improve SQL performance. Valid values are 1 to 256 megabytes.

Parallel MVS Catalog Locates
Enter the number of parallel MVS catalog locate tasks that can be initiated.

Terminate Utility if an ABEND
Specify Y to instruct Db2 Automation Expert to terminate utilities if an abend occurs during execution. The utility is stopped using the TERM UTILITY command.

Note: The TERM UTILITY command is not issued for the RECOVER utility.

Generate STEPLIB DDs
This field specifies whether STEPLIB DDs will be included the JCL. If you specify N, no STEPLIB DDs are included and the Db2 Automation Expert libraries (DAJ and FEC libraries) must be contained in the LNKLST set. If you specify Y, STEPLIB DDs are included in the JCL. The DDs include DAJ and FEC libraries and the subsystem Db2 load libraries specified in the Db2 Automation Expert setup screen.

Gen Image Copy DSNs in GMT
This field allows you to specify how Db2 Automation Expert treats time values when creating image copy data set names. If you specify Y, the GMT (Greenwich Mean Time) is used. If you specify N (the default), the local time is used.

Note: If you want date and time variables in templates to be resolved at job run time rather than job build time, set this field to Y.

Explode IXs with DEFINE NO TSs
Indicate how to treat indexes that are exploded from the table space when the table space was created with DEFINE NO. The VSAM data set for the table space does not exist. Valid values are Y to process these types of indexes and N to not process these types of indexes. Specify Y to process exploded indexes that are created with DEFER NO and DEFINE YES. In this case, the VSAM data set for the index does exist.

Execute RTS -ACCESS DATABASE
For exception processing, indicate if you want an -ACCESS DATABASE(*database*) SPACE(*space*) MODE(STATS) command issued for every object in the object profile prior to retrieving real-time statistics. If you enter Y, the command is run for every object prior to retrieving their statistics. If you enter N, the -ACCESS command is not issued; in this case, the STATSINT ZPARM value for your subsystem is used for externalizing the real-time statistics.

Enable Admin Scheduler Support
Enter Y to enable utility execution jobs and batch builds to be scheduled for execution by the Db2 administrative task scheduler. The Db2 administrative task scheduler must be installed and configured for this option to be meaningful.

Admin Scheduler Max History
This field is only applicable if **Enable Admin Scheduler Support** is set to Y. Specify the number of executions that Db2 Automation Expert retrieves from the Db2 administrative task scheduler when viewing a task execution status list. Db2 Automation Expert only uses this value to determine how many task executions to retrieve from the Db2 administrative task scheduler; it does not define the Maximum History parameter to the Db2 administrative task scheduler.

Admin Scheduler user ID
This field is only applicable if **Enable Admin Scheduler Support** is set to Y. If specified, this value defines the task user ID to be used when new tasks are scheduled. This can either be an alternate user ID, or default user ID (DFLTUID). If this field is left blank, the task user ID will be set to either the value in the Current SQLID field on the Db2 Automation Expert main menu, or the current TSO user ID. Any user ID that is entered here, including the default user ID, must have at least MONITOR1 privileges.

Altered Object Adjustment
Indicate how to treat non-wildcarded objects in object profiles that were altered after the object profile was created. Non-partitioned objects that are now partitioned objects can be processed either at the A (All) level or at the P (Part) level.

ODP Broker Name
Specify the OMEGAMON Data Provider broker name that is used to identify the broker instance on an LPAR. This allows data from Db2 Automation Expert be sent to the OMEGAMON Data Provider server, which in turn transforms and sends the data to modern analytic platforms.

ODP Store Name
Enter the OMEGAMON Data Provider internal in-memory stores that are used to store data that users send to the broker.

SSID specific HPU values (overrides):

> **Note:** These parameters apply only to the version of Db2 HPU on the subsystem that you are configuring. They override any Db2 HPU settings that are configured from the **System Parameters** panel option 5 (DAJ HPU Utility Support).

HPU Loadlibx
Enter the names of the data sets that comprise the current load library concatenation for Db2 HPU.

HPU Version
Enter the version of Db2 HPU that is installed on the subsystem.

> **Note:** Db2 Automation Expert supports Db2 HPU V5.1 and V4.3.

Primary Sort Work Space | Secondary Sort Work Space | Number of Sort Work DDs
These three fields are optional. Enter values to override the Db2 Automation Expert-calculated amount of sort work data sets and the number of SORTWKnn DD statements. Enter primary and secondary sort work spaces values in cylinders.

3. Press Enter, then PF3 to exit the screen.

Entering information for using Db2 Recovery Expert with Db2 Automation Expert

This portion of the configuration allows you to specify settings for the Db2 Recovery Expert image copy utility.

Procedure

1. Enter 4 in the Command line on the **System Parameters** panel and press Enter.

   The **Recovery Expert Parms** panel is displayed, as shown in the following figure:

```
DAJPNL4  V1R1 --------------- Recovery Expert Parms ---- 2023/10/17  10:37:53
Command ==>
-------------------------------------------------------------------------
 Recovery Expert Information:

 Control File  . . . . . . DDRT.ARY320.CONTROL
 RE Loadlib1 . . . . . . . DDRT.ARY320.SARYLOAD
 RE Loadlib2 . . . . . . .
 RE Loadlib3 . . . . . . .
 RE Loadlib4 . . . . . . .
 RE Loadlib5 . . . . . . .
```

Figure 16. Recovery Expert Parms panel

2. Enter the Db2 Recovery Expert-specific parameters on this panel.

   These options apply to all subsystems that have Db2 Recovery Expert installed; they only need to be entered once. The following provides a description of each parameter.

   Control File
   (optional) If Db2 Recovery Expert has a separate control file from Db2 Automation Expert, enter it here. If a separate control file is used, all Db2 Automation Expert users must have read access to it. If this field is left blank, it is assumed that Recovery Expert uses the same control file as Db2 Automation Expert.

   RE Loadlibx
   Enter the names of the data sets that comprise the current load library concatenation for Db2 Recovery Expert.

3. Press Enter, then PF3 to exit the screen.

What to do next

Users of the Recovery Expert image copy utility must be able to access Db2 Recovery Expert data sets. You should ensure potential users of the product have read access to the following:

- Db2 Recovery Expert load libraries
- Db2 Recovery Expert PARMLIB library
- Db2 Recovery Expert VSAM repository
- The Db2 Recovery Expert control file, if Recovery Expert uses a separate control file from Db2 Automation Expert

Refer to the Db2 Recovery Expert user guide for more information about these data sets.

Entering information for using Db2 High Performance Unload with Db2 Automation Expert

Use this portion of the configuration to specify Db2 High Performance Unload (Db2 HPU) settings for use with Db2 Automation Expert.

Procedure

1. Enter 5 in the command line on the **System Parameters** panel and press Enter.

   The **HPU Utility Parms** panel is displayed, as shown in the following figure:

   ```
   DAJPNL5  V1R1 ----------------- HPU Utility Parms ------ 2023/10/17  10:43:15
   Command ==>
   ------------------------------------------------------------------------------
    HPU Utility Information:

    HPU Loadlib1  . . . . . . VENDOR.INZ51.SINZLINK
    HPU Loadlib2  . . . . . .
    HPU Loadlib3  . . . . . .
    HPU Version . . . . . . . 510 (430, 510)
   ```

   Figure 17. **HPU Utility Parms** *panel*

2. Enter the Db2 HPU-specific parameters on this panel.

   These parameters apply to all subsystems that have Db2 HPU installed. The following list describes the parameters on this panel.

   HPU Loadlibx
   Enter the names of the data sets that comprise the current load library concatenation for Db2 HPU.

   HPU Version
   Enter the version of Db2 HPU that is installed on the system.

   Note: Db2 Automation Expert supports Db2 HPU V5.1 and V4.3.

3. Press Enter, then PF3 to exit the screen.

Specifying TEMPLATEDD data set, member, and name defaults

Use this portion of the configuration to specify default TEMPLATEDD data sets, member names, and template names. This information is used to create TEMPLATEDD control statements that define data set naming conventions and allocation parameters for some Db2 utilities.

Before you begin

Before specifying these defaults, the template data sets and members must exist and must contain control statements that follow Db2 syntax rules for the TEMPLATE utility control statement.

About this task

If you specify values in these fields, template data set names that are created by Db2 Automation Expert in the utility profiles are ignored, and the template DDs that are provided using these panels are used. However, if a template DD data set, member, and name are included in a utility profile, the utility profile template DDs override the values that are set in the defaults.

Procedure

1. Enter 6 in the command line on the **System Parameters** panel and press Enter.

   The **Template DSN Parameters** panel is displayed, as shown in the following figure:

```
DAJPNL6  V1R1 ----- Template DSN Parameters for SS01 ---- 2023/10/17  10:45:28
Command ==>                                                 Scroll ===> CSR

Enter or update data set names, member names, and template names to specify
the template library to be used for each Utility, and IC type.

                                                            More:     +
 Image Copy
   Data set name  . . . . . .
   Member name   . . . . . . .
   LP Template Name . . . . .          Select N (Yes/No)
   LB Template Name . . . . .          Select N (Yes/No)
   RP Template Name . . . . .          Select N (Yes/No)
   RB Template Name . . . . .          Select N (Yes/No)
   FlashCopy Template Name            Select N (Yes/No)
 Copy to Copy
   Data set name  . . . . . .
   Member name   . . . . . . .
   LP Template Name . . . . .          Select N (Yes/No)
   LB Template Name . . . . .          Select N (Yes/No)
   RP Template Name . . . . .          Select N (Yes/No)
   RB Template Name . . . . .          Select N (Yes/No)
```

Figure 18. **Template DSN Parameters** *panel*

2. For each listed utility, enter default template DDs as follows:

   a) Specify the template data set name in the **Data set name** field.

   b) Specify the template member name in the **Member name** field.

   c) Use one of the following methods to provide the template name:

   - Enter the template name for the listed data set type in the **Template Name** field.

   - Or, select a template name using the following steps:

     i) Enter Y in the corresponding Select field and press Enter.

     ii) On the **TEMPLATEDD Name Selection** panel, enter S next to the template name and press Enter. The template name is transferred to the **Template Name** header field.

     iii) Press PF3. The **Template DSN Parameters** panel is displayed. The template name is inserted in the **Template Name** field and a message confirms the template name selection.

3. Press PF3 to exit the panel.

Entering information for using Db2 Query Monitor with Db2 Automation Expert

Use this portion of the configuration to specify Db2 Query Monitor settings for use with Db2 Automation Expert.

Procedure

1. Enter 7 in the command line on the **System Parameters** panel and press Enter.

   The **DAJ Query Monitor Support** panel is displayed, as shown in the following figure:

```
DAJPNL7  V1R1 ------- DAJ Query Monitor Support ------- 2023/10/17  10:47:12.0
Command ==>

 Enter or Update the Query Monitor URL.

  Host Address  : 192.0.2.0                                              >
    HTTPS Port  : 50443
```

*Figure 19. **DAJ Query Monitor Support** panel*

2. Enter the Db2 Query Monitor-specific parameters on this panel.

   These parameters set up communication with the Db2 Query Monitor server for the smarter reorganization recommendation feature.

   Host Address
       Enter the host address that will be used to communicate with Db2 Query Monitor.

   HTTPS Port
       Enter the secure HTTP port number.

3. Press Enter, then PF3 to exit the screen.

Entering the Db2 Automation Expert best practice utility profiles for the ad-hoc utility API

The **Best Practice Utility profiles** panel allows you to specify the utility profiles used with the Db2 Automation Expert API for ad-hoc utilities.

About this task

These values specify the default utility profiles that are used in a Db2 Automation Expert ad-hoc utility API. If in the utility API call you do not specify a profile creator and profile name, the default profile that is listed in the corresponding utility field on this panel is used for the call. It is recommended to enter the default best practice utility profiles installed with Db2 Automation Expert as a starting point. For more information, see Chapter 19, "Running ad-hoc utilities with the Db2 Automation Expert API," on page 365.

Procedure

1. Enter 8 in the command line on the **System Parameters** panel and press Enter.

   The **Best Practice Utility profiles** panel is displayed, as shown in the following figure:

```
AUTOXPRT V1R1 ----- Best Practice Utility Profiles ---- 2023/11/06  14:07:43.4
Command ==>

  Enter the desired Creator and Profile name for each of the Best Practice
  Utility Profiles.

  Restore Default values N (Yes/No)

  Best Practice Utility Profiles
  Type          Creator  Name
  Recover . . .
  Rebuild Index
  Image Copy
  Copy to Copy
  Merge Copy
  Runstats  . .
  TS Reorg  . .
  IX Reorg  . .
  Quiesce . . .
  Modify  . . .
  Repair  . . .
  Check Data
```

*Figure 20. **Best Practice Utility profiles** panel*

2. To enter the default *creator.profile_names* as originally provided during product customization, enter Y in the **Restore Default values** field.

   Note: Restoring profile default values only applies to the profile names. Changes that have been made to the content of the profiles since configuration are retained.

   When you press Enter, the best practice profiles are set to their original *creator.profile_name* names.

```
AUTOXPRT V1R1 ----- Best Practice Utility Profiles ---- 2023/11/07  13:24:31.9
Command ==>

  Enter the desired Creator and Profile name for each of the Best Practice
  Utility Profiles.

  Restore Default values N (Yes/No)

  Best Practice Utility Profiles
  Type          Creator  Name
  Recover . . . DAJSAMPL RECOVER
  Rebuild Index DAJSAMPL REBUILD IX
  Image Copy    DAJSAMPL BEST PRACTICE FULL COPY
  Copy to Copy  DAJSAMPL COPY TO COPY
  Merge Copy    DAJSAMPL MERGECOPY
  Runstats  . . DAJSAMPL BEST PRACTICE RUNSTATS
  TS Reorg  . . DAJSAMPL BEST PRACTICE ONLINE REORG
  IX Reorg  . . DAJSAMPL ONLINE IX REORG
  Quiesce . . . DAJSAMPL QUIESCE
  Modify  . . . DAJSAMPL MODIFY RECOVERY
  Repair  . . . DAJSAMPL REPAIR SET NOCOPYPEND
  Check Data    DAJSAMPL CHECK DATA
```

3. Press Enter, then PF3 to exit the screen.

Configuring for data sharing

If you are using data sharing and you want Db2 Automation Expert to connect to Db2 via the group attach name, configure these screens as described in this topic.

Procedure

1. Enter the group attach name in the **Db2 Subsystem ID** field on the **System Parameters** panel.
2. On the **Update Db2 Subsystem Parameters** panel, use one of the data sharing group member's library information for the ZPARM, BSDS, and load library information.

Chapter 7. Getting started with Db2 Automation Expert sample best practice profiles

Db2 Automation Expert provides sample profiles that can be used for common maintenance tasks.

The sample profiles provide examples of common object, utility, exception, and job profiles containing typical defaults that can be tailored for your site's needs.

The best practice sample profiles can help you leverage IBM-advised industry trends and Db2 enhancements. These profiles reflect Db2 best practices as recommended by IBM Db2 for z/OS professionals, and provide a range of examples for different object types and schedules.

Installing the sample profiles

The sample profiles are installed using Tools Customizer. For more information, see Chapter 2, "Preparing to customize Db2 Automation Expert," on page 7.

After installation, you can rename or export the sample profiles with a different creator name and/or profile name. If you do not, and the sample profiles are reinstalled with the same creator and profile name, any changes that you make are overwritten.

Alternatively, you could make the sample profiles view only. To do so, update each sample profile and set the **Share Option** field to V for view only. Users can then export and import these profiles under their own creator ID and modify them for their own use.

Before using the sample profiles, modify them to fit your location's data set naming conventions and other location-specific information.

Using the sample profiles

The sample profiles are each described in the "Sample profiles reference" on page 111.

You can start by reviewing the best practice job profiles to see examples of common maintenance tasks. Check the profiles that you are interested in to see if modifications are needed for your location. For example, in the BEST PRACTICE RUNSTATS job profile, the ALL OBJECTS object profile is included. You might want to initially limit the object set until you understand how the job profile generates the job.

If you want to generate these job profiles as active or passive actions instead of JCL jobs, review the sample maintenance windows that are installed with Db2 Automation Expert. The samples provide common time periods for running maintenance activities and can be customized for your site. For information about the samples, see "Sample maintenance windows reference" on page 306.

Sample profiles reference

The sample profiles that are installed are listed in the following tables. The default content that is provided can easily be modified to suit your needs.

Table 12. Sample object profiles

Name	Default contents
ALL OBJECTS	All Db2 objects in the subsystem.
AUTOMATION EXPERT REPOSITORY	The Db2 Automation Expert and shared profile support database, stored in DAJDB*. Partitions for any partitioned object are processed together when utility JCL is generated.

Table 12. Sample object profiles (continued)

Name	Default contents
BEST PRACTICE PART OBJECTS	All partitioned table spaces without pending definition changes and their associated indexes, with JCL generated at the PART level.
BEST PRACTICE PBR ALL PART	All partition-by-range table spaces and their associated indexes, with JCL generated at the ALL level.
BEST PRACTICE PBR PART	All partition-by-range table spaces and their associated indexes, with JCL generated at the PART level.
DB2 CAT/DIR DSN%	All table spaces and their associated indexes in DSN% Db2databases.
DB2 CATALOG	All DSNDB06 table spaces and their associated indexes.
DB2 CATALOG AND DIRECTORY	All DSNDB01 and DSNDB06 table spaces and their associated indexes.
DB2 DIRECTORY	All DSNDB01 table spaces and their associated indexes.
SAMPLE DATABASE	All spaces in the DSN8D* Db2 sample database that is optionally installed with Db2, with JCL generated at the ALL level.
SAMPLE DATABASE BY PARTITION	All spaces in the DSN8D* Db2 sample database that is optionally installed with Db2, with JCL generated at the PART level.
SAMPLE DATABASE WITH EXCLUDE	All spaces in the Db2 sample database (DSN8D*), but excluding all partitions of DSN8S*1R table space. This is an example of how to exclude objects in a profile.
SAPR3	All table spaces and indexes that belong to an SAP/R3 subsystem (with the creator SAPR3).

Table 13. Sample utility profiles

Name	Default contents
BEST PRACTICE FULL COPY	Full copy of a table space using IBM's advice for optimally running a COPY utility.
BEST PRACTICE INCR COPY	Incremental copy of a table space using IBM's advice for optimally running a COPY utility.
BEST PRACTICE ONLINE REORG	Online REORG of a table space using IBM's advice for optimally running a REORG.
BEST PRACTICE RUNSTATS	Collect statistics on a table space using IBM's advice for optimally running RUNSTATS.
CHECK DATA	Runs a basic Db2 CHECK DATA utility.
COPY TO COPY	Use COPYTOCOPY to make local backup to tape from most recent image copy. The copy data set is a GDG data set with partition numbers. This profile contains an example on how to use the substring substitution variables.
COPY TO DASD	Full image copy with SHRLEVEL REFERENCE to DASD.

Table 13. Sample utility profiles (continued)

Name	Default contents
COPY TO TAPE	Full image copy with SHRLEVEL REFERENCE to tape using a GDG data set with partition numbers.
MODIFY RECOVERY	Delete recovery information over 30 days old from the Db2catalog.
ONLINE IX REORG	REORG of an index with SHRLEVEL CHANGE. The catalog is updated with inline statistics.
ONLINE TS REORG	REORG of a table space with SHRLEVEL CHANGE. The mapping is automatically created. The catalog is updated with inline statistics. An inline image copy is made. The copy data set is a GDG on DASD.
QUIESCE	Quiesce with WRITE set to YES.
RECOVER	Recover to current point-in-time.
REPAIR SET NOCOPYPEND	Uses the REPAIR utility to reset the COPY PENDING status of a space.
REPOSITORY MAINTENANCE	Clean up the Db2 Automation Expert repository of data older than 30 days.
RESIZE	Resize space data sets when more than 50 extents or percentage in use greater than 80%.
RUNSTATS CATALOG	Run RUNSTATS with SHRLEVEL REFERENCE and update all Db2 catalog statistics.
RUNSTATS REPOSITORY	Run RUNSTATS with SHRLEVEL REFERENCE and update all Db2 Automation Expert repository statistics. The Db2 catalog is not updated.
STANDARD IX REORG	REORG index with SHRLEVEL NONE.
STANDARD TS REORG	REORG table space with SHRLEVEL NONE.

Table 14. Sample exception profiles

Name	Default contents
BEST PRACTICE AREO* STATUS	For objects in REORG-pending advisory status (AREO*).
BEST PRACTICE EQ PDCS	For objects with pending definition changes.
BEST PRACTICE IMAGE COPY FULL	Determine when to take a full image copy by using these exceptions at regular intervals.
BEST PRACTICE IMAGE COPY INCR	For objects that have had changes since the last image copy.
BEST PRACTICE NE PDC	For objects that do not have pending definition changes.
BEST PRACTICE REORG #1	For non-LOB objects that are in a non-data sharing environment and where access to the object is predominantly not random access.
BEST PRACTICE REORG #2	For non-LOB objects that are in a data sharing environment and where access to the object is predominantly not random access.

Table 14. Sample exception profiles (continued)

Name	Default contents
BEST PRACTICE REORG #3	For non-LOB objects that are in a non-data sharing environment and where access to the object is predominantly random access.
BEST PRACTICE REORG #4	For non-LOB objects that are in a data sharing environment and where access to the object is predominantly random access.
BEST PRACTICE REORG AVOIDANCE	Detect when a REORG can be avoided by using these exception conditions.
BEST PRACTICE REORG LOB #1	For LOB table spaces that are in a non-data sharing environment where access to the table space is predominantly not random access.
BEST PRACTICE REORG LOB #2	For LOB table spaces that are in a data sharing environment where access to the table space is predominantly not random access.
BEST PRACTICE REORG LOB #3	For LOB table spaces that are in a non-data sharing environment where access to the table space is predominantly random access.
BEST PRACTICE REORG LOB #4	For LOB table spaces that are in a data sharing environment where access to the table space is predominantly random access.
BEST PRACTICE RUNSTATS	For objects that have more than 30% insert, updates, or deletes since the last RUNSTATS. Determine when to collect fresh statistics by using these exceptions at regular intervals.
CLUSTERRATIO VALUE RANGE	Check the Db2 catalog for a cluster ratio of less than 95% but great than 1%. This example shows how to set a range of values for a single condition.
COPY CONDITIONS	Common conditions for a copy: 1) more than 14 days since last full image copy; 2) changed since the last image copy or 3) in COPY PENDING status.
LARGE OBJECTS	For objects allocated greater than 3,000 tracks.
NEVER COPIED	For objects that have not had a full image copy taken.

Table 14. Sample exception profiles (continued)

Name	Default contents
REORG CONDITIONS	Common conditions for a REORG:
	• Data sets with more than 50 extents
	• Data sets that are more than 80% used
	• More than 5% of rows in a space have been relocated
	• More than 10% of the space contains rows from dropped tables
	• Index CLUSTERRATIO is less than 95% (the related table space is also selected for REORG *or* index leaf distance is greater than 200
	CARDF for table spaces and indexes is checked to make sure empty spaces are not selected. Statistics are collected by RUNSTATS with REPORT YES immediately before conditions are evaluated. Neither the Db2 catalog nor the Db2 Automation Expert repository are updated with these statistics. This is a good example of how conditions can be combined with AND and OR in the same profile.
SATURDAY ONLY	Check for a day of the week (Saturday is the default).
SMALL OBJECTS	For objects allocated less than or equal to 3,000 tracks.
STANDARD REORG CONDITIONS	For non-LOB objects with common conditions for a REORG:
	• Data sets with more than 50 extents
	• Data sets that are more than 80% used
	• More than 5% of rows in a space have been relocated
	• More than 10% of the space contains rows from dropped tables
	• Index CLUSTERRATIO is less than 95% (the related table space is also selected for REORG *or* index leaf distance is greater than 200
	CARDF for table spaces and indexes is checked to make sure empty spaces are not selected. Statistics are collected by RUNSTATS with REPORT YES immediately before conditions are evaluated. Neither the Db2 catalog nor the Db2 Automation Expert repository are updated with these statistics. This is a good example of how conditions can be combined with AND and OR in the same profile.

Table 15. Sample job profiles

Name	Default contents
BEST PRACTICE FULL INCR COPY	Use this job profile for both incremental image copies and full image copies. If an object meets the criteria for a full image copy, it is generated with full image copy control cards. If an object does not meet the criteria for a full image copy, it is generated with incremental copy control cards.

Table 15. Sample job profiles (continued)

Name	Default contents
BEST PRACTICE PBR REORG	This profile generates online REORGs for partition-by-range table spaces and indexes. There are three groups to generate 3 sets of jobs: 1. REORG at ALL level for PBR spaces that have pending definition changes and should be reorganized 2. REORG at PART level for PBR spaces in AREO* (advisory REORG pending) status 3. REORG at PART level for all other PBR spaces
BEST PRACTICE REORG #1	This job profile generates a standard REORG utility for objects that are in a non-data sharing environment and where access to the object is predominantly not random access, based on IBM REORG best practice recommendations.
BEST PRACTICE REORG #2	This job profile generates a standard REORG utility for objects that are in a data sharing environment and where access to the object is predominantly not random access, based on IBM REORG best practice recommendations.
BEST PRACTICE REORG #3	This job profile generates a standard REORG utility for objects that are in a non-data sharing environment and where access to the object is predominantly random access, based on IBM REORG best practice recommendations.
BEST PRACTICE REORG #4	This job profile generates a standard REORG utility for objects that are in a data sharing environment and where access to the object is predominantly random access, based on IBM REORG best practice recommendations.
BEST PRACTICE REORG AVOIDANCE	In this job profile, table spaces that meet the exception criteria of needing a REORG are identified. With this job profile, no utility is generated; instead, a preview report is created, enabling you to view the objects that would be included for a REORG had the utility JCL actually been created. This enables you to review the workload before the utility JCL is generated.
BEST PRACTICE RUNSTATS	Objects are included in the RUNSTATS utility based upon the number of inserts, updates, and deletes that have occurred on a given table space. Best practice standards are used when generating this utility job.
CONDITIONAL EXCEPTION PROFILE	Take a full image copy of the Db2 catalog objects. If an object has never had a full image copy taken, copy it to tape. Otherwise, copy it to DASD.
COPY CATALOG AND DIRECTORY	The Db2 catalog and directory table spaces are copied in the correct order, with separate COPY statements and job steps where necessary. One job is generated. Copy data sets will reside on DASD. Includes object profile DB2 CATALOG AND DIRECTORY and utility profile COPY TO DASD.

Table 15. Sample job profiles (continued)

Name	Default contents
COPY LARGE SPACES TO TAPE	Common copy conditions are used to select spaces that are larger than 3,000 tracks and copy them to tape. Multiple jobs are generated. Even though no job name template override is specified, a unique job name is generated for each job. Each job resides in its own PDS member, with the member name equal to the job name; as such, exactly 10 jobs are generated. If fewer than 10 objects are selected, one utility job is generated for each object. All remaining jobs contain only an IEFBR14 step. If more than 10 objects are selected, they are distributed among the 10 jobs. Utility IDs are prefixed with the job name. If a GDG base does not exist for any copy data set, it is created. This method of generating jobs is useful when using a job scheduler to automatically submit the jobs.
COPY SMALL SPACES TO DASD	Common copy conditions are used to select spaces that are 3,000 tracks or smaller and copy them to DASD. Multiple jobs are generated. In this case, only one PDS member, containing up to 10 jobs, is created. As such, it is possible to have fewer than the maximum number of jobs created. If fewer than 10 objects are selected, one utility job is created for each object, and no IEFBR14 jobs will be generated.
COPY TO DASD	This job profile contains multiple exception profiles. Normally, exception profiles are combined for evaluating objects. In this case, each profile is evaluated separately. Common copy conditions are used to select the spaces to be copied. If an object is not selected by the common copy conditions, then it is evaluated by the NEVER COPIED exception profile. The COPY utility is run to create an LP copy with SHRLEVEL REFERENCE, followed by the COPYTOCOPY utility to create an LB copy. One job is generated.
ONLINE REORG	Common REORG conditions are used to select table spaces and indexes for REORG with SHRLEVEL CHANGE. The mapping table is automatically created. Any object data sets that have more than 50 extents or are more than 80% full are resized. One job is generated.
RECOVER CATALOG AND DIRECTORY	The Db2 catalog and directory table spaces are recovered in the correct order, with separate RECOVER statements and job steps where necessary. One job is generated.
REPOSITORY STATS	The Db2 Automation Expert repository is populated with current statistics collected by RUNSTATS and statistics older than 30 days are removed for all objects in the object profile. One job is generated.
RUNSTATS CATALOG	The Db2 catalog is populated with current statistics collected by RUNSTATS for all objects in the object profile. One job is generated.
STANDARD REORG	Common REORG conditions are used to select table spaces and indexes for REORG with SHRLEVEL NONE. Any object data sets that have more than 50 extents or are more than 80% full are resized. One job is generated.

Table 15. Sample job profiles (continued)

Name	Default contents
TWO JOB GROUPS	This sample shows how to use one job profile to build two completely different jobs. One job copies the Db2 Automation Expert repository, and the other job reorganizes the Db2 catalog objects.

Using the catalog and directory sample profiles

The sample profiles include two job profiles that make it easy for you to backup and recover your Db2 catalog and directory.

These profiles are called COPY CATALOG AND DIRECTORY and RECOVER CATALOG AND DIRECTORY. These job profiles use the three following profiles:

- An object profile named **DB2 CATALOG AND DIRECTORY**. This profile includes all DSNDB01 and DSNDB06 objects. The objects are selected using wild cards, so all objects in those databases will be selected.
- A utility profile called **COPY TO DASD**. This profile specifies a full image copy with share level reference. The default image copy data set name is *database.spacenam*.LP.*timestamp,* but can easily be modified for your site's needs.
- A utility profile called **RECOVER**. This profile specifies a recovery to the current point in time, using the local site image copies.

Copying the catalog and directory

The job profile for copying the catalog and directory uses the DB2 CATALOG AND DIRECTORY object profile and the COPY TO DASD utility profile.

The Db2 catalog and directory table spaces will be copied in the correct order, with separate COPY statements and job steps where necessary. One job will be generated. The copied data sets will reside on DASD.

To use this profile, update the object and utility profiles as necessary for your site and build the profile.

The resulting job should be submitted on a regular basis to ensure recoverability of your Db2 catalog and directory.

Recovering the catalog and directory

The profile for recovery the catalog and directory uses the DB2 CATALOG AND DIRECTORY object profile and the RECOVER utility profile.

The Db2 catalog and directory table spaces will be recovered in the correct order, with separate RECOVER statements and job steps where necessary. One job will be generated.

To use this profile, update the object and utility profiles as necessary for your site and build the profile.

The resulting job should be placed on tape along with the image copies from the COPY DB2 CATALOG AND DIRECTORY utility profile..

Chapter 8. Creating object profiles

Object profiles contain customizable, reusable lists of Db2 objects. You can group related objects into one profile, such as all objects for a particular application.

An object profile includes the objects on which you want to run utilities. An object profile also can specify the objects that you want the utilities to ignore. You can select one or more of the following objects to include in an object profile:

- Entire databases
- Entire table spaces
- Select partitions of a table space
- Entire indexes
- Select partitions of an index
- Table spaces, index spaces, or both on a particular volume or volumes

You can use wildcards to select similarly named or created objects. In addition, you can define custom SQL to retrieve the objects by using search conditions in a WHERE clause.

Later, you link object profiles with utility profiles and (optionally) exception profiles to create a job profile.

Creating an object profile

Creating an object profile involves defining the profile and then selecting the objects to be included in the profile.

Procedure

1. On the Db2 Automation Expert main menu, enter 1 in the **Option** field and press Enter.

2. Specify selection criteria in the **Profile Like** and **Creator Like** fields, or enter the number of recently accessed profiles that you want to see in the **Recent Profiles** field, or enter values in both sets of fields. Press Enter.

   The profiles that meet your selection criteria or have been recently accessed are listed on the **Objects Profile Display**, as shown in following figure.

```
AUTOXPRT V1R1    -------- Objects Profile Display -------- 2023/10/19  16:23:04
Option  ===>                                            Scroll ===> CSR
  -----------------------------------------------------------------------------
Line Commands: C - Create  D - Delete  E - Export  I - Import
               Q - Quick   V - View    U - Update  J - Jobs    R - Rename
Profile Like   TEST                                   Db2 Subsystem: SS01
Creator Like   TWURS*    Recent Profiles 00           Row 1 of 1           >
  -----------------------------------------------------------------------------

Cmd  Name                              Creator    Updt
     TEST                              TWUSR       U
***************************** Bottom of Data ********************************
```

Figure 21. Objects Profile display

3. On the **Objects Profile Display**, enter C in the **Cmd** field and press Enter.

   The window that is shown in the following figure is displayed:

```
             Enter New Objects Profile Data


Creator . . . . TWUSR
Profile Name  .
Description . .
Update Option . U  (U - Update, V - View only, N - No access)
```

*Figure 22. **Enter New Objects Profile Data** window*

4. Enter the profile creator, a profile description, and the profile update option in the fields on the window. The **Creator** field contains your user ID, but can be modified.

5. After you complete these fields, press Enter.

   The window that is shown in the following figure is displayed. This window is used to specify whether to add table spaces, indexes, or both to the object profile.

```
Add Objects to the Object Profile

   Add Tablespaces . . N (Yes/No)

   Add Indexes . . . . N (Yes/No)

   Add Volumes . . . . N (Yes/No)
```

Figure 23. Specifying objects to add to the profile

What to do next

- To add table spaces, refer to "Adding table spaces" on page 120. Use this option to include table spaces and to include all indexes for a table space.
- To add indexes, refer to "Adding indexes" on page 133. Use this option to include indexes selectively.
- To add table spaces or index spaces from specific volumes, refer to "Adding spaces on specific volumes" on page 142.

Note: If you enter Y in more than one field, the screens to add the objects are displayed in succession.

Adding table spaces

There are several ways to specify how table spaces are included in an object profile. You can specify table spaces by database, table space or creator name, with or without wild cards. You can use custom SQL to specify other criteria to select the table spaces. Other options allow you to include all indexes on the table spaces, include clone tables only, include related LOB or XML spaces for base table spaces, or include referentially related table spaces.

Procedure

- On the **Add Objects to the Objects Profile** window, enter Y in the **Add Tablespaces** field and press Enter. The **Enter Tablespaces Like to Display** window is displayed, as shown in the following figure:

```
                     Enter Tablespaces Like to Display

Database Like. . *          Wildcard   N (Yes/No)
Tablespace Like. *          Exclude    I (E - Exclude, I - Include)
Creator Like . . *           >

Process Dependent Indexes . . . . . . . . . N (Yes/No)
Process Referentially Dependent Tablespaces . N (Y - Yes, N - No,
                                               B - Build time Expansion,
                                               R - Run time Expansion)
Process Cloned Tables . . . . . . . . . . . N (Yes/No)
Process AUX Tablespaces . . . . . . . . . . N (L - LOB, X - XML,
                                               A - All, N - No)
Process History and Archive objects . . . . . N (H - History,
                                               A - Archive,
                                               B - Both, N - None)
Advanced SQL . . . . N (Yes/No)    Update SQL N (Yes/No)
```

Figure 24. **Enter Tablespaces Like to Display** *window*

What to do next

Use the **Enter Tablespaces Like to Display** window to select the spaces that you want to include or exclude. See the following topics for more information:

Adding table spaces from a list

To generate a list of table spaces from which to select for inclusion in the object profile, follow these steps.

Procedure

1. Enter a database, table space, or creator name or mask in the appropriate fields on the **Enter Tablespaces Like to Display** window, but leave N in the **Wildcard** field, as shown in the following figure:

```
                    Enter Tablespaces Like to Display

Database Like. . *          Wildcard   N (Yes/No)
Tablespace Like. *          Exclude    I (E - Exclude, I - Include)
Creator Like . . PD*          >

Process Dependent Indexes . . . . . . . . . . N (Yes/No)
Process Referentially Dependent Tablespaces . N (Y - Yes, N - No,
                                                B - Build time Expansion,
                                                R - Run time Expansion)
Process Cloned Tables . . . . . . . . . . . . N (Yes/No)
Process AUX Tablespaces . . . . . . . . . . . N (L - LOB, X - XML,
                                                A - All, N - No)
Process History and Archive objects . . . . . N (H - History,
                                                A - Archive,
                                                B - Both, N - None)
Advanced SQL . . . . N (Yes/No)    Update SQL N (Yes/No)
```

Figure 25. Adding table spaces from a list

Note: The **Creator Like** field allows up to 128 bytes. To scroll this field, place the cursor in the field and use the PF11 key to scroll right and the PF10 key to scroll left.

2. Press Enter to continue.

   The **Include Tablespace Selection** panel is displayed. This panel lists the table spaces that match your selection criteria. It also provides columns of detailed information about each table space. Scroll right to see all the columns.

3. To select a table space, enter S in the **Cmd** field next to the space and press Enter.

   A message is displayed indicating that the space is added to the profile.

What to do next

To review and add indexes that are related to a table space, enter I next to the table space and press Enter. Refer to "Adding indexes" on page 133.

When you are finished adding table spaces and indexes, press PF3 until the **Update Object Profile Display** is displayed. For more information, see "Updating object profiles by using the Update Object Profile Display" on page 145.

Adding table spaces from a list with advanced SQL

You can refine the list of table spaces to be included by providing an advanced SQL statement with a customized WHERE clause. Any valid WHERE clause that selects table spaces to be included can be specified.

About this task

Advanced SQL works with the selection criteria that you specify in the **Database Like**, **Tablespace Like**, and **Creator Like** fields on the **Enter Tablespaces Like to Display** window. The results of selection criteria are intersected with the results of the advanced SQL statement to select the table spaces.

Selecting table spaces from a list requires setting the **Wildcard** field to N on the **Enter Tablespaces Like to Display** window. When **Wildcard** is set to N, the advanced SQL is used to build the list of table spaces from which to select. After you choose the spaces, the advanced SQL is discarded and not saved in the object profile.

Procedure

1. On the **Enter Tablespace Like to Display** window, enter a database, table space, or creator name or mask in the appropriate fields and enter N in the **Wildcard** field.

   Note: The **Creator Like** field allows up to 128 bytes. To scroll this field, place the cursor in the field and use the PF11 key to scroll right and the PF10 key to scroll left.

2. Enter Y in the **Advanced SQL** field and Y in the **Update SQL** field, as shown in the following figure.

```
                      Enter Tablespaces Like to Display

Database Like. . *         Wildcard   N (Yes/No)
Tablespace Like. *         Exclude    I (E - Exclude, I - Include)
Creator Like . . PD*        >

Process Dependent Indexes . . . . . . . . . N (Yes/No)
Process Referentially Dependent Tablespaces . N (Y - Yes, N - No,
                                                B - Build time Expansion,
                                                R - Run time Expansion)
Process Cloned Tables . . . . . . . . . . . N (Yes/No)
Process AUX Tablespaces . . . . . . . . . . N (L - LOB, X - XML,
                                                A - All, N - No)
Process History and Archive objects . . . . N (H - History,
                                                A - Archive,
                                                B - Both, N - None)
Advanced SQL . . . . Y (Yes/No)   Update SQL Y (Yes/No)
```

Figure 26. Specifying advanced SQL

3. Press Enter.

   The **Object Selection Advanced SQL** panel is displayed, as shown in following figure:

```
AUTOXPRT V1R1   ----  Object Selection Advanced SQL   --- 2023/10/19  16:26:58
Option  ===>                                              Scroll ===> CSR
                                                       Db2 Subsystem: SS01
-------------------------------------------------------------------------------
Commands: Execute - Test Sql  Import - Import from dataset
Line Commands: C - Copy  D - Delete  I - Insert  M - Move  R - Repeat
            T - Table/Column Lookup
-------------------------------------------------------------------------------
Cmd  SQL

**************************** Bottom of Data **********************************
```

*Figure 27. **Object Selection Advanced SQL** panel*

4. Enter your SQL statement in the SQL input area.

   You can enter any SQL statement that meets these requirements:

   • It must be a SELECT statement that specifies the following columns:

     – The first column is required and must represent a database name.

     – The second column is required and must represent a table space name.

     – The third column is optional, but if present must represent a partition number.

   • The FROM clause must be specified after the SELECT statement.

   • Use any WHERE clause criteria that identifies the objects to be included in the object profile.

   • You can enter comments by inserting two consecutive hyphens, followed by the comment. Any characters that follow two consecutive hyphens and are before the end of a line are ignored.

   You can optionally enter the T line command to look up table names and their columns on the subsystem. This command invokes the **Table Selection** panel, which you can use to generate a list of tables on this subsystem and find column names associated with the tables.

   The following panel shows a sample valid advanced SQL statement:

```
AUTOXPRT V1R1    ----  Object Selection Advanced SQL    --- 2023/10/19  16:28:24
Option  ===>                                                Scroll ===> CSR
                                                         Db2 Subsystem: SS01
-------------------------------------------------------------------------------
Commands: Execute - Test Sql  Import - Import from dataset
Line Commands: C - Copy  D - Delete  I - Insert  M - Move  R - Repeat
               T - Table/Column Lookup
-------------------------------------------------------------------------------
Cmd  SQL
     SELECT D.NAME,S.NAME
     FROM SYSIBM.SYSDATABASE D, SYSIBM.SYSTABLESPACE S
     WHERE D.IMPLICIT = 'Y' AND S.IMPLICIT = 'Y'  AND  D.NAME = S.DBNAME
***************************** Bottom of Data ********************************
```

Figure 28. Sample advanced SQL statement

5. To verify that the results of the SQL select statement are as expected, enter EXECUTE in the **Option** field and press Enter.

   The SQL statement is run and the results of the SELECT are listed on the **Advanced SQL Test Facility** panel, as shown in the following figure:

```
AUTOXPRT V1R1    ------- Advanced SQL Test Facility ------ 2023/10/19  16:29:30
Option  ===>                                                Scroll ===> CSR

                                                         Db2 Subsystem: SS01
                                                    Row 1 of 530           +>
-------------------------------------------------------------------------------
Dbname   Tsname    Part Creator    Dbid  Obid  Psid Bpool    Lockrule  Pagesize
DSN04828 A2345678    1 TSINB        584    1     2 BP0         R            4
DSN04829 A2345678    1 TSINB        585    1     2 BP0         R            4
DSN04830 A2345678    1 TSINB        586    1     2 BP0         R            4
DSN04831 A2345678    1 TSINB        587    1     2 BP0         R            4
DSN04722 AAAR0002    1 PDDAB        766    1     2 BP0         R            4
DSN03865 ABESS       1 PDSHEL      4973    1     2 BP0         R            4
DSN04379 ACDRCD      1 PSDPDB       575    1     2 BP0         R            4
DSN04168 APP1        1 TWSHAWN     5345    1     2 BP0         R            4
DSN03346 APPLICAN    1 TWSHAWN     4414    1     2 BP0         R            4
DSN03774 APPLICAN    1 TWSHAWN     4877    1     2 BP0         R            4
DSN03425 ARYRINLI    1 ARYTEST     4494    1     2 BP0         R            4
DSN03425 ARYRINLI    2 ARYTEST     4494    1     2 BP0         R            4
DSN03425 ARYRINLI    3 ARYTEST     4494    1     2 BP0         R            4
DSN02375 ARYTESTR    1 ARYTEST     3348    1     2 BP0         R            4
DSN02375 ARYTESTR    2 ARYTEST     3348    1     2 BP0         R            4
DSN02375 ARYTESTR    3 ARYTEST     3348    1     2 BP0         R            4
DSN02541 ARYTESTR    1 ARYTEST     3524    1     2 BP0         R            4
DSN02541 ARYTESTR    2 ARYTEST     3524    1     2 BP0         R            4
DSN02541 ARYTESTR    3 ARYTEST     3524    1     2 BP0         R            4
DSN03543 ARYTESTR    1 ARYTEST     4631    1     2 BP0         R            4
DSN03543 ARYTESTR    2 ARYTEST     4631    1     2 BP0         R            4
DSN03543 ARYTESTR    3 ARYTEST     4631    1     2 BP0         R            4
DSN02100 BADCHARS    1 PDERMA      3007    1     2 BP0         R            4
```

*Figure 29. **Advanced SQL Test Facility** panel with SQL statement results*

This panel shows the results of the SQL SELECT statement execution. The data on the panel is read only.

Note: The EXECUTE command runs the SQL statement without consideration for the **Database Like**, **Tablespace Like**, and **Creator Like** criteria that you specified on the **Enter Tablespaces Like to Display** window.

6. When you are satisfied with the results of the SELECT statement, on the **Advanced SQL Test Facility** panel, press PF3 twice.

   Note: Because the **Wild card** field was set to N on the **Enter Tablespaces Like to Display** window, the SQL statement is not saved when you exit the **Object Selection Advanced SQL** panel.

   The **Include Tablespace Selection** panel is displayed. This panel shows the results of the intersection of the SQL SELECT statement results and the **Database Like**, **Tablespace Like**, and **Creator Like**

criteria that you specified on the **Enter Tablespaces Like to Display** window. The following figure shows the results:

```
AUTOXPRT V1R1    ---- Include Tablespace Selection ----    2023/10/19  16:31:50
Option  ===>                                                    Scroll ===> CSR
--------------------------------------------------------------------------------

Line Commands: S - Select  I - Indexes  E - Edit  R - Report  V - Validate
                                                Row 1 of 302          +>
  Database   Like *                              Db2 Subsystem: SS01
  Tablespace Like *
  Creator    Like PD*                                                 >
--------------------------------------------------------------------------------
Cmd  Dbname    Tsname     Part  Creator   Dbid  Obid  Psid Bpool    Lockrule
     DSN00018 T1HP0344    ALL   PDPOLU    413    1     2   BP0         R
     DSN00018 T1HP0344     1    PDPOLU    413    1     2   BP0         R
     DSN00020 POLICYRI    ALL   PDDAB     415    1     2   BP0         R
     DSN00020 POLICYRI     1    PDDAB     415    1     2   BP0         R
     DSN00073 POLICYRI    ALL   PDDAB     504    1     2   BP0         R
     DSN00073 POLICYRI     1    PDDAB     504    1     2   BP0         R
     DSN00074 HISTRPOL    ALL   PDDAB     505    1     2   BP0         R
     DSN00074 HISTRPOL     1    PDDAB     505    1     2   BP0         R
     DSN00309 TIMETEST    ALL   PDDAB     749    1     2   BP0         R
     DSN00309 TIMETEST     1    PDDAB     749    1     2   BP0         R
     DSN00357 TEST2RIN    ALL   PDDAB     812    1     2   BP0         R
     DSN00357 TEST2RIN     1    PDDAB     812    1     2   BP0         R
     DSN00706 TSZ         ALL   PDILVE    457    1     2   BP0         R
     DSN00706 TSZ          1    PDILVE    457    1     2   BP0         R
     DSN00739 TSZ         ALL   PDKUZNA  1228    1     2   BP0         R
     DSN00739 TSZ          1    PDKUZNA  1228    1     2   BP0         R
     DSN01128 STAFF       ALL   PDERMA   1701    1     2   BP0         R
     DSN01128 STAFF        1    PDERMA   1701    1     2   BP0         R
     DSN01341 LEVWSUTM     0    PDKUZNA  1922    4     5   BP0         A
```

*Figure 30. **Include Tablespace Selection** panel*

7. On the **Include Tablespace Selection** panel, select the table spaces that you want to include in the object profile.

What to do next

To review and add indexes that are related to a table space, enter I next to the table space and press Enter. Refer to "Adding indexes" on page 133.

When you are finished adding table spaces and indexes, press PF3 until the **Update Object Profile Display** is displayed. For more information, see "Updating object profiles by using the Update Object Profile Display" on page 145.

Adding table spaces at job build time by using the Wildcard field

If you have an application that frequently adds or removes table spaces, you can use the **Wildcard** field to allow Db2 Automation Expertto resolve the object list at job build time. You can use this feature to avoid manually modifying the object profile whenever your application adds an object.

About this task

The **Wildcard** field works with the selection criteria that you specify in the **Database Like**, **Tablespace Like**, and **Creator Like** fields on the **Enter Tablespaces Like to Display** window. If you set **Wildcard** to Y, the criteria is evaluated at build time.

Procedure

1. On the **Enter Tablespace Like to Display** window, enter a database, table space, or creator name or mask in the appropriate fields and enter Y in the **Wildcard** field, as showing in the following figure:

```
                  Enter Tablespaces Like to Display

Database Like. . *        Wildcard   Y (Yes/No)
Tablespace Like. *        Exclude    I (E - Exclude, I - Include)
Creator Like . . PD*         >

Process Dependent Indexes . . . . . . . . . N (Yes/No)
Process Referentially Dependent Tablespaces . N (Y - Yes, N - No,
                                                B - Build time Expansion,
                                                R - Run time Expansion)
Process Cloned Tables . . . . . . . . . . . N (Yes/No)
Process AUX Tablespaces . . . . . . . . . . N (L - LOB, X - XML,
                                                A - All, N - No)
Process History and Archive objects . . . . N (H - History,
                                                A - Archive,
                                                B - Both, N - None)
Advanced SQL . . . . N (Yes/No)    Update SQL N (Yes/No)
```

Figure 31. Adding table spaces at build time by using the Wildcard field

2. Press Enter to continue.

   The window that is shown in the following figure is displayed.

```
              Choose Partition Method

Utilities can run against each partition or it can
run against all partitions.  When DAJ explodes wild
card table and index spaces, which method would you
like partitioned spaces exploded?

      Explode  A  (A - All, P - Partitioned)
```

Figure 32. Specifying partition processing for spaces

Specify how table space partitions are processed. To handle all partitions (for example, equivalent to a REORG TABLESPACE), enter A in the **Explode** field. To individually process each partition (for example, equivalent to REORG TABLESPACE PART n), enter P in the **Explode** field.

3. Press Enter.

   The specified spaces are added to the **Update Object Profile Display** and a Y is entered in the Wildcard column.

What to do next

On the **Update Object Profile Display**, you can enter the EXPLODE primary command or the E line command to review the expanded list of all table spaces and index spaces currently included in the profile. For more information, see "Updating object profiles by using the Update Object Profile Display" on page 145.

Using advanced SQL with the Wildcard field to add table spaces at job build time

If you have an application that frequently adds or removes table spaces, you can use the **Wildcard** field in conjunction with advanced SQL to allow Db2 Automation Expert to resolve the object list at job build time. You can use this feature to avoid manually modifying the object profile whenever your application adds an object.

About this task

Advanced SQL works with the selection criteria that you specify in the **Database Like**, **Tablespace Like**, and **Creator Like** fields on the **Enter Tablespaces Like to Display** window. The results of selection criteria are intersected with the results of the advanced SQL statement to select the table spaces. When you set

Wildcard to Y, the advanced SQL and the selection criteria are evaluated at build time to select the table spaces.

In addition, when the **Wildcard** field is set to Y, the advanced SQL is saved with the object profile and used at build time to generate the object list.

Procedure

1. On the **Enter Tablespace Like to Display** window, enter a database, table space, or creator name or mask in the appropriate fields and enter Y in the **Wildcard** field.

   Note: The **Creator Like** field allows up to 128 bytes. To scroll this field, place the cursor in the field and use the PF11 key to scroll right and the PF10 key to scroll left.

2. Enter Y in the **Advanced SQL** field and Y in the **Update SQL** field, as showing in the following figure:

```
                      Enter Tablespaces Like to Display

 Database Like. . *          Wildcard   Y (Yes/No)
 Tablespace Like. *          Exclude    I (E - Exclude, I - Include)
 Creator Like . . PD*          >

 Process Dependent Indexes . . . . . . . . . N (Yes/No)
 Process Referentially Dependent Tablespaces . N (Y - Yes, N - No,
                                               B - Build time Expansion,
                                               R - Run time Expansion)
 Process Cloned Tables . . . . . . . . . . . N (Yes/No)
 Process AUX Tablespaces . . . . . . . . . . N (L - LOB, X - XML,
                                               A - All, N - No)
 Process History and Archive objects . . . . N (H - History,
                                               A - Archive,
                                               B - Both, N - None)
 Advanced SQL . . . . Y (Yes/No)    Update SQL Y (Yes/No)
```

Figure 33. Adding table spaces at job build time

3. Press Enter.

   The **Object Selection Advanced SQL** panel is displayed, as shown in following figure:

```
 AUTOXPRT V1R1   ---- Object Selection Advanced SQL   --- 2023/10/19  16:28:24
 Option  ===>                                             Scroll ===> CSR
                                                          Db2 Subsystem: SS01
 -----------------------------------------------------------------------------
 Commands: Execute - Test Sql  Import - Import from dataset
 Line Commands: C - Copy  D - Delete  I - Insert  M - Move  R - Repeat
             T - Table/Column Lookup
 -----------------------------------------------------------------------------
 Cmd  SQL

 **************************** Bottom of Data **********************************
```

*Figure 34. **Object Selection Advanced SQL** panel*

4. Enter your SQL statement in the SQL input area.

   You can enter any SQL statement that meets these requirements:

   - It must be a SELECT statement that specifies the following columns:

     – The first column is required and must represent a database name.

     – The second column is required and must represent a table space name.

     – The third column is optional, but if present must represent a partition number.

   - The FROM clause must be specified after the SELECT statement.

- Use any WHERE clause criteria that identifies the objects to be included in the object profile.
- You can enter comments by inserting two consecutive hyphens, followed by the comment. Any characters that follow two consecutive hyphens and are before the end of a line are ignored.

You can optionally enter the T line command to look up table names and their columns on the subsystem. This command invokes the **Table Selection** panel, which you can use to generate a list of tables on this subsystem and find column names associated with the tables.

The following panel shows a sample valid advanced SQL statement:

```
AUTOXPRT V1R1    ----  Object Selection Advanced SQL    --- 2023/10/19  16:28:24
Option  ===>                                                 Scroll ===> CSR
                                                        Db2 Subsystem: SS01
--------------------------------------------------------------------------------
Commands: Execute - Test Sql  Import - Import from dataset
Line Commands: C - Copy  D - Delete  I - Insert  M - Move  R - Repeat
              T - Table/Column Lookup
--------------------------------------------------------------------------------
Cmd  SQL
     SELECT D.NAME,S.NAME
     FROM SYSIBM.SYSDATABASE D, SYSIBM.SYSTABLESPACE S
     WHERE D.IMPLICIT = 'Y' AND S.IMPLICIT = 'Y'  AND  D.NAME = S.DBNAME
**************************** Bottom of Data **********************************
```

Figure 35. Sample advanced SQL statement

5. To verify that the results of the SQL select statement are as expected, enter EXECUTE in the **Option** field and press Enter.

   The SQL statement is run and the results of the SELECT are listed on the **Advanced SQL Test Facility** panel, as shown in the following figure:

```
AUTOXPRT V1R1    ------- Advanced SQL Test Facility ------ 2023/10/19  16:29:30
Option  ===>                                                 Scroll ===> CSR

                                                        Db2 Subsystem: SS01
                                                      Row 1 of 529          +>
--------------------------------------------------------------------------------
Dbname   Tsname   Part Creator    Dbid  Obid  Psid Bpool   Lockrule  Pagesize
DSN04828 A2345678    1 TSINB        584    1     2 BP0        R              4
DSN04829 A2345678    1 TSINB        585    1     2 BP0        R              4
DSN04830 A2345678    1 TSINB        586    1     2 BP0        R              4
DSN04831 A2345678    1 TSINB        587    1     2 BP0        R              4
DSN04722 AAAR0002    1 PDDAB        766    1     2 BP0        R              4
DSN03865 ABESS       1 PDSHEL      4973    1     2 BP0        R              4
DSN04379 ACDRCD      1 PSDPDB       575    1     2 BP0        R              4
DSN04168 APP1        1 TWSHAWN     5345    1     2 BP0        R              4
DSN03346 APPLICAN    1 TWSHAWN     4414    1     2 BP0        R              4
DSN03774 APPLICAN    1 TWSHAWN     4877    1     2 BP0        R              4
DSN03425 ARYRINLI    1 ARYTEST     4494    1     2 BP0        R              4
DSN03425 ARYRINLI    2 ARYTEST     4494    1     2 BP0        R              4
DSN03425 ARYRINLI    3 ARYTEST     4494    1     2 BP0        R              4
DSN02375 ARYTESTR    1 ARYTEST     3348    1     2 BP0        R              4
DSN02375 ARYTESTR    2 ARYTEST     3348    1     2 BP0        R              4
DSN02375 ARYTESTR    3 ARYTEST     3348    1     2 BP0        R              4
DSN02541 ARYTESTR    1 ARYTEST     3524    1     2 BP0        R              4
DSN02541 ARYTESTR    2 ARYTEST     3524    1     2 BP0        R              4
DSN02541 ARYTESTR    3 ARYTEST     3524    1     2 BP0        R              4
DSN03543 ARYTESTR    1 ARYTEST     4631    1     2 BP0        R              4
DSN03543 ARYTESTR    2 ARYTEST     4631    1     2 BP0        R              4
DSN03543 ARYTESTR    3 ARYTEST     4631    1     2 BP0        R              4
DSN02100 BADCHARS    1 PDERMA      3007    1     2 BP0        R              4
```

Figure 36. Advanced SQL Test Facility

This panel shows the results of the SQL SELECT statement execution. The data on the panel is read only.

Note: The EXECUTE command runs the SQL statement without consideration for the **Database Like**, **Tablespace Like**, and **Creator Like** criteria that you specified on the **Enter Tablespaces Like to Display** window.

6. When you are satisfied with the results of the SELECT statement, on the **Advanced SQL Test Facility** panel, press PF3 twice.

   The window that is shown in the following figure is displayed.

```
                Choose Partition Method

  Utilities can run against each partition or it can
  run against all partitions.  When DAJ explodes wild
  card table and index spaces, which method would you
  like partitioned spaces exploded?

          Explode  A  (A - All, P - Partitioned)
```

Figure 37. Specifying partition processing for spaces

Specify how table space partitions are processed. To handle all partitions (for example, equivalent to a REORG TABLESPACE), enter A in the **Explode** field. To individually process each partition (for example, equivalent to REORG TABLESPACE PART *n*), enter P in the **Explode** field.

7. Press Enter.

   The specified spaces are added to the **Update Object Profile Display** with Y entered in the corresponding **Wildcard** column.

What to do next

You can enter the EXPLODE primary command or the E line command to see the expanded list of all table spaces and index spaces currently included in the profile.

Adding indexes on a table space

To select indexes on a table space, use the I line command next to a table space on the **Include Tablespace Selection** panel.

Procedure

1. On the **Include Tablespace Selection** panel, enter I next to a table space and press Enter.

   The **Include Index Selection** panel is displayed, as shown in the following figure:

```
AUTOXPRT V1R1   ------- Include Index Selection ------    2023/10/19  16:48:13
Option  ===>                                              Scroll ===> CSR
 -------------------------------------------------------------------------

Line Commands: S - Select Index                      Row 1 of 1           >
  Database Like *                                    Db2 Subsystem: SS01
  Index    Like *                                                        >
  Creator  Like TW*                                                      >
 -------------------------------------------------------------------------
Cmd  Name                   Creator    Part  Tbname         Tbcreator
     DAHIX                  TWUSR         0  DAHTB          TWUSR
*************************** Bottom of Data ********************************
```

*Figure 38. **Include Index Selection** panel*

2. Enter S next to the index to select it for inclusion in the profile and press Enter.

   A message is displayed indicating that the index was added to the profile.

Processing dependent indexes

You can automatically process all indexes that are related to a table space by using the **Process Dependent Indexes** field.

About this task

1. If Process Dependent Indexes is set to N, and the object profile is used with a RECOVER utility, indexes that are related to the recovered table spaces will be placed in REBUILD PENDING status by Db2 after the recovery.

2. If you specify to process dependent indexes and you request both a REORG TABLESPACE and a REORG INDEX in the same job profile, a REORG INDEX step is not generated for the dependent indexes. These indexes are automatically reorganized by the REORG TABLESPACE utility and do not need to be processed in a separate step.

Procedure

1. To process dependent indexes, do one of the following:

   - On the **Enter Tablespaces Like to Display** window, enter Y in the **Process Dependent Indexes** field.

   - On the **Update Object Profile Display**, when viewing objects already included in the profile, enter Y in the **Process IX** column for the selected objects.

2. On the **Update Object Profile Display**, you can view the indexes that are included in the profile by using the EXPLODE primary or line command.

Processing referentially related table spaces

Db2 Automation Expert provides the ability to include all table spaces related via referential integrity. This allows a utility to maintain referential constraints by executing all referentially related objects at the same time.

About this task

Some job steps cannot use LISTDEFs for object determination. These include the job registration step for the job tracking task; START and STOP DATABASE commands; Db2 Automation Expert utilities such as reallocation; and any IBM utility or command that does not support LISTDEFs, such as REPAIR. If RI spaces are to be processed and job generation options specify LISTDEFS, the job steps that cannot use LISTDEFs must determine the RI structure at job build time. If the RI structure changes between job build and job execution time, the object lists may not be consistent between steps.

Procedure

1. To process referentially related objects, do one of the following:

   - On the **Enter Tablespaces Like to Display** window, enter one of the following values in the **Process Referentially Dependent Tablespaces** field.

     Y

     Specifying Y processes the table space and all its referentially dependent table spaces. The RI will be expanded depending on the value of the LISTDEF job option. With LISTDEFs off, the RI will be expanded at build time. If LISTDEFs are selected, the RI will be expanded at utility execution time via LISTDEF RI keyword. However, wildcarded objects that are processed at the partition level are always exploded at build time, because the LISTDEF RI and PARTLEVEL keywords are mutually exclusive.

     B

     Specifying B means that RI is expanded at build time if the LISTDEF job option is set to N. If the LISTDEF job option is set to Y, RI is expanded at run time.

R

Specifying R forces RI to be expanded at utility execution time. LISTDEFs are required with this option. This option cannot be specified for wildcarded objects that are processed at the partition level, because the LISTDEF RI and PARTLEVEL keywords are mutually exclusive.

N

Specifying N does not process referentially related table spaces.

- On the **Update Object Profile Display**, when viewing objects already included in the profile, enter `Y, B, R` or N in the **Process RI** column for the selected objects. Refer to the previous step for a description of these values.

2. On the **Update Object Profile Display**, you can view the objects that are included in the profile by using the EXPLODE primary or line command.

Processing clone tables

Db2 Automation Expert can automatically process clone tables that are related to a table spaces. When you specify to process clone objects, only the clone objects are included in the object profile.

About this task

The clone table has the same structure as the base table, exists in the same table space, and is used to hold a copy of the base table. All related objects are cloned as well, such as indexes and before triggers. In addition, data can be exchanged between a base table and clone table by using SQL statements. In Db2 Automation Expert, when you specify to process clone objects, only the clone objects are included in the object profile. If you want to also process the base object, you must separately include the base object with the **Process Clone** column set to N.

Procedure

1. On the **Enter Tablespaces Like to Display** window, enter Y in the **Process Cloned Tables** field.

2. Follow one of these steps, depending upon how you are selecting table spaces:

   - If you are selecting table spaces from a list, the **Include Tablespace Selection** panel is displayed. Enter S next to a clone table and press Enter. A message is displayed to confirm that the table space is added.

   - If you are selecting table spaces by using the **Wildcard** field, the clone table spaces are automatically included in the object profile.

3. On the **Update Object Profile Display**, you can view the clone objects that are included in the profile by using the EXPLODE primary or line command.

   You can also change the value in the Process Clone column.

Processing related LOB and XML spaces (AUX spaces)

In an object profile, Db2 Automation Expert can automatically include LOB and XML spaces that are related to base table spaces. These auxiliary spaces can be included either at job build time or at job run time, depending on whether you specify the use of LISTDEFS in the job profile.

About this task

LOB and XML spaces can be included in the object profile when one or more base table spaces are selected via the **Enter Tablespaces Like to Display** window, or on the **Update Object Profile Display**.

Procedure

1. In the **Process AUX** field on the **Enter Tablespaces Like to Display** window, or in the **AUX** field on the **Update Object Profile Display**, enter one of the following values and press Enter.

   - L: Processes the base table space and all its related LOB table spaces.

- X: Processes the base table space and all its related XML table spaces.
- A: Processes the base table space and all its related LOB and XML table spaces. The point in time when related XML or LOB objects are discovered and resolved depends on the value in the **Generate Listdefs** field in the job profile, as follows:
  - When **Generate Listdefs** is set to Y, only the base table space is listed, but the ALL keyword is included in the LISTDEF. Related XML or LOB spaces (or both) are discovered at run time so that the base table spaces and its related LOB spaces or XML spaces are included in the JCL at run time.
  - When **Generate Listdefs** is set to N, the base table space and its related LOB or XML table spaces (or both) are discovered and included in the JCL at job build time.
- N: Processes only the base table space object.

2. Follow one of these steps, depending upon how you are selecting table spaces:
   - If you are selecting table spaces from a list, the **Include Tablespace Selection** panel is displayed. Enter S next to the base table and press Enter. A message is displayed to confirm that the table space is added.
   - If you are selecting table spaces by using the **Wildcard** field, the **Update Object Profile Display** shows the base table space with Y in the **Wildcard** field.

3. On the **Update Object Profile Display**, the base table space is listed and the **AUX** field indicates whether LOB, XML, or both types of related objects will be selected.

   You can use the **EXPLODE** primary or line command to see an expanded list of all of the table spaces and index spaces, including LOB and XML objects, that are included in the profile.

4. Verify that the LISTDEF options for the job profile are set as desired.
   a) On the **Update Jobs Profile Display**, enter Y in the **Update Job Generation options** field and press Enter.
   b) On the **Generation Options** panel, enter Y in the **Update Template/Listdef/Option parms** field and press Enter.
   c) On the **Utility Parms** window, in the **Generate Listdefs** field, enter the desired value.

Processing history and archive tables

Db2 Automation Expert can automatically include history and archive tables that are related to base objects.

Before you begin
You must specify LISTDEFs in the job profile in order to automatically include history and archive objects. The history and archive tables can only be discovered at job run time.

About this task

Note: When RECOVER VERIFYSET YES is specified, Db2 Automation Expert automatically includes all dependent objects by generating the LISTDEF INCLUDE ALL, LISTDEF INCLUDE ALL HISTORY, and LISTDEF INCLUDE ALL ARCHIVE keywords. Therefore, HISTORY and ARCHIVE clauses will be included when RECOVER VERIFYSET YES is run, regardless of the history and archive specifications in the object profile.

History and archive objects can be included in the object profile when one or more base table spaces are selected via the **Enter Tablespaces Like to Display** window, or on the **Update Object Profile Display**.

Procedure

1. In the **Process History and Archive objects** field on the **Enter Tablespaces Like to Display** window, or in the **H/A** field on the **Update Object Profile Display**, enter one of the following values and press Enter.

H

Specifying H includes all related history tables.

A

Specifying A includes all related archive tables.

B

Specifying B includes both history and archive tables.

N

Specifying N does not process related archive or history tables.

2. Follow one of these steps, depending upon how you are selecting table spaces:

- If you are selecting table spaces from a list, the **Include Tablespace Selection** panel is displayed. Enter S next to the base table and press Enter. A message is displayed to confirm that the table space is added.

- If you are selecting table spaces by using the **Wildcard** field, the **Update Object Profile Display** shows the base table space with Y in the **Wildcard** field.

3. On the **Update Object Profile Display**, the base table space is listed and the **H/A** field indicates whether history, archive, or both types of tables will be included.

4. Verify that the LISTDEF options for the job profile are set as desired.

   a) On the **Update Jobs Profile Display**, enter Y in the **Update Job Generation options** field and press Enter.

   b) On the **Generation Options** panel, enter Y in the **Update Template/Listdef/Option parms** field and press Enter.

   c) On the **Utility Parms** window, in the **Generate Listdefs** field, enter the desired value.

Results

On the **Update Object Profile Display**, only the base table space is listed. When the job profile is built, the LISTDEF in the generated job contains an INCLUDE statement for the base table space, followed by an INCLUDE statement with the HISTORY clause or ARCHIVE clause. If both are specified, two separate INCLUDES with HISTORY and ARCHIVE clauses are generated. The history or archive tables are then discovered at job run time.

Adding indexes

You can include indexes selectively in an object profile, or you can use wild cards to add indexes at job build time. You can include indexes by database name, creator name, or index name, with or without wild cards. Custom SQL can also be used to specify other criteria to select indexes.

Procedure

- On the **Add Objects to the Objects Profile** window, enter Y in the **Add Indexes** field and press Enter.

  The window that is shown in the following figure is displayed:

```
-------------------- Enter Indexes Like to Display --------------------

  Database   Like  *
  Creator    Like  PDUSR*          >
  Index      Like  *               >
  Wildcard N  (Yes/No) Exclude  I  (E - Exclude, I - Include)

  Process Cloned Indexes  N  (Yes/No)
  Advanced SQL . . . . N (Yes/No)    Update SQL N (Yes/No)
```

*Figure 39. **Enter Indexes Like to Display** window*

What to do next

Use the **Enter Indexes Like to Display** window to select the indexes that you want to include or exclude. For more information, see the following topics:

Adding indexes from a list

You can select indexes from a list when you are adding them to an object profile.

Procedure

1. On the **Enter Indexes Like to Display** window, enter a database name, index creator, or index name or mask in the appropriate fields and enter N in the **Wildcard** field, as shown in the following figure:

```
-------------------- Enter Indexes Like to Display --------------------

  Database    Like  *
  Creator     Like  PDUSR        >
  Index       Like  *                  >
  Wildcard N  (Yes/No) Exclude  I  (E - Exclude, I - Include)

  Process Cloned Indexes  N  (Yes/No)
  Advanced SQL . . . . N (Yes/No)    Update SQL N (Yes/No)
```

Figure 40. Adding indexes from a list

Note: The **Creator Like** and **Index Like** fields allow up to 128 bytes. To scroll a field, place the cursor in the field and use the PF11 key to scroll right and the PF10 key to scroll left.

2. Press Enter to continue.

   The **Include Index Selection** panel is displayed. This panel lists the indexes that match your selection criteria and provides columns of detailed information about each index. Scroll right to see all the columns.

3. To select an index, enter S in the **Cmd** field next to the index.

   A message is displayed indicating that the index was added to the profile.

4. When you finish adding indexes, press PF3.

   The **Update Object Profile Display**, which is shown in the following figure, is displayed:

```
AUTOXPRT V1R1    ---- Update Object Profile Display   --- 2023/10/19  16:51:40
Option  ===>                                             Scroll ===> CSR

---------------------------------------------------------------------------------
Commands: Explode - View all objects.
Line Commands: A - Add  D - Delete  E - Explode  U - Update  R - Repeat
           V - View Advanced SQL
Creator: TWUSR       Profile: TEST                          User: TWUSR
Description:                                   Db2 Subsystem: SS01
Share Option U  (U - Update, V - View, N - No)     Row 1 of 1              >
---------------------------------------------------------------------------------
    TS/                                      Volume /
    IX/ Wild -------- Process ------- Inc/ IX DB Name/ IX Crtr/ IX Name/
Cmd VL  Card IX RI Clone Util AUX H/A Exc  TS Crtr   DB Name  TS Name  Part
    IX  N    N N N     N    N   N  INC  IX1PRI01   PDUSER   DEPT      0
***************************** Bottom of Data **********************************
```

*Figure 41. Index added to **Update Object Profile Display***

By default, the indexes are listed in the order added to the object profile. You can use the EXPLODE primary or line command to see an expanded list of all table spaces and index spaces included in the profile. Scroll right to see all the columns.

Adding indexes from a list with advanced SQL

You can refine the list of indexes to be included by providing an advanced SQL statement with a customized WHERE clause. Any valid WHERE clause that selects indexes to be included can be specified.

About this task

Advanced SQL works with the selection criteria that you specify in the **Database Like**, **Index Like**, and **Creator Like** fields on the **Enter Indexes Like to Display** window. The results of selection criteria are intersected with the results of the advanced SQL statement to select the indexes.

Selecting indexes from a list requires setting the **Wildcard** field to N on the **Enter Indexes Like to Display** window. When **Wildcard** is set to N, the advanced SQL is used to build the list of indexes from which to select. After you choose the indexes, the advanced SQL is discarded and not saved in the object profile.

Procedure

1. On the **Enter Indexes Like to Display** window, enter a database, index, or creator name or mask in the appropriate fields and enter N in the **Wildcard** field.

   Note: The **Creator Like** and **Index Like** fields allow up to 128 bytes. To scroll these fields, place the cursor in the field and use the PF11 key to scroll right and the PF10 key to scroll left.

2. Enter Y in the **Advanced SQL** field and Y in the **Update SQL** field, as shown in the following figure.

```
-------------------- Enter Indexes Like to Display --------------------

  Database   Like  *
  Creator    Like  *          >
  Index      Like  *               >
  Wildcard N  (Yes/No) Exclude  I  (E - Exclude, I - Include)

  Process Cloned Indexes  N  (Yes/No)
  Advanced SQL . . . . Y (Yes/No)    Update SQL Y (Yes/No)
```

Figure 42. Specifying advanced SQL

3. Press Enter.

   The **Object Selection Advanced SQL** panel is displayed, as shown in following figure:

```
AUTOXPRT V1R1   ----  Object Selection Advanced SQL   --- 2023/10/19  16:54:00
Option  ===>                                              Scroll ===> CSR
                                                     Db2 Subsystem: SS01
------------------------------------------------------------------------------
Commands: Execute - Test Sql  Import - Import from dataset
Line Commands: C - Copy  D - Delete  I - Insert  M - Move  R - Repeat
            T - Table/Column Lookup
------------------------------------------------------------------------------
Cmd   SQL

***************************** Bottom of Data ********************************
```

*Figure 43. **Object Selection Advanced SQL** panel*

4. Enter your SQL statement in the SQL input area.

   You can enter any SQL statement that meets these requirements:

   - It must be a SELECT statement that specifies the following columns:

     – The first column is required and must represent a database name.

     – The second column is required and must represent an index name.

     – The third column is optional, but if present must represent a partition number.

   - The FROM clause must be specified after the SELECT statement.

   - Use any WHERE clause criteria that identifies the objects to be included in the object profile.

   - You can enter comments by inserting two consecutive hyphens, followed by the comment. Any characters that follow two consecutive hyphens and are before the end of a line are ignored.

   You can optionally enter the T line command to look up table names and their columns on the subsystem. This command invokes the **Table Selection** panel, which you can use to generate a list of tables on this subsystem and find column names associated with the tables.

   The following panel shows a sample valid advanced SQL statement:

```
AUTOXPRT V1R1   ----  Object Selection Advanced SQL   --- 2023/10/19  16:54:50
Option  ===>                                              Scroll ===> CSR
                                                     Db2 Subsystem: SS01
------------------------------------------------------------------------------
Commands: Execute - Test Sql  Import - Import from dataset
Line Commands: C - Copy  D - Delete  I - Insert  M - Move  R - Repeat
            T - Table/Column Lookup
------------------------------------------------------------------------------
Cmd   SQL
      SELECT D.NAME,S.NAME
      FROM SYSIBM.SYSINDEXES S, SYSIBM.SYSINDEXPART P,
          SYSIBM.SYSINDEXSTATS ST,SYSIBM.SYSDATABASE D
      WHERE S.NAME    = P.IXNAME
      AND S.CREATOR   = P.IXCREATOR
      AND P.PARTITION = ST.PARTITION
      AND S.DBNAME    = D.NAME
      AND ST.NLEVELS  = 3
      AND S.CREATOR   = 'PUSER1'
***************************** Bottom of Data ********************************
```

Figure 44. Sample advanced SQL statement

5. To verify that the results of the SQL select statement are as expected, enter EXECUTE in the **Option** field and press Enter.

   The SQL statement is run and the results of the SELECT are listed on the **Advanced SQL Test Facility** panel, as shown in the following figure:

```
AUTOXPRT V1R1    ------- Advanced SQL Test Facility ------ 2023/10/19  20:35:31
Option  ===>                                              Scroll ===> CSR

                                              Db2 Subsystem: SS01
                                         Row 1 of 26           +>
--------------------------------------------------------------------------------
Dbname   Name              Part Creator   Tbname        Tbcreator
SKDB2    IABRE4               1 PUSER1     TABRE4              PUSER1
SKDB2    IABRE4               2 PUSER1     TABRE4              PUSER1
SKDB2    IABRE4               3 PUSER1     TABRE4              PUSER1
SKDB2    IABRE4               4 PUSER1     TABRE4              PUSER1
SKDB2    IABRE4               5 PUSER1     TABRE4              PUSER1
SKDB2    IABRE4               6 PUSER1     TABRE4              PUSER1
SKDB2    IABRE4               7 PUSER1     TABRE4              PUSER1
SKDB2    IABRE4               8 PUSER1     TABRE4              PUSER1
SKDB2    IABRE4               9 PUSER1     TABRE4              PUSER1
SKDB2    IABRE4              10 PUSER1     TABRE4              PUSER1
SKDB2    IABRE4              11 PUSER1     TABRE4              PUSER1
SKDB2    IABRE4              12 PUSER1     TABRE4              PUSER1
SKDB2    IABRE4              13 PUSER1     TABRE4              PUSER1
SKDB2    IABRE4              14 PUSER1     TABRE4              PUSER1
SKDB2    IABRE4              15 PUSER1     TABRE4              PUSER1
```

*Figure 45. **Advanced SQL Test Facility** panel with SQL statement results*

This panel shows the results of the SQL SELECT statement execution. The data on the panel is read only.

Note: The EXECUTE command runs the SQL statement without consideration for the **Database Like**, **Index Like**, and **Creator Like** criteria that you specified on the **Enter Indexes Like to Display** window.

6. When you are satisfied with the results of the SELECT statement, on the **Advanced SQL Test Facility** panel, press PF3 twice.

   Note: Because the **Wildcard** field was set to N on the **Enter Indexes Like to Display** window, the SQL statement is not saved when you exit the **Object Selection Advanced SQL** panel.

   The **Include Index Selection** panel is displayed. This panel shows the results of the intersection of the SQL SELECT statement and the **Database Like**, **Index Like**, and **Creator Like** criteria that you specified on the **Enter Indexes Like to Display** window. The following figure shows the results:

```
AUTOXPRT V1R1    ------- Include Index Selection ------    2023/10/19  20:37:20
Option  ===>                                              Scroll ===> CSR
--------------------------------------------------------------------------------

Line Commands: S - Select Index                     Row 1 of 27         +>
  Database Like *                                   Db2 Subsystem: SS01
  Index    Like *                                                      >
  Creator  Like *                                                      >
--------------------------------------------------------------------------------
Cmd  Name              Creator    Part  Tbname        Tbcreator
     IABRE4            PUSER1      ALL   TABRE4              PUSER1
     IABRE4            PUSER1        1   TABRE4              PUSER1
     IABRE4            PUSER1        2   TABRE4              PUSER1
     IABRE4            PUSER1        3   TABRE4              PUSER1
     IABRE4            PUSER1        4   TABRE4              PUSER1
     IABRE4            PUSER1        5   TABRE4              PUSER1
     IABRE4            PUSER1        6   TABRE4              PUSER1
     IABRE4            PUSER1        7   TABRE4              PUSER1
     IABRE4            PUSER1        8   TABRE4              PUSER1
     IABRE4            PUSER1        9   TABRE4              PUSER1
     IABRE4            PUSER1       10   TABRE4              PUSER1
     IABRE4            PUSER1       11   TABRE4              PUSER1
```

*Figure 46. **Include Index Selection** panel*

7. On the **Include Index Selection** panel, select the indexes that you want to include in the object profile.

What to do next

When you are finished adding indexes, press PF3 until the **Update Object Profile Display** is displayed. For more information, see "Updating object profiles by using the Update Object Profile Display" on page 145.

Adding indexes at job build time using the Wildcard field

If you have an application that frequently adds or removes indexes, you can use the **Wildcard** field to allow Db2 Automation Expert to resolve the object list at job build time. You can use this feature to avoid manually modifying the object profile whenever your application adds or removes an index.

About this task

The **Wildcard** field works with the selection criteria that you specify in the **Database Like**, **Creator Like**, and **Index Like** fields on the **Enter Indexes Like to Display** window. If you set **Wildcard** to Y, the criteria is evaluated at build time.

Procedure

1. On the **Enter Indexes Like to Display** window, enter a database, index creator, or index name or mask in the appropriate fields, and enter Y in the **Wildcard** field. Refer to the following example:

```
                 Enter Indexes Like to Display

 Database    Like  *
 Creator     Like  PDUSER*    >
 Index       Like  *                    >
 Wildcard Y  (Yes/No) Exclude  I  (E - Exclude, I - Include)

 Process Cloned Indexes  N  (Yes/No)
 Advanced SQL . . . . N (Yes/No)    Update SQL N (Yes/No)
```

Figure 47. Selecting indexes using wild cards

   Note: The **Creator Like** and **Index Like** fields allow up to 128 bytes. To scroll a field, place the cursor in the field and use the PF11 key to scroll right and the PF10 key to scroll left.

2. Press Enter.

   The window that is shown in the following figure is displayed:

```
              Choose Partition Method

 Utilities can run against each partition or it can
 run against all partitions.  When DAJ explodes wild
 card table and index spaces, which method would you
 like partitioned spaces exploded?

        Explode  A  (A - All, P - Partitioned)
```

Figure 48. Specifying partition processing for indexes

   Specify how partitions are processed. To handle all partitions (equivalent to a REORG INDEX), enter A in the **Explode** field. To have each partition processed individually (equivalent to REORG INDEX PART *n*), enter P in the **Explode** field.

3. Press Enter.

   The specified indexes are added to the **Update Object Profile Display** and a Y is entered in the **Wildcard** column.

What to do next

On the **Update Object Profile Display**, you can enter the EXPLODE primary command or the E line command to review the expanded list of all table spaces and index spaces currently included in the profile. For more information, see "Updating object profiles by using the Update Object Profile Display" on page 145.

Using advanced SQL with the Wildcard field to add indexes at job build time

If you have an application that frequently adds or removes indexes, you can use the **Wildcard** field in conjunction with advanced SQL to allow Db2 Automation Expert to resolve the list of indexes at job build time. You can use this feature to avoid manually modifying the object profile whenever your application adds or removes an index.

About this task

Advanced SQL works with the selection criteria that you specify in the **Database Like**, **Index Like**, and **Creator Like** fields on the **Enter Indexes Like to Display** window. The results of selection criteria are intersected with the results of the advanced SQL statement. When you set **Wildcard** to Y, the advanced SQL and the selection criteria are evaluated at build time to select the indexes.

In addition, when the **Wildcard** field is set to Y, the advanced SQL is saved with the object profile and used at build time to generate the object list.

Procedure

1. On the **Enter Indexes Like to Display** window, enter a database, creator, or index name or mask in the appropriate fields, and enter Y in the **Wildcard** field.

   Note: The **Creator Like** and **Index Like** fields allow up to 128 bytes. To scroll these fields, place the cursor in the field and use the PF11 key to scroll right and the PF10 key to scroll left.

2. Enter Y in the **Wildcard** field, Y in the **Advanced SQL** field, and Y in the **Update SQL** field, as showing in the following figure:

```
-------------------- Enter Indexes Like to Display --------------------

  Database   Like  *
  Creator    Like  PD*        >
  Index      Like  *              >
  Wildcard Y  (Yes/No) Exclude  I  (E - Exclude, I - Include)

  Process Cloned Indexes  N  (Yes/No)
  Advanced SQL . . . . Y (Yes/No)    Update SQL Y (Yes/No)
```

Figure 49. Adding table spaces at job build time

3. Press Enter.

   The **Object Selection Advanced SQL** panel is displayed, as shown in following figure:

```
AUTOXPRT V1R1    ----  Object Selection Advanced SQL    --- 2023/10/19  20:40:34
Option  ===>                                               Scroll ===> CSR
                                                      Db2 Subsystem: SS01
-------------------------------------------------------------------------
Commands: Execute - Test Sql  Import - Import from dataset
Line Commands: C - Copy  D - Delete  I - Insert  M - Move  R - Repeat
               T - Table/Column Lookup
-------------------------------------------------------------------------
Cmd   SQL

***************************** Bottom of Data *********************************
```

*Figure 50. **Object Selection Advanced SQL** panel*

4. Enter your SQL statement in the SQL input area.

   You can enter any SQL statement that meets these requirements:

   - It must be a SELECT statement that specifies the following columns:

     – The first column is required and must represent a database name.

     – The second column is required and must represent an index name.

     – The third column is optional, but if present must represent a partition number.

   - The FROM clause must be specified after the SELECT statement.

   - Use any WHERE clause criteria that identifies the objects to be included in the object profile.

   - You can enter comments by inserting two consecutive hyphens, followed by the comment. Any characters that follow two consecutive hyphens and are before the end of a line are ignored.

   You can optionally enter the T line command to look up table names and their columns on the subsystem. This command invokes the **Table Selection** panel, which you can use to generate a list of tables on this subsystem and find column names associated with the tables.

   The following panel shows a sample valid advanced SQL statement:

```
AUTOXPRT V1R1   ----  Object Selection Advanced SQL   --- 2023/10/19  20:41:02
Option  ===>                                            Scroll ===> CSR
                                                        Db2 Subsystem: SS01
------------------------------------------------------------------------------
Commands: Execute - Test Sql  Import - Import from dataset
Line Commands: C - Copy  D - Delete  I - Insert  M - Move  R - Repeat
               T - Table/Column Lookup
------------------------------------------------------------------------------
Cmd  SQL
     SELECT D.NAME,S.NAME
     FROM SYSIBM.SYSINDEXES S, SYSIBM.SYSINDEXPART P,
          SYSIBM.SYSINDEXSTATS ST,SYSIBM.SYSDATABASE D
     WHERE S.NAME     = P.IXNAME
     AND S.CREATOR    = P.IXCREATOR
     AND P.PARTITION = ST.PARTITION
     AND S.DBNAME     = D.NAME
     AND ST.NLEVELS   = 3
     AND S.CREATOR    = 'PUSER1'
***************************** Bottom of Data **********************************
```

Figure 51. Sample advanced SQL statement

5. To verify that the results of the SQL select statement are as expected, enter EXECUTE in the **Option** field and press Enter.

   The SQL statement is run and the results of the SELECT are listed on the **Advanced SQL Test Facility** panel, as shown in the following figure:

```
AUTOXPRT V1R1    ------- Advanced SQL Test Facility ------ 2023/10/19  20:46:04
Option  ===>                                           Scroll ===> CSR

                                                   Db2 Subsystem: SS01
                                            Row 1 of 26              +>
------------------------------------------------------------------------------
Dbname   Name              Part Creator  Tbname            Tbcreator
SKDB2    IABRE4               1 PUSER1    TABRE4            PUSER1
SKDB2    IABRE4               2 PUSER1    TABRE4            PUSER1
SKDB2    IABRE4               3 PUSER1    TABRE4            PUSER1
SKDB2    IABRE4               4 PUSER1    TABRE4            PUSER1
SKDB2    IABRE4               5 PUSER1    TABRE4            PUSER1
SKDB2    IABRE4               6 PUSER1    TABRE4            PUSER1
SKDB2    IABRE4               7 PUSER1    TABRE4            PUSER1
SKDB2    IABRE4               8 PUSER1    TABRE4            PUSER1
SKDB2    IABRE4               9 PUSER1    TABRE4            PUSER1
SKDB2    IABRE4              10 PUSER1    TABRE4            PUSER1
SKDB2    IABRE4              11 PUSER1    TABRE4            PUSER1
SKDB2    IABRE4              12 PUSER1    TABRE4            PUSER1
SKDB2    IABRE4              13 PUSER1    TABRE4            PUSER1
SKDB2    IABRE4              14 PUSER1    TABRE4            PUSER1
SKDB2    IABRE4              15 PUSER1    TABRE4            PUSER1
```

Figure 52. Advanced SQL Test Facility

This panel shows the results of the SQL SELECT statement execution. The data on the panel is read only.

Note: The EXECUTE command runs the SQL statement without consideration for the **Database Like**, **Creator Like**, and **Index Like** criteria that you specified on the **Enter Indexes Like to Display** window.

6. When you are satisfied with the results of the SELECT statement, on the **Advanced SQL Test Facility** panel, press PF3 twice.

   The window that is shown in the following figure is displayed.

```
          Choose Partition Method

  Utilities can run against each partition or it can
  run against all partitions.  When DAJ explodes wild
  card table and index spaces, which method would you
  like partitioned spaces exploded?

        Explode  A  (A - All, P - Partitioned)
```

Figure 53. Specifying partition processing for spaces

Specify how index partitions are processed. To handle all partitions (for example, equivalent to a REORG INDEX), enter A in the **Explode** field. To individually process each partition (for example, equivalent to REORG INDEX PART *n*), enter P in the **Explode** field.

7. Press Enter.

   The specified spaces are added to the **Update Object Profile Display** with **Y** entered in the corresponding **Wildcard** column.

What to do next

You can enter the EXPLODE primary command or the E line command to see the expanded list of all table spaces and index spaces currently included in the profile.

Processing cloned indexes

Db2 Automation Expert can automatically process cloned indexes related to a table spaces. When you specify to process cloned indexes, only the cloned indexes are included in the object profile.

About this task

The clone table has the same structure as the base table, exists in the same table space, and is used to hold a copy of the base table. Indexes and all other related objects are cloned as well.

In Db2 Automation Expert, when you specify to process cloned indexes, ONLY the cloned indexes are included in the object profile. If you want to also process the base indexes, you must separately include the base index with the **Process Cloned Indexes** field set to N.

Procedure

- To process only cloned indexes, when selecting indexes to display, enter Y in the **Process Cloned Indexes** field on the **Enter Indexes Like to Display** window, or enter Y in the **Process Clone** field on the **Update Object Profile Display**.

Adding spaces on specific volumes

When selecting table spaces or indexes, you can include or exclude the spaces on specific volumes. You can select all the spaces on entire volumes, or use wild cards to add all the spaces on multiple volumes to an object profile at job build time.

Procedure

- On the **Add Objects to the Objects Profile** window, enter Y in the **Add Volumes** field and press Enter.

  The window that is shown in the following figure is displayed:

  ```
                  Enter Volumes Like to Display


    Volume      Like  D*         Wildcard N (Yes/No)
                               Exclude  I (E - Exclude, I - Include)

    Process Objects  A (A - All, T - TS Only, I - IX Only)
  ```

Figure 54. Enter Volumes Like to Display window

What to do next

Use the **Enter Volumes Like to Display** window to select the table spaces or indexes that you want to include or exclude from specific volumes. For more information, see the following topics:

- "Adding spaces on specific volumes from a list" on page 142
- "Adding spaces on specific volumes at job build time by using the Wildcard field" on page 144

Adding spaces on specific volumes from a list

When you are adding spaces to an object profile, you can select the spaces from a list of spaces on a specific volume or volumes.

Procedure

1. On the **Enter Volumes Like to Display** window, enter a volume name or mask in the appropriate field and enter N in the **Wildcard** field, as shown in the following figure:

```
                Enter Volumes Like to Display


    Volume     Like  DBP*       Wildcard N (Yes/No)
                                Exclude  I (E - Exclude, I - Include)

    Process Objects  A (A - All, T - TS Only, I - IX Only)
```

Figure 55. Adding spaces from a list of volumes

2. In the **Process Objects** field, enter A to include both table spaces and index spaces, enter T to include only table spaces, or enter I to include only indexes.

3. Press Enter.

   The **Include Volume Selection** panel is displayed. This panel lists the volumes that match your selection criteria. It also provides columns of detailed information about each volume. Scroll right to see all the columns.

4. Optional: On the **Include Volume Selection** panel, you can individually select table spaces and indexes on the volume by using the T and I line commands. When you use these commands, the **Tablespace Selection** or the **Index Selection** panel is displayed, where you can browse and select the objects from a list.

5. To select all the spaces on a volume, enter S in the **Cmd** field next to the volume.

   The window that is shown in the following figure is displayed:

```
        Choose Partition Method for Volume DBB010

  Utilities can run against each partition or it can
  run against all partitions.  When DAJ explodes a volume,
  which method would you like partitioned spaces exploded?

  Note:  If you will be using this profile in a job that
         will image copy datasets using EMC Symmetrixs or
         IBM Enterprise Storage Systems, you must explode
         objects at the Part level.

           Explode  P  (A - All, P - Partitioned)
```

Figure 56. Specifying partition processing

6. On this window, specify how partitions are processed for spaces on the volume. To handle all partitions (for example, equivalent to a REORG TABLESPACE|INDEX), enter A in the **Explode** field. To have each partition processed individually (for example, equivalent to REORG TABLESPACE|INDEX PART n), enter P in the **Explode** field.

7. Press Enter.

   A message is displayed indicated that the spaces from the volume have been added to the profile.

8. When you finish adding spaces on a volume, press PF3.

   The **Update Object Profile Display**, which is shown in the following figure, is displayed:

```
AUTOXPRT V1R1   ---- Update Object Profile Display   --- 2023/10/19  20:54:06
Option  ===>                                            Scroll ===> CSR

-------------------------------------------------------------------------------
Commands: Explode - View all objects.
Line Commands: A - Add  D - Delete  E - Explode  U - Update  R - Repeat
          V - View Advanced SQL
Creator: TWUSR        Profile: TEST                         User: TWUSR
Description:                              Db2 Subsystem: SS01
Share Option U  (U - Update, V - View, N - No)       Row 1 of 1           >
-------------------------------------------------------------------------------
    TS/                                          Volume /
    IX/ Wild -------- Process ------- Inc/ IX DB Name/ IX Crtr/ IX Name/
Cmd VL  Card IX RI Clone Util AUX H/A Exc  TS Crtr    DB Name  TS Name  Part
    VL  Y    A  N  N     N    N   N   INC             DBP1W0            PART
**************************** Bottom of Data ********************************
```

Figure 57. **Update Object Profile Display**

By default, the volumes are listed in the order added to the object profile. You can use the **EXPLODE** primary or line command to see an expanded list of all table spaces and index spaces included in the profile. Scroll right to see all the columns.

The value in the **Process Index** column indicates the type of objects to be processed. An A in this column means that both table spaces and indexes on the volume are included. A T indicates that only table spaces on the volume are included. An I indicates that only indexes are included. You can change the value on this screen.

Adding spaces on specific volumes at job build time by using the Wildcard field

If you have an application that frequently adds or removes table spaces, you can use the **Wildcard** field to allow Db2 Automation Expert to resolve the object list at job build time.

About this task
You can use this feature to avoid manually modifying the object profile whenever your application adds an object. If you set **Wildcard** to Y, the volume selection criteria is evaluated at build time to select the table spaces.

Procedure

1. On the **Enter Volumes Like to Display** window, enter a volume name or mask in the appropriate field. Enter Y in the **Wildcard** field, as shown in the following figure:

```
                 Enter Volumes Like to Display


   Volume     Like  VOL22*     Wildcard Y (Yes/No)
                               Exclude  I (E - Exclude, I - Include)

   Process Objects  A (A - All, T - TS Only, I - IX Only)
```

Figure 58. Adding spaces from a volume by using the Wildcard field

2. In the **Process Objects** field, enter A to include both table spaces and index spaces, enter T to include only table spaces, or enter I to include only indexes.
3. Press Enter to continue.

   The window that is shown in the following figure is displayed:

```
          Choose Partition Method for Volume DBB*

    Utilities can run against each partition or it can
    run against all partitions.  When DAJ explodes a volume,
    which method would you like partitioned spaces exploded?

    Note:  If you will be using this profile in a job that
           will image copy datasets using EMC Symmetrixs or
           IBM Enterprise Storage Systems, you must explode
           objects at the Part level.

           Explode  P  (A - All, P - Partitioned)
```

Figure 59. Specifying partition processing

4. On this window, specify how partitions are processed for spaces on the volume. To handle all partitions (for example, equivalent to a REORG TABLESPACE|INDEX), enter A in the **Explode** field. To have each partition processed individually (for example, equivalent to REORG TABLESPACE|INDEX PART n), enter P in the **Explode** field.

5. Press Enter.

   The **Update Object Profile Display** is displayed, as shown in the following figure:

```
AUTOXPRT V1R1   ---- Update Object Profile Display   --- 2023/10/19  20:55:37
Option  ===>                                             Scroll ===> CSR

--------------------------------------------------------------------------------
Commands: Explode - View all objects.
Line Commands: A - Add  D - Delete  E - Explode  U - Update  R - Repeat
              V - View Advanced SQL
Creator: TWUSR        Profile: TEST                       User: TWUSR
Description:                                  Db2 Subsystem: SS01
Share Option U  (U - Update, V - View, N - No)      Row 1 of 1            >
--------------------------------------------------------------------------------
    TS/                                           Volume /
    IX/ Wild -------- Process ------- Inc/ IX DB Name/ IX Crtr/ IX Name/
Cmd VL  Card IX RI Clone Util AUX H/A Exc  TS Crtr    DB Name  TS Name  Part
    VL  Y    A  N  N    N    N   N   INC            VOL22*            PART
**************************** Bottom of Data ********************************
```

*Figure 60. **Update Object Profile Display***

By default, the volumes are listed in the order added to the object profile. You can use the **EXPLODE** primary or line command to see an expanded list of all table spaces and index spaces included in the profile.

The value in the **Process IX** column indicates the type of objects to be processed. An A in this column means that both table spaces and indexes on the volume are included. A T indicates that only table spaces on the volume are included. An I indicates that only indexes are included. You can change the value on this panel.

Updating object profiles by using the Update Object Profile Display

Use the **Update Object Profile Display** to view and modify the list of objects that are included in the profile. From this panel, you can add or delete objects and view an exploded list of table spaces and index spaces included in the profile. You can also set object-specific utility options from this panel.

Procedure

1. When you finish selecting table spaces and index spaces for your object profile, press PF3.

   The **Update Object Profile Display**, which is shown in the following figure, is displayed:

```
AUTOXPRT V1R1    ---- Update Object Profile Display    --- 2023/10/19  20:57:44
Option  ===>                                                 Scroll ===> CSR


  --------------------------------------------------------------------------------
  Commands: Explode - View all objects.
  Line Commands: A - Add  D - Delete  E - Explode  U - Update  R - Repeat
            V - View Advanced SQL
  Creator: TWUSR        Profile: TEST                          User: TWUSR
  Description:                                    Db2 Subsystem: SS01
  Share Option U  (U - Update, V - View, N - No)     Row 1 of 4            >
  --------------------------------------------------------------------------------
      TS/                                            Volume /
      IX/ Wild -------- Process ------- Inc/ IX DB Name/ IX Crtr/ IX Name/
  Cmd VL  Card IX RI Clone Util AUX H/A Exc  TS Crtr    DB Name  TS Name  Part
      VL  Y    A  N  N     N    N   N   INC             VOL22*            PART
      TS  Y    N  N  N     N    N   N   INC  PDUSER     *        *        PART
      IX  N    N  N  N     N    N   N   INC  DBGPRI01   PDUSER   DEPT       0
      IX  N    N  N  N     N    N   N   INC  DBGPRI01   PDUSER   DEPTX      0
  **************************** Bottom of Data **********************************
```

Figure 61. **Update Object Profile Display**

2. Use this panel to review and refine the list of objects included in the profile.

   The selected spaces are listed in a single line on the panel. By default, the spaces are listed in the order added to the object profile. You can use the EXPLODE primary or line command to see an expanded list of all table spaces and index spaces included in the profile; see "Using the EXPLODE command" on page 153. Scroll right to see all the columns. Refer to the help panel for detailed information about the fields on this panel.

Specifying object-specific utility options

A limited utility interface is provided in object profiles to allow specification of certain object-specific utility options. Using this interface, you can define index and column level options specific to a particular object.

Object-specific utility options allow you to specify settings for particular columns or column groups in an index or table. RUNSTATS and REBUILD INDEX options that are set in a Db2 Automation Expert utility profile cannot specify index and table column-level statistics because the column information is not available to the utility profile.

Options on the RUNSTATS and REBUILD INDEX utility option panels that conflict with these object-specific options are only used when no object-specific options are defined.

If these options conflict with LISTDEFs, LISTDEFs are turned off for those objects and a build warning message is issued.

Note: The object-specific utility options do not include RUNSTATS INDEX with the TABLESPACE option. RUNSTATS INDEX supports the KEYCARD and HISTOGRAM options for INDEX, but not TABLESPACE.

During the build process, the object-level statistics are merged with the utility options. The result is the inclusion of one or more index-specific control cards for the following keywords:

```
INDEX name KEYCARD FREQVAL NUMCOLS nnn COUNT nnn MOST|LEAST|BOTH
      HISTOGRAM NUMCOLS nnn NUMQUANTILES nnn

TABLE name SAMPLE nnnn  COLUMN () COLGROUP (column)
      FREQVAL COUNT nnn MOST|BOTH|LEAST HISTOGRAM NUMQUANTILES nnn

REBUILD INDEX name
      STATISTICS FREQVAL NUMCOLS nnn COUNT nnn HISTOGRAM NUMCOLS nnn NUMQUANTILES nnn
```

Accessing object-specific utility options

After you select the objects to include in the profile, update the object-specific utility options on the **Update Object Profile Display** by entering U in the **Process Util** field, as shown in the following figure:

```
     TS/                                                    Volume /
     IX/ Wild -------- Process ------- Inc/ IX DB Name/ IX Crtr/ IX Name/
Cmd VL  Card IX RI Clone Util AUX H/A Exc  TS Crtr    DB Name  TS Name  Part
     TS  N    N  N  u     N    N  H   INC  TS6763      @ASUIVPX SREFREP  ALL
```

Figure 62. Updating object-specific utility options on the Update Object Profile Display

If the **Process Util** field contains Y, the utility settings have already been configured. You can change them by entering U in the field and pressing Enter.

The **Object-Specific Utility Options** panel is displayed, as shown in the following figure:

```
AUTOXPRT V1R1 ----- Object-Specific Utility Options ----- 2023/10/19  20:59:42
Option   ===>

  Creator: TWUSR      Profile: DAJ-12202                     User: TWUSR
  Description:                               Db2 Subsystem: SS01

                                         Include     Update
                                         Options     Options
Runstats Index Column Statistics . . . . . . . N (Yes/No)  N (Yes/No)
Runstats Table Column Statistics . . . . . . . N (Yes/No)  N (Yes/No)
Rebuild Index Column Statistics  . . . . . . . N (Yes/No)  N (Yes/No)
Reorg Index Statistics . . . . . . . . . . . N (Yes/No)  N (Yes/No)
Reorg Table Column Statistics  . . . . . . . . N (Yes/No)  N (Yes/No)
```

Figure 63. Object-Specific Utility Options panel

To set object-specific utility options, first select the utility by entering Y in the **Include Options** field. Then, enter Y in the utility's **Update Options** field.

To clear the selection of an object-specify utility option, enter N in the utility option's **Include Options** field.

Specifying RUNSTATS INDEX, REBUILD INDEX, and REORG INDEX column statistics

These options allow for multiple column-level statistics per index for RUNSTATS, REBUILD INDEX, and REORG INDEX utilities.

About this task
RUNSTATS, REBUILD INDEX, and REORG INDEX column statistics are specified by using the same procedure and the same panels. The RUNSTATS index panels are shown in this procedure as examples.

Procedure

1. On the **Object-Specific Utility Options** panel, enter Y in the **Include Options** and **Update Options** fields for Runstats Index Column Statistics, Rebuild Index Column Statistics, or Reorg Index Statistics and press Enter.

   The **Index Column Statistics** is displayed.

```
AUTOXPRT V1R1   ----  Index Column Statistics         --- 2023/10/19  21:01:1
Option  ===>                                              Scroll ===> CSR
Line Commands: V - View  U - Update
-------------------------------------------------------------------------------
   Creator: TWUSR       Profile: DB2 V12                       User: TWUSR
                                                   Db2 Subsystem: SS01
   Description:                                   Row 1 of 1
-------------------------------------------------------------------------------
                                                  Stats
Cmd  Name                    Creator  Part  Keycard  Defined
     ETRIGGER_IX             DLC         0  N              0
**************************** Bottom of Data *********************************
```

*Figure 64. **Index Column Statistics** panel*

Refer to the help panel for information about the fields on this panel.

2. Select the index for which you want to define column statistics by entering U in the **Cmd** field next to the index. Press Enter.

   The **Utility Column Statistics** panel is displayed.

3. A C is displayed in the **Cmd** field; press Enter to create statistics.

   The **Column Statistics Create** window is displayed.

4. Enter Y next to the **Define FREQVAL Statistics** field or the **Define HISTOGRAM Statistics** field. Press Enter.

   • For FREQVAL statistics, the **Freqval Options** panel is displayed.

```
AUTOXPRT V1R1 --------- RUNSTATS Freqval Options -------- 2023/10/19  21:02:01
Option  ===>                                              Scroll ===> CSR

   Creator: TWUSR      Name: TEST                          User: TWUSR
   Description:                                   Db2 Subsystem: SS01

   Index: DLC.ARCHIVES_V11_IX                                          >
   Index Partition: 0
   Index Columns: 4

   Freqval Numcols . . . . . . 1        (Number)
   Freqval Count . . . . . . . 10       (blank, Number)
     Freqval Occurrence. . . . M        (blank, M - Most,
                                          L - Least, B - Both)
```

*Figure 65. Setting FREQVAL statistics on the **Freqval Options** panel*

Refer to the help panel for information about the fields on this panel.

   • For HISTOGRAM statistics, the **Histogram Options** panel is displayed.

```
AUTOXPRT V1R1 ---------- RUNSTATS Histogram Options ----- 2023/10/19  21:03:22
Option  ===>                                              Scroll ===> CSR

   Creator: TWUSR      Name: DB2 V12                       User: TWUSR
   Description:                                   Db2 Subsystem: SS01

   Index: TWUSR.DAHIX                                                  >
   Index Partition: 0
   Index Columns: 1

   Histogram Numcols . . . . . 1    (Number)
   Histogram Numquantiles. . . 100 (Number)
```

*Figure 66. Setting HISTOGRAM statistics on the **Histogram Options** panel*

Refer to the help panel for information about the fields on this panel.

5. Press PF3 when you are finished defining statistics.

   The **Utility Column Statistics** panel is displayed. The statistics definitions are listed on this panel.

```
AUTOXPRT V1R1   --- RUNSTATS Utility Column Statistics --- 2023/10/19  21:03:5
Option  ===>                                              Scroll ===> CSR
Line Commands: V - View  C - Create  D - Delete  U - Update
--------------------------------------------------------------------------------
  Creator: TWUSR      Profile: DB2 V12                          User: TWUSR
  Description:                                        Db2 Subsystem: SS01
  Index: TWUSR.DAHIX                                                     >
  Index Partition: 0
  Index Columns: 1                                    Row 1 of 2
--------------------------------------------------------------------------------
Cmd  Statistic Definition
     FREQVAL   NUMCOLS    1 COUNT       10 MOST
     HISTOGRAM NUMCOLS    1 NUMQUANTILES  100
**************************** Bottom of Data *********************************
```

*Figure 67. Statistics definitions on the **Utility Column Statistics** panel*

What to do next

To create more statistic definitions, enter C in the **Cmd** field. You can also update, delete, or view statistics definitions by using the appropriate line commands.

Specifying RUNSTATS and REORG table column statistics

This option allows for multiple column-level statistics per table.

Procedure

1. On the **Object-Specific Utility Options** panel, enter Y in the **Include Options** and **Update Options** fields for Runstats Table Column Statistics or Reorg Table Column Statistics and press Enter.

   The **Table Column Statistics** panel is displayed.

```
AUTOXPRT V1R1   ----  Table Column Statistics       --- 2023/10/19  21:10:5
Option  ===>                                              Scroll ===> CSR
Line Commands: V - View  U - Update
--------------------------------------------------------------------------------
  Creator: TWUSR      Profile: DB2 V12                          User: TWUSR
                                                     Db2 Subsystem: SS01
  Description:                                        Row 1 of 1
--------------------------------------------------------------------------------
                                      Include  Stats
Cmd  Name                   Creator   Sample  Defined
     ACTION_GROUP           SAM          N       0
**************************** Bottom of Data *********************************
```

Figure 68. Setting table column statistics

   Refer to the help panel for information about the fields on this panel.

2. Select the table for which you want to define column statistics by entering U in the **Cmd** field next to the table. Press Enter.

   The **Runstats Table Column Statistics** panel is displayed.

3. A C is displayed in the **Cmd** field; press Enter to create statistics.

   The **Runstats Table Create** window is displayed.

4. In the **Column Statistic Type** field, enter C to specify a column list or enter G to specify a column group. Press Enter.

   • For the column list, the **Runstats Table Column Statistics** panel is displayed, as shown in the following figure:

```
AUTOXPRT V1R1   ---- Runstats Table Column Statistics --- 2023/10/19  21:12:23
Option  ===>                                            Scroll ===> CSR
Line Commands: S - Select  U - Unselect
--------------------------------------------------------------------------------
  Creator: TWUSR      Profile: DB2 V12                          User: TWUSR
  Description:                                      Db2 Subsystem: SS01
  Table: SAM.ACTION_GROUP                                                >
                                                   Row 1 of 13        +
--------------------------------------------------------------------------------
Cmd  Sel  Column                      Type     Length  Scale
          ACTION_ID                   BIGINT        8      0
          SEQUENCE                    SMALLINT      2      0
          ACTION_KEY                  VARCHAR      64      0
          STARTTS                     TIMESTMP     13     12
          ENDTS                       TIMESTMP     13     12
          TRANS_ID                    TIMESTMP     13     12
          STATUS                      VARCHAR      32      0
          RETURN_CODE                 INTEGER       4      0
          ERROR_MESSAGE               VARCHAR    1331      0
          OUTPUT                      CLOB          4      0
          UTILITY_STMT                CLOB          4      0
          UTILITYRUN_ID               BIGINT        8      0
```

*Figure 69. Setting table column statistics on the **Runstats Table Column Statistics** panel*

Select the columns that you want to collect statistics on by entering S in the **Cmd** field next to the column name. Press PF3 when finished.

- For the column group, the **Runstats Column Group Options** panel is displayed.

```
AUTOXPRT V1R1 ------ Runstats Column Group Options ------ 2023/10/19  21:12:48
Option   ===>                                            Scroll ===> CSR

--------------------------------------------------------------------------------
  Creator: TWUSR      Name: DB2 V12                            User: TWUSR
  Description:                                      Db2 Subsystem: SS01
  Table: SAM.ACTION_GROUP                                                >
  Freqval Count  . . . . . . . 1     (blank, Number)
  Freqval Occurrence . . . . . M     (blank, M - Most, L - Least
                                      B - Both)
  Histogram Numquantiles . . . 100   (Number)          Row 1 of 13        +
--------------------------------------------------------------------------------
Seq  Column                      Type     Length  Scale
     ACTION_ID                   BIGINT        8      0
     SEQUENCE                    SMALLINT      2      0
     ACTION_KEY                  VARCHAR      64      0
     STARTTS                     TIMESTMP     13     12
     ENDTS                       TIMESTMP     13     12
     TRANS_ID                    TIMESTMP     13     12
     STATUS                      VARCHAR      32      0
     RETURN_CODE                 INTEGER       4      0
     ERROR_MESSAGE               VARCHAR    1331      0
     OUTPUT                      CLOB          4      0
```

Figure 70. Setting column group options

Specify the column group for which statistics are collected by entering a numeric value in the **Seq** column. To clear a column, remove the numeric from the columns.

Refer to the help panel for information about the fields on this panel.

5. Press PF3 when you are finished defining statistics.

   The **Runstats Table Column Statistics** panel is displayed. The statistics definitions are listed on this panel, as shown in the following figure:

```
AUTOXPRT V1R1   ---- Runstats Table Column Statistics --- 2023/10/19  21:14:12
Option  ===>                                            Scroll ===> CSR
Line Commands: V - View  C - Create  D - Delete  U - Update
-------------------------------------------------------------------------------
  Creator: TWUSR      Profile: DB2 V12                        User: TWUSR
  Description:                                    Db2 Subsystem: SS01
  Table: SAM.ACTION_GROUP                                                >
                                                 Row 1 of 1              >

-------------------------------------------------------------------------------
Cmd  Colgroup  Columns                     Statistic Definition
     COLGROUP  ACTION_ID                   FREQVAL COUNT     1 MOST   HIST
**************************** Bottom of Data ********************************
```

*Figure 71. Statistics definitions on the **Runstats Table Column Statistics** panel*

6. Press PF3.

   The **Table Column Statistics** panel is displayed.

7. Enter Y in the **Include Sample** field and press Enter.

   The **Update Runstats Sample Specification** window is displayed.

```
          Update Runstats Sample Specification

   Sample  . . . . . . . . . .        (Percent)
   Table Sample  . . . . . . .        (Auto, 0.01 - 100.00, None)
     Repeatable  . . . . . . .        (Number)
```

Figure 72. Updating sampling options

8. Enter the sampling options for the table space.

   Refer to the help panel for information about the fields on this window.

9. When finished, press Enter.

What to do next

To create more statistic definitions, enter C in the **Cmd** field. You can also update, delete, or view statistics definitions by using the appropriate line commands.

Updating an object profile

You can update an object profile at any time to add or delete objects from the profile, or to change some of the processing options associated with the objects.

Procedure

1. On the Db2 Automation Expert main menu, enter 1 in the **Option** field and press Enter.

2. Specify selection criteria, or enter the number of recently accessed profiles that you want to see in the **Recent Profiles** field, or enter values in both sets of fields. Press Enter.

3. On the **Objects Profile Display**, enter U in the **Cmd** field next to the profile you want to update and press Enter.

4. On the **Update Object Profile Display**, use line commands to add or delete objects. You can also modify the values in the **Process** fields.

5. To update object-specific utility settings, enter U in the **Process Util** field and press Enter.

   The **Object-Specific Utility Options** panel is displayed. For more information, see "Specifying object-specific utility options" on page 146.

Adding objects

You can add objects to the object profile by using the A line command on the **Update Objects Profile Display**.

Procedure

- To add objects, enter A in any **Cmd** field and press Enter.

  The window that is shown in the following figure is displayed:

```
        Add Objects to the Object Profile

  Add Tablespaces        N     (Y - Yes, N - No)

  Add Indexes            N     (Y - Yes, N - No)

  Add Volumes            N     (Y - Yes, N - No)

  Press ENTER to process or PF3 to Cancel
```

Figure 73. Adding objects

Use this window to specify whether to add table spaces, indexes, or spaces on a particular volume. Enter Y in the appropriate field and press Enter.

Note: You can enter Y in more than one field; the screens to add the objects are displayed in succession.

Deleting objects

You can delete objects from the object profile by using the D line command on the **Update Objects Profile Display**.

Procedure

1. To delete objects, enter D in the **Cmd** field next to the object detail line you want to delete and press Enter.

   The **Confirm deletion** window is displayed, as shown in the following figure:

```
            Confirm deletion

  Are you sure you want to delete this object?

  Delete . . Y  (Yes/No)
```

*Figure 74. **Confirm deletion** window*

2. To delete the object, enter Y in the **Delete** field and press Enter.

   A message is displayed, confirming that the objects were deleted from the profile.

Using the R(epeat) line command

You can use the R line command on the **Update Objects Profile Display** to copy object criteria to the object selection window.

About this task

When you enter R next to an object, the object criteria from the selected line is entered in the **Enter Tablespaces/Indexes Like to Display** panel, which is displayed after you press Enter. You can then modify the object selection criteria to choose more objects.

Note: An object or objects cannot be duplicated in an object profile.

Procedure

1. Enter R next to an object and press Enter.

   The **Enter Tablespaces/Indexes Like to Display** window is displayed. The object information from the line you selected is entered in the object fields.

2. Do one of the following to refine the list of objects:

   - Modify the object information to change selection criteria.

   - Leave the object information as is.

   In either case, press Enter to get a list of objects that meet the selection criteria.

Viewing advanced SQL

If advanced SQL has been entered for table spaces or indexes, you can view the advanced SQL on a separate panel by using a line command.

Procedure

1. Enter V in the **Cmd** next to one or more objects and press Enter.

   The **Object Selection Advanced SQL** panel is displayed. You can review the advanced SQL for the objects, but no changes or other actions can be performed on this panel.

2. When you are finished reviewing the SQL, press PF3.

3. If you entered V in more than one **Cmd** field, and if advanced SQL is available for each, the screens to view the SQL for each object are displayed in succession.

Using the EXPLODE command

The EXPLODE command can be used on the Update Object Profile Display to generate a list of all the objects that meet the profile specifications and that would be included when a job is built using the object profile.

This command offers an easy way to see the list of objects that meet wild cards, include/exclude, and index processing specifications.

For example, if you use wildcarding to include objects, the EXPLODE command will show all items that match the wildcarding at the time the EXPLODE command was issued. If objects were excluded in the profile, these objects will not appear in the exploded list. Also, if indexes associated with an object or objects were to be processed, each index is listed on the exploded list.

The results of the EXPLODE command contain only objects that would be processed in the build. If an object does not appear on the list, it might be because an underlying VSAM file does not exist, or an object might be a temporary or work object.

When you view the exploded list, you can select one or more objects to exclude from the profile.

Note that the EXPLODE command does not work for objects that were originally excluded from the profile -- in other words, those objects that have EXC in the Include/Exclude column.

EXPLODE command as a line command

When you enter E next to an object(s) line in the object profile and press Enter, all items that meet the wildcarding and the index processing selections are listed in the Explode Object Profile Display.

The following figure shows the Explode Object Profile Display:

```
AUTOXPRT V1R1   ----- Explode Object Profile Display ---- 2023/10/19  21:16:53
Option ===>                                                Scroll ===> CSR
      -----------------------------------------------------------------------
Line Commands: S - Select to Exclude
Creator: TWUSR       Profile: DAJ-13303                      User: TWUSR

Db2 Subsystem: SS01                              Row 1 of 117          +>
      -----------------------------------------------------------------------
     TS/                                          Volume /
     IX/ Wild -------- Process ------- Inc/ IX DB Name/ IX Crtr/ IX Name/
Cmd VL  Card IX RI Clone Util AUX H/A Exc  TS Crtr    DB Name  TS Name  Part
     TS  N    N  N  N     N    N   H   INC  PDUSR1     TESTPART TESTPART ALL
     TS  N    N  N  N     N    N   H   INC  PDUSR1     TESTRCVY TESTRCVY ALL
     TS  N    N  N  N     N    N   H   INC  PDUSR1     TESTRI01 TSDEPT   ALL
     TS  N    N  N  N     N    N   H   INC  PDUSR1     TESTRI01 TSEMP    ALL
     TS  N    N  N  N     N    N   H   INC  PDUSR1     TEST100K TEST100K ALL
     TS  N    N  N  N     N    N   H   INC  PDUSR1     TEST50TS TEST5001 ALL
     TS  N    N  N  N     N    N   H   INC  PDUSR1     TEST50TS TEST5002 ALL
     TS  N    N  N  N     N    N   H   INC  PDUSR1     TEST50TS TEST5003 ALL
     TS  N    N  N  N     N    N   H   INC  PDUSR1     TEST50TS TEST5004 ALL
     TS  N    N  N  N     N    N   H   INC  PDUSR1     TEST50TS TEST5005 ALL
     TS  N    N  N  N     N    N   H   INC  PDUSR1     TEST50TS TEST5006 ALL
```

Figure 75. Explode Object Profile Display

On the Explode Object Profile Display, you can use the S line command to exclude an object from the profile.

When you return to the Update Object Profile Display, any objects that you excluded now are listed individually and contain EXC in the Include/Exclude column to indicate they are excluded.

EXPLODE as a primary command

When you enter **EXPLODE** in the Option line, all items in the profile are listed individually.

The following figure shows a sample list of objects selected to be included in a profile:

```
      -------------------------------------------------------------------------------
     TS/                                          Volume /
     IX/ Wild -------- Process ------- Inc/ IX DB Name/ IX Crtr/ IX Name/
Cmd VL  Card IX RI Clone Util AUX H/A Exc  TS Crtr    DB Name  TS Name  Part
     TS  Y    Y  N  N     N    N   N   INC  PD*        DSEP*    TSGP5*   ALL
**************************** Bottom of Data ********************************
```

Figure 76. Object list before EXPLODE command

If you use the EXPLODE command in the Option line, the objects would appear as shown in the following figure:

```
AUTOXPRT V1R1    ----- Explode Object Profile Display ---- 2023/10/19  21:18:25
Option  ===>                                             Scroll ===> CSR
-------------------------------------------------------------------------------
Line Commands: S - Select to Exclude
Creator: TWUSR       Profile: DAJ-13303                        User: TWUSR

Db2 Subsystem: SS01                              Row 1 of 50           +>
-------------------------------------------------------------------------------
     TS/                                         Volume /
     IX/ Wild -------- Process ------- Inc/ IX DB Name/ IX Crtr/ IX Name/
Cmd  VL  Card IX RI Clone Util AUX H/A Exc  TS Crtr    DB Name   TS Name  Part
     TS  N    N  N  N     N    N   N   INC  PDUSR1     DSEP50TS TSGP5001  ALL
     TS  N    N  N  N     N    N   N   INC  PDUSR1     DSEP50TS TSGP5002  ALL
     TS  N    N  N  N     N    N   N   INC  PDUSR1     DSEP50TS TSGP5003  ALL
     TS  N    N  N  N     N    N   N   INC  PDUSR1     DSEP50TS TSGP5004  ALL
     TS  N    N  N  N     N    N   N   INC  PDUSR1     DSEP50TS TSGP5005  ALL
     TS  N    N  N  N     N    N   N   INC  PDUSR1     DSEP50TS TSGP5006  ALL
     TS  N    N  N  N     N    N   N   INC  PDUSR1     DSEP50TS TSGP5007  ALL
     TS  N    N  N  N     N    N   N   INC  PDUSR1     DSEP50TS TSGP5008  ALL
     TS  N    N  N  N     N    N   N   INC  PDUSR1     DSEP50TS TSGP5009  ALL
     TS  N    N  N  N     N    N   N   INC  PDUSR1     DSEP50TS TSGP5010  ALL
     TS  N    N  N  N     N    N   N   INC  PDUSR1     DSEP50TS TSGP5011  ALL
```

Figure 77. EXPLODE primary command results

Once the exploded list appears, you can use the S line command to exclude an object from the profile.

Chapter 9. Creating utility profiles

Utility profiles allow you to select utilities to run on the objects included in an object profile and to set options for the utilities.

You can specify the following Db2 utilities:

- COPY (full or incremental)
- COPYTOCOPY
- MERGECOPY
- RUNSTATS
- Table space REORG
- Index REORG
- QUIESCE
- MODIFY
- REPAIR
- CHECK DATA
- REBIND
- RECOVER
- REBUILD INDEX

In addition, you can specify the following Db2 Automation Expert utilities:

- Image copies from system level backups taken by Db2 Recovery Expert.
- Space reallocation
- Load accelerator tables for IBM Db2 Analytics Accelerator for z/OS.

Later, you link object profiles with utility profiles and (optionally) exception profiles to create a job profile.

Note: Basic descriptions are provided in this documentation for utility parameters. If you have questions about any Db2 utility option, consult the *Db2 Utility Guide and Reference* for your version of Db2, or the documentation for your version of IBM Db2 Analytics Accelerator for z/OS.

Creating a utility profile

Creating a utility profile involves defining the profile, selecting the utilities to be included in the profile, and setting utility options.

Procedure

1. On the Db2 Automation Expert main menu, enter 2 in the **Option** field and press Enter.
2. Specify selection criteria in the **Profile Like** and **Creator Like** fields, or enter the number of recently accessed profiles that you want to see in the **Recent Profiles** field, or enter values in both sets of fields. Press Enter.

   The profiles that meet your selection criteria or have been recently accessed are listed on the **Utilities Profile Display**.
3. On the **Utilities Profile Display**, enter C in the **Cmd** field and press Enter.
4. On the **Enter New Utilities Profile Data** window, enter the new profile creator, a profile description, and the profile update option in the fields on the window. The **Creator** field contains your user ID, but can be modified.
5. After you complete these fields, press Enter.

The panel that is shown in the following figure is displayed. This panel is used to specify the utilities to be included in the profile.

```
AUTOXPRT V1R1 --------- Utility Profile Options --------- 2023/10/25  17:20:02
Option   ===>

  Creator: TWUSR      Profile: MERGECOPY                        User: TWUSR
  Description                                         Db2 Subsystem: SS01
  Share Option U (U - Update, V - View, N - No)

                                                        More:     +
                              Include     Update
                              Utility     Utility
Reallocation . . . . . . . . . . N (Yes/No)   N (Yes/No)
Recover  . . . . . . . . . . . N (Yes/No)   N (Yes/No)
Rebuild Index  . . . . . . . . N (Yes/No)   N (Yes/No)
Image Copy . . . . . . . . . . N (Yes/No)   N (Yes/No)
Recovery Expert Image Copy . . . N (Yes/No)   N (Yes/No)
Copy to Copy . . . . . . . . . N (Yes/No)   N (Yes/No)
Merge Copy . . . . . . . . . . N (Yes/No)   N (Yes/No)
Runstats . . . . . . . . . . . N (Yes/No)   N (Yes/No)
TS Reorg . . . . . . . . . . . N (Yes/No)   N (Yes/No)
IX Reorg . . . . . . . . . . . N (Yes/No)   N (Yes/No)
Quiesce  . . . . . . . . . . . N (Yes/No)   N (Yes/No)
Modify . . . . . . . . . . . . N (Yes/No)   N (Yes/No)
```

Figure 78. Specifying utilities to add to the profile

6. On the **Utility Profile Options** panel, enter Y in the **Include Utility** column next to the utility that you want to include. Press Enter.
7. To specify utility options, enter Y in the **Update Utility** column next to the utility. Press Enter.

   An options panel for the selected utility is displayed.

What to do next

You can add one or more utilities to the utility profile. You should review the utility options for each included utility.

Setting the exception rule

Most utility profiles contain an **Exception Rule** field, which controls exception processing. Exception processing produces sets of accepted and rejected objects. Using the **Exception Rule** field, utility profiles can be configured to act upon either set or both sets.

About this task

The **Exception Rule** field allows the utility to be run on:

- Objects that are accepted (included) as a result of exception processing OR
- Objects that are rejected (excluded) as a result of exception processing OR
- All objects, regardless of exception processing results

The following figure shows the **Exception Rule** field on the **Image Copy Options** panel:

```
AUTOXPRT V1R1 ----------- Image Copy Options ---------- 2023/10/19  21:20:39
Option  ===>                                         Scroll ===> CSR
  Creator: TWUSRA      Name: REORG TEST                      User: TWUSRA
                                                  Db2 Subsystem: SS01
    Exception Rule . . . . . . . . . . A (A - Accepted, R - Rejected, B - Both)
    Image Copy Utility mode  . . . . D (D - Db2, S - Symmetrix, E - Ess)
      Alter EMC Symm/IBM ESS Optns   N (Yes/No)
    Alter Image Copy DSN specs . . . Y (Yes/No)
    Utility ID . . . . . . . . . .                 (16 characters)
```

Figure 79. **Exception Rule** *field on the* **Image Copy Options** *panel*

To use this field, enter A to have the utility act on all objects that are accepted (included) as a result of exception processing. Enter R to have the utility act on objects that are rejected (excluded) as a result of exception processing. Enter B to have the utility act on all objects, regardless of exception processing results.

Note: If the exception rule is set to Rejected, but exception profiles are not included in a job profile, the utility JCL is not created, since objects cannot be rejected without exception processing.

Related concepts
"Creating exception profiles" on page 227
Exception profiles allow you to define when a utility in a utility profile is to be run against an object in an object profile.

Updating a utility profile

You can update a utility profile at any time to add or delete utilities, or to change utility options.

Procedure

1. On the Db2 Automation Expert main menu, enter 2 in the **Option** field and press Enter.
2. Specify selection criteria in the **Profile Like** and **Creator Like** fields, or enter the number of recently accessed profiles that you want to see in the **Recent Profiles** field, or enter values in both sets of fields. Press Enter.
3. On the **Utilities Profile Display**, enter U in the **Cmd** field next to the profile you want to update. Press Enter.
4. On the **Utility Profile Options** panel, enter Y in the **Include Utility** column next to the utility that you want to include. Press Enter.
5. To specify utility options, enter Y in the **Update Utility** column next to the utility. Press Enter.

   An options panel for the selected utility is displayed.

Reallocation options

Db2 Automation Expert can reallocate space for objects using the reallocation option. For example, you can specify that a reallocation is performed if the number of extents taken is greater than a specified number. When the job is built, an ALTER command is included for the objects in the object profile that meet that criteria.

About this task

You can choose to use Db2 ALTER syntax or the Db2 Automation Expert Dataset Manager to do the reallocation.

When the JCL is generated for data sets that will be reallocated, Db2 Automation Expert reports the before and after values of the primary quantity (PRIQTY) and secondary quantity (SQTY). Also reported is the percent of each page left as free space (PCTFREE) and number of free pages (FREEPAGE), if these

options are specified. This feature allows you to compare the old allocations and new allocations that take effect after the job is submitted.

When you specify to set reallocation options, the panel shown in the following figure is displayed:

```
AUTOXPRT V1R1 ------------ Reallocate Options ----------- 2023/10/19  21:24:09
 Option   ===>
  Creator: TWUSR       Name: UTILITY PROFILE                  User: TWUSR
                                                  Db2 Subsystem: SS01
                                                         More:     +
   Use RT Stats in addition to MVS Catalog N   (Yes/No)
   Use ONLY Exception Profile Criteria . . N   (Yes/No)
   Reallocate When
     Extents in space greater than . . . . 1      (1 - 255)
     Percentage used greater than  . . . .    .   (.01 - 100%)
   Reallocate Space Parameters
     Hash Sp = HASHSPACE plus x percent        (1 - 100%)
        or     DATASIZE  plus x percent        (1 - 100%)
     Primary = Allocated plus x percent        (1 - 100%)
        or    Used      plus x percent        (1 - 100%)
     Secondary = x percent of Primary  . .    (1 - 100%)
     Db2 Percent Free per Page . . . . . .    (0 - 99%)
     Db2 Free Pages  . . . . . . . . . . .    (0 - 255)
   Allow Reallocation to Decrease Size . . Y   (Yes/No)
   Use Dataset Manager to Reallocate . . . N   (Yes/No)
   Apply MAXPRIME rules to Reallocation    Y   (Yes/No)
   Round Allocations to the Cylinder level N   (Yes/No)
   Drop Pending Changes  . . . . . . . . . N   (Yes/No/Only)
```

*Figure 80. **Reallocate options** panel*

Procedure

1. Specify a value in either the **Hash Sp = HASHSPACE plus x percent** field or the **DATASIZE plus x percent** field.
2. Specify a value in either the **Primary = Allocated plus x percent** field or the **Primary Used plus x percent** field.
3. Set other fields on the panel as desired.

   Refer to the help panel for detailed information about the fields on this panel.
4. Press PF3 (END) to save and return to the **Utility Profile Options** panel.

RECOVER options

The RECOVER utility recovers data to the current state or to a previous point in time by restoring a copy and then optionally applying log records.

Some of the options that can be set for the RECOVER utility are the recovery point, whether a REBUILD INDEX should be done as part of the recovery, and parallel processing options.

A note about recovering indexes

You can specify the RECOVER utility for indexes even if the indexes do not have image copies, or were created with DEFER YES and have not been built.

Db2 Automation Expert will detect those situations and will build the appropriate JCL containing the REBUILD INDEX utility.

If an object profile used with a RECOVER utility profile has the **Process Dependent Indexes** field set to N(o), indexes are not recovered, and indexes related to the recovered table spaces will be placed in REBUILD PENDING status after the recovery.

Setting RECOVER options

Set RECOVER utility options and specify the recovery method on the **Recover Utility Profile Options** panel.

About this task

You can choose from the following recovery methods:

- Recovery using the log.

- Recover to an image copy.

- Recover an error range or a recover specific page.

- When indexes are included in the objects to be recovered, Db2 Automation Expert chooses to either recover or rebuild the index, depending on the index and the type of recovery.

When you specify to set recovery options, the **Recover Utility Profile Options** panel is displayed, as shown in the following figure.

```
AUTOXPRT V1R1 ----- Recover Utility Profile Options ----- 2023/10/20  09:14:25
Option  ===>
  Creator: TWUSR      Name: DAJ-12925                        User: TWUSR
                                               Db2 Subsystem: SS01
                                                          More:     +
  Exception Rule  . . . . . . . A  (A - Accepted, R - Rejected, B - Both)
  Utility ID  . . . . . . . . .             (16 characters)
  TO method . . . . . . . . . . L  (L - Log, C - Copy, E - Error)
  Alter method options  . . . . N  (Yes/No)
  Site  . . . . . . . . . . . .    (L - Local, R - Recovery, blank)
  Alter Rebuild Ix Statistics Optns  N  (Yes/No)
  Online Rebuild Index  . . . . N  (Yes/No)
    Alter Online Rbld Options   N  (Yes/No)
  Enforce . . . . . . . . . . . Y  (Yes/No)
  Verifyset . . . . . . . . . . Y  (Yes/No/Blank)
  Scope . . . . . . . . . . . .    (U - Updated, A - All)
  Update alternate copy pool       (Y - Yes, N - No, C - Clear)
    Alternate copy pool . . . .

  Perform LOB Dependency checks ==> Y  (Yes/No)
    Exclude objects that failed Dependency check ==> Y (Yes/No)
```

*Figure 81. **Recover Utility Profile Options** panel*

Refer to the help panel for a detailed description of the fields on this panel.

Procedure

1. Set the **Exception Rule** field.

2. Select the type of recovery method that will be used.

   a) Enter L to recover using the log.

   b) Enter C to recover to a copy.

   c) Enter E to recover an error range or page.

3. To set options for the selected type of recovery, enter Y in the **Alter method options** field.

   Refer to the subsequent topics for information about the options panel for the selected recovery type.

4. To create a REBUILD INDEX utility, enter Y in the **Alter Rebuild Ix Statistics Optns** field and press Enter.

   For more information, see "REBUILD INDEX utility" on page 168.

5. To create an online REBUILD INDEX utility, enter Y in the **Online Rebuild Index** field and enter Y in the **Alter Online Rbld Options** field, and press Enter.

You can specify the type of online rebuild (SHRLEVEL CHANGE or REFERENCE) on the subsequent panel. For more information, see "Online REBUILD INDEX utility" on page 169.

6. Set other fields on the panel as desired.

Recovery using the log

A log-type recovery recovers the target objects from their existing image copy data sets by applying log records to the data sets.

Recovery points can be specified for:

- A quiesce point. You can specify to recover to the last quiesce point on the log or up to nine quiesce points back in the log.
- A selected point in time. You can enter an RBA or LRSN, or you can select from a list of events in the log. The list can be targeted to a specific object or objects and in a specified time range.
- An image copy, concurrent copy, or system-level backup that was taken *prior* to a specified RBA/LRSN. The RESTOREBEFORE keyword allows the utility to avoid specific image copies, concurrent copies, or system-level backups with matching or more recent RBA or LRSN values. The RECOVER utility applies the log records and restores the object to its current state or the specified TORBA or TOLOGPOINT value.
- Current. If you do not select a specific point in time or quiesce point, recovery is to the current point in time.

When you specify **TO method** L and **Alter method options** Y, the **Recover Utility Log Options** panel appears, as shown in the following figure:

```
AUTOXPRT V1R1 ------- Recover Utility Log Options ------- 2023/10/20  09:17:06
Option  ===>

  Creator: TWUSR      Name: DB2 V12                         User: TWUSR
                                                  Db2 Subsystem: SS01
   Object event  . . . . . . . .    (Q - Quiesce, blank)
   Event generation  . . . . . 00 (00  -1  -2  -3  ...  -9)
   Select point-in-time  . . . . N  (Yes/No)
    Log RBA/LRSN . . . . . . . .                    (blank = current)
    Log timestamp  . . . . . . .
   Select RESTOREBEFORE  . . . . N  (Yes/No)
    RESTOREBEFORE Log RBA/LRSN                      (blank = none)
    RESTOREBEFORE Log timestamp
   Backout . . . . . . . . . . . N   (Yes/No)
   Reuse existing data sets  . . N  (Y - Yes, N - No, L - Log only)
   Parallel object restores  . . N  (Yes/No)
   Max nbr of parallel objects   0  (0 = optimal)
   Nbr of dynamic tape drives    0  (0 = optimal)
   From Dump . . . . . . . . . . N  (Yes/No)
   Dump Class  . . . . . . . . .
   FLASHCOPY_PPRCP . . . . . . . N  (N - No, P - Pnmo, M - pMp, R - pmR)
```

*Figure 82. **Recover Utility Log Options** panel*

The **Object Event** field is used to specify the type of log recovery:

- If you enter Q in the **Object event** field, and enter a value in the **Event generation** field other than 00 (such as -2), recovery will be to the specified number of quiesce points back from the last quiesce point.
- If you leave the field blank, you must select a point-in-time recovery and select options for the recovery.

The fields on the bottom half of the screen are general recovery-related fields that should be set for any log recovery. Refer to the help panel for a detailed description of the fields on this panel.

The following topics describe how to set the recovery type and related options.

Recovery to a quiesce point

To recover to a quiesce point, enter `Q` in the **Object event** field. If the value is `00` in the `Event generation` field, the most recent quiesce point is used. You can enter negative values up to -9 to recover to 10 quiesce points back.

Recovery to current

To recover to current, leave the **Object event** field blank and leave the **Log RBA/LRSN** field blank.

Recovery to a point in time

You can specify to recover to a point in time by entering the log RBA/LRSN or choosing a point-in-time from a list. If you know the RBA or LRSN to which you want to recover, enter it in the **Log RBA/LRSN** field. To select a recovery point from a list, follow these steps.

Procedure

1. On the **Recover Utility Log Options** panel, enter Y in the **Select point-in-time** field and press Enter.

2. On the **Point-In-Time Selection** panel, specify selection criteria in the header fields and press Enter.

   A list of RBAs or LRSNs that match your selection criteria is displayed. The RBA/LRSNs were recorded in SYSIBM.SYSCOPY and the Db2 Automation Expert SYSCOPY table in that time period. The following figure shows a sample list of recovery points:

```
AUTOXPRT V1R1    -------- Point-In-Time Selection -------- 2023/10/20  09:21:57
Option  ===>                                           Scroll ===> CSR
-----------------------------------------------------------------------------
Line Commands: S - Select                         Row 1 of 277        +>
-----------------------------------------------------------------------------
 Start  2023-09-25-01.00.00.000000  Database    N*       Db2 Subsystem: SS01
 End    2023-10-25-01.28.43.313983  Space name  TS*
-----------------------------------------------------------------------------
Cmd Timestamp                  RBA/LRSN           Database Spacenam Dsnum
    2023-10-04-17.02.43.406244 00DDFFA9E6A0B2907000 NMHACHNG TSCHNG01    0
    2023-10-04-17.02.43.406852 00DDFFA9E7334C2D2E00 NMHACHNG TSCHNG01    0
    2023-10-04-17.03.31.179261 00DDFFAA145749062A00 NMHACHNG TSCHNG01    1
    2023-10-04-17.03.31.179591 00DDFFAA145749062A00 NMHACHNG TSCHNG01    2
    2023-10-04-17.03.31.179889 00DDFFAA145749062A00 NMHACHNG TSCHNG01    3
    2023-10-04-17.03.31.179974 00DDFFAA145749062A00 NMHACHNG TSCHNG01    4
    2023-10-04-17.03.31.180020 00DDFFAA14C2AB351A00 NMHACHNG TSCHNG01    1
    2023-10-04-17.03.31.180020 00DDFFAA14C2AB351A00 NMHACHNG TSCHNG01    2
    2023-10-04-17.03.31.180020 00DDFFAA14C2AB351A00 NMHACHNG TSCHNG01    3
    2023-10-04-17.03.31.180020 00DDFFAA14C2AB351A00 NMHACHNG TSCHNG01    4
    2023-10-05-13.29.56.745812 00DE00BC344EB6B13400 NMHAQA26 TSQA2602    1
    2023-10-05-13.29.56.747659 00DE00BC344EB6B13400 NMHAQA26 TSQA2602    2
    2023-10-05-13.29.56.747730 00DE00BC344EB6B13400 NMHAQA26 TSQA2602    3
```

Figure 83. **Point-In-Time Selection** *panel*

   Scroll right to see the event that caused the log entry. The **Description** column lists the reason for the log entry, such as `QUIESCE WRITE(YES)` or `COPY FULL REORG LOG(NO)`.

3. To select an RBA or LRSN, enter S in the **Cmd** field next to the timestamp and press Enter.

   The recovery point information is transferred to the **Log RBA/LRSN** and **Log timestamp** fields on the **Recover Utility Log Options** panel, as shown in the following figure:

```
AUTOXPRT V1R1 ------- Recover Utility Log Options ------- 2023/10/20  09:22:38
Option  ===>

  Creator: TWUSR      Name: TEST                                 User: TWUSR
                                                       Db2 Subsystem: SS01
  Object event  . . . . . . . .     (Q - Quiesce, blank)
  Event generation  . . . . . 00 (00  -1  -2  -3  ...  -9)
  Select point-in-time  . . . . N  (Yes/No)
   Log RBA/LRSN . . . . . . . . 00DDFFA9E6A0B2907000 (blank = current)
   Log timestamp  . . . . . . . 2023-10-04-17.02.43.406244
  Select RESTOREBEFORE  . . . . N  (Yes/No)
   RESTOREBEFORE Log RBA/LRSN                     (blank = none)
   RESTOREBEFORE Log timestamp
  Backout . . . . . . . . . . . N   (Yes/No)
  Reuse existing data sets  . . N  (Y - Yes, N - No, L - Log only)
  Parallel object restores  . . N  (Yes/No)
  Max nbr of parallel objects   0  (0 = optimal)
  Nbr of dynamic tape drives    0  (0 = optimal)
  From Dump . . . . . . . . . . N  (Yes/No)
  Dump Class  . . . . . . . . .
  FLASHCOPY_PPRCP . . . . . . . N  (N - No, P - Pnmo, M - pMp, R - pmR)
```

*Figure 84. Log RBA and timestamp transferred to **Recover Utility Log Options** panel*

Note that the timestamp appears as read only.

The **Backout** field allows you to specify the recovery of objects to a prior point in time by a log-only backout. Enter N in this field to specify that a BACKOUT will not be started. Enter Y in this field to use the log to backout changes made since the log point that is specified in the RECOVER syntax by the TOLOGPOINT or TORBA options.

Recovery using the RESTOREBEFORE keyword

The RECOVER utility can use an image copy, concurrent copy, or system-level backup that has an RBA or LRSN that is prior to a specified RBA/LRSN, using the RESTOREBEFORE keyword. If you know the log RBA or LRSN that you want to use as the RESTOREBEFORE point, enter it in the **RESTOREBEFORE Log RBA/LRSN** field. To select the log RBA or LRSN from a list, follow the steps in this topic.

About this task
The RESTOREBEFORE keyword allows the utility to avoid specific image copies, concurrent copies, or system-level backups with matching or more recent RBA or LRSN values. The RECOVER utility applies the log records and restores the object to its current state or the specified TORBA or TOLOGPOINT value.

Procedure

1. On the **Recover Utility Log Options** panel, enter Y in the **Select RESTOREBEFORE** field and press Enter.

2. On the **Point-In-Time Selection** panel, specify selection criteria in the header fields and press Enter.

   A list of RBAs or LRSNs that match your selection criteria is displayed. The RBA/LRSNs were recorded in SYSIBM.SYSCOPY and the Db2 Automation Expert SYSCOPY table in that time period. The following figure shows a sample list of recovery points:

```
AUTOXPRT V1R1    -------- Point-In-Time Selection -------- 2023/10/20  09:26:31
Option  ===>                                                    Scroll ===> CSR
-------------------------------------------------------------------------------
Line Commands: S - Select                                Row 1 of 277        +>
-------------------------------------------------------------------------------
  Start  2023-09-25-01.00.00.000000  Database    N*        Db2 Subsystem: SS01
  End    2023-10-25-01.28.43.313983  Space name  TS*
-------------------------------------------------------------------------------
Cmd Timestamp                  RBA/LRSN            Database Spacenam Dsnum
    2023-10-04-17.02.43.406244 00DDFFA9E6A0B2907000 NMHACHNG TSCHNG01   0
    2023-10-04-17.02.43.406852 00DDFFA9E7334C2D2E00 NMHACHNG TSCHNG01   0
    2023-10-04-17.03.31.179261 00DDFFAA145749062A00 NMHACHNG TSCHNG01   1
    2023-10-04-17.03.31.179591 00DDFFAA145749062A00 NMHACHNG TSCHNG01   2
    2023-10-04-17.03.31.179889 00DDFFAA145749062A00 NMHACHNG TSCHNG01   3
    2023-10-04-17.03.31.179974 00DDFFAA145749062A00 NMHACHNG TSCHNG01   4
    2023-10-04-17.03.31.180020 00DDFFAA14C2AB351A00 NMHACHNG TSCHNG01   1
    2023-10-04-17.03.31.180020 00DDFFAA14C2AB351A00 NMHACHNG TSCHNG01   2
    2023-10-04-17.03.31.180020 00DDFFAA14C2AB351A00 NMHACHNG TSCHNG01   3
    2023-10-04-17.03.31.180020 00DDFFAA14C2AB351A00 NMHACHNG TSCHNG01   4
    2023-10-05-13.29.56.745812 00DE00BC344EB6B13400 NMHAQA26 TSQA2602   1
    2023-10-05-13.29.56.747659 00DE00BC344EB6B13400 NMHAQA26 TSQA2602   2
    2023-10-05-13.29.56.747730 00DE00BC344EB6B13400 NMHAQA26 TSQA2602   3
```

*Figure 85. **Point-In-Time Selection** panel*

Scroll right to see the event that caused the log entry. The **Description** column lists the reason for the
log entry, such as QUIESCE WRITE(YES) or COPY FULL REORG LOG(NO).

3. To select an RBA or LRSN, enter S in the **Cmd** field next to the timestamp and press Enter.

   The recovery point information is transferred to the **RESTOREBEFORE Log RBA/LRSN** and
   RESTOREBEFORE Log timestamp fields on the **Recover Utility Log Options** panel, as shown in the
   following figure:

```
AUTOXPRT V1R1 ------- Recover Utility Log Options ------- 2023/10/20  09:27:39
Option  ===>

  Creator: TWUSR      Name: TEST                              User: TWUSR
                                                       Db2 Subsystem: SS01
   Object event  . . . . . . . .    (Q - Quiesce, blank)
   Event generation  . . . . . 00 (00  -1  -2  -3  ...  -9)
   Select point-in-time  . . . . N  (Yes/No)
    Log RBA/LRSN . . . . . . . .                         (blank = current)
    Log timestamp  . . . . . .
   Select RESTOREBEFORE  . . . . N  (Yes/No)
    RESTOREBEFORE Log RBA/LRSN   00DE05F6D287C6432000 (blank = none)
    RESTOREBEFORE Log timestamp  2023-10-09-17.18.48.123300
   Backout . . . . . . . . . . . N   (Yes/No)
   Reuse existing data sets  . . N  (Y - Yes, N - No, L - Log only)
   Parallel object restores  . . N  (Yes/No)
   Max nbr of parallel objects   0  (0 = optimal)
   Nbr of dynamic tape drives    0  (0 = optimal)
   From Dump . . . . . . . . . . N  (Yes/No)
   Dump Class  . . . . . . . . .
   FLASHCOPY_PPRCP . . . . . . . N  (N - No, P - Pnmo, M - pMp, R - pmR)
```

Figure 86. RESTOREBEFORE Log RBA and timestamp transferred to Recover Utility Log Options panel

Note that the timestamp appears as read only. During the recovery, the utility will use an image copy
with an RBA or LRSN *before* the specified point.

Recovering to a copy

A recovery to a copy restores the target objects from a specified image copy.

About this task

The recovery points can be specified for:

- Last image copy. You can specify to recover to the last image copy taken, whether full or incremental.
- Full image copy. This option recovers to the last full image copy before the specified point. Any incremental image copies taken after the full copy are ignored.
- Incremental image copy. This option recovers to the last incremental image copy before the specified recovery point. The most recent full copy and subsequent incremental image copies up to the recovery point are applied.
- A specific recovery data set. You can select a particular data set to which to recover.

When you specify a **TO method** C and **Alter method options** Y, the **Recover Utility Copy Options** panel is displayed, as shown in the following figure:

```
AUTOXPRT V1R1 ------- Recover Utility Copy Options ------ 2023/10/20  09:37:10
Option  ===>

  Creator: TWUSR      Name: DAJ-1000 RECOVER                   User: TWUSR
                                                    Db2 Subsystem: SS01
   Object event  . . . . . . . N  (L - Last, F - Full, I - Incr, blank,
                                     N - Nosyscopy)
   Event generation  . . . . . 00 (00 -1  -2  -3  ...  -9)

   Select recovery file  . . . N  (Yes/No)
   Copy data set name  . . . . TWUSR.DAJ.TEST
   Copy volume serial number
   Copy file sequence number
   Copy timestamp  . . . . . :
   Nosyscopy copy type . . . :    (I - Inlcopy, F - FCCOPY, blank)

   Reuse existing data sets  . N  (Yes/No)
```

*Figure 87. **Recover Utility Copy Options** panel*

The **Object Event** field is used to specify the type of copy to recover to:

- If you enter L, F, or I in the **Object event** field, and enter 00 in the **Event generation** field, recovery will be to the last (most recent) specified copy.
- If you enter L, F, or I in the **Object event** field, and enter a value in the **Event generation** field other than 00 (such as -2), recovery will be to the specified number of copies back from the last (most recent) copy.
- If you enter N in the **Object event** field, you can select a specific recovery data set that is not represented in SYSIBM.SYSCOPY. This option is available only for Db2 V12 and later subsystems. If you choose this option, you must enter a data set name in the **Copy data set name** field, and optionally specify a copy type in the **Nosyscopy copy type** field.

  Note: Concurrent image copies are not supported.
- If you leave the field blank, you must select a recovery file to which to recover. Refer to "Recovering to a file" on page 166.

Refer to the help panel for a detailed description of the fields on this panel.

Recovering to a file

You can specify recovery to a particular image copy file (data set). If you know the image copy data set name, enter it in the **Copy dataset name** field. If the data set is not cataloged, enter the volume serial number, and if the recovery file is on tape, enter the file sequence number. To select a data set from a list of image copies, follow the steps in this topic.

About this task
When recovering to a file, only one image copy data set can be selected at a time.

Procedure

1. On the **Recover Utility Copy Options** panel, enter Y in the **Select recovery file** field and press Enter.
2. On the **Recovery File Selection** panel, specify selection criteria in the header fields and press Enter.

   A list of image copies for that time period and that meet the object selection criteria is displayed. The following figure shows a sample list of image copies:

```
AUTOXPRT V1R1    -------- Recovery File Selection -------- 2023/10/20  09:41:32
Option ===>                                              Scroll ===> CSR
-----------------------------------------------------------------------------
Line Commands: S - Select
----------------------------------------------------------------------   +>
 Database    *       Start  2023-01-22-08.00.00.000000   Db2 Subsystem: SS01
 Space name  *       End    2023-07-22-08.23.48.622460
-----------------------------------------------------------------------------
Cmd Database Spacenam Dsnum Timestamp                 Description
    DBAINLOB SAINLOB1     0 2023-06-17-06.25.08.656078 COPY FULL REORG LOG(NO)
    DBAINLOB SAINLOB1     0 2023-06-17-06.34.27.904759 COPY FULL REORG LOG(NO)
    DBAINLOB SAINLOB1     0 2023-06-17-06.42.56.128031 COPY FULL REORG LOG(NO)
    DBAINLOB SAINLOB1     0 2023-06-17-06.45.31.639367 COPY FULL REORG LOG(NO)
    DBAINLOB SAINLOB2     0 2023-06-17-06.25.13.822099 COPY FULL REORG LOG(NO)
    DBAINLOB SAINLOB2     0 2023-06-17-06.34.29.005081 COPY FULL REORG LOG(NO)
    DBAINLOB SAINLOB2     0 2023-06-17-06.42.57.255740 COPY FULL REORG LOG(NO)
    DBAINLOB TPAINLOB     0 2023-06-17-06.27.25.161581 COPY FULL REORG LOG(NO)
    DBAINLOB TPAINLOB     0 2023-06-17-06.34.33.040698 COPY FULL REORG LOG(NO)
    DBAINLOB TPAINLOB     0 2023-06-17-06.43.00.194373 COPY FULL REORG LOG(NO)
    DBALA846 TSP          0 2023-07-09-14.22.38.537811 COPY FULL YES
    DBALA846 TSPBG        0 2023-07-09-14.22.38.442851 COPY FULL YES
    DBALA846 TSRP         0 2023-07-09-14.22.38.483560 COPY FULL YES
```

*Figure 88. Sample image copies on the **Recovery File Selection** panel*

Scroll right to see information about the image copy.

3. To select an image copy, enter S in the **Cmd** field next to the image copy and press Enter.

   The data set information is transferred to the **Copy data set name** and other copy information fields on the **Recover Utility Copy Options** panel, as shown in the following figure:

```
AUTOXPRT V1R1 ------- Recover Utility Copy Options ------ 2023/10/20  09:42:36
Option ===>

  Creator: TWUSR      Name: SAMPLE RECOVER PROFILE       User: TWUSR
                                              Db2 Subsystem: SS01
   Object event  . . . . . . L (L - Last, F - Full, I - Incr, blank)
   Event generation  . . . . 00 (00 -1  -2  -3  ...  -9)

   Select recovery file  . . . N  (Yes/No)
   Copy data set name  . . . . CSMINIA.DAJ7116.DBAINLOB.SAINLOB1
   Copy volume serial number
   Copy file sequence number
   Copy timestamp  . . . . . : 2023-06-17-06.25.08.656078

   Reuse existing data sets  . N  (Yes/No)
```

*Figure 89. Copy information transferred to **Recover Utility Copy Options** panel*

The corresponding copy timestamp is read only. If the selected image copy data set was not cataloged, the volume serial appears in the **Copy volume serial number** field. If the image copy was on a tape device, the tape volume serial and file sequence number are listed on the panel.

Recovering an error range or a page

When you select this option, you can recover a range of pages or a specific page.

About this task

This portion of the RECOVER utility offers two options:

- An error range recovery specifies that all pages with reported I/O errors are to be recovered. You should be familiar with specifics about error range recovery before using this option; refer to the Db2 utility guide and reference for your version of Db2.
- If you know the specific page to be recovered, you can specify that page for the recover. This type of recovery should be used only with object profiles containing one object, because the page number is specific to the object.

Both of these recovery options are provided under the error method. When you specify **TO method** E and **Alter method options** Y, the **Recover Utility Error Options** panel appears, as shown in the following figure:

```
AUTOXPRT V1R1 ------ Recover Utility Error Options ------ 2023/10/20  11:15:39
 ===>

  Creator: TWUSR       Name: DB2 V13                        User: TWUSR
                                            Db2 Subsystem: SS01
  Error range . . . . . . . . Y          (Yes/No)

  Page number . . . . . . . . 0          (D - Decimal, X - 'hex')
  Page continue . . . . . . . N          (Yes/No)
  Page dsnum  . . . . . . . .             (D - Decimal, X - 'hex')
```

*Figure 90. **Recover Utility Error Options** panel*

The **Error Range** field specifies the type of error range recovery:

- If you enter Y, the equivalent of RECOVER object ERROR RANGE is specified. This specifies that all pages within the range of reported I/O errors are to be recovered.
- If you enter N, a specific page number will be recovered. You must enter the page number in the **Page number** field. If you enter Y in the **Page continue** field, then the recovery continues from the specified page until no I/O errors are detected. In addition, if you want to recover a specific page and the object is a range-partitioned table space with relative page numbering, you must enter the data set number in the **Page dsnum** field.

REBUILD INDEX utility

A REBUILD INDEX utility can be specified in conjunction with the RECOVER utility to recover indexes when no copies are available to recover.

About this task

REBUILD INDEX reconstructs an index from the table that it references. When you select a RECOVER utility for a utility profile, and indexes are included in the objects to be recovered, Db2 Automation Expert chooses the method of recovery:

- When an index was created with the COPY YES attribute and an image copy is available for recovery, Db2 Automation Expert invokes the RECOVER utility with the RECOVER INDEX syntax.
- When an index was created with the COPY NO attribute and/or there are no image copies to recover to, Db2 Automation Expert invokes the REBUILD INDEX utility.

You can also specify to build JCL for an online REBUILD INDEX. Refer to for more information.

To set options for the REBUILD INDEX, enter Y in the **Rebuild Ix Statistics Optns** field on the **Recover Utility Profile Options** panel. The **Rebuild Index Profile Options** panel is displayed, as shown in the following figure:

```
AUTOXPRT V1R1 ------ Rebuild Index Profile Options ------ 2023/10/20  11:20:16
Option  ===>

  Creator: TWUSR      Name: DB2 V13                          User: TWUSR
                                                   Db2 Subsystem: SS01
    Reuse existing data sets  . . . N  (Yes/No)
    Gather index statistics . . . . N  (Yes/No)
      Report messages . . . . . . . N  (Yes/No)
      Update catalog tables . . . . A  (A - All, P - Path, S - Space, N - None)
      Update history tables . . . . A  (A - All, P - Path, S - Space, N - None)
      Invalidate cache  . . . . . . N  (Yes/No)
      Collect all distinct values   N  (Yes/No)
      Update statistics . . . . . . N  (Yes/No)
```

*Figure 91. **Rebuild Index Profile Options** panel*

Refer to the help panel for a detailed description of the fields on this panel.

Online REBUILD INDEX utility

You can specify an online REBUILD INDEX with SHRLEVEL CHANGE or REFERENCE.

Procedure

1. Enter Y in the **Online Rebuild Index** field on the **Recover Utility Profile Options** panel.

2. To set options for an online REBUILD INDEX, enter Y in the **Alter Online Rbld Options** field on the **Recovery Utility Profile Options** panel and press Enter. The panel shown in the following figure is displayed:

```
AUTOXPRT V1R1 ------- Online Rebuild Index Options ------- 2023/10/20 11:22:00
Option   ===>

Creator: TWUSR      Name: DB2 V13                          User: TWUSR
                                                 Db2 Subsystem: SS01
Enter the options for Online Rebuild Index Utility

    Sharelevel . . . . R        (R - Reference, C - Change)
    Drain Wait . . . .          (0-1800 seconds)
    Retry  . . . . . .          (blank, 0-255)
    Retry Delay  . . .          (1-1800 seconds)
    Maxro  . . . . . .          (blank, Number, DEFER)
    Longlog  . . . . . C        (C - Continue, T - Term, D - Drain)
    Delay  . . . . . . 1200     (Number)
    RBALRSN_CONVERSION N        (blank, N - None, B - Basic, E - Extended)
```

*Figure 92. **Online Rebuild Index options** panel*

Refer to the help panel for a detailed description of the fields on this panel.

3. Press PF3 (END) to save and return to the **Utility Profile Options** panel.

Specifying an alternate copy pool

Db2 V12 and later allows additional copy pools to be specified when making system-level backups. In a RECOVER utility profile, you can specify an alternate copy pool to limit which system-level backups that RECOVER can use. If you specify an alternate copy pool, RECOVER will consider only those system-level backups that are associated with the specified copy pool.

Procedure

1. On the **Recover Utility Profile Options** panel, enter Y in the **Update alternate copy pool** field and press Enter.

   A list of copy pools that are available on your LPAR is displayed on the **Recover Utility copy pool selection** panel.

2. On the **Recover Utility copy pool selection** panel, enter S in the **CMD** field next to a copy pool to select it.

   Only one alternate copy pool can be selected.

3. Press Enter.

   A message is displayed to confirm that the alternate copy pool was selected.

4. Press PF3.

   The **Recover Utility Profile Options** panel is displayed. The selected alternate copy pool is listed in the **Alternate copy pool** field.

REBUILD INDEX utility

The REBUILD INDEX utility reconstructs indexes or index partitions from the table that they reference.

About this task

When you select the REBUILD INDEX utility, the **Online Rebuild Index options** panel is displayed, as shown in the following figure:

```
AUTOXPRT       ------- Online Rebuild Index Options ------- 2023/10/20 11:30:54
Option   ===>

Creator: TWUSR      Name: DAJ-12916                        User: TWUSR
                                                  Db2 Subsystem: SS01
                                                            More:     +

 Exception Rule     A (A - Accepted, R - Rejected, B - Both)
 Utility ID . . . .              (16 characters)
 Sharelevel . . . . R        (R - Reference, C - Change)
 Drain Wait . . . .           (0-1800 seconds)
 Retry  . . . . . .           (blank, 0-255)
 Retry Delay  . . .           (1-1800 seconds)
 Maxro  . . . . . .           (blank, Number, DEFER)
 Longlog  . . . . . C         (C - Continue, T - Term, D - Drain)
 Delay  . . . . . . 1200      (Number)
 RBALRSN_CONVERSION           (blank, N - None, B - Basic, E - Extended)
 Statistics
   Reuse existing data sets  . . . N  (Yes/No)
   Gather index statistics . . . . N  (Yes/No)
     Report messages . . . . . . . N  (Yes/No)
     Update catalog tables . . . . A  (A - All, P - Path, S - Space, N - None)
     Update history tables . . . . A  (A - All, P - Path, S - Space, N - None)
     Collect all distinct values   N  (Yes/No)
     Update statistics . . . . . . N  (Yes/No)

 Optional Template Dataset and member name:
   Template Dataset
   Member name  . .

 FlashCopy Options    (blank, Y -Yes, N - No, C - Consistent)
   Update FlashCopy Dataset Options N (Yes/No)

 Optional Skeletals         -BEFORE-     -AFTER-
   JCL Skeletal  . . . . . . .        . .            (8 Character Name)
   Control Cards Skeletal  . .        . .            (8 Character Name)
   Step End Skeletal . . . . .        . .            (8 Character Name)
```

Figure 93. ***Online Rebuild Index options*** *panel*

Refer to the help panel for a detailed description of the fields on this panel.

Procedure

1. Set the **Exception Rule** field.
2. Set other fields on the panel as desired.
3. If you want index statistics to be collected during the REBUILD INDEX, configure the type of statistics to be collected as follows:
   a) Enter Y in the **Gather Index Statistics** field.
   b) Enter Y in the **Update statistics** field and press Enter.
   c) On the **Rebuild Utility Column Statistics** panel, follow the instructions in the topic "Setting FREQVAL and HISTOGRAM options" on page 216 to complete configuring the statistics.
4. If you want to specify a FlashCopy image copy during the REBUILD INDEX, follow these steps:
   a) Select the copy type in the **FlashCopy Options** field and enter Y in the **Update FlashCopy Dataset Options** field.
   b) The **FlashCopy Options** panel is displayed. Set FlashCopy options as described in "Updating data set options" on page 212.
5. If you want to specify a FlashCopy image copy during the REBUILD INDEX but use your own template data set, follow these steps:
   a) Specify the template data set and member name in the **Optional Template Dataset and member name** fields.
   b) Select the copy type in the **FlashCopy Options** field and enter Y in the **Update FlashCopy Dataset Options** field.
   c) When the **TEMPLATEDD Name Selection** panel is displayed, select a template name and press PF3 to return to this panel.

COPY options

Db2 Automation Expert can build utility JCL for Db2 image copies, as well as image copies of objects on IBM Enterprise Storage Server (ESS) devices and EMC Symmetrix devices.

You must set options for the chosen image copy type. The following topics describe how to select the image copy type and specify the appropriate options.

Note: Image copies of an index can only be made if the index was created with the COPY=YES parameter.

Selecting the copy type

You can choose from several different methods of making image copies: Db2 COPY, ESS FlashCopy utility, and BCV or Snap Dataset for EMC Symmetrix devices.

About this task

When you specify to update image copy utility options, the **Image Copy options** panel is displayed, as shown in the following figure:

```
AUTOXPRT V1R1 ----------- Image Copy Options ---------- 2023/10/20  12:25:52
Option   ===>                                          Scroll ===> CSR
  Creator: TWUSR      Name: DAJ-11974                         User: TWUSR
                                                   Db2 Subsystem: SS02
                                                              More:    +
    Exception Rule . . . . . . . . . A (A - Accepted, R - Rejected, B - Both)
    Image Copy Utility mode  . . . . S (D - Db2, S - Symmetrix, E - Ess)
      Alter EMC Symm/IBM ESS Optns   N (Yes/No)
    Alter Image Copy DSN specs . . . N (Yes/No)
    Utility ID . . . . . . . . . . .               (16 characters)

    Parallel . . . . . . . . . . . . N (Yes/No)
      Number of objects  . . . . . .    (0 - 99)
      Number of tape units . . . . .    (0 - 99)
    Filter DDname  . . . . . . . . .        (8 character DD name)
    Sharelevel . . . . . . . . . . . R (R - Reference, C - Change)
    Full Image Copy  . . . . . . . . Y (Yes/No)
    Check Page . . . . . . . . . . . N (Yes/No)
    Concurrent . . . . . . . . . . . N (Yes/No)
    Change Limit
      First Percent  . . . . . . . .    (% value)
      Second Percent . . . . . . . .    (% value)
      Report only  . . . . . . . . .    (Yes/No)
    Max Tape Volume/DASD Unit Cnt    5   (1-255 volumes)
    Stack Copy Control Cards . . . . Y (Yes/No)
    Scope  . . . . . . . . . . . . . A (A - All, P - Pending)
    Group Partitions by  . . . . . . N (J - Job, S - Step, N - None)

  Optional Skeletals              -BEFORE-    -AFTER-
    JCL Skeletal . . . . . . . . . .          . .         (8 Character Name)
    Control Cards Skeletal . . . . .          . .         (8 Character Name)
    Step End Skeletal  . . . . . . .          . .         (8 Character Name)
```

*Figure 94. **Image Copy options** panel*

Procedure

1. Set the **Exception Rule** field.

2. To specify the copy type, set the **Image Copy Utility mode** field as follows:

   - Enter D to create Db2 image copies. Db2 Automation Expert builds jobs using Db2 COPY syntax.

   - Enter E to generate syntax for image copies using IBM ESS's FlashCopy utility.

   - Enter S to generate syntax for EMC Symmetrix devices.

3. For ESS or Symmetrix copies, set options for those types by entering Y in the **Alter EMC Symm/IBM ESS Optns** field.

   Refer to "Setting IBM ESS copy options" on page 173 and "Setting EMC copy options" on page 174 for more information.

4. For all copy types, define the image copy data set name specifications by entering Y in the **Alter Image Copy DSN specs** field.

   For more information, see "Specifying copy options and data set names" on page 173.

5. If you selected Db2 image copies, set the options on the remainder of this panel (from the **Utility ID** field down).

   Refer to the help panel for detailed information about the fields on this panel.

6. Optional: Enter optional user skeletons.

   For more information, see "Using the optional skeletons" on page 217.

Specifying copy options and data set names

For Db2 image copies and FlashCopy copies, you must specify copy options and choose how the copied data set(s) should be named.

About this task

For Db2 image copies, you can use your own templates that define the data set names and that are contained in an existing data set and member, or you can build the data set names using the Db2 Automation Expert interface. Or, you can choose to use FlashCopy to make the copies and build the FlashCopy data set names in a similar manner.

Procedure

1. On the **Image Copy options** panel, choose one of the following methods:

    - If you want to use your own template data sets for Db2 image copy data sets, do the following:

        a. Specify the template data set and member name in the **Optional Template Dataset** fields.

        b. Select the copy type and enter Y in the corresponding **Update Options** field.

        c. When the **TEMPLATEDD Name Selection** panel is displayed, select a template name.

            Note: Using your own templates also requires that the job generation option **Generate Templates** is set to Y in the job profile.

    - To specify data set options and names for Db2 image copies, do the following:

        a. Select a copy type by entering Y in the **Take Image Copy** column next to the copy type.

        b. Enter Y in the **Update Options** column next to the copy type.

        c. Follow the instructions in the topic "Updating data set options" on page 212.

    - To specify that FlashCopy is to be used to create the image copies:

        a. Enter Y or C in the **FlashCopy Options** field, enter Y in the **Update FlashCopy Dataset Options** field, and press Enter.

        b. Follow the instructions in the topic "Updating data set options" on page 212.

2. When finished, press PF3 to return to the previous panel.

Setting IBM ESS copy options

In addition to specifying the image copy data set name, you must set some options for image copies of objects on ESS devices.

Db2 Automation Expert can build utility JCL for image copies of objects on IBM ESS devices. Db2 Automation Expert supports IBM Enterprise Storage Server devices with Advanced Copy Services. The DFSSMS system data mover (SDM) API (macro ANTRQST) must be at level 5 or above.

This functionality uses IBM FlashCopy to make rapid image copies of data sets at the data set level without interruption. Db2 Automation Expert enables these copies to be used by Db2 in a RECOVER utility as follows:

- A copy of the table space data set is created on a target volume with a new high level VCAT. The new high level VCAT and target volume are set on the IBM ESS Backup Options panel. Depending on whether your site is non-SMS or SMS managed, additional settings may be required.

- An image copy is then taken of the copied data set with new high level VCAT.

- A record for the image copy is registered in SYSIBM.SYSCOPY and can be used for recovery.

The ESS copy options are set by selecting the ESS backup type on the **Image Copy options** panel, then entering Y in the **Alter EMC Symm/IBM ESS Optns** field. The **IBM ESS Backup Options** panel is shown in the following figure:

```
AUTOXPRT V1R1 ---------- IBM ESS Backup Options --------- 2023/10/20  12:27:31
Option   ===>

  Creator: TWUSR      Name: DAJ 43                            User: TWUSR
                                                 Db2 Subsystem: SS01
   Wait for volume avail or Stop    W (W - Wait, S - Stop)
   Continue or Stop on Errors . . . C (C - Continue, S - Stop)
   New High Level VCAT  . . . . . .         (1-8 characters)
   Number of Parallel subtasks  . . 1  (1-99)
   User Catalog . . . . . . . . .
   Flash Dataset Options                      (Optional)
     SMS Storage Class  . . . . . .         1-8(characters)
     SMS Data Class . . . . . . . .         1-8(characters)
     SMS Management Class . . . . .         1-8(characters)
   Volume Options
     Volume list (may be wildcarded)        1-6 volumes
       ==>        ==>        ==>        ==>        ==>        ==>
```

*Figure 95. **IBM ESS Backup Options** panel*

In addition to setting the image copy data set name specifications, you also can set the following options
for ESS copies:

Wait for volume avail or Stop
This field allows you to specify what happens if the volume containing the data set to be backed up
is not available. Enter W to allow the job to wait for the volume to become available before continuing.
Enter S to stop the job and end with a user abend code of 0400 if the volume is not available.

Continue or Stop on Errors
Specify what happens during processing in case errors are encountered. Enter C to continue
processing, even if errors are found. Enter S to stop job processing upon abend.

New High Level VCAT
(Required) Enter a new high level qualifier for the copied data sets.

Number of Parallel subtasks
Indicate how many parallel subtasks can be initiated during the build process.

User Catalog
This field is optional and is used to specify a user catalog in which to catalog the image copy data sets.
All entries will be deleted from this catalog before processing and upon job completion. This catalog
will be locked for exclusive use by Db2 Automation Expert during processing. Enter the fully qualified
data set name in this field.

Flash Dataset Options
If SMS is used at your site, specify the SMS storage, data, or management classes for the copied data
sets.

Volume Options
If your site does not use SMS, specify a volume or list of volumes that can be used for the copied data
sets in this field.

Setting EMC copy options

In addition to specifying the image copy data set name, you must set some options for EMC image copies.

About this task

The EMC copy options are set by selecting the Symmetrix backup type on the **Image Copy options** panel,
then entering Y in the **Alter EMC Symm/IBM ESS Optns** field. The **EMC Backup Options** panel is shown
the following figure:

```
AUTOXPRT V1R1 ------------ EMC Backup Options ----------- 2023/10/20  12:30:14
Option  ===>
  Creator: TWUSR      Name: DAJ 41                         User: TWUSR
                                               Db2 Subsystem: SS01
    Wait for volume avail or Stop    W        (W - Wait, S - Stop)
    Continue or Stop on Errors . . . C        (C - Continue,  S - Stop)
    New High Level VCAT  . . . . . .          (1-8 characters)
    Number of Parallel subtasks  . . 1        (1-99)
    Snap Dataset Options                      Optional
      SMS Storage Class  . . . . . .          (1-8 characters)
      SMS Data Class . . . . . . . .          (1-8 characters)
      SMS Management Class . . . . .          (1-8 characters)

    Snap Dataset/Volume Destination Volumes   Optional for snap dataset
    Volume list (may be wildcarded)           1-6 volumes
      ==>        ==>        ==>        ==>        ==>        ==>
```

Figure 96. **EMC Backup Options** panel

In addition to setting the image copy data set name specifications, you also can set the following options for EMC copies:

Wait for volume avail or Stop
This field allows you to specify what happens if the volume containing the data sets to be copied is not available. Enter W to specify that the job will wait for the volume to become available before continuing. Enter S to stop the job and end with a user abend code of 0400 if the volume is not available.

Continue or Stop on Errors
Specify how the job is to proceed in case of errors. Enter C to continue processing even if errors are encountered. Enter S to stop the job upon abend.

New High Level VCAT
(Required) Enter a new high level qualifier to be assigned to the copied data sets.

Number of Parallel subtasks
Specify how many parallel subtasks can be initiated during the build process. Valid values are 1 through 99.

Snap Dataset Options
If SMS is used at your site, these fields allow you to specify SMS storage, data, or management classes for the copied data sets.

Snap Dataset/Volume Destination Volumes
When using Snap Dataset, this field lets you specify a volume or list of volumes that can be used for the data set copies produced by Db2 Automation Expert.

Options for image copies from Db2 Recovery Expert system level backups

Db2 Automation Expert can create image copies from system level backups taken by Db2 Recovery Expert. To use this feature, you must have Db2 Recovery Expert V2.2 with APAR PM06332 or higher installed on the subsystem.

This image copy utility allows you to select a current or specific Db2 Recovery Expert system level backup and allows you to set options for the image copy.

There are several ways for Db2 Automation Expert to extract an image copy from a Db2 Recovery Expert SLB:

• Select a specific Db2 Recovery Expert system level backup from the utility profile

• Locate the current system level backup at Db2 Automation Expert build time for each object.

• Db2 Automation Expert can locate the system level backup at utility execution time.

Many of the Db2 Automation Expert features, such as user skeletons, object wildcarding, exception processing, and image copy thresholds can be used when making image copies from Db2 Recovery Expert SLBs.

> ⚠️ **Attention:**
> - Template and LISTDEFs are not supported for this feature and will not be generated regardless of the job options settings in the job profile.
> - The system level backups taken with Db2 Recovery Expert do not allow image copies to be made at the all partition level (the DSNUM ALL keyword). Objects in Db2 Automation Expert profiles that specify PART ALL will be exploded into individual partitions and the copies taken at the individual partition level.
> - If these image copies will be used for recovery, the recovery must be done at the partition level.

Setting options for copies made from Db2 Recovery Expert SLBs

In addition to specifying the image copy data set name, you must set some options for image copies from Db2 Recovery Expert SLBs.

About this task

When you specify to update the copy utility options for this utility, the panel shown in the following figure is displayed:

```
AUTOXPRT V1R1 ---------- RE Image Copy Options ---------- 2023/10/20  12:32:23
Option   ===>
  Creator: TWUSR      Name: DAJ V11                         User: TWUSR
                                                   Db2 Subsystem: SS01
    Use System Level Backup (SLB) ==> B
        (R - Current Runtime SLB, B - Current Buildtime SLB, S - Select SLB)

       RE Profile creator
       RE Profile Name
       Generation      Date           Time


    Exception Rule . . . . . . . . A (A - Accepted, R - Rejected, B - Both)
    Alter Image Copy DSN specs . . Y (Y - Yes, N - No)
    Number of tasks  . . . . . . . 2   (1-99)
    Work Volumes
    Work Storage Class . . . . . .
 Optional Skeletals              -- BEFORE --  -- AFTER --
   JCL Skeletal . . . . . . . .           . .           (8 Character Name)
   Control Cards Skeletal . . . .          . .           (8 Character Name)
   Step End Skeletal  . . . . . .          . .           (8 Character Name)
```

*Figure 97. **RE Image Copy** options panel*

The following describes the options you can set for this utility:

Use System Level Backup (SLB)
Specify one of the following ways to use an SLB to make an image copy:

- Enter R to allow Db2 Automation Expert locate the system level backup at utility execution (run) time.
- Enter B to allow Db2 Automation Expert to find the current system level backup at build time. For each triggered object, a Db2 Recovery Expert interface will be called to find the current system level backup. If no system level backup is found, a warning message will be issued during the build process.
- Enter S to select a specific Db2 Recovery Expert system level backup. When you press Enter, the **SLB Selection** panel is displayed. Verification will be performed during the Db2 Automation Expert build to ensure all triggered objects are included in the selected system level backup. If an object is not found in the specified system level backup, a build warning will be issued.

RE Profile creator
RE Profile Name
Generation
Date
Time
> These fields are read only. When a specific SLB is selected from Db2 Recovery Expert, these fields will be populated with information about the SLB. The Db2 Recovery Expert profile name and creator are included, as well as the SLB generation number, creation date and time. These fields are blank if one of the other two SLB types are selected.

Exception Rule
> This field specifies how the utility is to be run on objects processed through exception processing. Enter A in this field to have the utility act on all objects that are accepted (included) as a result of exception processing. Enter R to have the utility act on objects that are rejected (excluded) as a result of exception processing. Enter B to have the utility act on all objects, regardless of exception processing results.

Alter Image Copy DSN specs
> Enter Y in this field to set or change the image copy specifications. When you press Enter, the **RE Image Copy Options** panel appears.

Number of tasks
> Specify how many parallel subtasks can be initiated during the build process.

Work Volumes
> Specify the work volumes used during the creation of the image copies. At least one must be specified, but up to six volumes can be specified.

Work Storage Class
> If the work volume(s) are SMS-managed, enter the storage class in this field.

Optional Skeletals
> These fields can be used to customize the JCL generated by Db2 Automation Expert. You can add your own skeletons that can be processed before or after the utility JCL. For more information on using these fields, refer to "Using the optional skeletons" on page 217.

Selecting a Db2 Recovery Expert SLB

You can use the Db2 Automation Expert interface to select a Db2 Recovery Expert system level backup from which to make copies.

About this task

On the **RE Image Copy options** panel, type S in the **Use System Level Backup (SLB)** field. When you press Enter, the panel shown in the following figure is displayed:

```
AUTOXPRTTOOL V1R1   ------------- SLB Selection ------------- 2023/03/19  17:59:19
Option  ===>                                             Scroll ===> PAGE
Line Commands: S - Select
 -------------------------------------------------------------------------------
 Db2 Subsystem: SS1B                                 Row 1 of 2            >
 -------------------------------------------------------------------------------
CMD  Date       Time    GEN Profile                          Creator
     2023/02/04 13:23:16 01  TEST V13 DB2 TYPE BACKUP        PDUSR
     2023/02/04 12:07:02 02  TEST V13 DB2 TYPE BACKUP        PDUSR
**************************** Bottom of Data ********************************
```

*Figure 98. **SLB Selection** panel*

This panel allows you to select a specific Db2 Recovery Expert SLB from which the image copy is to be made. To select a backup, enter S in the **Cmd** line next to the backup.

The fields on this panel provide information about the system level backup and are described in the following section:

Db2 subsystem
    The Db2 subsystem ID.

Date
    The date the SLB was taken.

Time
    The time the SLB was taken.

GEN
    The generation number of the SLB.

Profile
    The Db2 Recovery Expert profile name.

Creator
    The Db2 Recovery Expert creator name.

RBA/LRSN
    The RBA or LSRN of the SLB.

When you have selected a backup, press Enter. The **RE Image Copy options** panel is displayed, with the information for the selected backup transferred to the panel, as shown in the following figure:

```
 AUTOXPRT V1R1 ---------- RE Image Copy options ---------- 2023/03/19  18:12:25
 Option   ===>
   Creator: TWUSR      Name: DB2 13                          User: TWUSR
                                                 Db2 Subsystem: SS1B
    Use System Level Backup (SLB) ==>
        (R - Current Runtime SLB, B - Current Buildtime SLB, S - Select SLB)

      RE Profile creator  PDUSR
      RE Profile Name   TEST V13 DB2 TYPE BACKUP
      Generation  01 Date  2023/02/04 Time  13:23:16


    Exception Rule . . . . . . . . A (A - Accepted, R - Rejected, B - Both)
    Alter Image Copy DSN specs . . Y (Y - Yes, N - No)
    Number of tasks  . . . . . . . 2   (1-99)
    Work Volumes
    Work Storage Class . . . . . .
 Optional Skeletals              -- BEFORE --  -- AFTER --
   JCL Skeletal . . . . . . . .        . .           (8 Character Name)
   Control Cards Skeletal . . . .      . .           (8 Character Name)
   Step End Skeletal  . . . . . .      . .           (8 Character Name)
```

*Figure 99. Selected backup information on the **RE Image Copy options** panel*

Specifying the image copy type and data set name

You must specify the type of copies to be made from Db2 Recovery Expert system level backups and configure the image copy data set name.

About this task

On the **RE Image Copy Options** panel, enter Y in the **Alter Image Copy DSN specs** field. When you press Enter, the panel shown in the following figure is displayed:

```
AUTOXPRT V1R1 ---------- RE Image Copy Options ---------- 2023/10/20  12:40:00
Option   ===>

  Creator: TWUSR      Name: DAJ V11                        User: TWUSR
                                                  Db2 Subsystem: SS01

  Enter the Image Copy options to associate with this utility profile

                              Take Image Copy        Update Options
    Local Primary . . . . . . . . . N  (Yes/No) . . . . N  (Yes/No)
    Local Backup . . . . . . . . . . N  (Yes/No) . . . . N  (Yes/No)
    Recovery Site Primary  . . . . . N  (Yes/No) . . . . N  (Yes/No)
    Recovery Site Backup . . . . . . N  (Yes/No) . . . . N  (Yes/No)
```

Figure 100. **RE Image Copy Options** *panel: specifying image copy types*

This panel allows you to specify the type of image copy and to update the options for the selected image copy type. To select a copy type, enter Y in the **Take Image Copy** column next to the copy type you want.

To set options for the copy, enter Y in the **Update Options** column next to the copy type. The panel shown in the following figure is displayed:

```
AUTOXPRT V1R1 --------- RE LP Image Copy Options -------- 2023/08/25  12:54:48
Option   ===>
  Creator: TWUSR      Name: DAJ V11                        User: TWUSR
                                                  Db2 Subsystem: SS01


Image Copy options for Image Copy Local Primary
Use Threshold Unit if allocated space exceeds x Meg/Giga/Trks/Cyls  Optional
                                                     Quantity M|G|T|C
                          Std Unit       Threshold Unit
Update DSN create spec . . Y  . . . . . . N       (Yes/No)
Unit Type  . . . . . . .              . .         (CART - DISK - etc.)
Catalog Image Copy . . . . Y  . . . . . . Y       (Yes/No)
Register in SYSCOPY  . . . Y  . . . . . . Y       (Yes/No)
Data Class . . . . . . . .            . .         (8 character class)
Storage Class  . . . . . .            . .         (8 character class)
Management Class . . . . .            . .         (8 character class)
Expiration date *or*   . .           . . .        (YYYYDDD - YYDDD)
Retention period . . . . .         . . . .        (4 digit number)
Tape specific parameters Only needed if Unit Type is a Tape device:
   Stack copies on tape  . Y  . . . . . . Y       (Yes/No)
   Tape stack limit  . . . 5    . . . . . 5       (1 - 999)
   Maximum tapes . . . . . 5    . . . . . 5       (1 - 256)
```

Figure 101. **Image Copy Options** *panel*

This panel allows you to set options for the image copy data set and for the threshold data set (if specified). Specify the data set options for the **Image Copy Options** panel as follows:

Use Threshold Unit if allocated space exceeds x Meg/Giga/Trks/Cyls
    This field sets the limit on the space allocation for the standard (default) unit. You can specify up to 6 digits in the quantity field and specify the value in megabytes, gigabytes, tracks, or cylinders. When the job is built, the allocation calculations for the image copies are checked against this threshold value; if the limit is exceeded, the threshold unit device specifications are used to generate the DD instead of the standard unit. If this field is left blank, image copies will be created using the definitions in the **Std Unit** column. Thresholds cannot be specified for SLBs that will be located at job run time.

The data set information fields following this field appear in two columns: **Std Unit** and **Threshold Unit**.

Note: Thresholds cannot be specified for SLBs that will be located at job run time.

The fields in these columns are the same and are described as follows:

Update DSN create spec
    Enter Y in this field to set or change the image copy data set specifications.

Unit Type

Enter a valid unit where the image copy data set will be written. If you enter a value that is not found in your site's eligible device table (EDT), the **Device Type** window is displayed (see "Adding user-designated devices and unit types" on page 215).

Catalog Image Copy

Enter Y in this field to specify that the image copy should be cataloged after it is made.

Register in SYSCOPY

Enter Y in this field to have the image copy registered in SYSIBM.SYSCOPY after it is made.

Data Class

If your site uses SMS to manage data sets, enter the SMS Data Class.

Storage Class

If your site uses SMS to manage data sets, enter the SMS Storage Class.

Management Class

If your site uses SMS to manage data sets, enter the SMS Management Class.

Expiration date *or* Retention period

Enter either the tape expiration date in YYYYDDD format, or the tape retention period in number of days.

The following fields are Db2 Recovery Expert settings; they are required for tape and optional for DASD. They are used when Db2 Recovery Expert is invoked to create the image copies.

Stack copies on tape

Enter Y to allow image copy data sets to be stacked on tape.

Note: If you want to stack multiple objects onto tape, Db2 Recovery Expert requires that the job be in a single step. Ensure that the job breakdown options are set to allow more than one object in each step.

Tape stack limit

If stacking image copies, enter the number of image copies that you want stacked on one tape before dismounting the tape.

Maximum tapes

The maximum number of tapes for each image copy.

Building an image copy data set name

Db2 Automation Expert offers a simple way to construct an image copy data set name.

About this task

When you enter Y in an **Update DSN create spec** field, the panel shown in the following figure is displayed:

```
AUTOXPRT V1R1 ----- RE LP Image Copy DSN Generation ----- 2023/08/25  12:56:38
Option  ===>
  Creator: TWUSR      Name: DAJ V11                        User: TWUSR
                                                Db2 Subsystem: SS01

  Image Copy Local Primary Non-Threshold
  Qualifier code      Free form literal        Show DSN  N
  GDG Limit          (1-255)
  Current dataset name generation qualifier string:

Valid dataset name generation codes are:
   1. Database         11. Date (YYYYDDD)      22. GDG (+1)..(+n)
   2. Space Name       12. Year (YYYY)         24. Local/Remote (L/R)
   3. Partition        13. Month (MM)          25. Primary/Backup (P/B)
   4. Volser           14. Day (DD)            28. Job Name
   7. Vcatname         15. Julian Day (DDD)    29. Step Name
   8. Subsystem ID     16. Hours (HH)          30. Substring Qualifier
   9. User ID          17. Minutes (MM)        31. Use freeform literal
  10. Time (HHMMSS)    18. Seconds (SS)
                       19. Timestamp
                       20. Random Number
```

Figure 102. **RE Image Copy DSN Generation** *panel*

The **Image Copy DSN Generation** panel appears once for each standard and threshold image copy type. For threshold data sets, the panel is the same, except for the addition of the **Use Standard DSN in Threshold Proc** field.

Qualifier code
> To include a qualifier, enter its number in the **Qualifier code** field and press Enter. The qualifier string appears in the **Current dataset name generation qualifier string** field. You can also type the data set name directly in the string field.

Free form literal
> After selecting the **Use Freeform literal** qualifier, you can enter an eight-character literal in this field. If you want the literal to be in its own substring, make sure to begin the literal with a period.

Show DSN
> To view the string as it will be completed, enter Y in the **Show DSN** field.

GDG Limit
> If you want to set a specific GDG limit for this data set, enter it here. If no GDG limit is set on this panel (**GDG limit field** is left blank), the GDG limit set in the job profile on the **Generation Options** panel applies. Valid values are from 1 to 999.

Use Standard DSN in Threshold Proc
> This field only appears for threshold data sets. If you want the threshold data set name to be the same as the standard data set, enter Y in this field. You do not need to re-enter the data set string on this panel.

Current dataset name generation qualifier string
> This field displays the qualifier string as it was input.

Commonly used qualifiers for image copy data set names are listed on the bottom half of the panel.

Refer to the help panel for more detailed information about the qualifier codes and the fields on this panel.

Example

If in the **Qualifier code** field you enter 1 (Database), 2 (Space Name), then 20 (Random Number), the data set name appears as:

```
&DB..&SN..&RANDOM#.
```

Using the substring function

You can use the substring qualifier function to customize a data set name.

When you choose the Substring Qualifier function to customize a qualifier substring, the window shown in the following figure is displayed:

```
        Substring Parameters

 Enter the Qualifier Code ==> __
 Enter Starting Position  ==> _____
 Enter Substring Length   ==> _____
```

Figure 103. **Substring Parameters** *window*

You can choose to enter almost any of the qualifier codes and specify the string's starting position and length. For example, qualifier code 8 generates a string of "&SSID", a four-character subsystem name. However, if your site uses three-character SSIDs, the substring qualifier option can be used to specify the SSID and customize the string length, as shown in the following figure:

```
        Substring Parameters

 Enter the Qualifier Code ==> 8_
 Enter Starting Position  ==> 1____
 Enter Substring Length   ==> 3____
```

Figure 104. Example: specifying the SSID substring length

The results are shown in the following figure:

```
   Current dataset name generation qualifier string:
 &SSID(1,3).
```

Figure 105. Example: results of substring generation

Resulting DSN using current symbolic string

Some substrings (such as time and date) require the addition of an alphanumeric or symbol in the beginning of the string.

When you select these substrings, the window that is shown in the following figure is displayed:

```
                Resulting DSN using current symbolic string


 Enter a Literal or Symbolic to Prefix the Invalid Dataset Node

 ==>


 Invalid Dataset Name:

* SS01.DATABASE.SPACENAM.2008143                *




 ---------------------------------------------------------------------
 | DAJM250E - Invalid data set node detected. First character not alphabetic |
 | or national.                                                        |
 ---------------------------------------------------------------------
```

Figure 106. **Resulting DSN using current symbolic string** *window*

This panel allows you to insert an alphanumeric or symbol to make the data set node name valid. When finished, press Enter.

Viewing a sample string

You can view a sample resulting data set name using your specifications by entering Y in the **Show DSN** field.

About this task

To view the string as it will be completed, enter Y in the **Show DSN** field. When you press Enter, the sample string appears, as shown in the following figure:

```
          Resulting DSN using current symbolic string

  Using the following sample data as input:

  &JOBNAME  = 'JOBNAME '  &STEPNAME  = 'STEPNAME'  &UID   = 'TUSER'
  &SSID     = 'E81B'      &PRIBAC    = 'P'         &DB    = 'DATABASE'
  &LOCREM   = 'L'         &SN        = 'SPACENAM'  &PART     = '00001'
  The date/time fields are set to the current time.

  The generated dataset would be:

* DATABASE.SPACENAM.R721880                      *

  Press ENTER or PF3 to continue
```

Figure 107. Viewing a sample string

Press PF3 (END) to return to the **RE Image Copy DSN Generation** panel.

COPYTOCOPY options

The COPYTOCOPY utility makes image copies from an image copy that was taken by the COPY utility. This includes inline copies made by REORG or LOAD utility.

About this task

Copy options must be set when including the COPYTOCOPY utility. Some of the COPY options you can set are the source of the copy, the new image copy data set names, and the maximum number of tape volumes.

When you specify to set COPYTOCOPY options, the panel shown in the following figure is displayed:

```
AUTOXPRT V1R1 ----------- Copy to Copy Options ---------- 2023/10/20  12:45:59
Option   ===>

 Creator: TWUSR      Name: DAJ 11                        User: TWUSR
                                            Db2 Subsystem: SS01
  Exception Rule  . . . . . . . . A        (A - Accepted,
                                            R - Rejected, B - Both)
  Utility ID  . . . . . . . . .            (16 characters)
  Alter Image Copy DSN specs  . . Y        (Yes/No)
  Copy to copy source . . . . . . C        (C - last Copy,
                                            F - Full, I - Incr)
  Max Tape Volume/DASD Unit Cnt   5        (1-255 volumes)

Optional Skeletals              -BEFORE-     -AFTER-
  JCL Skeletal  . . . . . . . . .         . .         8 (Character Name)
  Control Cards Skeletal . . . .          . .         8 (Character Name)
  Step End Skeletal . . . . . . .         . .         8 (Character Name)
```

*Figure 108. **Copy to Copy** options panel*

Procedure

1. Set the **Exception Rule** field.
2. To specify the data set definitions for the COPYTOCOPY, enter Y in the **Alter Image Copy DSN specs** field and press Enter.

   See "Specifying copy options and data set names" on page 184 for details.
3. Specify the source for the input to the utility in the **Copy to copy source** field.
4. Set other fields on the panel as desired.

   Refer to the help panel for detailed information about the fields on this panel.

Specifying copy options and data set names

When making COPYTOCOPY copies, you must specify copy options and choose how the copied data set(s) should be named.

About this task

You can use your own templates that define the data set names and that are contained in an existing data set and member, or you can build the data set names using the Db2 Automation Expert interface.

Procedure

1. On the **Copy to Copy Image Copy Options** panel, choose one of the following methods:
   - If you want to use your own template data sets for the copy data sets, do the following:

     a. Specify the template data set and member name in the **Optional Template Dataset** fields.

     b. Select the copy type and enter Y in the corresponding **Update Options** field.

     c. When the **TEMPLATEDD Name Selection** panel is displayed, select a template name.

        Note: Using your own templates also requires that the job generation option **Generate Templates** is set to Y in the job profile.
   - To specify data set options and names for the copies, do the following:

     a. Select a copy type by entering Y in the **Take Image Copy** column next to the copy type.

     b. Enter Y in the **Update Options** column next to the copy type.

     c. Follow the instructions in the topic "Updating data set options" on page 212.
2. When finished, press PF3 to return to the previous panel.

MERGECOPY options

The MERGECOPY utility merges several incremental Db2 image copies to make a new incremental copy, or merges Db2 incremental copies into a Db2 full image copy to make a new full image copy. MERGECOPY does not impact access to the table space and might be faster than taking a new full image copy. A valid recovery point is established when a new full image copy is created from a MERGECOPY.

About this task

Copy options must be set when including the MERGECOPY utility. At a minimum, you must specify the new image copy data set names.

When you specify to set MERGECOPY options, the panel shown in the following figure is displayed:

```
AUTOXPRT V1R1 ------------ Merge Copy Options ----------- 2023/10/20  12:48:37
Option   ===>

 Creator: TWUSR      Name: DAJ-11478                       User: TWUSR
                                                Db2 Subsystem: SS01
  Exception Rule  . . . . . . . . . . A            (A - Accepted,
                                                    R - Rejected, B - Both)
  Utility ID . . . . . . . . . . . .                (16 characters)
  Alter Image Copy DSN specs  . . . . Y            (Yes/No)
  Newcopy . . . . . . . . . . . . . . Y            (Yes/No)
  Max Tape Volume/DASD Unit Cnt . . . 5            (1-255 volumes)
  Alter SYSUT1 Dataset Options  . . . N            (Yes/No)

 Optional Skeletals             -BEFORE-     -AFTER-
  JCL Skeletal  . . . . . . . . .        . .        8 (Character Name)
  Control Cards Skeletal  . . . .        . .        8 (Character Name)
  Step End Skeletal . . . . . . .        . .        8 (Character Name)
```

*Figure 109. **Merge Copy options** panel*

Procedure

1. Set the **Exception Rule** field.
2. Required: To specify the data set definitions for the MERGECOPY, enter Y in the **Alter Image Copy DSN specs** field and press Enter.

   See "Specifying copy options and data set names for MERGECOPY" on page 185 for details.
3. In the **Newcopy** field, enter Y to merge all incremental image copies with the full image copy to form a new full image copy. Enter N to merge incremental image copies into a single incremental image copy without including the full image copy.
4. To set data set options for the SYSUT1 work data set for the MERGECOPY, enter Y in the **Alter SYSUT1 Dataset Options** field and press Enter.

   For more information, see "Updating data set options" on page 212.
5. Set other fields on the panel as desired.

   Refer to the help panel for detailed information about the fields on this panel.

Specifying copy options and data set names for MERGECOPY

When making MERGECOPY copies, you must specify options and define how the copied data set(s) should be named.

About this task

You can use your own templates that define the data set names and that are contained in an existing data set and member, or you can build the data set names using the Db2 Automation Expert interface.

Procedure

1. On the **Merge Copy Image Copy options** panel, choose one of the following methods:

   • If you want to use your own template data sets for the copy data sets, do the following:

     a. Specify the template data set and member name in the **Optional Template Dataset** fields.

     b. Select the copy type and enter Y in the corresponding **Update Options** field.

     c. When the **TEMPLATEDD Name Selection** panel is displayed, select a template name.

        Note: Using your own templates also requires that the job generation option **Generate Templates** is set to Y in the job profile.

   • To specify data set options and names for the copies, do the following:

     a. Select a copy type by entering Y in the **Take Image Copy** column next to the copy type.

     b. Enter Y in the **Update Options** column next to the copy type.

c. Follow the instructions in the topic "Updating data set options" on page 212.

2. When finished, press PF3 to return to the previous panel.

RUNSTATS options

RUNSTATS gathers statistics about the data in table spaces and indexes and records the statistics in the Db2 catalog.

About this task

RUNSTATS statistics help Db2 determine access paths at bind time. Some of the options that can be set when specifying the RUNSTATS utility include:

- Whether you want RUNSTATS to update the catalog
- The application share level
- Whether you want to generate a report

Note: You can use object profiles to set column-level RUNSTATS statistics for indexes or tables. Using the column-level statistics settings will override the settings in the RUNSTATS utility profile. Refer to the topic "Specifying object-specific utility options" on page 146 for information about this feature.

When you specify to set RUNSTATS options, the panel that is shown in the following figure is displayed:

```
AUTOXPRT V1R1 ------------- Runstats Options ----------- 2023/10/20  12:51:34
Option   ===>                                            Scroll ===> CSR
  Creator: TWUSR      Name: DAJ-13228                       User: TWUSR
                                                  Db2 Subsystem: SS01
                                                           More:    +
  Exception Rule . . . . . . A (A - Accepted, R - Rejected, B - Both)
  Utility ID . . . . . . . .            (16 characters)
  Sharelevel . . . . . . . . R (R - Reference, C - Change)
    Register . . . . . . . .   (blank, Y - Yes, N - No)
  Report . . . . . . . . . . Y (Yes/No)
  Update Catalog Tables  . . N (A - All, C - aCcesspath, S - Space, N - None)
  Update History Tables  . . N (A - All, C - aCcesspath, S - Space, N - None)
  Reset Accesspath . . . . . N (Yes/No)
    History Accesspath  . . N (Yes/No)
  Force Rollup . . . . . . .   (blank, Y - Yes, N - No)
  Invalidate Cache . . . . . N (Yes/No)
  Table All  . . . . . . . . Y (Yes/No)
    Sample  . . . . . . . . 25     (Percent)
    TableSample . . . . . .        (Auto, 0.01 - 100.00, None)
      Repeatable  . . . . .        (Number)
  Index  . . . . . . . . . . A (A - All, N - No, P - Part)
    Keycard . . . . . . . . N (Yes/No)
      Repeatable  . . . . .        (Number)
  Index  . . . . . . . . . . A (A - All, N - No, P - Part)
    Keycard . . . . . . . . N (Yes/No)
    Update Statistics . . . N (Yes/No)
  Save Stats in Repository   N (Yes/No)
  Group Partitions by  . . . N (J - Job, S - Step, N - None)
  Profile  . . . . . . . . .   (Blank - Not used, U - Use,
                               I - use Include npi, D - Delete,
                               P - uPdate, S - Set,
                               E - set from Existing stats)
  Sort Device Type  . . . .          (CART/DISK/etc.)
  Sort Number  . . . . . .      (2-255)
  Stat Colgroup Mem Sort . .      (blank, 1-4096)
 Optional Skeletals        -BEFORE-     -AFTER-
  JCL Skeletal . . . . . . .          . .          (8 Character Name)
  Control Cards Skeletal . .          . .          (8 Character Name)
  Step End Skeletal  . . . .          . .          (8 Character Name)
```

Figure 110. **Runstats Options** *panel*

Procedure

1. Set the **Exception Rule** field.

2. Set other fields on the panel as desired.

   Refer to the help panel for detailed information about the fields on this panel.

3. If you want index statistics to be collected during the REBUILD INDEX, configure the type of statistics to be collected as follows:

   a) Enter A or P in the **Index** field.

   b) Enter Y in the **Update statistics** field and press Enter.

   c) On the **Runstats Utility Column Statistics** panel, follow the instructions in "Setting RUNSTATS column statistics" on page 187 to complete configuring the statistics.

Setting RUNSTATS column statistics

The **Runstats Utility Column Statistics** panel allows you to set column statistics that will be collected during RUNSTATS.

Procedure

1. To specify statistics, enter Y in the **Update statistics** field on the **Runstats Options** panel.

   When you press Enter, the panel that is shown in the following figure is displayed.

```
AUTOXPRT V1R1 ---- RUNSTATS Utility Column Statistics --- 2023/10/20  12:53:34
Option  ===>                                              Scroll ===> CSR
Line Commands: V - View  C - Create  D - Delete  U - Update
------------------------------------------------------------------------------
  Creator: TWUSR      Name: DB2 V13                             User: TWUSR
                                                  Db2 Subsystem: SS01
                                                  Row 1 of 1
------------------------------------------------------------------------------
Cmd  Statistic Definition
 C   Press Enter to Create Statistics
**************************** Bottom of Data *********************************
```

Figure 111. ***RUNSTATS Utility Column Statistics*** *panel*

This panel allows you to view and set statistics that will be collected.

2. To set a column statistic definition, enter C in the line command area and press Enter.

   The **Runstats Column Statistics Create** window is displayed.

3. Enter Y next to the type of statistics (FREQVAL or HISTOGRAM) that you want to define and press Enter.

4. Set FREQVAL options on the **Freqval Options** window.

   Refer to the help panel for information about the fields on this panel.

5. Set HISTOGRAM options as follows on the **Histogram Options** window.

   Refer to the help panel for information about the fields on this panel.

Table space REORG options

Reorganizing a table space can improve access performance and reclaim fragmented space.

When specifying a table space REORG, some of the options you can specify are:

- The degree of access to the data during the REORG
- Whether to take image copies before or after the REORG
- Whether to collect statistics as part of the REORG
- To generate a report as to whether a REORG is needed

Setting REORG options

Db2 Automation Expert provides many options for the REORG TABLESPACE utility.

About this task

The **Reorg Utility Profile Options** panel is shown in the following figure:

```
AUTOXPRT V1R1 ------ Reorg Utility Profile Options ------ 2023/10/20  12:56:00
Option   ===>

  Creator: TWUSR      Name: TEST PROFILE                    User: TWUSR
                                                     Db2 Subsystem: SS02
                                                            More:     +
   Optional Template Dataset and member name:
    Template Dataset
    Member name  . .
                              ------Include------  ------Update-------
   Online reorg  . . . . . . . N (Yes/No) . . . . . N (Yes/No)
   Copy options  . . . . . . . N (Yes/No) . . . . . N (Yes/No)
   Statistics options  . . . . N (Yes/No) . . . . . N (Yes/No)
   Discard . . . . . . . . . . N (Yes/No) . . . . . N (Yes/No)
    Update Discard DSN options  . . . . . . . . . . N (Yes/No)
    Nopad  . . . . . . . . . . N (Yes/No)
    Nocheckpend. . . . . . . . N (Yes/No)
   Update Sysrec DSN options . . . . . . . . . . . N (Yes/No)
   Update Syspunch DSN options . . . . . . . . . . N (Yes/No)
   Exception Rule  . . . . . . A (A - Accepted, R - Rejected, B - Both)
   Utility ID . . . . . . . .            (16 characters)
   Parallel  . . . . . . . . . 0      (0-32767)
   Reuse . . . . . . . . . . . N (Yes/No)
   Log . . . . . . . . . . . . Y (Yes/No)
   Fastswitch  . . . . . . . . N (Yes/No)
   Sortdata  . . . . . . . . . N (Yes/No)
      Recluster  . . . . . . . Y (Yes/No)
   Scope . . . . . . . . . . . A (A - All, P - Pending)
   Rebalance . . . . . . . . . N (Yes/No)
      Sortcluster  . . . . . . N (Yes/No)
   Keep Dictionary . . . . . . N (Yes/No)
   Sort Device Type  . . . . .            (CART/DISK/etc.)
   Sort Number . . . . . . . .        (Number)
   Nosysrec  . . . . . . . . . N (Yes/No)
   Unload Data . . . . . . . . C (C - Continue, E - External,
                                  O - Only, P - Pause)
   Preformat . . . . . . . . . N (Yes/No)
   Rowformat . . . . . . . . .        (B - BRF, R - RRF, Blank)
   Sortnpsi  . . . . . . . . .        (A - Auto, Y - Yes, N - No, Blank)
      Generate NPSI Runstats      (Yes/No)
   Offposlimit . . . . . . . .          (Number)
   Indreflimit . . . . . . . .          (Number)
   Report Only . . . . . . . . N (Yes/No)
   Max Concurrent Idx Builds  00    (0-99)
   Max Tape Vols/DASD Units   5     (1-255)
   Turn off Tape Stacking  . . N (Y - Yes, N - No, P - Pending Only)
   Decompress alloc multiplier 03   (1-99)
   Group Partitions by . . . . N (J - Job, S - Step, N - None)
   Group Partitions with NPI   Y (Yes/No)
   List Partitions . . . . . .       (blank, 1-4096)
   Auto Estimate Hash Space    Y (Yes/No)
   Perform LOB Dependency checks Y (Yes/No)
   List Partitions . . . . . .       (blank, 1-4096)
   Auto Estimate Hash Space    Y (Yes/No)
   Perform LOB Dependency checks Y (Yes/No)
     Exclude objects that failed Dependency check  Y (Yes/No)
     Ignore dependency check for DEFINE NO objects N (Yes/No)
   RBA/LRSN Conversion . . . .   (blank, B - Basic, E - Extended, N - No)
   REORG ALL PARTS if percentage exceeded     (blank, 1-100%)
   Populate compression dictionary data set N (Yes/No)
      Update Searchtime Options . . . . . . N (Yes/No)
   Drop Part . . . . . . . . .   (Y - Yes, N - No, Blank)
 Optional Skeletals        -BEFORE-     -AFTER-
   JCL Skeletal  . . . . . . .            . .       (8 Character Name)
   Control Cards Skeletal  . .            . .       (8 Character Name)
   Step End Skeletal . . . . .            . .       (8 Character Name)

   Pause Skeletal  . . . . . .         (8 Character Name)
```

*Figure 112. **Reorg Utility Profile Options** panel*

Procedure

1. If you want to use an existing template for data set names instead of allowing Db2 Automation Expert
   to create the template, enter the template data set and member name in the **Template Dataset** and
   member name fields.

You also must enter Y in one or more of the following fields to select a template name:

- For image copies: **Copy options** (**Include** and **Update**)
- For discard data sets: **Discard** (**Include** and **Update Discard DSN options**)
- For SYSREC data sets: **Update Sysrec DSN options**
- For SYSPUNCH data sets: **Update Syspunch DSN options**

After you select one or more of these, you are prompted to select the template names on the **TEMPLATEDD Name Selection** panel.

2. To specify an online REORG, enter Y in the **Online Reorg Include** and **Update** fields and press Enter.

   When using online REORG, you must also specify at least one image copy.

   See "Setting online REORG options" on page 190 for details.

3. To specify that image copies should be taken during the REORG, enter Y in the **Copy options Include** and **Update** fields and press Enter.

   See "Specifying copy options and data set names for table space REORGs" on page 196 for details.

4. To collect inline statistics during the REORG, enter Y in the **Statistics options Include** and **Update** fields and press Enter.

   See "Setting statistics options" on page 195 for details.

5. To specify that records that meet specified WHEN conditions are to be discarded during REORG TABLESPACE UNLOAD CONTINUE or UNLOAD PAUSE:

   a) Enter Y in the **Discard Include** and **Update** fields and press Enter.

      See "Setting discard options" on page 196 for details.

   b) To set or change discard data set options, enter Y in the **Update Discard DSN options** field and press Enter.

      For more information, see "Updating data set options" on page 212.

6. To set SYSREC or SYSPUNCH data set options, enter Y in **Update Syrec DSN options** or **Update Syspunch DSN options** fields (or both) and press Enter.

   The SYSREC data set is a single data set into which the data is to be unloaded. The SYSPUNCH data set contains the generated LOAD utility control cards that can be used for reloading the data, if desired. For more information, see "Updating data set options" on page 212.

7. Specify other fields as required. Refer to the help panel for detailed information about the fields on this panel.

Setting online REORG options

Several options can be set for online REORGs of table spaces.

About this task

To set options for an online REORG, enter Y in both the **Include** field and the **Update** field on the **Reorg Utility Profile Options** panel and press Enter. The panel that is shown in the following figure is displayed:

```
AUTOXPRT V1R1 ----------- Online Reorg Options ---------- 2023/10/20  12:59:03
Option   ===>                                          Scroll ===> CSR

  Creator: TWUSR      Name: DB2 V13 PROFILE                  User: TWUSR
                                                 Db2 Subsystem: SS01
  Enter the options to associate with this utility profile

    Sharelevel . . . . . . . . . . . C     (R - Reference, C - Change, N - None)
    Drain Wait . . . . . . . . . . .       (blank, 0-1800 seconds)
    Retry  . . . . . . . . . . . .         (blank, 0-255)
    Retry Delay  . . . . . . . . .         (blank, 1-1800 seconds)
    Timeout  . . . . . . . . . . . T       (A - Abend, T - Term, N - None)
    Force  . . . . . . . . . . . . N       (A - All, R - Readers, N - None)
    AUX  . . . . . . . . . . . . . N       (blank, Y - Yes, N - No)
    Drain Allparts . . . . . . . . N       (Yes/No)


                             Include               Update
    Deadline Options . . . . . N  (Yes/No)  . . . . . . N  (Yes/No)
    Switchtime Options . . . . N  (Yes/No)  . . . . . . N  (Yes/No)
    Shrlevel Change Options    Y  (Yes/No)  . . . . . . N  (Yes/No)
```

Figure 113. **Online Reorg options** *panel*

Procedure

1. Specify the level of access that you want to have to your data during reorganization in the **Sharelevel** field.

   Valid values are C for change (applications can read and write data during the REORG); R for reference (applications can read but not write data during the REORG); or N for none (applications can neither read or write data during the REORG).

2. If you entered C or R in the **Sharelevel** field, enter Y in the **Include/Update Deadline Options** fields and press Enter.

   See "Setting deadline options" on page 191 to continue.

3. If you entered C or R in the **Sharelevel** field, enter Y in the **Include/Update Switchtime Options** fields and press Enter.

   See "Setting switch time options" on page 192 to continue.

4. If you entered C in the **Sharelevel** field, enter Y in the **Include/Update Shrlevel Change Options** fields and press Enter.

   See "Setting SHRLEVEL CHANGE options" on page 193 to continue.

5. On the **Online Reorg options** panel, specify other fields as required. Refer to the help panel for detailed information about the fields on this panel.

Setting deadline options

When performing an online REORG with SHRLVL CHANGE or REFERENCE, you can specify a deadline for the switch phase to begin.

About this task

To specify the deadline, enter Y in both the **Deadline options Include** and **Update** fields on the **Online Reorg options** panel and press Enter. The panel that is shown in the following figure is displayed:

```
AUTOXPRT V1R1 ----------- Deadline Options   ---------- 2023/10/20  13:00:22
Option  ===>

  Creator: TWUSR      Name: TEST PROFILE                    User: TWUSR
                                               Db2 Subsystem: SS01
  Enter the "Deadline" options to associate with this utility profile

    Deadline . . . . . . . . . .   N   (N - None, T - Timestamp, L - Lde)

    Timestamp value . . . . . . .

                                                            More:     +
    Labeled Duration Expression
    Base On Current Date/Timestamp     (D - Date, T - Timestamp)
    Time Zone . . . . . . . . . . . N (Yes/No)
    +/-   Value
                     Year(s)
                     Month(s)
                     Day(s)
                     Hour(s)
                     Minute(s)
                     Seconds(s)
```

Figure 114. **Deadline options** *panel*

Procedure

1. In the **Deadline** field, indicate the type of deadline that you want to set for the switch phase to begin.

   Enter T for a timestamp or L for labeled duration expression.

2. Do one of the following:

   - If you specified to use a timestamp for the deadline, enter a timestamp in the **Timestamp value** field.

   - If you specified to use an LDE for the deadline, complete the following labeled duration expression fields.

     Based on Current Date/Timestamp
     Indicate in this field whether you want to use a date or timestamp as the base. Enter D for date or T for timestamp.

     Time Zone
     Type Y to specify that the Current Timestamp value includes a time zone. This option is available only for REORGs with labeled-duration-expressions using CURRENT TIMESTAMP.

     +/-
     In this column, type + to add the specified value, or - to subtract the specified value.

     Value
     Enter an integer value to correspond with the time value.

3. Press PF3 (END) to return to the **Online Reorg options** panel.

Setting switch time options

When performing an online REORG with SHRLVL CHANGE or REFERENCE, you can specify a switch time for the final log iteration of the LOG phase to begin.

About this task

On the **Online Reorg options** panel, enter Y in both the **Switchtime options Include** and **Update** fields and press Enter. The panel that is shown in the following figure is displayed:

```
AUTOXPRT V1R1 ------------ Switchtime Options ----------- 2023/10/20  13:02:33
Option  ===>

  Creator: TWUSR      Name: TEST PROFILE                      User: TWUSR
                                                Db2 Subsystem: SS13
  Enter the "Switchtime" options to associate with this utility profile

    Switchtime  . . . . . . . . . . N   (N - None, T - Timestamp, L - Lde)

    Timestamp value . . . . . . . .

    Newmaxro  . . . . . . . . . . .          (blank, Number)

                                                            More:     +
    Labeled Duration Expression
    Base On Current Date/Timestamp     (D - Date, T - Timestamp)
    Time Zone . . . . . . . . . . . N (Yes/No)
    +/-   Value
                   Year(s)
                   Month(s)
                   Day(s)
                   Hour(s)
```

Figure 115. **Switchtime Options** *panel*

Procedure

1. In the **Switchtime** field, specify the type of deadline for the switch time.

   Enter T for a timestamp or L for labeled duration expression, or enter N for no switch time deadline.

2. (Optional) Specify a value in the **Newmaxro** field that will override the **Maxro** value.

   Leaving this field blank will result in NEWMAXRO NONE at job build time. Refer to the help panel for additional information about this field.

3. Do one of the following:

   - If you specified to use a timestamp for the switch time, enter a timestamp in the **Timestamp value** field.
   - If you specified to use an LDE for the switch time, complete the following labeled duration expression fields.

     Based on Current Date/Timestamp
       Indicate in this field whether you want to use a date or timestamp as the base. Enter D for date or T for timestamp.

     Time Zone
       Type Y to specify that the CURRENT TIMESTAMP is compared with the time zone column. This option is available only for REORGs with labeled-duration-expressions using CURRENT TIMESTAMP.

     +/-
       In this column, type + to add the specified value, or - to subtract the specified value.

     Value
       Enter an integer value to correspond with the time value.

4. Press PF3 (END) to return to the **Online Reorg options** panel.

Setting SHRLEVEL CHANGE options

When performing an online REORG, you can specify several options specific to SHRLEVEL CHANGE.

About this task

Note: SHRLEVEL CHANGE is not available for spaces with large composite records (greater than 32k).

To specify these options, enter Y in both the **Shrlevel Change Options Include** and **Update** fields on the **Online Reorg options** panel and press Enter. The panel that is shown in the following figure is displayed:

```
AUTOXPRT V1R1 ------------- Change Options ------------ 2023/10/20  13:05:46
Option  ===>
 Creator: TWUSR      Name: TEST PROFILE                    User: TWUSR
                                             Db2 Subsystem: SS01
                                                        More:    +
 Enter the "Shrlevel Change" options to associate with this utility profile
 Create Dynamic Mapping Table . . . . Y    (Y - Yes, N - No, I - Ignore)
 Mapping Table Space Type . . . . . . S    (P - Partition-by-growth,
                                            S - Segmented)
 Max partitions for type PBG  . . . .       (blank, 1-4096)
 Mapping Database . . . . . . . . . .                      (dbname)
 Mapping Table Creator  . . . . . . . &JOBNAME (8 Characters)
 Mapping Table Name . . . . . . . . . REORG_&STEPNAM     (18 Characters)
 Dyn Map Table Bufferpool . . . . . . BP0      (8 Characters)
 Dyn Map Table Storage Group  . . . . SYSDEFLT (8 Characters)
 Dyn Map Index Storage Group  . . . . SYSDEFLT (8 Characters)
 Dyn Map Index Primary Quantity . . . 48       (Number in kilobytes)
 Dyn Map Index Secondary Quantity . . 48       (Number in kilobytes)
 Maxro  . . . . . . . . . . . . . . .          (blank, Number, or DEFER)
 Drain  . . . . . . . . . . . . . . . A    (W - Writers, A - All, N - No)
 Longlog  . . . . . . . . . . . . . . C    (C - Continue, T - Term, D - Drain)
 Delay  . . . . . . . . . . . . . . . 1200     (Number)
 Dyn Map Index Storage Group  . . . . SYSDEFLT (8 Characters)
 Dyn Map Index Primary Quantity . . . 48       (Number in kilobytes)
 Dyn Map Index Secondary Quantity . . 48       (Number in kilobytes)
 Maxro  . . . . . . . . . . . . . . .          (blank, Number, or DEFER)
 Drain  . . . . . . . . . . . . . . . A    (W - Writers, A - All, N - No)
 Longlog  . . . . . . . . . . . . . . C    (C - Continue, T - Term, D - Drain)
 Delay  . . . . . . . . . . . . . . . 1200     (Number)
 Lastlog  . . . . . . . . . . . . . . Y        (Yes/No)
 Logranges  . . . . . . . . . . . . . Y        (Yes/No)

 You can let Db2 manage the creation and deletion of the mapping table
 by setting Create Dynamic Mapping Table to ''I'' (Ignore). Or, if you
 are providing a mapping table, set Create Dynamic Mapping Table to
 ''N''. Automation Expert will create and delete a mapping table if Create
 Dynamic Mapping Table is ''Y''.
```

Figure 116. **Change options** *panel*

Procedure

1. Specify the source of the mapping table.

   A mapping table is required when specifying a online REORG with SHRLEVEL CHANGE. Specify one of the following in the **Create Dynamic Mapping Table** field:

   - Enter Y if you want to allow Db2 Automation Expert to create the mapping table for you. The dynamic mapping table will be created before the REORG step and will be dropped after REORG completion. You can specify the mapping table name and other options in the fields that follow.

   - Enter I to allow Db2 to create the mapping table.

   - If you enter N in this field, you must create the mapping table outside of Db2 Automation Expert and specify the creator and table name in the **Mapping Table Creator** and **Name** fields.

2. If the mapping table will be created by Db2 Automation Expert (Y is specified in the **Create Dynamic Mapping Table** field), specify values for the following:

   - **Mapping Table Space Type**

   - (Optional) **Max partitions for type PBG**

   - (Optional) **Mapping Table Creator**; defaults to the job name

   - (Optional) **Mapping Table Name**; defaults to REORG_*stepname*

   - **Dyn Map Table Bufferpool, Dyn Map Table Storage Group, Dyn Map Index Storage Group, Dyn Map Table Primary Quantity, Dyn Map Index Secondary Quantity**: Specify a buffer pool, storage groups, and primary and secondary quantities for the dynamic table. Db2 Automation Expert will create the table in the specified buffer pool and storage group, then drop the table upon completion of the REORG. If the **Dyn Map Index Storage Group** field is left blank, the value of **Dyn Map Table Storage Group** will be used.

3. If the mapping table exists (N is specified in the **Create Dynamic Mapping Table** field), specify the mapping table in the **Mapping Table Creator** and **Mapping Table Name** fields. The mapping table and its index must already exist. For information about creating this table, refer to the *Db2 Utility Guide and Reference* for your version of Db2.

4. If the mapping table will be created by Db2 (I is specified in the **Create Dynamic Mapping Table** field), specify values for the following:

   - **Mapping Table Space Type**
   - (Optional) **Max partitions for type PBG**
   - (Optional) **Mapping Database**: If you want Db2 to use a specific database for the mapping table, enter it in this field.
   - (Optional) **Mapping Table Creator**; defaults to the job name
   - (Optional) **Mapping Table Name**; defaults to REORG_*stepname*

5. Specify other fields as required. Refer to the help panel for detailed information about the fields on this panel.

6. Press PF3 (END) to return to the **Online Reorg options** panel.

Setting statistics options

Catalog statistics can be updated or reported on as part of the table space REORG.

About this task

To specify this option, enter Y in the **Statistics options/Update** field on the **Reorg Utility Profile Options** panel and press Enter. The panel that is shown in the following figure is displayed:

```
AUTOXPRT V1R1 ----- Reorg Utility Statistics Options ---- 2023/10/20  13:08:30
Option   ===>
  Creator: TWUSR       Name: DB2 13 UTILITIES               User: TWUSR
                                                     Db2 Subsystem: SS01
  Report  . . . . . . . . N (Yes/No)
  Update  . . . . . . . . A (A - All, C - aCcesspath, S - Space, N - None)
  History . . . . . . . . N (A - All, C - aCcesspath, S - Space, N - None)
  Invalidate Cache  . . . N (Yes/No)
  Force Rollup  . . . . . N (Yes/No)
  Table All . . . . . . . Y (Yes/No)
     Sample . . . . . . .     (Percent)
     TableSample  . . . . N     (Auto, 0.01 - 100.00, None)
  Profile . . . . . . . .     (Blank - Not used, U - Use, D - Delete, S - Set,
                               I - use Include npi, P - uPdate,
                               E - set from Existing stats)
  Index All . . . . . . . Y (Yes/No)
    Keycard . . . . . . . N (Yes/No)
    Update statistics . . N (Yes/No)
```

*Figure 117. **Reorg Utility Statistics options** panel*

Procedure

1. To create or update the frequent value and histogram statistic definitions, enter Y in the **Update Statistics** field and press Enter.

   See "Setting FREQVAL and HISTOGRAM options" on page 216 for additional information.

2. Specify other fields as required. Refer to the help panel for detailed information about the fields on this panel.

3. Press PF3 (END) to return to the **Reorg Utility Profile Options** panel.

Specifying copy options and data set names for table space REORGs

During the RELOAD phase of the REORG, Db2 Automation Expert can create full image copies. You can set options for copies taken during table space REORGs.

About this task

The REORG copy options are set independently of the image copy utility options. You can specify one set of copy options for image copies taken with the COPY utility and a different set for image copies taken during a REORG.

You can build the data set names using the Db2 Automation Expert interface or you can choose to use FlashCopy to make the copies, and build the FlashCopy data set names in a similar manner.

Procedure

1. On the **Image Copy Options** panel, choose one of the following methods:
   - To specify data set names for Db2 image copies, do the following:
     a. Select a copy type by entering Y in the **Take Image Copy** column next to the copy type.
     b. Enter Y in the **Update Options** column next to the copy type.
     c. Follow the instructions in the topic .
   - To specify that FlashCopy is to be used to create the image copies:
     a. Enter Y or C in the **FlashCopy Options** field, enter Y in the **Update FlashCopy Dataset Options** field, and press Enter.
     b. Follow the instructions in the topic .
2. When finished, press PF3 to return to the previous panel.

Setting discard options

As part of the table space REORG, you can specify that records that meet certain WHEN conditions are to be discarded during REORG TABLESPACE UNLOAD CONTINUE or UNLOAD PAUSE.

You must specify text to be used for the DISCARD FROM TABLE ... WHEN specification. You may optionally specify a data set to contain the discarded records.

Note: LISTDEFS are not allowed with DISCARD.

Entering DISCARD text

If you specify DISCARD, you must qualify the rows that you want to discard by specifying FROM TABLE with the WHEN option.

About this task

Records that meet the specified WHEN conditions are then discarded during the REORG TABLESPACE UNLOAD CONTINUE or UNLOAD PAUSE. For additional information about using the DISCARD option, refer to the *Db2 Utility Guide* for your version of Db2.

Procedure

1. On the **Reorg Utility Profile Options** panel, enter Y in the **Discard Include** field to include the Discard options.
2. Enter Y in the **Update** field for the **Discard** option and press Enter.

   An ISPF edit session appears in which you can enter the FROM TABLE...WHEN syntax. The first time you create a utility profile that specifies DISCARD, the text appears as follows:

```
   File   Edit   Edit_Settings   Menu   Utilities   Compilers   Test   Help

 EDIT        DISCARD_FROM_TABLE(S)_SQL_TEXT               Columns 00001 00072
 Command ===>                                               Scroll ===> CSR
 ****** **************************** Top of Data ******************************
 000001 -- THE DISCARD TEXT MUST BE PRECEEDED WITH A COMMENT
 000002 -- DESCRIBING THE DATABASE AND TABLESPACE THAT THE
 000003 -- FOLLOWING TEXT IS ASSOCIATED WITH.
 000004 -- EXAMPLE:
 000005 --
 000006 -- DATABASE: MYDATABS TABLESPACE: MYSPACE1
 000007 --          FROM TABLE MYCRTR1.MYTABLE1
 000008 --           WHEN (KEY_COL BETWEEN 6001 AND 7000)
 000009 -- DATABASE: MYDATABS TABLESPACE: MYSPACE2
 000010 --          FROM TABLE MYCRTR2.MYTABLE2
 000011 --           WHEN (KEY_COL BETWEEN 6001 AND 7000)
 000012 --
 000013 -- ---------------------------------- KEYWORD DATABASE: IS REQUIRED
 000014 -- |           ----------------------- DATABASE NAME
 000015 -- |           |          -------------- KEYWORD TABLESPACE: IS REQUIRED
 000016 -- |           |          |            --- TABLESPACE NAME
 000017 -- |           |          |            |
 000018 -- V           V          V            V
 000019 -- DATABASE: MYDATABS TABLESPACE: MYSPACE2
 000019 -- DATABASE: MYDATABS TABLESPACE: MYSPACE2
 000020          FROM TABLE CRTR1.TABLE1
 000021           WHEN (KEY_COL BETWEEN 8001 AND 9000)
 000022          FROM TABLE CRTR2.TABLE2
 000023           WHEN (KEY_COL BETWEEN 8001 AND 9000)
 000024          FROM TABLE CRTR3.TABLE3
 000025           WHEN (KEY_COL BETWEEN 8001 AND 9000)
 000026
 000027 -- DATABASE: DATABAS1 TABLESPACE: TABLSPC1
 000028          FROM TABLE CRTR4.TABLE4
 000029           WHEN (KEY_COL BETWEEN 8001 AND 9000)
 000030
 000031 -- DATABASE: DATABAS2 TABLESPACE: TABLSPC2
 000032          FROM TABLE CRTR5.TABLE5
 ****** *************************** Bottom of Data ****************************
```

Figure 118. Edit session for entering DISCARD text

3. Edit the text to fit your needs. The discard text must specify the table name(s) and the WHEN clauses that describe the rows to discard. In addition, the discard text must be preceded by a comment that includes the database name and table space name.

   The layout of the comment statement is as follows:

```
-- ---------------------------------- KEYWORD DATABASE: IS REQUIRED
-- |           ----------------------- DATABASE NAME
-- |           |          -------------- KEYWORD TABLESPACE: IS REQUIRED
-- |           |          |            --- TABLESPACE NAME
-- |           |          |            |
-- V           V          V            V
-- DATABASE: MYDATABS TABLESPACE: MYSPACE2
```

   The comment describing the database and table space must be formatted as follows:

   • The keyword DATABASE must begin in column 4.
   • Your database name must begin in column 14.
   • The keyword TABLESPACE must begin in column 23.
   • Your table space name must begin in column 35.

   The remainder of the text (the FROM TABLE and WHEN clauses) must be entered per SQL statement syntax rules. Be sure to remove extra sample statements from the text before exiting the edit session.

   Note: The discard text is not validated by Db2 Automation Expert.

4. When you are finished updating the discard text, press PF3 (END).

Specifying DISCARD options

If you specify DISCARD, you must specify the data set name and other options for the data set to contain the discarded records.

About this task

This data set will contain copies of records that meet the DISCARD FROM TABLE ... WHEN specification. When the syntax is built, the data set will be used in the SYSDISC DD statement.

Procedure

1. On the **Reorg Utility Profile Options** panel, enter Y in the **Update Discard DSN options** field and press Enter.
2. On the **Update Dataset Options** panel, enter the data set options.

   For more information, see "Updating data set options" on page 212.
3. When finished, press PF3 (END) to return to the **Reorg Utility Profile Options** panel.

Setting searchtime options

Search time options are used when REORG TABLESPACE copies the existing compression dictionaries for a table space that is defined with DATA CAPTURE CHANGES into the compression dictionary data set (CDDS), instead of reorganizing the table space. The **Searchtime options** panel lets you specify the timestamp that REORG TABLESPACE uses to determine which expansion dictionary to use to populate the CDDS. If the expansion dictionary that the target page set is currently using has an LRSN value that is later than the SEARCHTIME value, REORG searches for the prior expansion dictionary in the Db2 log and in SYSCOPY information. If a prior expansion dictionary exists, REORG copies that dictionary into the CDDS.

About this task

To specify the search time, enter Y in both the **Populate compression dictionary data set** and **Update Searchtime Options** fields on the **Reorg Utility Profile Options** panel and press Enter. The panel that is shown in the following figure is displayed:

```
AUTOXPRT V1R1 ------------ Searchtime Options ----------- 2023/10/20  13:12:14
Option   ===>

  Creator: TWUSR      Name: TEST PROFILE                    User: TWUSR
                                              Db2 Subsystem: SS01
  Enter the "Searchtime" options to associate with this utility profile

    Searchtime  . . . . . . . . . . N   (N - None, T - Timestamp, L - Lde)

    Timestamp value . . . . . . . .

                                                    More:     +
    Labeled Duration Expression
    Base On Current Date/Timestamp     (D - Date, T - Timestamp)
    Time Zone . . . . . . . . . . . N (Yes/No)
    +/-   Value
                  Year(s)
                  Month(s)
                  Day(s)
                  Hour(s)
                  Minute(s)
                  Seconds(s)
```

*Figure 119. **Searchtime options** panel*

Procedure

1. In the **Searchtime** field, indicate the type of timestamp that you want to set.

- To specify that REORG populates the CDDS from the expansion dictionary that the target page set is currently using, type N in this field.
- To specify a TIMESTAMP(6) constant that determines which expansion dictionary to use to populate the CDDS, type T in this field and enter a timestamp in the **Timestamp** field.
- To specify an LDE, type L in this field and complete the **Labeled Duration Expression** fields.

2. Do one of the following:

- If you specified to use a timestamp for the search time, enter a timestamp in the **Timestamp value** field.
- If you specified to use an LDE for the search time, complete the following labeled duration expression fields.

  Based on Current Date/Timestamp
  Indicate in this field whether you want to use a date or timestamp as the base. Enter D for date or T for timestamp.

  Time Zone
  Type Y to specify that the CURRENT TIMESTAMP is compared with the time zone column. This option is available only for REORGs with labeled-duration-expressions using CURRENT TIMESTAMP.

  +/-
  In this column, type + to add the specified value, or - to subtract the specified value.

  Value
  Enter an integer value to correspond with the time value.

3. Press PF3 (END) to return to the **Online Reorg options** panel.

Index REORG options

Reorganizing an index can improve access performance and reclaim fragmented space.

When specifying an index REORG, some of the options you can specify are:

- The degree of access to the data during the REORG
- Whether to take image copies before or after the REORG
- Whether to collect statistics as part of the REORG
- To generate a report as to whether a REORG is needed

Setting index REORG options

Index REORG settings that can be configured include statistics options, specifying an online REORG, and other options.

About this task

A portion of the **Reorg Index Utility Profile Options** panel is shown in the following figure. Press PF8 (DOWN) to view additional fields.

```
AUTOXPRT V1R1 --- Reorg Index Utility Profile Options --- 2023/10/20  13:15:00
Option   ===>                                            Scroll ===> CSR
  Creator: TWUSR      Name: TEST                          User: TWUSR
                                                    Db2 Subsystem: SS01
                                                             More:    +
                                Include                Update
   Online reorg . . . . . . . . . N (Yes/No) . . . . . . . N (Yes/No)
   Statistics options . . . . . . N (Yes/No) . . . . . . . N (Yes/No)
   Optional Template Dataset and member name:
     Template Dataset
     Member name   . .
   Update SYSUT1 Dataset Options  N (Y - Yes, N - No)
   FlashCopy Options    (blank, Y - Yes, N - No, C - Consistent)
     Update FlashCopy Dataset Options  N (Y - Yes, N - No)
   Exception Rule . . . . . . . . A (A - Accepted, R - Rejected, B - Both)
   Utility ID . . . . . . . . . .                  (16 characters)
   Reuse  . . . . . . . . . . . . N (Yes/No)
   Leafdistlimit . . . . . . . .          (Integer)
   Fastswitch . . . . . . . . . . N (Yes/No)
   Report only  . . . . . . . . . N (Yes/No)
   Unload . . . . . . . . . . . . C (C - Continue, P - Pause, O - Only)
   Preformat  . . . . . . . . . . N (Yes/No)
   Max Tape Vols/DASD Units . . . 5        (1-255)
   Decompress alloc multiplier    3        (1-99)
   Sort Device Type . . . . . . .          (CART/DISK/etc.)
   Sort Number  . . . . . . . . .        (Number)
   RBA/LRSN Conversion  . . . . .  (blank, B - Basic, E - Extended, N - No)
   NOSYSUT1 . . . . . . . . . . . N (Yes/No)
   PARALLEL . . . . . . . . . . . 0     (0-32767)
 Optional Skeletals         -BEFORE-    -AFTER-
   JCL Skeletal . . . . . . . . .        . .            (8 Character Name)
   Control Cards Skeletal . . . .        . .            (8 Character Name)
   Step End Skeletal  . . . . . .        . .            (8 Character Name)
```

*Figure 120. **Reorg Index Utility Profile Options** panel*

Procedure

1. To specify an online REORG, enter Y in the **Online Reorg Include** and **Update** fields and press Enter.

   See "Setting online REORG options for indexes" on page 201 for details.

2. To collect inline statistics during the REORG, enter Y in the **Statistics options Include** and **Update** fields and press Enter.

   See "Setting statistics options" on page 204 for details.

3. If you want to use an existing template for FlashCopy data set names instead of allowing Db2 Automation Expert to create the template, enter the template data set and member name in the **Template Dataset** and **member name** fields.

   You also must enter Y or C in the **FlashCopy Options** field, and Y in the **Update FlashCopy Dataset Options** field.

   When you press Enter, you are prompted to select the template name on the **TEMPLATEDD Name Selection** panel.

4. If you specified FlashCopy copies, follow the instructions in the topic "Updating data set options" on page 212.

5. To set data set options for the SYSUT1 work data set for the REORG, enter Y in the **Update SYSUT1 Dataset Options** field and press Enter.

   For more information, see "Updating data set options" on page 212.

6. Specify other fields as required. Refer to the help panel for detailed information about the fields on this panel.

Setting online REORG options for indexes

Online index REORG options that can be set for indexes include share level options, retries and timeouts, switch times, and deadlines.

About this task

To set online REORG options, enter Y in both the **Online Reorg Include** and **Update** fields and press Enter. The **Online Reorg Index Options** panel is displayed, as shown in the following figure:

```
AUTOXPRT V1R1 -------- Online Reorg Index Options ------- 2023/10/20  13:16:34
Option   ===>

  Creator: TWUSR      Name: DB2 V13                        User: TWUSRA
                                               Db2 Subsystem: SS01

  Enter the options to associate with this utility profile

    Sharelevel . . . . . . . . . . C    (R - Reference, C - Change, N - None)
    Drain Wait . . . . . . . . . .      (blank, 0-1800 seconds)
    Retry  . . . . . . . . . . . .      (blank, 0-255)
    Retry Delay  . . . . . . . . .      (blank, 1-1800 seconds)
    Force  . . . . . . . . . . . . N    (A - All, R - Readers, N - None)
    Timeout  . . . . . . . . . . . T    (A - Abend, T - Term, N - No)

                                 Include              Update
    Deadline Options . . . . . . N (Yes/No) . . . . . . . N (Yes/No)
    Switchtime Options . . . . . Y (Yes/No) . . . . . . . N (Yes/No)
    Shrlevel Change Options  . . Y (Yes/No) . . . . . . . N (Yes/No)
```

*Figure 121. **Online Reorg Index Options** panel*

Procedure

1. Specify the level of access that you want to have to your data during reorganization in the **Sharelevel** field.

   Valid values are C for change (applications can read and write data during the REORG); R for reference (applications can read but not write data during the REORG); or N for none (applications can neither read or write data during the REORG).

2. If you entered C or R in the **Sharelevel** field, enter Y in the **Include/Update Deadline Options** fields and press Enter.

   See "Setting deadline options" on page 191 to continue.

3. If you entered C or R in the **Sharelevel** field, enter Y in the **Include/Update Switchtime Options** fields and press Enter.

   See "Setting switch time options" on page 192 to continue.

4. If you entered C in the **Sharelevel** field, enter Y in the **Include/Update Shrlevel Change Options** fields and press Enter.

   See "Setting SHRLEVEL CHANGE options" on page 193 to continue.

5. On the **Online Reorg Index options** panel, specify other fields as required. Refer to the help panel for detailed information about the fields on this panel.

Setting deadline options

When performing an online REORG with SHRLVL CHANGE or REFERENCE, you can specify a deadline for the switch phase to begin.

About this task

To specify the deadline, enter Y in both the **Deadline options Include** and **Update** fields on the **Online Reorg options** panel and press Enter. The panel that is shown in the following figure is displayed:

```
AUTOXPRT V1R1 ------------ Deadline Options   ----------- 2023/10/20  13:00:22
Option  ===>

  Creator: TWUSR      Name: TEST PROFILE                      User: TWUSR
                                              Db2 Subsystem: SS01
  Enter the "Deadline" options to associate with this utility profile

    Deadline  . . . . . . . . . .   N   (N - None, T - Timestamp, L - Lde)

    Timestamp value . . . . . . . .

                                                         More:     +
    Labeled Duration Expression
    Base On Current Date/Timestamp      (D - Date, T - Timestamp)
    Time Zone . . . . . . . . . . . N (Yes/No)
    +/-   Value
                  Year(s)
                  Month(s)
                  Day(s)
                  Hour(s)
                  Minute(s)
                  Seconds(s)
```

*Figure 122. **Deadline options** panel*

Procedure

1. In the **Deadline** field, indicate the type of deadline that you want to set for the switch phase to begin.

   Enter T for a timestamp or L for labeled duration expression.
2. Do one of the following:

   - If you specified to use a timestamp for the deadline, enter a timestamp in the **Timestamp value** field.
   - If you specified to use an LDE for the deadline, complete the following labeled duration expression fields.

     Based on Current Date/Timestamp
     Indicate in this field whether you want to use a date or timestamp as the base. Enter D for date or T for timestamp.

     Time Zone
     Type Y to specify that the Current Timestamp value includes a time zone. This option is available only for REORGs with labeled-duration-expressions using CURRENT TIMESTAMP.

     +/-
     In this column, type + to add the specified value, or - to subtract the specified value.

     Value
     Enter an integer value to correspond with the time value.
3. Press PF3 (END) to return to the **Online Reorg options** panel.

Setting switch time options

When performing an online REORG with SHRLVL CHANGE or REFERENCE, you can specify a switch time for the final log iteration of the LOG phase to begin.

About this task

On the **Online Reorg options** panel, enter Y in both the **Switchtime options Include** and **Update** fields and press Enter. The panel that is shown in the following figure is displayed:

```
AUTOXPRT V1R1 ------------ Switchtime Options ----------- 2023/10/20  13:02:33
Option  ===>

  Creator: TWUSR     Name: TEST PROFILE                 User: TWUSR
                                            Db2 Subsystem: SS13
  Enter the "Switchtime" options to associate with this utility profile

    Switchtime . . . . . . . . . . N   (N - None, T - Timestamp, L - Lde)

    Timestamp value . . . . . . .

    Newmaxro . . . . . . . . . .            (blank, Number)

                                                      More:    +
    Labeled Duration Expression
    Base On Current Date/Timestamp     (D - Date, T - Timestamp)
    Time Zone . . . . . . . . . . . N (Yes/No)
    +/-  Value
                 Year(s)
                 Month(s)
                 Day(s)
                 Hour(s)
```

Figure 123. **Switchtime Options** *panel*

Procedure

1. In the **Switchtime** field, specify the type of deadline for the switch time.

   Enter T for a timestamp or L for labeled duration expression, or enter N for no switch time deadline.

2. (Optional) Specify a value in the **Newmaxro** field that will override the **Maxro** value.

   Leaving this field blank will result in NEWMAXRO NONE at job build time. Refer to the help panel for additional information about this field.

3. Do one of the following:

   - If you specified to use a timestamp for the switch time, enter a timestamp in the **Timestamp value** field.

   - If you specified to use an LDE for the switch time, complete the following labeled duration expression fields.

     Based on Current Date/Timestamp
       Indicate in this field whether you want to use a date or timestamp as the base. Enter D for date or T for timestamp.

     Time Zone
       Type Y to specify that the CURRENT TIMESTAMP is compared with the time zone column. This option is available only for REORGs with labeled-duration-expressions using CURRENT TIMESTAMP.

     +/-
       In this column, type + to add the specified value, or - to subtract the specified value.

     Value
       Enter an integer value to correspond with the time value.

4. Press PF3 (END) to return to the **Online Reorg options** panel.

Setting SHRLEVEL CHANGE options for index REORGs

When performing an online REORG of an index, you can specify several options specific to SHRLEVEL CHANGE.

About this task

To specify these options, enter Y in both the **Shrlevel Change Options Include** and **Update** fields on the **Online Reorg Index Options** panel and press Enter. The panel that is shown in the following figure is displayed:

```
AUTOXPRT V1R1 ------------- Change Options ------------ 2023/10/20  13:18:52
Option   ===>

  Creator: TWUSR      Name: TEST PROFILE                      User: TWUSR
                                                  Db2 Subsystem: SS01
  Enter the "Shrlevel Change" options to associate with this utility profile

    Maxro  . . . . . . . . . . .              (blank, Number, DEFER)
    Drain  . . . . . . . . . . . A            (W - Writers, A - All, N - No)
    Longlog  . . . . . . . . . . C            (C - Continue, T - Term, D - Drain)
    Delay  . . . . . . . . . . 1200           (Number)
    Lastlog  . . . . . . . . . Y              (Yes/No)
    Logranges  . . . . . . . . Y              (Yes/No)
```

*Figure 124. **Change Options** panel*

Procedure

1. Specify the fields as required. Refer to the help panel for detailed information about the fields on this panel.
2. Press PF3 (END) to return to the **Online Reorg Index Options** panel.

Setting statistics options

Catalog statistics can be updated or reported on as part of the REORG INDEX.

About this task

To specify this option, enter Y in the **Statistics options/Update** field on the **Reorg Index Utility Profile Options** panel and press Enter. The panel that is shown in the following figure is displayed:

```
AUTOXPRT V1R1 ----- Reorg Utility Statistics Options ---- 2023/10/20  14:14:20
Option   ===>

  Creator: TWUSR       Name: DAJ-11518 REORG IX            User: TWUSR
                                                  Db2 Subsystem: SS01
    Report  . . . . . . . . . . . Y           (Yes/No)
    Update  . . . . . . . . . . . N           (A - All, C - aCcesspath,
                                               S - Space, N - None)
    Invalidate Cache  . . . . . .             (Yes/No)
    History . . . . . . . . . . . N           (A - All, C - aCcesspath,
                                               S - Space, N - None)
    Force Rollup  . . . . . . . . N           (Yes/No)
    Keycard . . . . . . . . . . . N           (Yes/No)
    Update statistics . . . . . . N           (Yes/No)
```

*Figure 125. **Reorg Utility Statistics options** panel*

Procedure

1. To create or update the frequent value and histogram statistic definitions, enter Y in the **Update Statistics** field and press Enter.

   See "Setting FREQVAL and HISTOGRAM options" on page 216 for additional information.

2. Specify other fields as required. Refer to the help panel for detailed information about the fields on this panel.
3. Press PF3 (END) to return to the **Reorg Index Utility Profile Options** panel.

QUIESCE options

The QUIESCE utility establishes a quiesce point (the current log RBA or log record sequence number (LRSN)) for an object and records it in the SYSCOPY catalog table. A successful QUIESCE improves the probability of a successful RECOVER or COPY.

Quiesce options that can be set include:

- Whether all referentially related table spaces are to be quiesced at once
- Whether to write changed pages to disk
- The utility ID

When you specify to set QUIESCE options, the panel shown in the following figure is displayed:

```
AUTOXPRT V1R1 ------------- Quiesce Options ------------- 2023/10/20  14:16:24
Option   ===>

  Creator: TWUSR      Name: DAJ 11                         User: TWUSR
                                                 Db2 Subsystem: SS01
    Exception Rule  . . . . . . . A  (A - Accepted, R - Rejected, B - Both)
    Utility ID . . . . . . . . .                    16 characters
    Tablespaceset . . . . . . . N  (Yes/No)
    Write . . . . . . . . . . . Y  (Yes/No)
  Optional Skeletals           -BEFORE-     -AFTER-
    JCL Skeletal  . . . . . . . .         . .          (8 Character Name)
    Control Cards Skeletal . . .          . .          (8 Character Name)
    Step End Skeletal . . . . . .         . .          (8 Character Name)
```

Figure 126. *Quiesce options* panel

The following describes the options you can set for the QUIESCE utility:

Exception Rule
Enter A in this field to have the utility act on all objects that are accepted (included) as a result of exception processing. Enter R to have the utility act on objects that are rejected (excluded) as a result of exception processing. Enter B to have the utility act on all objects, regardless of exception processing results.

Utility ID
Enter a 1 to 16 character utility ID to be used to uniquely identify the utility to Db2. The ID must begin with a letter; the remainder can be alphanumeric or the following special characters: #, $, @, ¢, !, ¬, . If this utility profile is included in a job profile that is built for execution in a maintenance window, a utility ID that is specified in this field is ignored. For maintenance window builds, Db2 Automation Expert generates a unique utility ID for each object by using the letter "A" followed by the action ID that is assigned to the object and utility pair (for example, "A1785").

Tablespaceset
Enter Y to specify that all of the referentially related table spaces in a table space set are to be quiesced. For the purposes of the QUIESCE utility, a table space set is either:

- A group of table spaces that have a referential relationship.
- A base table space with all of its LOB table spaces.

Write
Enter Y in this field to write all changed pages from the table spaces and indexes to disk as part of the QUIESCE.

Note: You cannot specify N in this field for table spaces with the NOT LOGGED attribute.

Optional Skeletals
These fields can be used to customize the JCL generated by Db2 Automation Expert. You can add your own skeletons that can be processed before or after the utility JCL. For more information on using these fields, refer to .

MODIFY options

The MODIFY utility profile offers MODIFY RECOVERY and MODIFY STATISTICS options to clean up IBM SYSCOPY tables and records related to recovery and statistics, as well as options to clean up several internal Db2 Automation Expert tables.

About this task

You can specify one or more of the following operations:

- SYSIBM recovery table cleanup deletes records from SYSCOPY catalog tables, as well as related log records from the SYSLGRNX directory table and entries from the DBD.
- SYSIBM statistics tables cleanup removes statistics information from SYSIBM history tables.
- Clean up of internal Db2 Automation Expert data repositories, including the RUNSTATS repository tables, utilities runtime statistics, jobs reporting repositories, EMC Symmetrix and IBM ESS volume backup and recovery information stored in the Db2 Automation Expert SYSCOPY tables, and the Db2 Change Accumulation Tool mini-log tables.

When you specify to set MODIFY options, the panel shown in the following figure is displayed, a portion of which is shown in the following figure:

```
AUTOXPRT V1R1 -------------- Modify Options ------------- 2023/10/20  14:19:38
Option   ===>

  Creator: TWUSR      Name: TEST UTIL PROFILE User: TWUSR
                            Db2 Subsystem: SS02
                                                        More:     +
  Exception Rule  . . . . . . . . A  (A - Accepted, R - Rejected, B - Both)
  Utility ID  . . . . . . . . . .              (16 characters)
  Jobs Profile Like . . . . . . .                    30 Characters
  Jobs Creator Like . . . . . . .      (8 Characters)
  Table Clean Up Options
  SYSIBM Recovery Tables  . . . . Y      (Yes/No)
    Retain  . . . . . . . . . . . N  (N - No, L - Last, O - 101glimit,
                                     T - lasT, M - logliMit, G - Gdglimit)
    Number of Records . . . . . .         (for Last and gdglimit lasT)
    Delete Image Copy data set   N        (Yes/No) (V12 and higher)
    Date  . . . . . . . . . . . .          (YYYYMMDD date, *)
    Age . . . . . . . . . . . . . *        (1 - 32767, *)
    Flashcopy Only. . . . . . . . N        (Yes/No)
    No Copy Pending . . . . . . . N        (Yes/No)
  SYSIBM Statistics Tables  . . . N       (Yes/No)
    Delete. . . . . . . . . . . . A        (A - All, C - aCcesspath, S - Space)
    Date  . . . . . . . . . . . .           (YYYYMMDD date, *)
    Age . . . . . . . . . . . . . *         (1 - 32767, *)
    Include Define No Objects . . N        (Yes/No)
  Runstats Repository Tables  . . N        (Yes/No)
  Utility runtime statistics  . . N        (Yes/No)
  Jobs Reporting Facility . . . . N        (Yes/No)
  Automation Expert SYSCOPY table N        (Yes/No)
  Change Accum mini logs table    N        (Yes/No)
  Date  . . . . . . . . . . . . .           (YYYYMMDD date, *)
  Age . . . . . . . . . . . . . . *         (1 - 32767, *)
  Optional Skeletals          -BEFORE-     -AFTER-
  JCL Skeletal  . . . . . . . . .      . .             (8 Character Name)
  Control Cards Skeletal  . . . .      . .             (8 Character Name)
  Step End Skeletal . . . . . . .      . .             (8 Character Name)
```

Figure 127. **Modify options** *panel*

Procedure

1. Set the **Exception Rule** field.
2. Optional: When cleaning up the Db2 Automation Expert jobs reporting facility, set the **Jobs Profile Like** or the **Jobs Creator Like** fields to further qualify the selection beyond what the **Date** and **Age** fields filter. Refer to the help panel for more detailed information.
3. To clean up SYSIBM recovery tables, enter Y in the **SYSIBM Recovery Tables** field, and specify related fields as required.

4. To clean up SYSIBM statistics tables, enter Y in the **SYSIBM Statistics Tables** field, and specify related fields as required.

5. For internal Db2 Automation Expert repositories, specify one or more of the following.

   Note: The **Date** and **Age** fields that follow these fields can be used to select the records that are deleted based on a date or age. Refer to the help panel for more information about using these fields.

   - To clean up the Db2 Automation Expert runtime repository that contains statistics used in exception processing, enter Y in the **Runstats Repository Tables** field.
   - To clean up the Db2 Automation Expert utility runtime statistics repository, enter Y in the **Utility runtime statistics** field.
   - To clean up the Jobs Reporting Facility, enter Y in the **Jobs Reporting Facility** field. For this repository, you can further refine the table cleanup by specifying values in the **Jobs Profile Like** and **Jobs Creator Like** fields at the top of the panel.
   - To clean up the Db2 Automation Expert SYSCOPY table that contains backup and recovery information from ESS and EMC devices, enter Y in the **Automation Expert SYSCOPY table** field.
   - To clean up the Db2 Change Accumulation Tool mini logs table, enter Y in the **Change Accum mini logs table** field.

6. Optional: Enter optional user skeletons. For more information, see "Using the optional skeletons" on page 217.

REPAIR options

The REPAIR online utility repairs data. REPAIR is intended as a means of replacing invalid data with valid data.

About this task

⚠️ **CAUTION:** Use caution in using REPAIR, as already damaged data could be further compromised if REPAIR is improperly used.

A portion of the **Repair options** panel is shown in the following figure. Press PF8 (DOWN) to view additional fields.

```
AUTOXPRT V1R1 -------------- Repair Options ------------- 2023/10/20  14:21:44
Option  ===>
  Creator: TWUSR      Name: DAJ-13639 DB2 13 KEYWORDS        User: TWUSR
                                            Db2 Subsystem: SS01
                                                           More:     +
   Exception Rule  . . . . . . . A  (A - Accepted, R - Rejected, B - Both)
   Utility ID . . . . . . . . .               (16 characters)
   Log . . . . . . . . . . . . Y  (Yes/No)
   Process . . . . . . . . . . S  (S - Set, D - Dbd, L - Levelid
                                   I - Insert Version Pages)
   No Copy Pending . . . . . . . N  (Yes/No)
   No Recover Pending  . . . . . N  (Yes/No)
   No Check Pending  . . . . . . N  (Yes/No)
   No Auxiliary Warning  . . . . N  (Yes/No)
   No Auxiliary Check Pending   N  (Yes/No)
   No Rebuild Pending  . . . . . N  (Yes/No)
   No Advisory Reorg Pending . . N  (Yes/No)
   No Advisory Reorg Pending*   N  (Yes/No)
   Rebuild Pending . . . . . . . N  (Yes/No)
   Page Set Rebuild Pending  . . N  (Yes/No)
   Repair Catalog  . . . . . . . N  (Yes/No)
   Repair Catalog Test . . . . . N  (Yes/No)
```

*Figure 128. **Repair options** panel*

Procedure

1. Set the **Exception Rule** field.

2. Enter the type of REPAIR to be done in the **Process** field.

   a) To reset pending statuses, enter S in the **Process** field.

     Then specify the status to be reset in one or more of the fields that follow the **Process** field.

   b) To repair a DBD, enter D in the **Process** field.

     In addition, specify the type of repair to be done in the **DBD Process Option** field.

   c) To reset the level identifier of a table space partition, index, or index space partition, enter L in the **Process** field.

   d) To insert missing version zero system pages to ensure that the table space or partition is self describing, enter I in the **Process** field.

     In addition, set the desired values in the **Set Current Version** and **SHRLEVEL Change** fields.

3. To log the changes made by the REPAIR utility, enter Y in the **Log** field.

4. Set other fields on the panel as desired.

   Refer to the help panel for detailed information about the fields on this panel.

CHECK DATA options

CHECK DATA checks table spaces for violations of referential and table check constraints, and reports information about violations. CHECK DATA can also checks for consistency between a base table space and the corresponding LOB or XML table spaces.

About this task

Restriction:

- Under some conditions, it is recommended that CHECK INDEX and CHECK LOB be run prior to running CHECK DATA. For information about the circumstances under which you may need to run these utilities, refer to the Db2 utilities guide for your version of Db2. CHECK INDEX and CHECK LOB are not currently supported in Db2 Automation Expert. These utilities can be included via the use of user exits and user skeletons.

- For user-managed spaces, CHECK DATA with the SHRLEVEL CHANGE option spaces requires that shadow data sets be created prior to running CHECK DATA. You must create the shadow data sets before running the CHECK DATA utility job generated by Db2 Automation Expert.

When you specify to set CHECK DATA options, the panel that is shown in the following figure is displayed. Only a portion of the panel is shown; scroll down to see all the fields.

```
AUTOXPRT V1R1 ---- Check Data Utility Profile Options --- 2023/10/20  14:23:24
Option   ===>                                              Scroll ===> CSR

  Creator: TWUSR      Name: CHECK DATA UTILITY            User: TWUSR
                                               Db2 Subsystem: SS01
                                                        More:     +
   Exception Rule  . . . . . . A (A - Accepted, R - Rejected, B - Both)
   Include Exception Tables  . N (Yes/No)    Update N (Yes/No)
   Utility ID . . . . . . . .            (16 characters)
   Sharelevel . . . . . . . . R    (R - Reference, C - Change)
   Drain Wait . . . . . . . .      (blank, 0-1800 seconds)
   Retry . . . . . . . . . .       (blank, 0-255)
   Retry Delay . . . . . . . .     (blank, 1-1800 seconds)
   Scope . . . . . . . . . . . P    (P - Pending, X - AuxOnly,
                                     A - All, R - RefOnly,
                                     S - XMLSchemaOnly)
   AUXerror  . . . . . . . . . R    (I - Invalidate, R - Report)
   LOBerror  . . . . . . . . . R    (I - Invalidate, R - Report)
   XMLerror  . . . . . . . . . R    (I - Invalidate, R - Report)
   Include ALL XML spaces  . . N    (Yes/No)
   Include Implicit spaces . . N    (Yes/No)
   Max Tape Vols/DASD Units. . 5    (blank, 1-255)
```

*Figure 129. **Check Data Utility Profile Options** panel*

Procedure

1. Set the **Exception Rule** field.
2. If you want exception tables to be included in a FOR EXCEPTION clause, enter Y in the **Include Exception Tables** field, and enter Y in the corresponding **Update** field to update definitions for the exception tables.

   Refer to "Specifying CHECK DATA exception tables" on page 209 for more information.
3. Specify other fields as required. Refer to the help panel for detailed information about the fields on this panel.

Specifying CHECK DATA exception tables

A CHECK DATA exception table is used to hold deleted rows from the table that is checked. The exception table can already exist, or it can be created by Db2 Automation Expert.

About this task

The **Check Data Exception options** panel is shown in the following figure:

```
AUTOXPRT V1R1 ------- Check Data Exception Options ------ 2023/10/20  14:27:10
Option   ===>                                           Scroll ===> CSR

  Creator: TWUSR      Name: DAJ-13534                        User: TWUSR
                                               Db2 Subsystem: SS01
  Enter the options for Exception Tables

   Database . . . . . . . . . . . . . . . .           (8 Characters)
   Table space  . . . . . . . . . . . . . .           (8 Characters)
   Bufferpool . . . . . . . . . . . . . . .           (8 Characters)
   Storage Group  . . . . . . . . . . . . .           (8 Characters)
   Primary Quantity . . . . . . . . . . . . 12        (Number in kilobytes)
   Secondary Quantity . . . . . . . . . . . 12        (Number in kilobytes)
   Exception Table Creator  . . . . . . . .           (8 Characters)
   Exception Table Suffix . . . . . . . . .           (8 Characters)
   Include RID column . . . . . . . . . . . N         (Yes/No)
   Include Timestamp column . . . . . . . . N         (Yes/No)
   Current Application Compatibility Register         (Compatibility Level)
```

Figure 130. **Check Data Exception options** *panel*

Procedure

1. Specify the following required fields: **Database**, **Table space**, **Bufferpool**, and **Storage Group**.
2. If you want Db2 Automation Expert to create the exceptions table:

   - Enter valid values in the following required fields: **Primary quantity** and **Secondary Quantity**.
   - Optionally, enter values in the **Exception Table Creator** and **Exception Table Suffix** fields. Specifying values for these fields can help ensure unique names, especially if many objects will be checked.
3. Specify other fields as required. Refer to the help panel for detailed information about the fields on this panel.
4. Press PF3 (END) to return to the **Check Data Utility Profile Options** panel.

REBIND options

The REBIND command is used to rebind plans and packages. Db2 Automation Expert builds REBIND jobs for plans and packages related to triggered objects in the object profile.

About this task

When you specify to set REBIND options, the panel shown in the following figure is displayed. Only a portion of the fields are shown; scroll down to see all the fields.

```
AUTOXPRT V1R1  ----- Rebind Utility Profile Options ----- 2023/10/20  14:28:47
Option   ===>                                          Scroll ===> CSR
  Creator: TWUSR       Name: REBIND UTILITY                   User: TWUSR
                                            Db2 Subsystem: SS01
                                                          More:    +

   Exception Rule  . . . . . . . A  (A - Accepted, R - Rejected, B - Both)
 Rebind Parameters
   Acquire . . . . . . . . . . U  (blank, A - Allocate, U - Use)
   Access Path Compare . . . . .   (blank, W - Warn, E - Error, N - None)
   Access Path Reuse . . . . . .   (blank, W - Warn, E - Error, N - None)
   Access Path Retain Duplicate    (blank, Y - Yes, N - No)
   Business Time Sensitive . . .   (blank, Y - Yes, N - No)
   Cachesize . . . . . . . . . .    (blank, 0-4096)
   Concurrent Access Resolution    (blank,
                                    U - Use Currently Committed,
                                    W - Wait for Outcome)
   Currentdata . . . . . . . . Y  (blank, Y - Yes, N - No)
   Database Connect Protocol . . D  (blank, D - DRDA, P - Private)
   Defer Prepare . . . . . . . N  (blank, Y - Yes, N - No)
   Degree  . . . . . . . . . . 1  (blank, A - Any, 1 - 1)
   Deplevel  . . . . . . . . . .    (blank, P - Package, S - Statement)
   Disconnect  . . . . . . . . E  (blank,
                                    A - Automatic,
                                    C - Conditional,
                                    E - Explicit)
   Dynamic Rules . . . . . . . R  (blank,
                                    B - Bind,
                                    D - Define Bind,
                                    F - Define Run,
                                    I - Invoke Bind,
                                    O - Invoke Run,
                                    R - Run)
```

Figure 131. ***Rebind Utility Profile Options*** *panel*

Procedure

1. Set the **Exception Rule** field.
2. Set other fields on the panel as desired.

   Refer to the help panel for detailed information about the fields on this panel.

Load accelerator table options

The Db2 Automation Expert load accelerator table utility builds JCL and control cards to reload IBM Db2 Analytics Accelerator for z/OS tables that have been triggered through exception processing.

IBM Db2 Analytics Accelerator for z/OS is a combined hardware and software solution that can reduce response times for Db2 for z/OS database queries by using accelerator tables. You can use the Db2 Automation Expert utility to reload the accelerator tables when they need to be reloaded as defined by exception criteria in an exception profile.

To reload IBM Db2 Analytics Accelerator for z/OS-enabled objects, you must have a job profile with the following:

- An object profile that contains the IBM Db2 Analytics Accelerator for z/OS-enabled objects.

- An exception profile that specifies at least one of the three IBM Db2 Analytics Accelerator for z/OS exception conditions.

Note: The utility starts one or more instances of SYSPROC.DSNUTILU. DSNUTILU must be installed and configured properly on Db2 for z/OS. This includes setup of the WLM application environment for Db2-supplied stored procedures and for IBM Db2 Analytics Accelerator for z/OS. For more information, refer to the information about defining WLM performance goals for IBM Db2 Analytics Accelerator for z/OS stored procedures in the *IBM Db2 Analytics Accelerator for z/OS Installation Guide*.

```
AUTOXPRT V1R1 ------ Load Accelerator Table Options ----- 2023/10/20  14:30:43
Option   ===>

  Creator: TWUSR      Name: UTILITY PROFILE                 User: TWUSR

  Enter the options to associate with this utility profile

  Exception Rule . . . . . . . . A (A - Accepted, R - Rejected, B - Both)
  Lock Mode  . . . . . . . . . . S (S - tableSet, T - Table, P - Partitions
                                   N - None, R - Row)

 Optional Skeletals        -BEFORE-     -AFTER-
  JCL Skeletal . . . . . . .        . .            (8 Character Name)
  Control Cards Skeletal . .        . .            (8 Character Name)
  Step End Skeletal  . . . .        . .            (8 Character Name)
```

*Figure 132. **Load Accelerator Table Options** panel*

The following describes the options that you can set:

Exception Rule
Enter A in this field to have the utility act on all objects that are accepted (included) as a result of exception processing. Enter R to have the utility act on objects that are rejected (excluded) as a result of exception processing. Enter B to have the utility act on all objects, regardless of exception processing results.

Lock Mode
Specify the protection level while the tables that are on an accelerator are being loaded. The protection level ensures a consistent state of the data with respect to the specified entity. Enter one of the following:

- S - Protects all tables to be loaded against change during the load operation.
- T - Protects only the table that is currently being loaded.
- P - Protects the table space partition containing that part of the table that is currently being loaded. With this setting, an non-partitioned table is always completely locked.
- N - None or no locking at all. However, only committed data is loaded into the table, because the Db2 data is unloaded with isolation level CS and SKIP LOCKED DATA.
- R - Protects only the row or page that is being loaded against updates. Db2 data is unloaded with isolation level CS, but in comparison to lock mode NONE, rows that are locked by an application are not skipped.

  Note: Using this lock mode has many implications, especially as related to incrementally updated tables. Contact IBM Software Support before using this setting.

Optional Skeletals
These fields can be used to customize the JCL generated by Db2 Automation Expert. You can add your own skeletons that can be processed before or after the utility JCL. For more information on using these fields, refer to "Using the optional skeletons" on page 217.

Valid values for the Utility ID field

The **Utility ID** field is included in all utility profiles and is used to uniquely identify the utility to Db2, and must adhere to naming rules.

The ID must begin with a letter; the remainder can be alphanumeric or the following special characters: #, $, @, ¢, !, ¬, . If this utility profile is included in a job profile that is built for execution in a maintenance window, a utility ID that is specified in this field is ignored. For maintenace window builds, Db2 Automation Expert generates a unique utility ID for each object by using the letter "A" followed by the action ID that is assigned to the object and utility pair (for example, "A1785").

Updating data set options

Several types of data sets are created by Db2 Automation Expert for utility processing, such as image copy data sets and utility work data sets. This common interface allows you to set options for the data sets and helps you construct names for the data sets.

Before you begin

For FlashCopy data sets, the following requirements must be met:

- The subsystem must be Db2 V10 New Function Mode (NFM) or later.
- The Db2 objects must be SMS-managed.
- FlashCopy V2 volumes must be available.
- The job generation option **Generate Templates** must be set to Y.

About this task

The panel that is shown in the following figure is displayed when updating data set names and options.

```
AUTOXPRT V1R1 ---------- Update Dataset Options --------- 2023/10/20  14:33:43
Option   ===>
 Creator: TWUSR      Name: TEST                         User: TWUSR
 Dataset: utility_name:data_set_type            Db2 Subsystem: SS13
                                                            More:    +
 Use Threshold Unit if allocated space exceeds x Meg/Gig/Trks/Cyls  Optional
                                                       Quantity M|G|T|C
                              Std Unit        Threshold Unit
 Update DSN create spec . . Y  . . . . . . N (Yes/No)
 Unit Type  . . . . . . . .         . . .          (CART - DISK - etc.)
 Catalog Options
 DISP=Status  . . . . . . . M  . . . . . . M (M - MOD, N - NEW,
                                             O - OLD, S - SHR)
     Normal Termination   C  . . . . . . C (C - CATLG, D - DEL,
                                            K - KEEP, U - UNCATLG)
     Abnormal Termination  C  . . . . . . C (C - CATLG, D - DEL,
                                            K - KEEP, U - UNCATLG)
 Data Class . . . . . . . .         . . .         (8 character class)
 Storage Class  . . . . . .         . . .         (8 character class)
 Management Class . . . . .         . . .         (8 character class)
 Primary Allocation                . . . .        (Numeric)
 Secondary Allocation              . . . .        (Numeric)
 PCTPRIME . . . . . . . . .         . . . .        (blank, 1-100)
 Allocation Units                  . . . . . .   (C - Cylinders, T - Tracks)

   Parameters Only required if Unit Type is a Tape device:
 Expiration date *or* . . .         . . .         (YYYYDDD - YYDDD)
 Retention period . . . . .         . . . . .     (4 digit number)
 DSN Type . . . . . . . . .         . . . . .     (blank, L - Large)
```

Figure 133. **Update Dataset Options** *panel*

The utility name and the data set type that you are creating is shown in the **Dataset** field at the top of the panel.

Procedure

1. Enter Y in the **Update DSN create spec** field and press Enter. The **Update Dataset Name** panel is displayed.
2. Create a data set name by following the steps in "Constructing a data set name" on page 213 .
3. On the **Update Dataset Options** panel, enter the unit where the data set will be written in the **Unit Type** field. To add a unit type that is not in your site's eligible device table, see "Adding user-designated devices and unit types" on page 215 for instructions.
4. Specify additional fields as required. Refer to the help panel for detailed information about the fields on this panel.
5. Press PF3 (END) to return to the previous panel.

Constructing a data set name

Db2 Automation Expert offers a simple way to construct a data set name for copies or utility data sets.

About this task

When you enter Y in an **Update DSN create spec field**, the following panel is displayed:

```
AUTOXPRT V1R1 ----------- Update Dataset Name ----------- 2023/10/20  14:37:40
Option   ===>
 Creator: TWUSR      Name: DAJ-11974                        User: TWUSR
 Dataset: utility_name:copy_type              Db2 Subsystem: SS02
 Qualifier code     Free form literal         Show DSN  N
 GDG Limit . . .    (0-999)
 Current dataset name generation qualifier string:


                                                     More:     +
 Valid dataset name generation codes are
 (* marked items are not supported in IC dynamic dataset generation.)
   1. Database             12. Month (MM)        24. Primary/Backup (P/B)
   2. Space Name           13. Day (DD)          25. ICTYPE
   3. Partition/DSNUM      14. Julian Day (DDD)  26. Utility Name
   4. Volser               15. Hours (HH)        27. Job Name
   5. Partition/DSNUM      16. Minutes (MM)      28. Step Name
      only when partitioned 17. Seconds (SS)     29. Utility ID
   6. Vcatname             18. Timestamp         30. Listdef
   7. Subsystem ID         19. Random Number     31. Sequence
   8. User ID              20. Unique            32. Index Space Name
   9. Time (HHMMSS)        21. GDG (+1)..(+n)    33. Table Space Name
```

Figure 134. **Update Dataset Name** *panel*

The utility name and the data set type that you are creating is shown in the **Dataset** field at the top of the panel.

Commonly used qualifiers for data set names are listed on the bottom half of the panel. Refer to the help panel for detailed information about the data set name qualifiers. Qualifiers that are marked with an asterisk are not supported when using the TEMPLATE control statement. Depending on the purpose of the data set, some qualifiers may be disabled; in that case, error message DAJM820E is displayed.

You can also type the data set name directly in the **Current dataset name generation qualifier string** field.

Procedure

1. Enter the first qualifier number in the **Qualifier Code** field and press Enter.

   The qualifier string is placed in the **Current dataset name generation qualifier string** field.
2. Enter the second qualifier number in the **Qualifier code** field and press Enter.

   The string is appended to the first string.

3. Repeat until all qualifier codes have been entered.

   Note: The Dsnum qualifier is required for FlashCopy data sets, and represents a data set number. When you enter this qualifier, a window is displayed so that you can enter a valid character for the first position in the string.

4. To see how the data set name would be generated, enter Y in the **Show DSN** field and press Enter.

5. When finished, press PF3 (END) to return to the previous panel.

Using the substring function

You can use the substring qualifier function to customize a data set name.

When you choose the Substring Qualifier function to customize a qualifier substring, the window shown in the following figure is displayed:

```
        Substring Parameters

  Enter the Qualifier Code ==> __
  Enter Starting Position  ==> _____
  Enter Substring Length   ==> _____
```

Figure 135. **Substring Parameters** *window*

You can choose to enter almost any of the qualifier codes and specify the string's starting position and length. For example, qualifier code 8 generates a string of "&SSID", a four-character subsystem name. However, if your site uses three-character SSIDs, the substring qualifier option can be used to specify the SSID and customize the string length, as shown in the following figure:

```
        Substring Parameters

  Enter the Qualifier Code ==> 8_
  Enter Starting Position  ==> 1____
  Enter Substring Length   ==> 3____
```

Figure 136. Example: specifying the SSID substring length

The results are shown in the following figure:

```
  Current dataset name generation qualifier string:
 &SSID(1,3).
```

Figure 137. Example: results of substring generation

Viewing a sample string

You can view a sample data set name that uses generic values, to show how the data set name would be generated using your specifications.

About this task

To view the string as it will be completed, enter Y in the **Show DSN** field. When you press Enter, the sample string appears, as shown in the following figure:

```
              Resulting DSN using current symbolic string

  Using the following sample data as input:

  &JOBNAME   = 'JOBNAME '  &STEPNAME  = 'STEPNAME'  &UID   = 'TUSER'
  &SSID      = 'SS01'       &ICTYPE    = 'F'          &UTIL  = 'UTILNAME'
  &LOCREM    = 'L'          &PRIBAC    = 'P'          &DB    = 'DATABASE'
  &SN        = 'SPACENAM'  &PART      = '00001'
  The date/time fields are set to the current time.

  The generated dataset would be:

* SS01.DATABASE.SPACENAM.D2008143               *
```

Figure 138. Viewing a sample string

Press PF3 (END) to return to the data set name generation panel.

Adding user-designated devices and unit types

When you need to specify a DASD device or tape unit that is not in your site's eligible device table (EDT), you can add that device to a Db2 Automation Expert table of valid devices and use that device throughout Db2 Automation Expert.

Some panels allow only DASD devices to be added (for example, copies using FlashCopy and utilities that require sort work devices can only use DASD devices). In those cases, the **Confirm DASD Device Name** panel is displayed, as shown in the following figure:

```
 AUTOXPRT V1R1 --------- Confirm DASD Device Name -------- 2023/06/11  14:04:34

   Device entered NEWTYPE not found in EDT (Eligible Device Table).

   Enter Y to keep this device name if it is a DASD device, or press
   PF3(END) to return and enter a valid device name.

   Confirm  N  (Yes/No)
```

*Figure 139. **Confirm DASD Device Name** panel*

In the **Confirm** field, enter Y to confirm the addition of the device with the name that is shown on the panel, and press Enter. The device is saved as a valid device name and the previous panel is displayed.

To cancel and correct the device name, press PF3 on the **Confirm DASD Device Name** panel.

When a panel allows a tape or a DASD device to be added, the **Confirm Device Type** panel is displayed, as shown in the following figure:

```
 AUTOXPRT V1R1 ----------- Confirm Device Type ----------- 2023/10/20  14:39:05

   Device entered NEWTYPE not found in EDT (Eligible Device Table).

   To keep this device name, indicate whether it is a tape or DASD
   device.

   Device type   (T - Tape, D - DASD)
```

*Figure 140. **Confirm Device Type** panel*

In the **Device type** field, specify T for tape or D for DASD device, and press Enter. The device name that is shown on the panel is saved as a valid device name and the previous panel is displayed.

To cancel and correct the device name, press PF3 on the **Confirm Device Type** panel without specifying the device type.

Setting FREQVAL and HISTOGRAM options

You can customize the FREQVAL stats and HISTOGRAM statistics that will be collected by RUNSTATS during a REORG or REBUILD INDEX utility.

About this task

Note: Histogram statistics are available only for Db2 Version 11 NFM and later.

Procedure

1. To specify statistics, enter Y in the **Update statistics** field on one of the following panels:
   - REBUILD INDEX via the RECOVER utility: **Rebuild Index Profile Options** panel
   - REBUILD INDEX utility: **Online Rebuild Index options** panel
   - REORG TABLESPACE or REORG INDEX: **Reorg Utility Statistics options** panel

   When you press Enter, the panel that is shown in the following figure is displayed.

```
AUTOXPRT V1R1 ---- Rebuild Utility Column Statistics  --- 2023/10/20  14:44:42
Option  ===>                                              Scroll ===> CSR
Line Commands: V - View  C - Create  D - Delete  U - Update
-------------------------------------------------------------------------------
  Creator: TWUSR      Name: DB2 V13                             User: TWUSR
                                                    Db2 Subsystem: SS01
                                                          Row 1 of 1
-------------------------------------------------------------------------------
Cmd  Statistic Definition
 C   Press Enter to Create Statistics
***************************** Bottom of Data **********************************
```

*Figure 141. **Reorg | Rebuild Utility Column Statistics** panel*

   This panel allows you to view and set statistics that will be collected.

2. To set a column statistic definition, enter C in the line command area and press Enter.
   - On subsystems running Db2 Version 11 NFM or later, the **Reorg | Rebuild Column Statistics Create** window is displayed. Enter Y next to the type of statistics you want to define and press Enter.
   - On other subsystems, the **Freqval Options** window is displayed.

3. Set FREQVAL options on the **Freqval Options** window as follows:

   Freqval Numcols
   Enter the number of columns in the index for which frequently occurring values are to be collected. This value can be a number between 1 and the number of indexed columns.

   Freqval Count
   Enter the number of frequently occurring values that are to be collected from the specified key columns.If you leave this field blank, the utility determines the count value. If this field is blank, the **Freqval Occurrence** field must also be blank.

   Freqval Occurrence
   Enter M to specify that the most frequently occurring values for the specified set of key columns are to be collected. Enter L to specify that the least frequently occurring values for the specified set of key columns are to be collected. Enter B to specify that both most and least frequently occurring values are to be collected. Leave this field blank to allow the utility to determine the count value. If this field is blank, the **Freqval Count** field must also be blank.

4. For Db2 Version 11 subsystems, set HISTOGRAM options as follows on the **Reorg | Rebuild Histogram Options** window:

Histogram Numcols
Enter the number of columns in the index for which histogram statistics are to be collected. This value can be a number between 1 and the number of indexed columns.

Histogram Numquantiles
Enter how many quantiles that the utility is to collect. The integer value must be equal to or greater than one. The number of quantiles that you specify should never exceed the total number of distinct values in the specified key columns. The maximum number of quantiles is 100.

Using the optional skeletons

You can customize the JCL generated by Db2 Automation Expert by adding your own skeletons that can be processed before or after the utility JCL.

User skeletons can be included for JCL, control card, and step end skeletons for any utility JCL prepared by Db2 Automation Expert. For REORG TABLESPACE with UNLOAD PAUSE, you can include a skeleton that is included after the PAUSE. Utility screens that allow this option contain fields in which to place the skeleton member names.

About creating user skeletons

When creating user skeletons, you can access variables that are used by Db2 Automation Expert.

This section lists the variables that you can insert into a control card skeleton.

⚠️ **CAUTION:** These variables can only be used when creating control card skeleton members. Do not alter the value of these variables. Altering the variable values during processing may produce unpredictable results.

&CONDSTEP
References the step directly before the current user step.

&USROBJTY
Object type

&USRTSDBN
Database name

&USRTSNAM
Table space name

&USRPRTNB
Partition number, as follows:

- ALL: when all partitions are selected
- 0000: when a non-partitioned table space is selected
- 0001-4096: the partition number when a partitioned table space is selected

&USRIXNAM
Index name

&USRIXCRT
Index creator

&USREXTNT
Number of extents

&USRDSNMS
Number of data sets

&USROBIDS
Space OBID

&USRDBIDS
Space DBID

&USRPSIDS
Space PSID

&USRPGSIZ
Space page size

&USRPIESZ
Space piece size

&USRUSDBL
Space used block

&USRPCTUS
Space percent used

&USRCISIZ
Space control interval size

&USRVCATN
VCAT name

&USRSTORT
Storage type

&USRSTGRP
Storage group

&USRDATCL
SMS data class

&USRSTOCL
SMS storage class

&USRMGTCL
SMS management class

&USRPRSPC
Primary space

&USRSCSPC
Secondary space

&USRCOMPR
Whether the object is compressed; valid values are Y or N.

&USRIXDBN
Index database name

&USRIXSPC
Index space name

&USRCOPYI
Index copy indicator; valid values are Y or N.

&USRIXTSD
The data base name of the table for which the index is defined

&USRIXTSN
The table space name of the table for which the index is defined

&USRIXTBN
The table name for which the index is defined

&USRIXTBC
The creator of the table on which the index is defined

&USRIPREF
The first character of the instance qualifier for the data set name for the table space or partition. 'I' or 'J' are the only valid characters for this field.

&USRUSTEP
For BEFORE skeletons, reference the upcoming main utility stepname. For AFTER skeletons, references the previous main utility stepname.

Steps for using user skeletons

In order to implement user skeletons, you must follow the steps in this section.

About this task

Procedure

1. Create skeletons to build the JCL and/or control cards that you want to insert into the Db2 Automation Expert generated job.

   You can create these types of skeletons:

   - JCL
   - Control cards
   - Pause skeleton (for REORG TABLESPACE only)
   - Step end cards

2. Update the DAJV11C CLIST to specify your skeleton library.

   This is accomplished by inserting the user skeleton library into the DAJSLIB1 library in the CLIST, as follows:

   ```
           DAJSLIB1(user.skeleton.library)                          +
           DAJSLIB2(DAJLVL.SDAJSLIB)                                +
   ```

3. Update each utility profile to specify the user skeleton member name and specify whether the user skeleton is to be inserted before or after the utility JCL and/or control cards.

   Scroll to the bottom of the panel to find the skeleton fields, as shown in the following figure:

   ```
    Optional Skeletals            -BEFORE-    -AFTER-
      JCL Skeletal  . . . . . . .        . .           (8 Character Name)
      Control Cards Skeletal  . .        . .           (8 Character Name)
      Step End Skeletal . . . . .        . .           (8 Character Name)

      Pause Skeletal  . . . . . .        (8 Character Name)
   ```

   Figure 142. Skeleton fields

   Enter the skeleton member name in the BEFORE or AFTER column, depending where you want the skeletons to be inserted.

   JCL Skeletal
   Type in the name of the JCL skeleton. This skeleton will be the first user skeleton invoked by the Db2 Automation Expert job building routine. It is invoked one time per build, and the built JCL is placed in the specified location.

   Note: Object variables cannot be used in JCL skeletons, because they cannot be resolved when the JCL skeleton is included in the build. If you want to use variables for object information in the JCL, then the JCL skeleton should not be entered. Instead, the control card skeleton should be entered, and the control card skeleton should contain both JCL and control cards. If you choose this method, each object will generate a separate user step.

   Control Cards Skeletal
   Type the name of the control card skeleton. This skeleton will be invoked by the Db2 Automation Expert job building routine once for each object that will be processed by the utility. These skeletons follow the JCL skeleton, if included.

   Step End Skeletal
   Indicates the name of a step end skeleton. This skeleton will be invoked by the Db2 Automation Expert job building routine one time, after the other user skeletons have been invoked.

Pause Skeletal

This field is unique to REORG TABLESPACE. It indicates the name of the skeleton that will be included after the REORG TABLESPACE UNLOAD PAUSE JCL has been built. After the user skeleton JCL is built, a step is generated to restart the REORG utility using the RESTART parameter. The setting in the Run User Step field does not affect the Pause skeleton. If a member name is present in the Pause Skeletal field, the skeleton is used to place syntax in the appropriate location. Therefore, the Pause skeleton should be a complete job step, including JCL and EOF card for SYSIN.

Examples

This section show examples of job output when using the skeleton fields.

REORG TABLESPACE with UNLOAD PAUSE and no user skeletons

An example of a basic REORG TABLESPACE job output when using the skeleton fields is provided in this topic.

The object profile contained two table spaces and two indexes. The utility profile specified REORG PAUSE with inline copy; no skeleton overrides were used. (For brevity's sake, the registration step and job card are not shown.)

```
000064 //** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
000065 //*                                                              *
000066 //*  Step:      RP01001                                          *
000067 //*                                                              *
000068 //*  Desc:      This step will invoke the IBM Reorg Tablespace Utility  *
000069 //*                                                              *
000070 //** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
000071 //*                                                              *
000072 //RP01001 EXEC  PGM=DSNUTILB,REGION=0000M,COND=(4,LT),
000073 //           PARM=(SS01,)
000074 //*
000075 //STEPLIB  DD DSN=DAJ.WRK0110.LOADLIB,DISP=SHR
000076 //         DD DSN=FEC.MNT0130.LOADLIB,DISP=SHR
000077 //         DD DSN=FEC.PRD0130.LOADLIB,DISP=SHR
000078 //         DD DSN=SS01.SDSNEXIT,DISP=SHR
000079 //         DD DSN=DSN.V810.SDSNLOAD,DISP=SHR
000064 //** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
000065 //*                                                              *
000066 //*  Step:      RP01001                                          *
000067 //*                                                              *
000068 //*  Desc:      This step will invoke the IBM Reorg Tablespace Utility  *
000069 //*                                                              *
000070 //** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
000071 //*                                                              *
000072 //RP01001 EXEC  PGM=DSNUTILB,REGION=0000M,COND=(4,LT),
000073 //           PARM=(SS01,)
000074 //*
000075 //STEPLIB  DD DSN=DAJ.WRK0110.LOADLIB,DISP=SHR
000076 //         DD DSN=FEC.MNT0130.LOADLIB,DISP=SHR
000077 //         DD DSN=FEC.PRD0130.LOADLIB,DISP=SHR
000078 //         DD DSN=SS01.SDSNEXIT,DISP=SHR
000079 //         DD DSN=DSN.V810.SDSNLOAD,DISP=SHR
000080 //SYSOUT   DD SYSOUT=*
000081 //UTPRINT  DD SYSOUT=*
000082 //SYSPRINT DD SYSOUT=*
000083 //SYSREC   DD DSN=TEST.TESTING4.RC01001.REORG.SYSREC,
000084 //            DISP=(MOD,CATLG,CATLG),
000085 //            UNIT=(VIO,5),SPACE=(CYL,(5,1),,,ROUND)
000086 //SYSUT1   DD DSN=TEST.TESTING4.RC01001.REORG.SYSUT1,
000087 //            DISP=(MOD,CATLG,CATLG),
000088 //            UNIT=(VIO,5),SPACE=(CYL,(5,1),,,ROUND)
000089 //SORTOUT  DD DSN=TEST.TESTING4.RC01001.REORG.SORTOUT,
000090 //            DISP=(MOD,CATLG,CATLG),
000091 //            UNIT=(VIO,5),SPACE=(CYL,(5,1),,,ROUND)
000092 //SORTWK01 DD UNIT=(VIO,5),SPACE=(CYL,(20,1),,,ROUND)
000093 //SORTWK02 DD UNIT=(VIO,5),SPACE=(CYL,(20,1),,,ROUND)
000094 //SORTWK03 DD UNIT=(VIO,5),SPACE=(CYL,(20,1),,,ROUND)
000095 //R1LP0001 DD DSN=&&R1LP0001,DISP=(NEW,DELETE,DELETE),
000096 //            UNIT=VIO,SPACE=(TRK,(0,0))
000097 //SYSIN    DD *
000098    REORG TABLESPACE ADHDB2.ADHTS2
000099         LOG          YES
```

```
000100          COPYDDN     (R1LP0001)
000101          SHRLEVEL    NONE
000102          UNLOAD      PAUSE
000103
000104 /*
000105 //*
000106 //** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
000107 //*                                                                      *
000108 //*  Step:     RC01001                                                   *
000109 //*                                                                      *
000110 //*  Desc:      This step will invoke the IBM Reorg Tablespace Utility   *
000111 //*                                                                      *
000112 //** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
000113 //*                                                                      *
000114 //RC01001 EXEC  PGM=DSNUTILB,REGION=0000M,COND=(4,LT),
000115 //           PARM=(SS01,,RESTART)
000116 //*
000117 //STEPLIB  DD DSN=DAJ.WRK0110.LOADLIB,DISP=SHR
000118 //         DD DSN=FEC.MNT0130.LOADLIB,DISP=SHR
000119 //         DD DSN=FEC.PRD0130.LOADLIB,DISP=SHR
000120 //         DD DSN=SS01.SDSNEXIT,DISP=SHR
000121 //         DD DSN=DSN.V810.SDSNLOAD,DISP=SHR
000122 //SYSOUT   DD SYSOUT=*
000123 //UTPRINT  DD SYSOUT=*
000124 //SYSPRINT DD SYSOUT=*
000125 //SYSREC   DD DSN=TEST.TESTING4.RC01001.REORG.SYSREC,
000126 //            DISP=(MOD,DELETE,CATLG),
000127 //            UNIT=(VIO,5),SPACE=(CYL,(20,1),,,ROUND)
000128 //SYSUT1   DD DSN=TEST.TESTING4.RC01001.REORG.SYSUT1,
000129 //            DISP=(MOD,DELETE,CATLG),
000130 //            UNIT=(VIO,5),SPACE=(CYL,(20,1),,,ROUND)
000131 //SORTOUT  DD DSN=TEST.TESTING4.RC01001.REORG.SORTOUT,
000132 //            DISP=(MOD,DELETE,CATLG),
000133 //            UNIT=(VIO,5),SPACE=(CYL,(20,1),,,ROUND)
000134 //SORTWK01 DD UNIT=(VIO,5),SPACE=(CYL,(20,1),,,ROUND)
000135 //SORTWK02 DD UNIT=(VIO,5),SPACE=(CYL,(20,1),,,ROUND)
000136 //SORTWK03 DD UNIT=(VIO,5),SPACE=(CYL,(20,1),,,ROUND)
000137 //R1LP0001 DD DSN=TUSER.ADHDB2.ADHTS2.P00000,
000138 //            DISP=(MOD,CATLG,CATLG),
000139 //            UNIT=(3390,5),
000140 //            SPACE=(TRK,(1,1),RLSE)
000141 //SYSIN    DD *
000142    REORG TABLESPACE ADHDB2.ADHTS2
000143          LOG         YES
000144          COPYDDN     (R1LP0001)
000145          SHRLEVEL    NONE
000146          UNLOAD      PAUSE
000147
000148 /*
000149 //*
000150 //** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
000151 //*                                                                      *
000152 //*  Step:     RP02001                                                   *
000153 //*                                                                      *
000154 //*  Desc:      This step will invoke the IBM Reorg Tablespace Utility   *
000155 //*                                                                      *
000156 //** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
000157 //*                                                                      *
000158 //RP02001 EXEC  PGM=DSNUTILB,REGION=0000M,COND=(4,LT),
000159 //           PARM=(SS01,)
000160 //*
000161 //STEPLIB  DD DSN=DAJ.WRK0110.LOADLIB,DISP=SHR
000162 //         DD DSN=FEC.MNT0130.LOADLIB,DISP=SHR
000163 //         DD DSN=FEC.PRD0130.LOADLIB,DISP=SHR
000164 //         DD DSN=SS01.SDSNEXIT,DISP=SHR
000165 //         DD DSN=DSN.V810.SDSNLOAD,DISP=SHR
000166 //SYSOUT   DD SYSOUT=*
000167 //UTPRINT  DD SYSOUT=*
000168 //SYSPRINT DD SYSOUT=*
000169 //SYSREC   DD DSN=TEST.TESTING4.RC02001.REORG.SYSREC,
000170 //            DISP=(MOD,CATLG,CATLG),
000171 //            UNIT=(VIO,5),SPACE=(CYL,(5,1),,,ROUND)
000172 //SYSUT1   DD DSN=TEST.TESTING4.RC02001.REORG.SYSUT1,
000173 //            DISP=(MOD,CATLG,CATLG),
000174 //            UNIT=(VIO,5),SPACE=(CYL,(5,1),,,ROUND)
000175 //SORTOUT  DD DSN=TEST.TESTING4.RC02001.REORG.SORTOUT,
000176 //            DISP=(MOD,CATLG,CATLG),
000177 //            UNIT=(VIO,5),SPACE=(CYL,(5,1),,,ROUND)
000178 //SORTWK01 DD UNIT=(VIO,5),SPACE=(CYL,(20,1),,,ROUND)
000179 //SORTWK02 DD UNIT=(VIO,5),SPACE=(CYL,(20,1),,,ROUND)
000180 //SORTWK03 DD UNIT=(VIO,5),SPACE=(CYL,(20,1),,,ROUND)
000181 //R1LP0002 DD DSN=&&R1LP0002,DISP=(NEW,DELETE,DELETE),
```

```
000182 //             UNIT=VIO,SPACE=(TRK,(0,0))
000183 //SYSIN    DD *
000184    REORG TABLESPACE ADHTSTDB.ADHTSTTS
000185          LOG           YES
000186          COPYDDN      (R1LP0002)
000187          SHRLEVEL     NONE
000188          UNLOAD       PAUSE
000189
000190 /*
000191 //*
000192 //** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
000193 //*                                                                    *
000194 //*  Step:    RC02001                                                  *
000195 //*                                                                    *
000196 //*  Desc:     This step will invoke the IBM Reorg Tablespace Utility  *
000197 //*                                                                    *
000198 //** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
000199 //*                                                                    *
000200 //RC02001 EXEC  PGM=DSNUTILB,REGION=0000M,COND=(4,LT),
000201 //           PARM=(SS01,,RESTART)
000202 //*
000203 //STEPLIB  DD DSN=DAJ.WRK0110.LOADLIB,DISP=SHR
000204 //           DD DSN=FEC.MNT0130.LOADLIB,DISP=SHR
000205 //           DD DSN=FEC.PRD0130.LOADLIB,DISP=SHR
000206 //           DD DSN=SS01.SDSNEXIT,DISP=SHR
000207 //           DD DSN=DSN.V810.SDSNLOAD,DISP=SHR
000208 //SYSOUT   DD SYSOUT=*
000209 //UTPRINT  DD SYSOUT=*
000210 //SYSPRINT DD SYSOUT=*
000211 //SYSREC   DD DSN=TEST.TESTING4.RC02001.REORG.SYSREC,
000212 //            DISP=(MOD,DELETE,CATLG),
000213 //            UNIT=(VIO,5),SPACE=(CYL,(20,1),,,ROUND)
000214 //SYSUT1   DD DSN=TEST.TESTING4.RC02001.REORG.SYSUT1,
000215 //            DISP=(MOD,DELETE,CATLG),
000216 //            UNIT=(VIO,5),SPACE=(CYL,(20,1),,,ROUND)
000217 //SORTOUT  DD DSN=TEST.TESTING4.RC02001.REORG.SORTOUT,
000218 //            DISP=(MOD,DELETE,CATLG),
000219 //            UNIT=(VIO,5),SPACE=(CYL,(20,1),,,ROUND)
000220 //SORTWK01 DD UNIT=(VIO,5),SPACE=(CYL,(20,1),,,ROUND)
000221 //SORTWK02 DD UNIT=(VIO,5),SPACE=(CYL,(20,1),,,ROUND)
000222 //SORTWK03 DD UNIT=(VIO,5),SPACE=(CYL,(20,1),,,ROUND)
000223 //R1LP0002 DD DSN=TUSER.ADHTSTDB.ADHTSTTS.P00000,
000224 //            DISP=(MOD,CATLG,CATLG),
000225 //            UNIT=(3390,5),
000226 //            SPACE=(TRK,(1,1),RLSE)
000227 //SYSIN    DD *
000228    REORG TABLESPACE ADHTSTDB.ADHTSTTS
000229          LOG           YES
000230          COPYDDN      (R1LP0002)
000231          SHRLEVEL     NONE
000232          UNLOAD       PAUSE
000233
000234 /*
000235 //*
```

REORG TABLESPACE with UNLOAD PAUSE and one user skeleton

An example of a basic REORG TABLESPACE job output with UNLOAD PAUSE and one user skeleton is provided in this topic.

The following output shows a REORG TABLESPACE job with the UNLOAD PAUSE option. The object profile contained two table spaces and two indexes. The utility profile specified REORG PAUSE with inline copy. A user skeleton was included in the utility profile. (For brevity's sake, the registration step and job card are not shown.)

Here is the skeleton:

```
//TUSERDD JOB TUSERA,CLASS=A,NOTIFY=&SYSUID
//*
//*
//** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
//*                                                                    *
//*  This is JKL's test job                                            *
//*                                                                    *
//** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
//*                                                                    *
//*                                                                    *
```

```
//USERSTEP EXEC PGM=IDCAMS
//SYSPRINT DD   SYSOUT=*
//SYSOUT   DD   SYSOUT=*
//SYSIN    DD   *
   DELETE 'SS01..DSNDBC.&USRTSDBN.&USRTSNAM..I0001.A001'

   SET MAXCC = 0

   DEFINE CLUSTER                                           -
              ( NAME(SS01..DSNDBC.&USRTSDBN.&USRTSNAM..I0001.A001) -
                LINEAR                                  -
                REUSE                                   -
                VOLUMES(* *)                            -
                RECORDS(10 10)                          -
                SHAREOPTIONS(3 3) )                     -
           DATA                                         -
              ( NAME(SS01..DSNDBD.&USRTSDBN.&USRTSNAM..I0001.A001))

/*
//*
```

When the job was built, the output appears as follows. Note lines 106 and 219; these are the locations where the user PAUSE skeleton was included.

```
000064 //** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
000065 //*                                                                      *
000066 //*  Step:     RP01001                                                   *
000067 //*                                                                      *
000068 //*  Desc:     This step will invoke the IBM Reorg Tablespace Utility  *
000069 //*                                                                      *
000070 //** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
000071 //*                                                                      *
000072 //RP01001 EXEC  PGM=DSNUTILB,REGION=0000M,COND=(4,LT),
000073 //          PARM=(SS01,)
000074 //*
000075 //STEPLIB  DD DSN=DAJ.WRK0110.LOADLIB,DISP=SHR
000076 //         DD DSN=FEC.MNT0130.LOADLIB,DISP=SHR
000077 //         DD DSN=FEC.PRD0130.LOADLIB,DISP=SHR
000078 //         DD DSN=SS01.SDSNEXIT,DISP=SHR
000079 //         DD DSN=DSN.V810.SDSNLOAD,DISP=SHR
000080 //SYSOUT   DD SYSOUT=*
000081 //UTPRINT  DD SYSOUT=*
000064 //** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
000065 //*                                                                      *
000066 //*  Step:     RP01001                                                   *
000067 //*                                                                      *
000068 //*  Desc:     This step will invoke the IBM Reorg Tablespace Utility  *
000069 //*                                                                      *
000070 //** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
000071 //*                                                                      *
000072 //RP01001 EXEC  PGM=DSNUTILB,REGION=0000M,COND=(4,LT),
000073 //          PARM=(SS01,)
000074 //*
000075 //STEPLIB  DD DSN=DAJ.WRK0110.LOADLIB,DISP=SHR
000076 //         DD DSN=FEC.MNT0130.LOADLIB,DISP=SHR
000077 //         DD DSN=FEC.PRD0130.LOADLIB,DISP=SHR
000078 //         DD DSN=SS01.SDSNEXIT,DISP=SHR
000079 //         DD DSN=DSN.V810.SDSNLOAD,DISP=SHR
000080 //SYSOUT   DD SYSOUT=*
000081 //UTPRINT  DD SYSOUT=*
000082 //SYSPRINT DD SYSOUT=*
000083 //SYSREC   DD DSN=TEST.TESTING4.RC01001.REORG.SYSREC,
000084 //           DISP=(MOD,CATLG,CATLG),
000085 //           UNIT=(VIO,5),SPACE=(CYL,(5,1),,,ROUND)
000086 //SYSUT1   DD DSN=TEST.TESTING4.RC01001.REORG.SYSUT1,
000087 //           DISP=(MOD,CATLG,CATLG),
000088 //           UNIT=(VIO,5),SPACE=(CYL,(5,1),,,ROUND)
000089 //SORTOUT  DD DSN=TEST.TESTING4.RC01001.REORG.SORTOUT,
000090 //           DISP=(MOD,CATLG,CATLG),
000091 //           UNIT=(VIO,5),SPACE=(CYL,(5,1),,,ROUND)
000092 //SORTWK01 DD UNIT=(VIO,5),SPACE=(CYL,(20,1),,,ROUND)
000093 //SORTWK02 DD UNIT=(VIO,5),SPACE=(CYL,(20,1),,,ROUND)
000094 //SORTWK03 DD UNIT=(VIO,5),SPACE=(CYL,(20,1),,,ROUND)
000095 //R1LP0001 DD DSN=&&R1LP0001,DISP=(NEW,DELETE,DELETE),
000096 //           UNIT=VIO,SPACE=(TRK,(0,0))
000097 //SYSIN    DD *
000098    REORG TABLESPACE ADHDB2.ADHTS2
000099          LOG         YES
000100          COPYDDN    (R1LP0001)
000101          SHRLEVEL    NONE
```

```
000102          UNLOAD       PAUSE
000103
000104 /*
000105 //*
000106 //TUSERDD JOB TUSERA,CLASS=A,NOTIFY=
000107 //*
000108 //*
000109 //** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
000110 //*                                                                       *
000111 //*  This is JKL's test job                                              *
000112 //*                                                                       *
000113 //** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
000114 //*                                                                       *
000115 //*                                                                       *
000116 //USERSTEP EXEC PGM=IDCAMS
000117 //SYSPRINT DD   SYSOUT=*
000118 //SYSOUT   DD   SYSOUT=*
000119 //SYSIN    DD   *
000120    DELETE 'SS01.DSNDBC.ADHTS2.I0001.A001'
000121    SET MAXCC = 0
000122    DEFINE CLUSTER                                                   -
000123             ( NAME(SS01.DSNDBC.ADHTS2.I0001.A001) -
000124               LINEAR                              -
000125               REUSE                               -
000126               VOLUMES(* *)                        -
000127               RECORDS(10 10)                      -
000128               SHAREOPTIONS(3 3) )                 -
000129           DATA                                    -
000130             ( NAME(SS01.DSNDBD.ADHTS2.I0001.A001))
000131 /*
000132 //*
000133 //** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
000134 //*                                                                       *
000135 //*  Step:    RCER001                                                     *
000136 //*                                                                       *
000137 //*  Desc:    This step will invoke the IBM Reorg Tablespace Utility  *
000138 //*                                                                       *
000139 //** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
000140 //*                                                                       *
000141 //RCER001 EXEC  PGM=DSNUTILB,REGION=0000M,COND=(4,LT),
000142 //          PARM=(SS01,,RESTART)
000143 //*
000144 //STEPLIB  DD DSN=DAJ.WRK0110.LOADLIB,DISP=SHR
000145 //         DD DSN=FEC.MNT0130.LOADLIB,DISP=SHR
000146 //         DD DSN=FEC.PRD0130.LOADLIB,DISP=SHR
000147 //         DD DSN=SS01.SDSNEXIT,DISP=SHR
000148 //         DD DSN=DSN.V810.SDSNLOAD,DISP=SHR
000149 //SYSOUT   DD SYSOUT=*
000150 //UTPRINT  DD SYSOUT=*
000151 //SYSPRINT DD SYSOUT=*
000152 //SYSREC   DD DSN=TEST.TESTING4.RC01001.REORG.SYSREC,
000153 //            DISP=(MOD,DELETE,CATLG),
000154 //            UNIT=(VIO,5),SPACE=(CYL,(20,1),,,ROUND)
000155 //SYSUT1   DD DSN=TEST.TESTING4.RC01001.REORG.SYSUT1,
000156 //            DISP=(MOD,DELETE,CATLG),
000157 //            UNIT=(VIO,5),SPACE=(CYL,(20,1),,,ROUND)
000158 //SORTOUT  DD DSN=TEST.TESTING4.RC01001.REORG.SORTOUT,
000159 //            DISP=(MOD,DELETE,CATLG),
000160 //            UNIT=(VIO,5),SPACE=(CYL,(20,1),,,ROUND)
000161 //SORTWK01 DD UNIT=(VIO,5),SPACE=(CYL,(20,1),,,ROUND)
000162 //SORTWK02 DD UNIT=(VIO,5),SPACE=(CYL,(20,1),,,ROUND)
000163 //SORTWK03 DD UNIT=(VIO,5),SPACE=(CYL,(20,1),,,ROUND)
000164 //R1LP0001 DD DSN=TUSER.ADHDB2.ADHTS2.P00000,
000165 //            DISP=(MOD,CATLG,CATLG),
000166 //            UNIT=(3390,5),
000167 //            SPACE=(TRK,(1,1),RLSE)
000168 //SYSIN    DD *
000169    REORG TABLESPACE ADHDB2.ADHTS2
000170          LOG          YES
000171          COPYDDN     (R1LP0001)
000172          SHRLEVEL     NONE
000173          UNLOAD       PAUSE
000174
000175 /*
000176 //*
000177 //** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
000178 //*                                                                       *
000179 //*  Step:    RP02001                                                     *
000180 //*                                                                       *
000181 //*  Desc:    This step will invoke the IBM Reorg Tablespace Utility  *
000182 //*                                                                       *
000183 //** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
```

```
000184 //*                                                              *
000185 //RP02001 EXEC  PGM=DSNUTILB,REGION=0000M,COND=(4,LT),
000186 //          PARM=(SS01,)
000187 //*
000188 //STEPLIB  DD DSN=DAJ.WRK0110.LOADLIB,DISP=SHR
000189 //         DD DSN=FEC.MNT0130.LOADLIB,DISP=SHR
000190 //         DD DSN=FEC.PRD0130.LOADLIB,DISP=SHR
000191 //         DD DSN=SS01.SDSNEXIT,DISP=SHR
000192 //         DD DSN=DSN.V810.SDSNLOAD,DISP=SHR
000193 //SYSOUT   DD SYSOUT=*
000194 //UTPRINT  DD SYSOUT=*
000195 //SYSPRINT DD SYSOUT=*
000196 //SYSREC   DD DSN=TEST.TESTING4.RC02001.REORG.SYSREC,
000197 //            DISP=(MOD,CATLG,CATLG),
000198 //            UNIT=(VIO,5),SPACE=(CYL,(5,1),,,ROUND)
000199 //SYSUT1   DD DSN=TEST.TESTING4.RC02001.REORG.SYSUT1,
000200 //            DISP=(MOD,CATLG,CATLG),
000201 //            UNIT=(VIO,5),SPACE=(CYL,(5,1),,,ROUND)
000202 //SORTOUT  DD DSN=TEST.TESTING4.RC02001.REORG.SORTOUT,
000203 //            DISP=(MOD,CATLG,CATLG),
000204 //            UNIT=(VIO,5),SPACE=(CYL,(5,1),,,ROUND)
000205 //SORTWK01 DD UNIT=(VIO,5),SPACE=(CYL,(20,1),,,ROUND)
000206 //SORTWK02 DD UNIT=(VIO,5),SPACE=(CYL,(20,1),,,ROUND)
000207 //SORTWK03 DD UNIT=(VIO,5),SPACE=(CYL,(20,1),,,ROUND)
000208 //R1LP0002 DD DSN=&&R1LP0002,DISP=(NEW,DELETE,DELETE),
000209 //            UNIT=VIO,SPACE=(TRK,(0,0))
000210 //SYSIN    DD *
000211    REORG TABLESPACE ADHTSTDB.ADHTSTTS
000212         LOG          YES
000213         COPYDDN     (R1LP0002)
000214         SHRLEVEL    NONE
000215         UNLOAD      PAUSE
000216
000217 /*
000218 //*
000219 //TUSERDD JOB TUSERA,CLASS=A,NOTIFY=
000220 //*
000221 //*
000222 //** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
000223 //*                                                              *
000224 //*  This is JKL's test job                                     *
000225 //*                                                              *
000226 //** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
000227 //*                                                              *
000228 //*                                                              *
000229 //USERSTEP EXEC PGM=IDCAMS
000230 //SYSPRINT DD   SYSOUT=*
000231 //SYSOUT   DD   SYSOUT=*
000232 //SYSIN    DD   *
000233    DELETE 'SS01.DSNDBC.ADHTSTTS.I0001.A001'
000234    SET MAXCC = 0
000235    DEFINE CLUSTER                                               -
000236              ( NAME(SS01.DSNDBC.ADHTSTTS.I0001.A001) -
000237                LINEAR                              -
000238                REUSE                               -
000239                VOLUMES(* *)                        -
000240                RECORDS(10 10)                      -
000241                SHAREOPTIONS(3 3) )                 -
000242          DATA                                      -
000243              ( NAME(SS01.DSNDBD.ADHTSTTS.I0001.A001))
000244 /*
000245 //*
000246 //** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
000247 //*                                                              *
000248 //*  Step:    RCER001                                           *
000249 //*                                                              *
000250 //*  Desc:     This step will invoke the IBM Reorg Tablespace Utility  *
000251 //*                                                              *
000252 //** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
000253 //*                                                              *
000254 //RCER001 EXEC  PGM=DSNUTILB,REGION=0000M,COND=(4,LT),
000255 //          PARM=(SS01,,RESTART)
000256 //*
000257 //STEPLIB  DD DSN=DAJ.WRK0110.LOADLIB,DISP=SHR
000258 //         DD DSN=FEC.MNT0130.LOADLIB,DISP=SHR
000259 //         DD DSN=FEC.PRD0130.LOADLIB,DISP=SHR
000260 //         DD DSN=SS01.SDSNEXIT,DISP=SHR
000261 //         DD DSN=DSN.V810.SDSNLOAD,DISP=SHR
000262 //SYSOUT   DD SYSOUT=*
000263 //UTPRINT  DD SYSOUT=*
000264 //SYSPRINT DD SYSOUT=*
000265 //SYSREC   DD DSN=TEST.TESTING4.RC02001.REORG.SYSREC,
```

```
000266 //              DISP=(MOD,DELETE,CATLG),
000267 //              UNIT=(VIO,5),SPACE=(CYL,(20,1),,,ROUND)
000268 //SYSUT1   DD DSN=TEST.TESTING4.RC02001.REORG.SYSUT1,
000269 //              DISP=(MOD,DELETE,CATLG),
000270 //              UNIT=(VIO,5),SPACE=(CYL,(20,1),,,ROUND)
000271 //SORTOUT  DD DSN=TEST.TESTING4.RC02001.REORG.SORTOUT,
000272 //              DISP=(MOD,DELETE,CATLG),
000273 //              UNIT=(VIO,5),SPACE=(CYL,(20,1),,,ROUND)
000274 //SORTWK01 DD UNIT=(VIO,5),SPACE=(CYL,(20,1),,,ROUND)
000275 //SORTWK02 DD UNIT=(VIO,5),SPACE=(CYL,(20,1),,,ROUND)
000276 //SORTWK03 DD UNIT=(VIO,5),SPACE=(CYL,(20,1),,,ROUND)
000277 //R1LP0002 DD DSN=TUSER.ADHTSTDB.ADHTSTTS.P00000,
000278 //              DISP=(MOD,CATLG,CATLG),
000279 //              UNIT=(3390,5),
000280 //              SPACE=(TRK,(1,1),RLSE)
000281 //SYSIN    DD *
000282    REORG TABLESPACE ADHTSTDB.ADHTSTTS
000283         LOG          YES
000284         COPYDDN    (R1LP0002)
000285         SHRLEVEL     NONE
000286         UNLOAD       PAUSE
000287
000288 /*
000289 //*
```

Chapter 10. Creating exception profiles

Exception profiles allow you to define when a utility in a utility profile is to be run against an object in an object profile.

For example, you might define an exception to examine the PERCDROP column in SYSTABLEPART (which contains the percentage of space that is occupied by rows of dropped tables). If you specify a comparator and value of "greater than 10", you can define the job profile such that a REORG might be triggered for those objects with more than 10% space occupied by dropped table rows.

After you select exception conditions, you can edit and customize the exceptions logic to control how exception processing evaluates multiple exception conditions. For example, you can add parentheses around exception conditions to group those exceptions into a logical set of conditions that are evaluated as an overall AND or OR.

Exception profiles are placed in the job profile with at least one object and one utility profile. During the job build, the exception criteria are processed and produce a list of accepted objects (those that meet the conditions) and a list of rejected objects (those that do not meet the conditions). You can specify whether the utility is to be run on the accepted objects, the rejected objects, or both, in the utility profile.

Db2 Automation Expert offers various exceptions conditions that you can specify in a profile. For example, DSNACCOX-like exception conditions simulate the results of the DSNACCOX stored procedure that is provided with Db2. You can use these exceptions to get recommendations for when to reorganize or image copy objects, or to update statistics for table spaces or index spaces.

In addition, you can incorporate user exits to allow extension of Db2 Automation Expert exception monitoring beyond its native z/OS environment.

Through the Exceptions Profile Display, you can also access the Db2 Automation Expert statistics reporting and maintenance facility.

Creating an exception profile

Creating an exception profile involves defining the profile and selecting the conditions to be included in the profile, then optionally customizing the conditions.

Procedure

1. On the Db2 Automation Expert main menu, enter 3 in the **Option** field and press Enter.
2. Specify selection criteria in the **Profile Like** and **Creator Like** fields, or enter the number of recently accessed profiles that you want to see in the **Recent Profiles** field, or enter values in both sets of fields. Press Enter.

   The profiles that meet your selection criteria or have been recently accessed are listed on the **Exceptions Profile Display**. An example is shown in the following figure:

```
AUTOXPRT V1R1    ------- Exceptions Profile Display ------ 2023/10/02  13:31:42
Option  ===>                                              Scroll ===> CSR
Line Commands: C - Create  D - Delete  E - Export  I - Import
               U - Update  V - View    J - Jobs    R - Rename
       ------------------------------------------------------------------------
        Profile Like  *                               Db2 Subsystem: SS01
        Creator Like  TWUSR*   Recent Profiles 00           Row 1 of 1      >
       ------------------------------------------------------------------------
        Display Statistics Reports and/or Perform Statistics Maintenance? N (Yes/No)
       ------------------------------------------------------------------------

       Cmd  Name                          Creator   Updt
        C   Line Cmds: (Create,Import)
       **************************** Bottom of Data *********************************


         DAJM044W - No profiles were found that match your selection criteria. Press
         enter to create a new profile or change the selection criteria.
```

Figure 143. Exceptions Profile Display

3. On the **Exceptions Profile Display**, enter C in the **Cmd** field and press Enter.
4. On the **Enter New Exceptions Profile Data** window, enter the new profile creator, a profile description, and the profile update option in the fields on the window. The **Creator** field contains your user ID, but can be modified. Press Enter.
5. On the **Exception Processing Features** window, review the information and choose whether to show or hide this panel in the future. Press Enter.

   Note: If you choose to hide this panel, you can reinstate its appearance by entering the **SHOW DAJ$EPRF** command on the **Select Boolean Logic Exceptions** panel.

Results
The **Update Exceptions Profile Display** is displayed as shown in the following figure:

```
AUTOXPRT V1R1    ---- Update Exceptions Profile Display --- 2023/10/04 10:32:05
Option  ===>                                              Scroll ===> CSR
Commands: VIEW B - View Boolean  VIEW C - View Category  VIEW S - View Selected
          EDIT B - Edit Boolean
 OPTions - Panel display options  GROUP - Toggle Groups  SAVE - Save Profile
Line Cmds: A - And  O - Or  S - Select  D - Deselect  R - Repeat  U - Update
Group Line Commands: G - Toggle  + - Expand  - - Contract
    CONDitions: LT|<|LE|<=|EQ|=|GT|>|GE|>=|NE|¬=|<>   "*" indicates an DAJ stat
   ----------------------------------------------------------------------
Creator: TWUSR       Profile: TEST                        User: TWUSR
                                                Db2 Subsystem: SS01
Update Exception Profile Options: N (Yes/No)    Scroll Right for Column Help
   ---------------------------------------------------- Row 1 of 18      +>
S Statistics Type--- *Column------------ Cond --------Exception Value---------
  Limit Exception Processing by Day of the Week/Month and or Time of Day
  Limit the types of Objects that are processed
  Query Monitor performance recommendations
  RUNSTATS recommendation for missing or conflicting catalog statistics
  Specify various types of User Exits
  IBM Db2 Analytics Accelerator Exception Conditions
  DSNACCOX-like Recommendations
  Real Time TableSpace Statistics
```

*Figure 144. **Update Exceptions Profile Display** shown when creating an exception profile*

What to do next

Set the source of statistics that will be used to evaluate exceptions. For more information, see .

Exception categories are collapsed by default and the full set of header fields is displayed, but you can customize the appearance of the **Update Exceptions Profile Display** by using the **OPTIONS** command. For more information, see "Customizing the Update Exceptions Profile Display" on page 229.

Customizing the Update Exceptions Profile Display

The **Update Exceptions Profile Display** contains static data in the header area of the panel. If you want to view a larger scrollable area on the panel, use the **OPTIONS** command to customize the information that is displayed in the header field area of the **Update Exceptions Profile Display**.

If you are running a low-resolution screen, such as Mod 2, the scrollable area of the **Update Exceptions Profile Display** might be small. The following figure shows a Mod 2 display with all of the header fields displayed.

```
AUTOXPRT V1R1   ---- Update Exceptions Profile Display --- 2023/10/02 13:44:27
Option  ===>                                          Scroll ===> CSR
Commands: VIEW B - View Boolean  VIEW C - View Category  VIEW S - View Selected
          EDIT B - Edit Boolean
 OPTions - Panel display options  GROUP - Toggle Groups  SAVE - Save Profile
Line Cmds: A - And  O - Or  S - Select  D - Deselect  R - Repeat  U - Update
Group Line Commands: G - Toggle  + - Expand  - - Contract
    CONDitions: LT|<|LE|<=|EQ|=|GT|>|GE|>=|NE|¬=|<>   "*" indicates an DAJ stat
    --------------------------------------------------------------------------
Creator: TWUSR      Profile: TEST                          User: TWUSR
                                             Db2 Subsystem: SS01
Update Exception Profile Options: N (Yes/No)    Scroll Right for Column Help
--------------------------------------------------- Row 1 of 18       +>
S Statistics Type--- *Column----------- Cond --------Exception Value---------
  Limit Exception Processing by Day of the Week/Month and or Time of Day
  Limit the types of Objects that are processed
  Query Monitor performance recommendations
  RUNSTATS recommendation for missing or conflicting catalog statistics
  Specify various types of User Exits
  IBM Db2 Analytics Accelerator Exception Conditions
  DSNACCOX-like Recommendations
  Real Time TableSpace Statistics
```

*Figure 145. All header fields shown on the **Update Exceptions Profile Display***

You can control the appearance and the amount of data that is displayed in the header area by entering the **OPTIONS** command (or **OPT**) in the Option line. On the window that is shown below, you can deselect some or all of the information to be displayed in the header area, thereby providing more space in the scrollable area for exception conditions.

```
    Panel display options

 Enter "/" to select an option.
 /  Show primary commands
 /  Show line commands
 /  Show conditions
 /  Show profile information
 /  Show update profile options
```

Figure 146. Panel display options window for selecting header area information

For example, if you deselect all of the options shown in the figure, the panel appears as follows:

```
AUTOXPRT V1R1    ---- Update Exceptions Profile Display --- 2023/10/02 13:46:29
Option  ===>                                              Scroll ===> CSR
                                                  Db2 Subsystem: SS01
-------------------------------------------------------- Row 1 of 18      +>
S Statistics Type--- *Column------------ Cond ---------Exception Value---------
  Limit Exception Processing by Day of the Week/Month and or Time of Day
  Limit the types of Objects that are processed
  Query Monitor performance recommendations
  RUNSTATS recommendation for missing or conflicting catalog statistics
  Specify various types of User Exits
  IBM Db2 Analytics Accelerator Exception Conditions
  DSNACCOX-like Recommendations
  Real Time TableSpace Statistics
  Real Time IndexSpace Statistics
  Real Time Image Copy related Thresholds...since last COPY
  Real Time Reorg Tablespace related Thresholds...since last REORG
  Real Time Reorg Index related Thresholds...since last REORG
  Real Time Runstats related Thresholds...since last RUNSTATS
  MVS Catalog exception conditions
  Db2 Catalog Image Copy related Thresholds
  Db2 Display Status Exception conditions
  Db2 Catalog Non-Partitioned Object Exception Conditions
```

*Figure 147. The scrollable area of the **Update Exceptions Profile Display** becomes larger when no header information is selected for display*

You can modify the header area appearance at any time by entering the **OPTIONS** command.

Specifying the source of statistics to use for exception evaluation

Db2 Automation Expert can use different sources of statistics to determine if the objects that are specified in the object profile meet exception criteria. You can choose the source from the **Edit Exceptions Profile Options** window.

About this task

Refer to for more information about how statistics are used in evaluating exception conditions.

Procedure

1. On the **Update Exceptions Profile Display**, ensure that the **Update Exception Profile Options** field is displayed.

   If it is not, enter the **OPTIONS** command and select the **Show update profile options** field.

2. On the **Update Exceptions Profile Display**, enter Y in the **Update Exception Profile Options** field and press Enter.

3. On the **Edit Exception Profile Options** window, specify one of the following in the **Use Stats From** field:

   - Enter R to use the Db2 Automation Expert repository of statistics.

   - Enter C to use Db2 catalog statistics.

   - Enter S to use a Db2 shadow catalog. To use this option, you must have added the shadow catalog package list name to the **Shared Profile Parameters** configuration panel.

   - Enter H to use Db2 history statistics from the _HIST tables.

   - Enter U to have Db2 Automation Expert invoke a RUNSTATS utility. The statistics generated by RUNSTATs are used in evaluating the exception conditions. You should also specify RUNSTATS options by entering Y in the **Edit Runstats Options** field.

4. Press Enter.

Other exception profile settings

Other fields on the **Edit Exceptions Profile Options** window allow you to specify how multiple conditions are handled, whether exception triggers are saved in a repository, whether a WTO is issued, and whether to re-evaluate table spaces that are triggered because their corresponding indexes were triggered.

These fields are shown in the following figure:

```
           Edit Exception Profile Options

   User: TWUSR                          Db2 Subsystem: SS01
 Creator: TWUSR        Profile: TST
   Description:
  Share Option: U (U - Update, V - View,  N - No)
Use Stats From: R (R - Repository, C - Catalog, U - Runstats
                S - Shadow, H - History)
Edit Runstats Options . . . . . . . . N (Yes/No)
Save Triggers in Repository . . . . : N (Yes/No)
WTO number of triggered Object. . . : N (Yes/No)
Combine IX/TS Exceptions when
   evaluating an IX triggering a TS : N (Yes/No)
```

Figure 148. Edit Exceptions Profile Options window: profile specification fields

The following topics describe these fields.

Save Triggers in Repository

The **Save Triggers in Repository** field specifies whether Db2 Automation Expert is to save information about the triggers generated by exception processing for this profile.

When you specify Y in this field, trigger information is written to a Db2 Automation Expert repository and is then available for viewing and analysis through the Statistics Reports and Maintenance facility. For example, you might use this information to analyze why triggers have been repeatedly generated for an object. If you specify N, trigger information is not saved to the repository.

WTO number of triggered objects

The **WTO number of triggered Objects** field specifies whether Db2 Automation Expert is to issue a write-to-operator (WTO) message if any objects are triggered by exception processing during the build process. The message displays the number of objects that were triggered. This feature can be used to indicate whether any exception condition is met.

When the exception rule (set on the appropriate utility panel) is A(ccepted) or B(oth), a WTO is issued when the accepted count is greater than 0. When the exception rule is set to R(ejected) or B(oth), a WTO is issued when the rejected count is greater than 0.

Combine IX/TS exceptions when evaluating an IX triggering a TS

When this field is set to Y, Db2 Automation Expert re-evaluates the associated table space exception criteria when an index meets its index space criteria, but triggers the corresponding table space instead of itself.

Index exception criteria that trigger the associated table space are:

```
SYSINDEXES: CLUSTERED, CLUSTERING, CLUSTERRATIO, CLUSTERRATIOF
SYSINDEXSTATS: CLUSTERRATIO, CLUSTERRATIOF
SYSINDEXPART: NEAROFFPOSF, FAROFFPOSF, PERCOFFPOS
```

If this field is set to Y, when a table space is triggered because its index meets one of those exception criteria, Db2 Automation Expert evaluates the table space against the table space exception criteria that are included in the profile. The table space must meet the table space criteria in order to be triggered.

For example, a job profile contains a REORG utility profile and an exceptions profile that includes the following:

```
A MVS CATALOG          *ALLOCATED_TRACKS    <    1001
A Db2 DISPLAY STATUS  STATUS_RW             EQ
A SYSINDEXES           CLUSTERRATIO         <    95
```

When evaluating table space criteria, table space TS1 meets the specified Db2 DISPLAY STATUS criteria but does not meet the ALLOCATED_TRACKS criteria. Therefore, TS1 is not triggered. When evaluating index space criteria, however, associated index IX1 meets the specified CLUSTERRATIO criteria, as well as the ALLOCATED_TRACKS criteria, and the specified Db2 DISPLAY STATUS criteria. Since **Combine IX/TS Exceptions when evaluating IX triggering a TS** is set to Y, Db2 Automation Expert re-evaluates the associated table space TS1 to ensure that it meets all of the table space exception criteria. However, TS1 does not meet the table space criteria and, therefore, would not be triggered.

Selecting and specifying values for exception conditions

After you select an exception condition, enter the values that you want to use for comparison.

Procedure

- To select an exception condition, type S(elect), A(nd), or O(r) in the S(elect) column next to the exception conditions. Use the PF7/PF8 keys to scroll UP/DOWN through the column list.

  The following section describes the column values for selecting exception conditions:

  Statistics Type
    The type of exception condition that can be specified appears in this column. Some exception condition types are derived from Db2 catalog tables, such as SYSTABLEPART. Others, such as MVS CATALOG, refer to Db2 Automation Expert-defined statistics and are not based on Db2 catalog tables. For information about the statistics type, scroll right (PF11) to view the column description.

  *Column
    This column contains the value to be compared. The value is either:

    – An operand to be compared, such as the NTH_MONDAY for the DAY OF MONTH value
    – A catalog column that contains the value to be compared, such as the ICTYPE column for the SYSCOPY table.

    An asterisk (*) next to a value indicates that the column is a Db2 Automation Expert statistic that is retrieved or derived from RUNSTATs or another source, such as its own repository or the MVS catalog.

  Cond
    Type in the comparator that you want to use in the condition. Valid values are:

    – LT or <: Less than
    – LE or <=: Less than or equal to
    – EQ or =: Equal to
    – GT or >: Greater than
    – GE or >=: Greater than or equal to
    – NE or <> or ¬= : Not equal to

  Exception Value
    Where an input field is provided, enter an appropriate exception value for the selected condition.

  Column Description
    A brief description of the column statistics. For more detailed information, refer to "Exception types on the Update Exceptions Profile Display" on page 246.

Results
When you finish entering exceptions, press PF3. Your changes are saved and the **Exceptions Profile Display** is re-displayed.

Toggling groups of exception conditions

Exception conditions are grouped together logically by statistics category. Upon initial display of the **Update Exceptions Profile Display**, the groups are collapsed. To see the exception conditions that you are interested in, you can use primary and line commands to display or hide the exceptions within their categories.

About this task

Note: The colors that are mentioned in this topic are based on the default ISPF color scheme. If you changed your default ISPF colors, they may not match the colors as described.

On the **Update Exceptions Profile Display**, exception conditions are logically grouped by a group detail line that is highlighted in either yellow or red. When yellow, the group does not contain any selected exception conditions. When red, the group contains at least one selected exception condition. Each group can be collapsed to allow you to see all group categories of exception conditions on one panel, or expanded to allow you to see all the exception conditions within that group. A combination of collapsed and expanded groups can be shown on the panel.

Procedure

- Enter **GROUP** in the Option line to toggle the display of all exception condition categories.
- Enter **G** in the line command next to a category to toggle (expand or contract) its exception conditions.

  You can also enter the **+** line command to expand a category, or the **-** to contract a category.
- Enter **VIEW C** in the Option line to display exception conditions that are related to a category of exception conditions, such as REORG TS.

  a) On the **Categories of Exception Conditions** window, select one or more categories of exceptions.

  b) Press Enter. The **Update Exceptions Category Display** shows only the exception conditions that are related to the category that you selected.

  c) When you are finished specifying conditions, press PF3 (END) to save.

  The exception conditions are shown in red on the **Update Exceptions Profile Display**.

Adding conditions

To add conditions, type S(elect), A(nd) or O(r) in the S(elect) column next to the condition you want to include.

Results
For most statistics types, you will be prompted to complete the Cond and Exception Value fields as described in "Selecting and specifying values for exception conditions" on page 232.

Deselecting conditions

To deselect conditions, type D in the S(elect) line next to the condition you want to deselect and press Enter.

Results
The comparator and exception values are cleared from the condition line.

Specifying "or" condition values

To specify more than one possible value for a condition, type R(epeat) in the S(elect) line next to the condition you want to repeat and press Enter.

Results

A line for the column is added, preceded by an OR.

Example

For example, if you set an exception condition for SYSCOPY where ICTYPE =W OR Y, the exception is triggered if the image copy type registered in SYSCOPY is REORG LOG(NO) or LOAD LOG(NO).

Using the A and O line commands

Instead of the S line command, you can use the A or O line commands to specify how a statistic should be evaluated.

In some cases, using the A or O line commands is not allowed. For example, you cannot specify DAY OF WEEK = MONDAY **AND** TUESDAY. An error message warns you when this option is not available.

Viewing selected exception conditions

On the **Update Exceptions Profile Display**, you can use commands to view all the exception conditions that you selected consolidated onto one panel. You can also see how exception processing logic will evaluate the selected exception conditions in a Boolean logic format.

Procedure

1. On the **Update Exceptions Profile Display**, select one or more exception conditions.
2. In the **Option** line, enter one of the following commands:

   - To view the exceptions consolidated onto a single display, enter `View S` and press Enter. The **View Selected Exceptions** panel shows all selection exceptions, as shown in the following figure:

```
AUTOXPRT V1R1    ---- View Selected Exceptions          --- 2023/10/17 13:15:59
Option  ===>                                                   Scroll ===> CSR
-------------------------------------------------------------------------------
Creator: TWUSR        Profile: TWUSR EXCEPTION PROFILE          User: TWUSR
                                                      Db2 Subsystem: SS01
-------------------------------------------------------------------------------
Description                                      Scroll Right for Column Help
Use Stats From: R (R - Repository,       View Runstats Options: N (Yes/No)
                C - Catalog,        Save Triggers in Repository: N (Yes/No)
                U - Runstats,    WTO number of triggered Objects: N (Yes/No)
                S - Shadow,    Combine IX/TS Exceptions when
                H - History)    evaluating an IX triggering a TS: N (Yes/No)
----------------------------------------------------- Row 1 of 4         >
S Statistics Type--- *Column------------ Cond ---------Exception Value---------
S DAY OF WEEK         SUNDAY         And   EQ
S                     SATURDAY        Or   EQ
O MVS CATALOG        *EXTENTS             >    50
O                    *ALLOCATED_TRACKS    >    100
***************************** Bottom of Data **********************************
```

   - To view the exceptions in a Boolean logic format, enter `View B` and press Enter. The exceptions are displayed in the order that they will be processed on the **View Exception Boolean Logic** panel, as shown in the following figure:

```
AUTOXPRT V1R1    ---- View Exceptions Boolean Logic     --- 2023/10/17 13:24:50
Option  ===>                                                   Scroll ===> CSR
Creator: TWUSR        Profile: TWUSR EXCEPTION PROFILE          User: TWUSR
Description:                                    Db2 Subsystem: SS01
View Exception Profile Options: N (Yes/No)
------------------------------------------------------ Row 1 of 17         +
IF (
      DAY OF WEEK         NE SUNDAY
  A   DAY OF WEEK         NE SATURDAY
    )  TERMINATE EXCEPTION PROCESSING
ENDIF
FOR EACH TABLESPACE OBJECT...
IF (
      MVS CATALOG         EXTENTS            >  50
  O   MVS CATALOG         ALLOCATED_TRACKS   >  100
    )  TRIGGER OBJECT
ENDIF
FOR EACH INDEX OBJECT...
IF (
      MVS CATALOG         EXTENTS            >  50
  O   MVS CATALOG         ALLOCATED_TRACKS   >  100
    )  TRIGGER OBJECT
ENDIF
***************************** Bottom of Data ***********************************
```

Use these panels to review your selected exception conditions and processing. The panels are view only; no changes can made.

3. Press PF3 to return to the **Update Exceptions Profile Display**.

Editing exceptions using the Boolean logic editor

Once you have selected exception conditions, you can edit them using a display that shows the conditions in a Boolean logic format, where you can customize how AND and OR conditions are evaluated.

About this task

Editing the exception profile in Boolean logic format allows you to specify more complex scenarios for evaluating exceptions than the default. You can use parentheses to group exception conditions into logical units and have those groups evaluated using AND and OR logic. You can also add comments.

The **Edit Exceptions Boolean Logic** panel is displayed when:

- You create a new exception profile and you enter the EDIT B command on the **Update Exceptions Profile Display**.
- You update an existing exception profile that contains exception conditions. If an exception profile is empty, the **Update Exceptions Profile Display** is first shown, so that you can select exceptions from the list of conditions.

Procedure

1. On the **Update Exceptions Profile Display**, select one or more exception conditions.
2. In the **Option** line, enter the **EDIT B** command and press Enter.
3. On the **Boolean Logic Warning** window, review the information and choose whether to show or hide this panel in the future. Press Enter.

   Note: If you choose to hide this panel, you can reinstate its appearance by entering the **SHOW DAJ$EPRH** command on the **Edit Exceptions Boolean Logic** panel.
4. The **Edit Exceptions Boolean Logic** panel shows all selected exceptions, as shown in the following figure:

```
AUTOXPRT V1R1   ---- Edit Exceptions Boolean Logic     --- 2023/10/17 13:38:32
Option  ===>                                          Scroll ===> CSR
Line Cmds: A - After  B - Before  C - Copy    D - Delete  I - Insert
           L - bLank  M - Move    R - Repeat  U - Update
Creator: TWUSR       Profile: TWUSR EXCEPTION PROFILE       User: TWUSR
Description:                                      Db2 Subsystem: SS01
Edit Exception Profile Options: N (Yes/No)
------------------------------------------------- Row 1 of 17        +
  A (
C O ) Category---------- Column------------ CC Exception Value----------------
IF (
      DAY OF WEEK         NE SUNDAY
  A   DAY OF WEEK         NE SATURDAY
    )  TERMINATE EXCEPTION PROCESSING
ENDIF
FOR EACH TABLESPACE OBJECT...
IF (
      MVS CATALOG         EXTENTS          >  50
  O   MVS CATALOG         ALLOCATED_TRACKS >  100
    )  TRIGGER OBJECT
ENDIF
FOR EACH INDEX OBJECT...
```

There are three fields on the **Edit Exceptions Boolean Logic** panel that are used to allow you to customize the exceptions:

- The left-most field under the **C**(ommand) heading is used for line commands.

- The center field under the **AO** heading on each Boolean logic line is used to indicate whether the exception condition is an AND or an OR condition. An AND or OR condition cannot be specified for the first line after the IF statement, or on a closing parenthesis line, as those fields are protected.

- The third field under the **( )** heading is used to specify parentheses to group exception conditions into a logical condition, and to indicate a user comment after a blank line is inserted. Creating a user comment is described in a later topic.

Line commands for the Boolean logic editor

The line commands available with the Boolean logic editor enable you to copy, move, and update existing exception conditions, as well as add new exception conditions to the list.

The following line commands are available on the **Edit Exceptions Boolean Logic** panel:

- A: Copy or move a line after the current line
- B: Copy or move a line before the current line
- C: Copy the current line
- D: Delete the current line
- I: Insert a new exception condition after the current line; this displays the **Select Boolean Logic Exceptions** panel
- L: Insert a blank line after the current line
- M: Move the current line
- R: Repeat the current line
- U: Update exception condition comparators or values. This displays the **Update Boolean Logic Exceptions** panel

Editing restrictions

When editing exceptions, some restrictions apply. Db2 Automation Expert issues messages when an edit to the exception profile is not permitted.

- Copying and moving an exception condition can only be performed in the same section. For example, you cannot copy or move a table space exception condition to the object or index IF-ENDIF section.

- Date and time exceptions and object exceptions cannot be copied or moved. However, user comments within the Date and time section and object sections can be copied and moved.
- An AND or OR condition cannot be specified in the first line after the IF statement, or on a closing parenthesis line, as those fields are protected.

Adding blank lines and comments

A blank line is used for specifying a parenthesis in the **( )** column to group exception conditions into a logical AND/OR group, or for adding a user comment.

Procedure

1. On the **Edit Exceptions Boolean Logic** panel, enter L in C column and press Enter.

```
AUTOXPRT V1R1    ---- Edit Exceptions Boolean Logic      --- 2023/10/29 16:49:54
Option  ===>                                               Scroll ===> CSR
Line Cmds: A - After  B - Before  C - Copy    D - Delete  I - Insert
           L - bLank  M - Move    R - Repeat  U - Update
Creator: TWUSR       Profile: BEST PRACTICE REORG #1           User: TWUSR
Description: NON-DATA SHARE; NO RANDOM ACCS         Db2 Subsystem: SS01
Edit Exception Profile Options: N (Yes/No)
----------------------------------------------- Row 1 of 34        +
  A (
C O ) Category---------- Column------------ CC Exception Value----------------
IF (
L     OBJECT            EQ LOB
   )  SKIP OBJECT
ENDIF
FOR EACH TABLESPACE OBJECT...
IF (
    * When to REORG a TS/IX in a non-data sharing environment where
    * access to the object is predominantly NOT random access.
      OBJECT            EQ PENDING_DEF_CHGS
  O   TABLESPACESTATS    EXTENTS           >  254
  O   TABLESPACESTATS    DATASIZE          >  2
  O   REALTIME REORG TS  INSERTS_PCT       >  25
```

A blank line is inserted after the line where the L command was entered.

```
  A (
C O ) Category---------- Column------------ CC Exception Value
IF (
_  _  DAY OF WEEK        NE SUNDAY
_ A _  DAY OF WEEK        NE SATURDAY
   )  TERMINATE EXCEPTION PROCESSING
ENDIF
IF (
_  _   OBJECT            EQ LOB

_  )  SKIP OBJECT
ENDIF
FOR EACH TABLESPACE OBJECT...
```

2. To add a comment, place an * (asterisk) in the **( )** field and press Enter.

   An empty comment line is displayed after the current line.
3. Enter a comment on the line.

   Descriptive text up to 72 characters is allowed. Comments are not evaluated by exception processing.
4. Press Enter.

   The comment is added.

```
   A (
C O ) Category---------- Column------------ CC Exception Value
IF (
_   _  DAY OF WEEK        NE SUNDAY
_  A _  DAY OF WEEK        NE SATURDAY
   )  TERMINATE EXCEPTION PROCESSING
ENDIF
IF (
_   _    OBJECT            EQ LOB
_   *  Here is a comment_____
   )  SKIP OBJECT
ENDIF
FOR EACH TABLESPACE OBJECT...
```

5. Press PF3 to save and return to the **Exceptions Profile Display**.

Adding parentheses

Add parentheses in the **( )** column to group exception conditions into a logical AND/OR group.

Procedure

1. On the **Edit Exceptions Boolean Logic** panel, on the first and last exception that you want to group, add a blank line above the first exception and below the last exception by entering L in the C column.

```
IF (
     INDEXSPACESTATS    EXTENTS            >  254
L O  REALTIME REORG IX  INSERTS_PCT        >  25
  O  REALTIME REORG IX  DELETES_PCT        >  25
  O  REALTIME REORG IX  APPENDED_INS_PCT   >  20
L O  REALTIME REORG IX  PSEUDO_DEL_PCT     >  10
```

2. Press Enter.

Blank lines are inserted.

```
IF (
     INDEXSPACESTATS    EXTENTS            >  254
  O  REALTIME REORG IX  INSERTS_PCT        >  25

  O  REALTIME REORG IX  DELETES_PCT        >  25
  O  REALTIME REORG IX  APPENDED_INS_PCT   >  20
  O  REALTIME REORG IX  PSEUDO_DEL_PCT     >  10

```

3. In the blank lines above and below the exceptions that you want to group, add a left and right parenthesis in the **( )** column.

```
IF (
     INDEXSPACESTATS    EXTENTS            >  254
  O  REALTIME REORG IX  INSERTS_PCT        >  25
   (
  O  REALTIME REORG IX  DELETES_PCT        >  25
  O  REALTIME REORG IX  APPENDED_INS_PCT   >  20
  O  REALTIME REORG IX  PSEUDO_DEL_PCT     >  10
   )
```

4. Press PF3 to save and return to the **Exceptions Profile Display**.

Adding exception conditions

You can insert exception conditions into the profile from the Boolean logic format display. Db2 Automation Expert does validity checking to assist you in adding the correct conditions in the right location.

About this task

When you are inserting conditions into and otherwise editing an exception profile, Db2 Automation Expert checks for the following situations, and intelligently restricts certain selections. When this occurs, messages are displayed to allow you to analyze and correct the problem.

- Insertion of exception conditions is allowed only in the correct category sections of an exceptions profile. For example: if an I command is entered in a table space category, only table space-related exception conditions are displayed on the **Select Boolean Logic Exceptions** panel. This prevents insertion of an index exception condition into the table space category. The location of the I(nsert) line command on the **Edit Exceptions Boolean Logic** panel determines the valid condition list.

- In addition, the display of exception conditions that you can select from on the **Select Boolean Logic Exceptions** panel is limited based on the other exception conditions that have already been added to the profile. Incompatible exception conditions cannot be added. You can update or repeat most conditions that are listed on the **Edit Exceptions Boolean Logic** panel.

- Some exception conditions cannot be edited or moved once inserted into the profile, such as the day and time exceptions. For more information, "Day and time-related exceptions are always evaluated first" on page 244.

To insert new exception conditions into the list, use the I line command. In general, an exception condition is added after the line that contains the I command, except for day and time-related exceptions. Day and time-related conditions are always inserted first in their own category.

Procedure

1. On the **Edit Exceptions Boolean Logic** panel, enter I in C column and press Enter.

```
AUTOXPRT V1R1    ---- Edit Exceptions Boolean Logic      --- 2023/10/29 16:49:54
Option  ===>                                              Scroll ===> CSR
Line Cmds: A - After  B - Before  C - Copy    D - Delete  I - Insert
           L - bLank  M - Move    R - Repeat  U - Update
Creator: TWUSR       Profile: BEST PRACTICE REORG #1           User: TWUSR
Description: NON-DATA SHARE; NO RANDOM ACCS         Db2 Subsystem: SS01
Edit Exception Profile Options: N (Yes/No)
---------------------------------------------------- Row 1 of 34        +
  A (
C O ) Category---------- Column------------ CC Exception Value----------------
IF (
I    OBJECT              EQ LOB
   ) SKIP OBJECT
ENDIF
FOR EACH TABLESPACE OBJECT...
IF (
    * When to REORG a TS/IX in a non-data sharing environment where
    * access to the object is predominantly NOT random access.
      OBJECT              EQ PENDING_DEF_CHGS
  O   TABLESPACESTATS    EXTENTS          >  254
  O   TABLESPACESTATS    DATASIZE         >  2
  O   REALTIME REORG TS  INSERTS_PCT      >  25
```

The **Select Boolean Logic Exceptions** panel is displayed. Note that only the exception conditions that would be valid additions to the exception profile are listed. The Category field contents indicates the section in which the I command was entered.

```
AUTOXPRT V1R1    --- Select Boolean Logic Exceptions     --- 2023/10/29 16:52:12
Option  ===>                                              Scroll ===> CSR
Commands: END - Accept changes  CANcel - Discard changes  GROUP - Toggle groups
          OPTions - Panel display options              SAVE  - Save Profile
Line Commands: A - And  O - Or  S - Select  D - Deselect  R - Repeat
Group Line Commands: G - Toggle  + - Expand  - - Contract
   CONDitions: LT|<|LE|<=|EQ|=|GT|>|GE|>=|NE|¬=|<>   "*" indicates an DAJ stat
   -----------------------------------------------------------------------
Creator:  TWUSR        Profile: BEST PRACTICE REORG #1         User: TWUSR
Category: OBJECT EXCEPTIONS                          Db2 Subsystem: SS01
---------------------------------------------------- Row 1 of 4
S Statistics Type--- *Column------------ Cond --------Exception Value---------
  Limit Exception Processing by Day of the Week/Month and or Time of Day
  Limit the types of Objects that are processed
  Query Monitor performance recommendations
  Specify various types of User Exits
**************************** Bottom of Data ********************************
```

2. Expand the group or groups and select the exception conditions that you want to add.

For additional information, see "Selecting and specifying values for exception conditions" on page 232.

For this example, two day of week exceptions are selected.

```
AUTOXPRT V1R1   --- Select Boolean Logic Exceptions    --- 2023/10/29 17:47:29
Option  ===>                                                 Scroll ===> CSR
Commands: END - Accept changes  CANcel - Discard changes  GROUP - Toggle groups
         OPTions - Panel display options                   SAVE  - Save Profile
Line Commands: A - And  O - Or  S - Select  D - Deselect  R - Repeat
Group Line Commands: G - Toggle  + - Expand  - - Contract
   CONDitions: LT|<|LE|<=|EQ|=|GT|>|GE|>=|NE|¬=|<>   "*" indicates an DAJ stat
--------------------------------------------------------------------------------
Creator: TWUSR        Profile: BEST PRACTICE REORG #1          User: TWUSR
Category: OBJECT EXCEPTIONS                           Db2 Subsystem: SS01
------------------------------------------------- Row 1 of 23
S Statistics Type--- *Column------------ Cond ---------Exception Value---------
   Limit Exception Processing by Day of the Week/Month and or Time of Day
S DAY OF WEEK          SUNDAY        And   EQ
                       MONDAY
                       TUESDAY
                       WEDNESDAY
                       THURSDAY
                       FRIDAY
S                      SATURDAY      Or   EQ
   DAY OF MONTH        NTH_SUNDAY
                       NTH_MONDAY
```

3. Press PF3.

   The **Edit Exceptions Boolean Logic** panel is displayed with the additional conditions in Boolean logic format:

```
AUTOXPRT V1R1    ---- Edit Exceptions Boolean Logic    --- 2023/10/29 17:48:33
Option  ===>                                                 Scroll ===> CSR
Line Cmds: A - After  B - Before  C - Copy    D - Delete  I - Insert
           L - bLank  M - Move    R - Repeat  U - Update
Creator: TWUSR        Profile: BEST PRACTICE REORG #1          User: TWUSR
Description: NON-DATA SHARE; NO RANDOM ACCS         Db2 Subsystem: SS01
Edit Exception Profile Options: N (Yes/No)
------------------------------------------------- Row 1 of 39         +
  A (
C O ) Category---------- Column------------ CC Exception Value----------------
IF (
      DAY OF WEEK        NE SUNDAY
  A   DAY OF WEEK        NE SATURDAY
   )  TERMINATE EXCEPTION PROCESSING
ENDIF
IF (
      OBJECT             EQ LOB
   )  SKIP OBJECT
ENDIF
FOR EACH TABLESPACE OBJECT...
IF
      DAJ674I - The selected exception conditions were added to the list.
```

4. Press PF3 to save and return to the **Exceptions Profile Display**.

Example: Adding an exception via the Boolean logic editor

This example shows how to add an exception condition when using the Boolean logic editor.

For example, the best practice exception profile provided with Db2 Automation Expert called BEST PRACTICE IMAGE COPY FULL comes configured with the following exceptions. These exceptions are designed for triggering a utility (probably a full image copy) if either a REORG, LOAD REPLACE, or RUNSTATS was performed on the object after the last COPY, or if the percentage of inserts, deletes, and updates of the total number of object rows exceeds 25%. The default profile is as follows:

```
-------------------------------------------------------
FOR EACH TABLESPACE OBJECT...
IF (
      REALTIME ICOPY     REORG_LOAD_STATS   EQ
```

```
  O   REALTIME ICOPY     COPY_CHANGES_PCT  >  25
   )  TRIGGER OBJECT
ENDIF
FOR EACH INDEX OBJECT...
IF (
       REALTIME ICOPY     REORG_LOAD_STATS   EQ
   O   REALTIME ICOPY     COPY_CHANGES_PCT  >  25
   )  TRIGGER OBJECT
ENDIF
**************************** Bottom of Data *********
```

For this example, we want to add a condition to trigger a table space object if the conditions above are met, and in addition, no full image copy has been done in the past 30 days. To customize this profile, you can do the following:

1. Export the sample profile to a different profile with a different user ID. Make sure to change the Update option to "U" during the export.

2. Update the exported profile.

3. On the **Edit Exceptions Boolean Logic** panel, in the table space object section, enter I in the C column next to the last exception condition and press Enter.

```
  A (
C O ) Category---------- Column------------ CC Exception Value-
FOR EACH TABLESPACE OBJECT...
IF (
       REALTIME ICOPY     REORG_LOAD_STATS   EQ
I  O   REALTIME ICOPY     COPY_CHANGES_PCT  >  25
   )  TRIGGER OBJECT
```

4. On the **Select Boolean Logic Exceptions** panel, find and expand the **Real Time Image Copy related Thresholds...since last COPY** group (enter + in the S column).

5. Select the DAYS_SINCE_LAST exception by entering S in the Selection area. Enter GT (greater than) for the condition and 30 (indicating 30 days) for the exception value, as follows:

```
S Statistics Type--- *Column------------ Cond ---------Exception Value---------
  REALTIME ICOPY      *REBUILD
                      *REORG_OR_LOAD
s                      DAYS_SINCE_LAST    GT  30
```

6. Press Enter, then PF3 to accept the changes. The new condition is added by default as an OR with other two conditions.

```
  A (
C O ) Category---------- Column------------ CC Exception Value-----------------
FOR EACH TABLESPACE OBJECT...
IF (
       REALTIME ICOPY     REORG_LOAD_STATS   EQ
   O   REALTIME ICOPY     COPY_CHANGES_PCT  >  25
   O   REALTIME ICOPY     DAYS_SINCE_LAST    GT 30
   )  TRIGGER OBJECT
```

7. To group the exceptions, add blank lines above and below the exception that you want to group by entering L in the C column next to the exceptions in the group.

```
  A (
C O ) Category---------- Column------------ CC Exception Value
FOR EACH TABLESPACE OBJECT...
IF (
L      REALTIME ICOPY     REORG_LOAD_STATS   EQ
L  O   REALTIME ICOPY     COPY_CHANGES_PCT  >  25
   O   REALTIME ICOPY     DAYS_SINCE_LAST    GT 30
   )  TRIGGER OBJECT
ENDIF
```

8. Press Enter. The blank lines are added.

```
  A (
C O ) Category---------- Column------------ CC Exception Value-
FOR EACH TABLESPACE OBJECT...
IF (
```

```
        REALTIME ICOPY      REORG_LOAD_STATS   EQ
   O    REALTIME ICOPY      COPY_CHANGES_PCT   >  25

   O    REALTIME ICOPY      DAYS_SINCE_LAST    GT 30
   )    TRIGGER OBJECT
```

9. Add a left parenthesis in the ( ) column in the first blank line, and a right parenthesis in the blank line after the second exception to be grouped.

```
   A (
C O ) Category---------- Column------------ CC Exception Value-
FOR EACH TABLESPACE OBJECT...
IF (
   (
     REALTIME ICOPY      REORG_LOAD_STATS   EQ
   O   REALTIME ICOPY      COPY_CHANGES_PCT   >  25
   )
   O   REALTIME ICOPY      DAYS_SINCE_LAST    GT 30
   )   TRIGGER OBJECT
```

10. Change the O that is next to the DAYS_SINCE_LAST exception to A, and press Enter.

```
   A (
C O ) Category---------- Column------------ CC Exception Value-
FOR EACH TABLESPACE OBJECT...
IF (
   (
     REALTIME ICOPY      REORG_LOAD_STATS   EQ
   O   REALTIME ICOPY      COPY_CHANGES_PCT   >  25
   )
   A   REALTIME ICOPY      DAYS_SINCE_LAST    GT 30
   )   TRIGGER OBJECT
```

11. Press PF3 to save the profile and exit.

These exception conditions will be evaluated as follows:

```
IF
   (
     (REORG, LOAD, or RUNSTATS has been run on the table space since the last
      image copy of the table space was taken)
     OR
     (The number of inserts, deletes, and updates as a percentage of the total
      number of rows of the table space is greater than 25%)
   )
AND
   (It has been more than 30 days since the last image copy was taken of the table space)
THEN
Trigger the utility
```

Copying and moving conditions and comments

Performing a copy or move of an exception condition or comment is similar to ISPF Edit.

About this task

You can only copy or move exception conditions and user comments within the same IF-ENDIF sections. Validity checking is done by Db2 Automation Expert when you attempt to copy or move any condition or comment.

Restriction: Date and time exceptions and object exceptions cannot be copied or moved. However, user comments within the date and time section and the object section can be copied and moved.

This procedure covers moving items; copying is the same process, but enter the C command instead of the M command.

Procedure

1. To move an exception condition or comment, on the **Edit Exceptions Boolean Logic** panel, enter the M command on the condition or comment line that you want to move and a B or A command on the line that you want the comment to precede or follow.

For example:

```
  A (
C O ) Category---------- Column------------ CC Exception Value
IF (
M     INDEXSPACESTATS     EXTENTS             >  254
  O   REALTIME REORG IX  INSERTS_PCT          >  25
    (
  O   REALTIME REORG IX  DELETES_PCT          >  25
  O   REALTIME REORG IX  APPENDED_INS_PCT     >  20
  O   REALTIME REORG IX  PSEUDO_DEL_PCT       >  10
    )
  O   DB2 DISPLAY STATUS                     EQ ARBDP
A O   DB2 DISPLAY STATUS                     EQ AREO*
    ) TRIGGER OBJECT
```

2. Press Enter.

   The condition or comment is moved to the specified location.

```
  A (
C O ) Category---------- Column------------ CC Exception Value-
IF (
      REALTIME REORG IX  INSERTS_PCT          >  25
    (
  O   REALTIME REORG IX  DELETES_PCT          >  25
  O   REALTIME REORG IX  APPENDED_INS_PCT     >  20
  O   REALTIME REORG IX  PSEUDO_DEL_PCT       >  10
    )
  O   DB2 DISPLAY STATUS                     EQ ARBDP
  O   DB2 DISPLAY STATUS                     EQ AREO*
      INDEXSPACESTATS     EXTENTS             >  254
    ) TRIGGER OBJECT
```

3. Press PF3 to save and return to the **Exceptions Profile Display**.

Updating exception conditions

Once you have added an exception condition, you can use the U(pdate) line command to update DSNACCOX exception condition values, or update the condition or exception value of a table space, index, or post-user exit exception conditions. To modify the date/time and object exception conditions, you must delete them and insert new exception conditions.

Procedure

1. On the **Edit Exceptions Boolean Logic** panel, enter U in C column next to the condition that you want to update and press Enter.

   The **Update Boolean Logic Exceptions** panel is displayed. Note that only the exception conditions that can be updated are listed.

```
AUTOXPRT V1R1    --- Update Boolean Logic Exceptions    --- 2023/10/30 20:38:36
Option ===>                                              Scroll ===> CSR
Commands: END - Accept changes  CANCEL - Discard changes
Line Commands: A - And  O - Or  S - Select
   CONDitions: LT|<|LE|<=|EQ|=|GT|>|GE|>=|NE|¬=|<>   "*" indicates an DAJ stat
------------------------------------------------------------------------------
Creator: TWUSR        Profile: BEST PRACTICE REORG #1        User: TWUSR
                                                      Db2 Subsystem: SS01
-------------------------------------------------------- Row 1 of 21       +>
S Statistics Type--- *Column------------ Cond ---------Exception Value---------
  FOR EACH TABLESPACE OBJECT...
O TABLESPACESTATS      EXTENTS              >    254
O TABLESPACESTATS      DATASIZE             >    2
O REALTIME_REORG_TS  *INSERTS_PCT          >    25
O REALTIME_REORG_TS  *DELETES_PCT          >    25
O REALTIME_REORG_TS  *UNCLUST_INS_PCT      >    10
O REALTIME_REORG_TS  *DISORGED_LOBS_PCT    >    50
O REALTIME_REORG_TS  *RELOCATED_ROWS_PCT   >    10
O REALTIME_REORG_TS   MASS_DELETES         >    0
O REALTIME_REORG_TS   CLUSTERSENS          >    0
O DB2_DI
O DB2_DI   DAJ664I - Updating Boolean Logic exception conditions.
```

2. Edit the condition and exception values as desired.

   Db2 Automation Expert checks the values that you enter to ensure they are valid.

3. When finished, press PF3 to save the changes and return to the **Edit Exceptions Boolean Logic** panel.

Specifics about exception conditions

The following section provides additional information about exception conditions and how you can use them in your exception profiles.

Day and time-related exceptions are always evaluated first

If specified, the day and time exceptions are the first conditions evaluated, regardless of any other exceptions specified.

This means that if any day exception or any time exception is selected, it must be true or no objects will be triggered. For example, if you specify Day of Week = Monday or Tuesday, the result is as follows:

```
IF (DAY OF WEEK = MONDAY OR TUESDAY)
THEN CHECK OTHER EXCEPTIONS….
```

If more than one day or time is selected, they are treated as AND conditions. For example:

```
IF (DAY OF WEEK = MONDAY OR TUESDAY)
AND IF (DAY OF MONTH = LAST DAY)
THEN CHECK OTHER EXCEPTIONS….
```

In this case, both conditions must be true before the other exceptions will be checked.

How RUNSTATS is used in exception processing

This section explains how Db2 Automation Expert uses RUNSTATS in exception processing.

How Db2 Automation Expert determines the source of statistics when evaluating exceptions

The setting in the Use Stats From field determines the source of statistics used by Db2 Automation Expert when evaluating those conditions. The statistics can reside in the Db2 catalog (C in the Use Stats From field), the catalog history tables (H), a shadow catalog (S), the Db2 Automation Expert repository (R), or can be collected dynamically (U).

At some point, RUNSTATS must be executed to get statistics. The RUNSTATS utility itself will allow you to update the catalog, the history tables, or neither. If you want to update the Db2 Automation Expert

repository, you must use a Db2 Automation Expert RUNSTATS utility profile (included in a job profile) with the following options:

- Report Y
- Save Stats in Repository Y

When you build the RUNSTATS job profile, a RUNSTATS step is generated, followed by a step that parses the RUNSTATS output and populates the repository.

If you do not want to save the RUNSTATS statistics anywhere, you can specify Use Stats From U, which will cause Db2 Automation Expert to execute RUNSTATS immediately before evaluating conditions. The statistics are kept in memory for evaluating conditions. Set Update Runstats Options to Y if you want to control whether or not to save these statistics and to set other RUNSTATS options.

RUNSTATS and package set names

The selection of a particular Use Stats From value requires a corresponding package list name that was specified on the setup panel for Db2 Automation Expert.

The name that was specified on the Setup panel must correspond to a PKLIST name in the bind job for your Db2 version from the SAMP library (DAJ#BDxx). Db2 Automation Expert uses the specified package list name when retrieving RUNSTATS statistics.

Note that an appropriate shadow catalog must be created in your environment if you specify that RUNSTATS statistics are to be retrieved from a Db2 shadow catalog.

How Db2 Automation Expert handles lack of RUNSTATS statistics

When retrieving RUNSTATS statistics from either the Db2 catalog, Db2 shadow catalog, history tables, or Db2 Automation Expert repository, Db2 Automation Expert verifies whether RUNSTATS has been run on an object prior to performing exception processing. If RUNSTATS statistics are not found, an error message is displayed and Db2 Automation Expert will attempt to continue processing.

How Db2 Automation Expert verifies whether RUNSTATS has been run on an object

Prior to performing exception processing, Db2 Automation Expert verifies whether RUNSTATS has been run on an object by checking the columns in certain tables.

The catalog tables listed in the following table are checked for the indicated value.

Table 16. Runstats value check

Table	Value
SYSTABLEPART.CARDF	-1
SYSTABLEPART.STATSTIME	0001-01-01
SYSTABLES.CARDF	-1
SYSTABLES.STATSTIME	0001-01-01
SYSINDEXPART.CARDF	-1
SYSINDEXPART.STATSTIME	0001-01-01

If there are no RUNSTATS statistics for an object, the statistics values for all columns of the tables (except for PQTY and SQTY) will be their default values (either -1 or 0). If a corresponding statistic table row is not found, then PQTY and SQTY will be 0.

Exception types on the Update Exceptions Profile Display

This section provides information about the exceptions that can be specified in an exception profile.

The exception conditions are grouped into categories that can be expanded or contracted for easier reviewing. Refer to the topic "Selecting and specifying values for exception conditions" on page 232 for information.

Group: Limit exception processing by day of the week/month and/or time of day

DAY OF WEEK

The day of week exception triggers exceptions based on the day of the week.

Use S to select the day; the AND/OR operator for these exceptions are fixed. Example:

```
S DAY OF WEEK        MONDAY       And   EQ
S                    TUESDAY       Or   EQ
```

triggers an exception if the day of the week is Monday or Tuesday.

DAY OF MONTH

The day of month exception triggers exceptions based on the day of the month.

Use S to select the day; the AND/OR operator for these exceptions are fixed. Example:

```
S                    NTH_TUESDAY      LE  2
```

triggers an exception if the current day is Tuesday and it is the first or second Tuesday of the month.

TIME OF DAY

The time of day exception triggers objects based on a time range.

Use S to select the TIME_FROM and TIME_TO exceptions; the AND/OR operator for these are fixed. Enter the start time in the TIME_FROM field and the end time in the TIME_TO field. Example:

```
S TIME OF DAY        TIME_FROM    And   GE  01 : 30 P M
S                    TIME_TO      And   LE  05 : 00 P M
```

triggers an exception if the current time is between the listed times.

Group: Select these conditions to limit the types of objects that are processed

These exceptions can be used to select only objects with the specified properties, or exclude objects based on those properties.

The following tables shows the exception types.

Table 17. Exception type: Object

Statistic	Description
CLONE	Triggers an exception if the object is a cloned object. The allowed exception value is either E(xclude) or O(nly).
LOB	Triggers an exception if the table space is a LOB. The allowed exception value is either E(xclude) or O(nly).

Table 17. Exception type: Object (continued)

Statistic	Description
PGSIZE_32K	Triggers an exception if the table space was defined with a 32k page size. The allowed exception value is either E(xclude) or O(nly).
PBG_TS	Triggers an exception if the object is a partition-by-growth (PBG) table space. The allowed exception value is either E(xclude) or O(nly).
PBR_TS	Triggers an exception if the object is a partition-by-range (PBR) table space. The allowed exception value is either E(xclude) or O(nly).
PARTITION	Triggers an exception if the object's partition number matches the exception value. Enter a condition value and a partition number or range.
PENDING_DEF_CHGS	Triggers an exception if the object has any pending definition changes.
PEND_PARTNUM_KEYS	(Db2 Version 11 and later) Triggers an exception if the object has any pending alters of the limit key value (pending ALTER TABLE ALTER PARTITION statement with the ENDING AT keywords). If the object is selected at the ALL level, the PARTITION is not included on the SELECT. If the object is at the PART level, the PARTITION of the object is included on the SELECT.
PEND_DROP_COLUMNS	(Db2 Version 11 and later) Triggers an exception if the object has any pending dropped columns (pending ALTER TABLE DROP COLUMN).
PEND_IX_COMPRESS	(Db2 V12 and later) Triggers an exception for an index if the index has a pending ALTER INDEX COMPRESS.

Db2 Query Monitor performance recommendations

This exception enables Db2 Automation Expert and Db2 Query Monitor to work together to provide smarter reorganization recommendations. Using these products together helps your organization avoid unnecessary reorganizations, thereby reducing CPU cycles, memory use, disk space usage, and the impact on your applications.

The following table explains the exception value (under the Query Monitor performance recommendations heading) for Db2 Query Monitor that appears on the **Update Exceptions Profile Display**. See the topic Chapter 13, "Smarter reorganization recommendations with Db2 Automation Expert and Db2 Query Monitor," on page 323 for details about using this feature.

Note: In addition to the REORG_OVERRIDE exception, you must select at least one other exception to trigger smarter reorganization recommendations. It is recommended that you choose an exception that evaluates whether the objects in the job profile require reorganization (such as the real-time statistic exception DAYS_SINCE_LAST). Date and time-related exceptions (Day of Week, Day of Month, and Time of Day) are not valid with REORG_OVERRIDE.

Table 18. Exception type: Query Monitor performance recommendations

Exception	Description
REORG_OVERRIDE	Triggers an exception to call the Db2 Query Monitor reorganization recommendation function during the job build.

RUNSTATS recommendation for missing or conflicting catalog statistics

Specify this exception if you want Db2 Automation Expert to trigger an exception if RUNSTATS needs to be run based on whether the object is identified in the SYSIBM.SYSSTATFEEDBACK catalog table.

The following table explains the exception value (under the RUNSTATS recommendation for missing or conflicting catalog statistics heading) that is displayed on the **Update Exceptions Profile Display**.

Table 19. Exception type: SYSSTATFEEDBACK

Exception	Description
RUNSTS_RECOMMENDED	Triggers an exception if a row for the object has been inserted in the SYSIBM.SYSSTATFEEDBACK catalog table.
	Note: When Db2 writes new statistics recommendations to the SYSIBM.SYSSTATFEEDBACK catalog table, it also updates existing statistics profiles based on the recommendations. If an object is triggered by the RUNSTS_RECOMMENDED exception, and a RUNSTATS utility is included in the job profile, the RUNSTATS utility profile field **Profile** is automatically set to U.

Group: Select these conditions to specify various types of user exits

The User Exits exception allows you to specify a load module or a CLIST/REXX EXEC to be executed.

This user-defined program should contain the logic necessary to check for exception conditions.

User exits can perform any type of function, including executing SQL. You can set up a program to query any catalog or user-defined table. This option allows you to query additional catalog columns not offered in exception profiles.

Each load module, CLIST, and REXX EXEC is called once per object included in the object profiles.

A sample assembler DSECT is contained in the DAJ$USRX member in *hilevel*.SAMPLIB. The following parameter list is passed to the user exit:

```
DAJ$USRX_S                   DSECT
DAJ$USRX_IDENTIFIER          DS  CL08'DAJ$USRX'
DAJ$USRX_RETURN_CODE         DS  F      UserExit must set this to either
DAJ$USRX_RC_SKIP             EQU 0        this value or
DAJ$USRX_RC_TRIGGER          EQU 4        this value.
DAJ$USRX_FIRST_CALL          DS  CL01   Yes if First call to UserExit
DAJ$USRX_LAST_CALL           DS  CL01   Yes if Last  call to UserExit
DAJ$USRX_LOB                 DS  CL01   Yes if a Large OBject
DAJ$USRX_YES                 EQU C'Y'
DAJ$USRX_NO                  EQU C'N'
                             DS  CL09
DAJ$USRX_DB2_SSID            DS  CL04   DB2 SubSystem ID
DAJ$USRX_DBID                DS  H      Internal ID of Database
DAJ$USRX_OBID                DS  H      Internal ID of Object
DAJ$USRX_PSID                DS  H      Internal ID of TS/IX Page Set
DAJ$USRX_DATASET_EXTENTS     DS  H      Number of Dataset Extents
DAJ$USRX_DATASET_DSNUMS      DS  H      Number of Datasets for Object
DAJ$USRX_PARTITION           DS  H      -1 if Object at ALL level
DAJ$USRX_PGSIZE              DS  H      TS - PAGE SIZE IN K
*                                       IX - SIZE, IN BYES, OF LEAF
*                                            PAGES IN INDEX:
*                                            256|512|1024|2048|4096
                             DS  CL08
DAJ$USRX_TYPE                DS  CL02   TS|IX
DAJ$USRX_DATABASE            DS  CL08   TableSpace Database Name
DAJ$USRX_SPACENAME           DS  CL08   TableSpace Name
DAJ$USRX_IX_CREATOR          DS  CL128  If NOT an IX, these are blank.
DAJ$USRX_IX_NAME             DS  CL128    x
DAJ$USRX_IX_DATABASE         DS  CL08     x
DAJ$USRX_IX_INDEXSPACE       DS  CL08     x
DAJ$USRX_IX_TABLE_NAME       DS  CL128    x
DAJ$USRX_IX_TABLE_CREATOR    DS  CL128    x
DAJ$USRX_IX_COPY_INDICATOR   DS  CL01     Can IX be Image Copied? Y/N
DAJ$USRX_RETPD               DS  CL04   Retention Period
                             DS  CL(4096-(*-DAJ$USRX_S))
```

```
DAJ$USRX_LEN                    EQU *-DAJ$USRX
DAJ$USRX_PARMS                  EQU DAJ$USRX_S,*-DAJ$USRX_S
DAJ$USRX                        EQU DAJ$USRX_PARMS
```

The user exit sets DAJ$USRX_RETURN_CODE to indicate whether the object is selected for processing.

Additional information about the retention period parameter

The DAJ$USRX_RETPD parameter allows you to specify a retention period for a particular object to Db2 Automation Expert from an outside source (for example, a Db2 table).

About this task

Db2 Automation Expert then builds the DDs for that object using the supplied value rather than the retention period specified in the utility profile. This field can be set by specifying a user exit in an exception profile. The user-written exit can return a numeric value for the object's retention period to Db2 Automation Expert. If the value is present, Db2 Automation Expert will use it for the retention period; if it is not present, Db2 Automation Expert will use the value from the utility profile for the retention period.

This exit can be used with the COPY and COPYTOCOPY utilities and the REORG utility when an inline COPY is specified. Using this function affects the retention period parameters in DDs or TEMPLATE control statements used for COPY utilities.

Procedure

1. Create a user exit by following the instructions in the DAJ$USRX member. You must write the user exit to return the retention period in the required parameter field (DAJ$USRX_RETPD).
2. Create an exception profile specifying the user exit.
3. Include the exception profile in the job profile.

Results

Note the following:

- DAJ$USRX_RETPD is initialized to blanks. If the field is left blank after user exit execution, Db2 Automation Expert uses the retention period specified in the utility profile.
- If the user exit returns a retention period (the DAJ$USRX_RETPD field is NOT blank), the retention period value is used only for the object on which the exception profile was operating on. Because a user exit is called once per object in the object profile, the value is reset to blanks each time the user exit is called.
- No validation is performed on the parameter; you must ensure that the value passed to Db2 Automation Expert is a valid value for a retention period.
- If both the retention period in an exception profile and an expiration date in a utility profile are specified in the same job profile, the built JCL may contain both parameters and result in a JCL error.

Stored procedure user exit exceptions

The stored procedure user exit exception allows you to invoke a Db2 stored procedure immediately before, during, and immediately after exceptions processing. You can code any type of Db2 stored procedure that will either accept (trigger) or reject an object.

The stored procedure can be a native SQL procedure, an external SQL procedure, or an external procedure written in C, COBOL, or any programming language supported by Db2. The stored procedure can perform any type of allowable function, including executing SQL. The user exit will be called by exceptions processing during three processing phases and passed information about every object in the object profiles included in the jobs profile. This user-defined stored procedure should contain the logic necessary to check for exception conditions.

Three exceptions are provided to allow the stored procedure to be called:

- Prior to any processing performed by exception processing (pre-user exit). The pre-user exit is called once per included object in the jobs profile.
- During exception processing, once per included object in the jobs profile.
- After exception processing is finished (post-user exit). The post-user exit is called once per included object in the jobs profile.

Specifying the stored procedure

The stored procedure names can be specified with or without a schema name. At build time, exception processing verifies that the specified stored procedure exists as follows:

- If the schema name is not specified, a SELECT from SYSIBM.SYSROUTINES is issued to obtain the schema name, based on the stored procedure name, parameter count, and routine type.
- If the schema name is specified, exception processing does an SQL CALL of *schema-name.stored-procedure-name*.

If no row is returned from SYSROUTINES or a -440 SQL return code is obtained on the SQL CALL, a build error message is issued and further processing of the stored procedure is aborted. Processing of other exception conditions continues.

The STORED_PROC_PRE and STORED_PROCEDURE exception conditions are handled like any other exception condition, and can either be an AND or OR condition. If selected as an And condition, all AND conditions for a particular object, including any of the two noted stored procedure exception conditions, must be true in order for the object to be accepted. If selected as an OR condition, an object will be accepted if the stored procedure accepts the object.

The STORED_PROC_POST exception condition (the post-user exit stored procedure) is handled differently than other exception conditions, since exception processing is not processing other exception conditions at the time a post-user exit runs. This means that a post-user exit can accept and reject an object by itself without any other exception condition being applied. A post-user exit can accept and reject an object without any other exception conditions affecting what the user exit does with the objects. Further, the post-user exit can reject an object that had previously met all specified exception conditions.

You can specify the same procedure name for any or all of the three stored procedure exception conditions. If the stored procedure user exit does not want to process objects during a particular phase of exception processing (before, during, or after), or only needs to process a certain number of objects, the user exit can set DAJ_RETURN_CODE to 8 to indicate to terminate that phase of the user exit.

Parameters passed to the user exit

The information passed to an exceptions stored procedure user exit is similar to the information passed to an exceptions CLIST, REXX exec, and load module user exit. The DAJ$USRP member in *hilevel*.SAMPLIB contains the parameters that are passed to the user exit. The stored procedure user exit must specify the parameters as outlined in DAJ$USRP. Following are the parameters passed to the stored procedure:

```
(INOUT DAJ_RETURN_CODE         INTEGER   --0=Reject Object
                                         --4=Accept Object
                                         --8=Terminate User-Exit
,IN DAJ_FUNCTION               CHAR(01)  --B=Pre-User-Exit
                                         --P=Process each Object
                                         --X=Post-User-Exit
,IN DAJ_TYPE                   CHAR(02)  --TS|IX
,IN DAJ_DATABASE               CHAR(08)  --TS Database Name
,IN DAJ_SPACENAME              CHAR(08)  --TableSpace Name
,IN DAJ_IX_CREATOR             CHAR(128) --_IX_ fields are blank
,IN DAJ_IX_NAME                CHAR(128) --    if not an IX.
,IN DAJ_IX_DATABASE            CHAR(08)  --IX Database Name
,IN DAJ_IX_INDEXSPACE          CHAR(08)  --IX IndexSpace Name
,IN DAJ_IX_TABLE_NAME          CHAR(128) --Table Name in the TS
,IN DAJ_IX_TABLE_CRTR          CHAR(128) --Creator Name of the Table
,IN DAJ_DB2_SSID               CHAR(04)  --DB2 SubSystem ID
,IN DAJ_DBID                   SMALLINT  --ID of Database
,IN DAJ_OBID                   SMALLINT  --ID of Object
,IN DAJ_PSID                   SMALLINT  --ID of TS/IX Page Set
,IN DAJ_DATASET_EXTNTS         SMALLINT  --Nbr of Dataset Extents
```

```
   ,IN DAJ_DATASET_DSNUMS        SMALLINT  --Nbr of Datasets
   ,IN DAJ_PARTITION             SMALLINT  -- -1 if at ALL level
   ,IN DAJ_PGSIZE                SMALLINT  --TS - PAGE SIZE IN K
                                          --IX - SIZE, in bytes,of
                                          --    Leaf Pages in IX.
   ,INOUT DAJ_RETPD_OVERRIDE     CHAR(04)  --Overridden Retention Period
                                          --# of days to retain dataset
   ,IN DAJ_IX_COPY_IND           CHAR(01)  --Can be ICed? Y|N
   ,IN DAJ_LOB                   CHAR(01)  --Large OBject? Y|N
   )
```

If there are multiple exceptions profiles in a job, and if the exceptions profiles are processed one at a time, once an object is triggered, it is not evaluated by any subsequent exceptions profile. This prevents exceptions profiles from rejecting an object that was accepted by another exceptions profile. This is also the case for user exits. However, during the post-user exit phase, exception processing will pass accepted objects to the post-user exits only if those objects were triggered by the same exceptions profile as the post-user exit.

Upon entry to the post-user exit, DAJ_RETURN_CODE is set to 4 if the object was triggered by that exceptions profile. Otherwise, DAJ_RETURN_CODE is set to 0.

Setting DAJ_RETURN_CODE to 0 upon exit from the post-user exit will reject a previously accepted object. This overrides any previously met exception conditions. The Exceptions Trigger Report, however, will list those triggers that were turned off by a post-user exit, along with an indicator noting that the post-user exit overrode those exception conditions.

Group: IBM Db2 Analytics Accelerator for z/OS exceptions

These exceptions enable you to determine whether a table that is enabled for IBM Db2 Analytics Accelerator for z/OS is fully operational or if it needs to be reloaded.

You can create a Db2 Automation Expert utility profile to generate the JCL to load tables that are enabled for IBM Db2 Analytics Accelerator for z/OS with the Load Accelerator Tables utility. For more information, refer to the topic "Load accelerator table options" on page 210.

IBM Db2 Analytics Accelerator for z/OS exception conditions only apply to tables that are loaded onto an appliance. Objects that are not enabled for IBM Db2 Analytics Accelerator for z/OS are not evaluated by these exception conditions.

All accelerators that are attached to a Db2 subsystem will be queried. This means that, for example, if there are two accelerators attached to a Db2 SSID, any selected exception conditions will be applied to all tables in the object profile that are enabled for IBM Db2 Analytics Accelerator for z/OS, on both of the accelerators.

The following table explains the exception values (under the IDAA heading) for IBM Db2 Analytics Accelerator for z/OS that appear on the Update Exceptions Profile Display.

Table 20. Statistics type: IBM Db2 Analytics Accelerator for z/OS

Statistic	Description
NOT_OPERATIONAL	Triggers an exception if the status of a table that is enabled for IBM Db2 Analytics Accelerator for z/OS is not operational. Message DAJ218W is issued to alert you of this condition.
RELOAD_RECOMMENDED	Triggers an exception if the status of a table that is enabled for IBM Db2 Analytics Accelerator for z/OSis RELOAD_RECOMMENDED or RELOAD REQUIRED.
DAYS_SINCE_LOADED	Triggers an exception if the specified number of days since the last time a table that is enabled for IBM Db2 Analytics Accelerator for z/OS was loaded is met.

Group: DSNACCOX-like recommendations

DSNACCOX-like exception conditions simulate the results of the DSNACCOX stored procedure that is provided with Db2. You can use these exceptions to get recommendations for when to reorganize or image copy objects, or to update statistics for table spaces or index spaces.

Db2 Automation Expert does not call the DSNACCOX stored procedure, but uses its own processing to produce the results. The exception conditions mimic the DSNACCOX stored procedure without the overhead of writing, testing, and debugging an application program that calls DSNACCOX.

The DSNACCOX-like exceptions are drawn from other categories in the exception profile; however, they are treated as a single unit. Triggered or rejected objects can be generated into any utility that is included in the job group. The exception conditions are based on the formulas used by the DSNACCOX stored procedure. For more information, see the documentation for the DSNACCOX stored procedure on IBM Documentation.

Specifying DSNACCOX-like exceptions

Each of the DSNACCOX-like exception categories is a set of exception conditions that are in other categories.

About this task

Note: The colors that are mentioned in this topic are based on the default ISPF color scheme. If you changed your default ISPF colors, they may not match the colors as described.

Procedure

1. Select DSNACCOX-like exceptions using one of the following methods:

    - Expand the **DSNACCOX-like Recommendations** category, then enter S or A next to the category of exception conditions that you want to select.
    - Enter `View C` in the Option line. When the **Categories of Exception Conditions** window is displayed, enter / next to the category of exception conditions that you want to select.

2. On the **Update Exceptions Category Display**, the selected category of exceptions is listed.

    The panel displays the formulas in parenthesized IF-ENDIF (Boolean) format. You need only to specify the exception values; the And/Or condition and the condition value (such as EQ, NE, or GT) are fixed by the DSNACCOX formula and cannot be changed. The exception condition values that must be entered are populated with question marks ("?"). The cursor is placed at the first field that contains a question mark.

3. Specify valid exception condition values that you want exception processing to use in each field. All fields must be specified.

4. Press PF3 (END).

    The **Update Exceptions Profile Display** shows the **DSNACCOX-like Recommendations** group line, and other groups that were selected as part of the DSNACCOX-like formulas, in red.

Results

All of the exception conditions that are part of the DSNACCOX-like exception group are displayed in pink. If you expand a red exception condition group that is red, any exception condition that is part of the DSNACCOX-like exception group is displayed in pink.

What to do next

You can use the `VIEW S` or `VIEW B` commands to view only the selected exception conditions or to view the selected exception conditions using Boolean logic. Once you have selected and set exceptions in the DSNACCOX-like category, you cannot edit the exceptions in their individual categories. To edit those values, either enter U next to the exception in the DSNACCOX-like category, or enter the `View C` command in the Option line and reselect the category.

Groups: Real-time statistics

Real-time statistics can be used to help determine when maintenance functions need to be run on your table spaces and index spaces. If the real-time statistics tables have been set up on the subsystem, Db2 Automation Expert can use the data in them to evaluate exceptions.

This topic contains information on exception conditions based on the SYSIBM real-time statistic tables. The exception conditions are labeled on the **Update Exceptions Profile Display** as follows:

- Real time table space statistics
- Real time index space statistics
- Real time image copy related thresholds...since last COPY
- Real time REORG TABLESPACE related thresholds...since last REORG
- Real time REORG INDEX related thresholds...since last REORG
- Real time RUNSTATS related thresholds...since last RUNSTATS

The statistics are kept in Db2 catalog tables SYSIBM.SYSTABLESPACESTATS and SYSIBM.SYSINDEXSPACESTATS.

Db2 Automation Expert uses some statistics directly from the real-time statistics tables. In addition, Db2 Automation Expert uses the statistics to calculate other pertinent values that can be specified for exception processing. For real-time statistics table information, refer to IBM Knowledge Center.

The following tables explain the exception values related to real-time statistics that appear on the **Update Exceptions Profile Display**.

Table 21. Statistics type: TABLESPACESTATS

Column	Description	How calculated
TOTALROWS	The number of rows or LOBs in the table space or partition; if the space contains more than one table, this value is the total number of rows for all tables.	Table space statistics table: TOTALROWS column
SPACE	The kilobytes of DASD storage allocated to the table space or partition	Table space statistics table: SPACE column
EXTENTS	The number of physical extents for the table space or partition; for multi-piece table spaces, this value is the number of extents for the last data set.	Table space statistics table: EXTENTS column
NACTIVE	The number of active (pre-formatted) pages in the table space or partition.	Table space statistics table: NACTIVE column
NPAGES	The number of distinct pages with active rows in the table space or partition.	Table space statistics table: NPAGES column
DATASIZE	The total number of bytes that row data occupy in the data rows or LOB rows.	Table space statistics table: DATASIZE column
SPACE_DATA_RATIO	The ratio of space allocated to data space used. Can be used to reclaim space.	Table space statistics table: (SPACE * 1024) / DATASIZE
SPACEUSED_PCT	The amount of space used as a percentage of the size limit for the table space.	Table space statistics table: (NPAGES * PAGESIZE *100) / DSSIZE

Table 22. Statistics type: INDEXSPACESTATS

Stats	Description	How calculated
TOTALENTRIES	The number of index entries (including duplicates) in the index space or partition.	Index space statistics table: TOTALENTRIES column
SPACE	The kilobytes of DASD storage allocated to the index space or partition.	Index space statistics table: SPACE column
EXTENTS	The number of physical extents for the index or partition; for multi-piece index spaces, this value is the number of extents for the last data set.	Index space statistics table: EXTENTS column
NACTIVE	The number of active (pre-formatted) pages in the index space or partition.	Index space statistics table: NACTIVE column
NPAGES	The number of pages in the index tree that contain only pseudo-deleted index entries.	Index space statistics table: NPAGES column
NLEVELS	The number of levels in the index tree.	Index space statistics table: NLEVELS column
NLEAF	The number of leaf pages in the index.	Index space statistics table: NLEAF column
EMPTY_LEAF_PCT	Percentage of pseudo-empty pages to the total number of leaf pages.	Index space statistics table: (NPAGES*100) / NLEAF

Table 23. Statistics type: REALTIME ICOPY

Stat	Description	How calculated
REBUILD	If selected, triggers an exception if a REBUILD INDEX was performed on the object after the last COPY.	Compare timestamp of last copy (COPYLASTTIME) to timestamp of last REBUILD INDEX (REBUILDLASTTIME)
REORG_OR_LOAD	If selected, triggers an exception if a REORG or LOAD REPLACE was performed on the object after the last COPY.	Compare timestamps of last copy (COPYLASTTIME) to timestamp of last REORG (REORGLASTTIME) and LOAD REPLACE (LOADRLASTTIME)
REORG_LOAD_STATS	If selected, triggers an exception if a REORG, LOAD REPLACE, or RUNSTATS was performed on the object after the last COPY.	Compare timestamps of last copy (COPYLASTTIME) to timestamp of last REORG (REORGLASTTIME), LOAD REPLACE (LOADRLASTTIME), and RUNSTATS (STATSLASTTIME)
DAYS_SINCE_LAST	The number of days since the last COPY.	Table space or index space statistics table: CURRENT DATE-COPYLASTTIME (in days)
UPDATED_PAGES	The number of distinct pages updated.	Table space or index space statistics table: COPYUPDATEDPAGES

Table 23. Statistics type: REALTIME ICOPY (continued)

Stat	Description	How calculated
UPDATED_PAGES_PCT	The number of distinct pages updated as a percentage of the total number of active (pre-formatted) pages.	Table space or index space statistics table: (COPYUPDATEDPAGES * 100) / NACTIVE
COPY_CHANGES	The number of inserts, deletes, and updates.	Table space or index space statistics table: COPYCHANGES
COPY_CHANGES_PCT	The number of inserts, deletes, and updates as a percentage of the total number of rows.	Table space or index space statistics table: (COPYCHANGES * 100) / TOTALROWS

Table 24. Statistics type: REALTIME REORG TS

Stat	Description	How calculated
NO_REORG_LOAD	If selected, triggers an exception if both a REORG and a LOAD REPLACE have not been done on a table space.	SYSIBM.SYSTABLEPART REORG_LR_TS column.
DAYS_SINCE_LAST	The number of days since the last REORG.	Table space statistics table: CURRENT DATE - REORGLASTTIME (in days)
DAYS_SINCE_HASH	The number of days since hash access was used for SELECT, FETCH, searched UPDATE, searched DELETE, or used to enforce RI constraints.	CURRENT DATE – HASHLASTUSED value (in days) in SYSTABLESPACESTATS
DATAISMORETHAN HASH	Trigger an exception if the DATASIZE is larger than the HASH SPACE for a hash organized table space. Enables reallocation of hash access tables and adjustment of hash space.	Compare table space statistics table DATASIZE to HASHSPACE value in SYSTABLESPACE
INSERTS	The number of rows or LOBs that were inserted since the last REORG or LOAD REPLACE or since the object was created.	Table space statistics table: REORGINSERTS
INSERTS_PCT	The percentage of inserts since the last REORG or LOAD REPLACE or since the object was created.	(REORGINSERTS * 100) / TOTALROWS
DELETES	The number of deleted rows or LOBs since the last REORG or LOAD REPLACE or since the object was created.	Table space statistics table: REORGDELETES
DELETES_PCT	The percentage of deletes since the last REORG or LOAD REPLACE or since the object was created.	(REORGDELETES * 100) / TOTALROWS
INS_UPD_DEL	The number of inserts, updates, and deletes.	Table space statistics table: REORGINSERTS + REORGDELETES + REORGUPDATES

Table 24. Statistics type: REALTIME REORG TS (continued)

Stat	Description	How calculated
INS_UPD_DEL_PCT	The number of inserts, updates, and deletes as a percentage of the total number of rows.	Table space statistics table: [(REORGINSERTS + REORGDELETES + REORGUPDATES) * 100] / TOTALROWS
UNCLUST_INS	The number of inserted rows placed greater than 16 pages away from target page.	Table space statistics table: REORGUNCLUSTINS
UNCLUST_INS_PCT	The number of inserted rows placed greater than 16 pages away from target page, as a percentage of the total number of rows.	Table space statistics table: (REORGUNCLUSTINS * 100) / TOTALROWS
DISORGED_LOBS	The number of LOBs inserted since the last REORG or LOAD REPLACE that are not perfectly chunked.	Table space statistics table: REORGDISORGLOB
DISORGED_LOBS_PCT	The number of LOBs inserted since the last REORG or LOAD REPLACE that are not perfectly chunked, as a percentage of the total number of rows.	Table space statistics table: (REORGDISORGLOB * 100) / TOTALROWS
RELOCATED_ROWS	Total number of relocated rows.	Table space statistics table: REORGNEARINDREF + REORGFARINDREF
RELOCATED_ROWS_PCT	Total number of relocated rows as a percentage of the total number of rows.	Table space statistics table: (RELOCATED_ROWS * 100) / TOTALROWS
MASS_DELETES	The number of tables that have been mass deleted since the last REORG or LOAD REPLACE. If this value is not zero, the space may need a REORG.	Table space statistics table: REORGMASSDELETE
CLUSTERSENS	The number of times data has been read by SQL sensitive to clustering sequence of data since last REORG or LOAD REPLACE.	Table space statistics table: REORGCLUSTERSENS
HASHACCESS	The number of times data is accessed using hash access or used to enforce RI constraints.	Table space statistics table: REORGHASHACCESS
SCANACCESS	The number of times data is accessed for SELECT, FETCH, UPDATE, or DELETE.	Table space statistics table: REORGSCANACCESS

Table 25. Statistics type: REALTIME REORG IX

Stat	Description	How calculated
NO_REORG_REBUILD	If selected, triggers an exception if both a REORG and a REBUILD INDEX have not been done on an index.	SYSIBM.SYSTABLEPART REORG_LR_TS column.

Table 25. Statistics type: REALTIME REORG IX (continued)

Stat	Description	How calculated
DAYS_SINCE_LAST	The number of days since the last REORG.	Index space statistics table: CURRENT DATE - REORGLASTTIME (in days)
INSERTS	The number of index entries that were inserted into the index or partition since the last REORG, REBUILD INDEX, or LOAD REPLACE, or since the object was created.	Index space statistics table: REORGINSERTS
INSERTS_PCT	The percentage of inserts that were done since the last REORG, REBUILD INDEX, or LOAD REPLACE, or since the object was created.	(REORGINSERTS * 100) / TOTALENTRIES
DELETES	The number of index entries that have been deleted since the last REORG, REBUILD INDEX, or LOAD REPLACE, or since the object was created.	Index space statistics table: REORGDELETES
DELETES_PCT	The percentage of deletes that were done since the last REORG, REBUILD INDEX, or LOAD REPLACE, or since the object was created.	(REORGDELETES * 100) / TOTALENTRIES
INS_DEL	The number of inserts and deletes.	Index space statistics table: REORGINSERTS + REORGDELETES
INS_DEL_PCT	The number of inserts and deletes as a percentage of the total number of index entries.	Index space statistics table: [(REORGINSERTS + REORGDELETES) * 100] / TOTALENTRIES
APPENDED_INS	The number of index entries that have been inserted since the last REORG, REBUILD INDEX, or LOAD REPLACE on the index space or partition that have a key value greater than the maximum key value in the index space or partition.	Index space statistics table: REORGAPPENDINSERT
APPENDED_INS_PCT	The percentage of index entries that have been inserted since the last REORG, REBUILD INDEX, or LOAD REPLACE on the index space or partition that have a key value greater than the maximum key value in the index space or partition, as a percentage of the total number of index entries.	Index space statistics table: (REORGAPPENDINSERT * 100) / TOTALENTRIES
PSEUDO_DEL	The number of pseudo-deleted index entries stored in the index space or partition.	Index space statistics table: REORGPSEUDODELETES

Table 25. Statistics type: REALTIME REORG IX (continued)

Stat	Description	How calculated
PSEUDO_DEL_PCT	The percentage of pseudo-deleted index entries stored in the index space or partition, as a percentage of the total number of index entries.	Index space statistics table: (REORGPSEUDODELETES * 100) / TOTALENTRIES
LEAFFAR_SPLITS_PCT	The percentage of leaf pages located far away from the previous leaf pages, as a percentage of the total number of active (pre-formatted) pages.	Index space statistics table: (REORGLEAFFAR * 100) / NACTIVE
NLEAF_SPLITS	The total number of index page splits.	Index space statistics table: REORGLEAFNEAR + REORGLEAFFAR
NLEAF_SPLITS_PCT	The percentage of index page splits as a percentage of the total number of active (pre-formatted) pages.	Index space statistics table: [(REORGLEAFNEAR + REORGLEAFFAR) * 100] / NACTIVE
NUMLEVELS_UPDATED	The number of levels in the index tree that were added or removed since last REORG, REBUILD INDEX, or LOAD REPLACE.	Index space statistics table: REORGNUMLEVELS
MASS_DELETES	The number of mass deletes or the number of dropped tables since the last REORG, REBUILD INDEX, or LOAD REPLACE.	Index space statistics table: REORGMASSDELETE
INDEXACCESS	The number of times the index was used for SELECT, FETCH, searched UPDATE, searched DELETE, or was used to enforce RI constraints. For hash overflow indexes, this is the number of times the hash overflow exception index was used.	Index space statistics table: REORGINDEXACCESS

Table 26. Statistics type: REALTIME RUNSTATS

Stat	Description	How calculated
REORG_OR_LOAD	If selected, triggers an exception if REORG or a LOAD REPLACE have been done since the last RUNSTATS was run.	Table space statistics table: Compare timestamp of last RUNSTATS (STATSLASTTIME) to timestamp of last REOREG (REORGLASTTIME) and LOAD REPLACE (LOADRLASTTIME)
DAYS_SINCE_LAST	The number of days since the last RUNSTATS.	Table space or index space statistics table: CURRENT DATE - STATSLASTTIME (in days)
INS_UPD_DEL	For table spaces, the number of inserts, updates and deletes since the last RUNSTATS was run. For index spaces, the number of inserts and deletes since the last RUNSTATS was run.	Table space statistics table: STATSINSERTS + STATSUPDATES + STATSDELETES Index space statistics table: STATSINSERTS + STATSDELETES

Table 26. Statistics type: REALTIME RUNSTATS (continued)

Stat	Description	How calculated
INS_UPD_DEL_PCT	For table spaces, the number of inserts, updates and deletes as a percentage of the total number of rows since the last RUNSTATS was run. For index spaces, the number of inserts and deletes as a percentage of the total number of rows since the last RUNSTATS was run.	Table space statistics table: [(STATSINSERTS + STATUSUPDATES + STATSDELETES) * 100] / TOTALROWS Index space statistics table: [(STATSINSERTS + STATSDELETES) * 100] / TOTALENTRIES
MASS_DELETES	The number of times that the index or index space partition was mass deleted since the last RUNSTATS was run.	Table space or index space statistics table: STATSMASSDELETE

Group: MVS catalog exception conditions

The MVS catalog exceptions triggers exceptions based on the following values. These statistics are derived from information in the z/OS catalog.

The MVS catalog exceptions are processed at the partition level.

Table 27. Statistics type: MVS Catalog

Statistic	Description
DSNUM	The number of individual data sets for each object partition.
EXTENTS	The number of data set extents for each individual object partition.
ALLOCATED_TRACKS	The number of tracks allocated for each individual object partition.
PERCENT_USED	The percentage of space used for each individual object partition; calculated as (total used space / total allocated space) x 100. When specifying trigger amounts based on the PERCENT_USED column, you should be aware that fractional amounts are truncated when Db2 Automation Expert reviews an object's space utilization. Therefore if you use exception criteria to specify that a table space should be triggered when its percent used is > 25%, and a table space's percent used is 25.70%, it will NOT be triggered because the 25.7% is truncated to 25 (which is not greater than 25). You can trigger an object taking fractional amounts into consideration by specifying the exception criteria to be greater than or EQUAL TO the numerical value. In this case you would specify the exception criteria to be PERCENT_USED GE 25.

Table 27. Statistics type: MVS Catalog (continued)

Statistic	Description
PERCENT_MAXUSED PERCENT_MAXALLOC	These conditions allow exceptions for object space usage. These values can be a whole number in the range of 0 to 100. The values are calculated as follows: • PERCENT_MAXALLOC is calculated as (*total_allocated_space* / *max_size*) * 100 • PERCENT_MAXUSED is calculated as (*total_used_space* / *max_size*) * 100 Where *max_size* is determined according to the "Calculations used for maximum potential size of an object for exception processing" on page 773 topic. Exceptions are evaluated as follows: • If the object is simple or segmented (non-partitioned) or a LOB, PERCENT_MAXALLOC and PERCENT_MAXUSED are calculated against the entire object's space usage. This takes into account potential multiple data sets. • If the object is partitioned, PERCENT_MAXALLOC and PERCENT_MAXUSED are calculated against each object partition. If the object was included at the ALL partition level and any one of the object partitions meets the exception criteria, the entire object is triggered. • For partition-by-growth table spaces that are included at the ALL partition level, the space usage for each partition is totaled and then divided by the total amount of potential space for all allocated partitions. The MVS catalog exceptions are then applied against that percentage. If you want PBG partitions to be evaluated individually, you must include the PBG spaces at the PART level in the object profile.
PQTY	Primary space allocation in units of 4K blocks for each individual object partition.
SQTY	Secondary space allocation in units of 4K blocks for each individual object partition.

Group: Db2 catalog image copy related thresholds

The Db2 catalog image copy related thresholds exceptions trigger exceptions based on values in SYSIBM.SYSCOPY.

The following table lists the exception conditions based on values in SYSIBM.SYSCOPY.

Table 28. Statistics type: SYSCOPY

Stat	Description
ICTYPE	Triggers an exception if the value in the ICTYPE field in SYSIBM.SYSCOPY equals or does not equal the specified value. Possible values are: • A - ALTER • B - REBUILD INDEX • C - CREATE • D - CHECK DATA LOG(NO) (no log records for the range are available for RECOVER utility) • E - RECOVER (to current point) • F - COPY FULL YES • I - COPY FULL NO (incremental image copy) • J - REORG TABLESPACE or LOAD REPLACE • L - SQL (type of operation) • M - MODIFY RECOVERY utility • P - RECOVER TOCOPY/TOLOGPOINT/TORBA • Q - QUIESCE • R - LOAD REPLACE LOG(YES) • S - LOAD REPLACE LOG(NO) • T - TERM UTILITY command (terminated utility) • V - REPAIR CATALOG utility • W - REORG LOG(NO) • X - REORG LOG(YES) • Y - LOAD LOG(NO) • Z - LOAD LOG(YES)
DAYS	Triggers an exception if the specified utility has not been run in the specified number of days. You must specify the utility in the ICTYPE column.
CHGD_SINCE_LAST_IC	Triggers an exception if changes have been made to an object since the last image copy. **Note:** If you select this exception condition, jobs using this exception profile must be built in batch.

Group: Db2 DISPLAY status exception conditions

Exceptions can be triggered based on the results of the DISPLAY DATABASE command.

Db2 Automation Expert runs the DISPLAY DATABASE command to retrieve this information.

Table 29. Exception conditions: Db2 DISPLAY status

Stat	Description
TRIGGER_IF_1_MATCH	When ANDing conditions, select this field to trigger an object if only ONE status matches; otherwise all statuses must match.
STATUS_ACHKP	The object is in the auxiliary CHECK-pending status.

Table 29. Exception conditions: Db2 DISPLAY status (continued)

Stat	Description
STATUS_ARBDP	The object is in the advisory REBUILD-pending status.
STATUS_AREO*	The object is in the advisory REORG-pending status.
STATUS_AREOR	The object is in the advisory REORG-pending status and needs reorganization to apply pending definition changes.
STATUS_AREST	The object is in advisory RESTART-pending state.
STATUS_AUXW	Either the base table space or XML table space is in the auxiliary warning advisory status, or the LOB table space is in the auxiliary warning advisory status.
STATUS_CHKP	The object is in the CHECK-pending status.
STATUS_COPY	The object is in the COPY-pending status.
STATUS_GRECP	The object is GBP-dependent and a group buffer pool RECOVER is pending.
STATUS_ICOPY	The index space is in the informational COPY-pending advisory status.
STATUS_LPL	The object has entries in the logical page list and therefore may have a page error.
STATUS_LSTOP	The logical partition of a non-partitioning index is stopped.
STATUS_PRO	The table space partition is in the Persistent Read Only restricted status.
STATUS_PSRBD	The entire non-partitioning index space is in a page set REBUILD-pending status.
STATUS_RBDP	The physical or logical index partition is in the REBUILD-pending status.
STATUS_RBDP*	The logical partition of a non-partitioning secondary index is in the REBUILD-pending star status.
STATUS_RECP	The object is in the RECOVER-pending status.
STATUS_REFP	The object is in the REFRESH-pending status.
STATUS_REORP	The data partition is in the REORG-pending status.
STATUS_RESTP	The object is being restarted (restart-pending).
STATUS_RO	The object is started for read-only activity.
STATUS_RW	The object is started for read and write activity.
STATUS_STOP	The object is stopped.
STATUS_STOPE	The table space or index is stopped because of an invalid log RBA or LRSN in one of its pages.
STATUS_STOPP	A stop is pending for the object.
STATUS_UT	The object is started for utility processing only.
STATUS_UTRO	A utility is in process on the object that allows only RO access.
STATUS_UTRW	A utility is in process on the object that allows RW access.

Table 29. Exception conditions: Db2 DISPLAY status (continued)

Stat	Description
STATUS_UTUT	A utility is in process on the object that allows only UT access.

Group: Db2 catalog non-partitioned object exception conditions

Exceptions can be triggered based on various statistics that are contained in Db2 catalog tables.

Many of the catalog columns listed are standard catalog table columns. For specific information on the column contents, refer to the Db2 catalog table descriptions for your version of Db2 on IBM Knowledge Center.

The columns that are listed on this panel may differ depending on your version of Db2. For example, columns that were added to Db2 Version 12 tables will not appear on the panel for Db2 11 subsystems.

Columns marked with an asterisk (*) are Db2 Automation Expert exceptions that may be derived from catalog contents. These exceptions are not described with the Db2 catalog tables on the IBM Knowledge Center. The following tables provide information about these Db2 Automation Expert exceptions.

Table 30. Db2 Automation Expert-calculated non-partitioned object exceptions

Table	Exception	Description
SYSINDEXES	ONLY_NONPART_OBJ	Select this exception to apply the exceptions that are listed under SYSINDEXES only to non-partitioned indexes. Otherwise, the exceptions are applied to all partitioned and non-partitioned indexes.
SYSTABLESPACE	DAYS_SINCE_ALTERED	The number of days since the table space, tables in the table space, or associated indexes were ALTERed.
SYSTABLES	ONLY_NONPART_OBJ	Select this exception to apply the exceptions that are listed under SYSTABLES only to non-partitioned table spaces. Otherwise, the exceptions are applied to all partitioned and non-partitioned table spaces.
SYSTABLES PROFILES	PROF_UPDATED_RUNS	Triggers a table space if the timestamp in the PROFILE_UPDATE column is greater than the timestamp in the STATSTIME column in SYSTABLESPACE.
SYSTABLES PROFILES	PROF_UPDATED_RUNS2	Triggers a table space if the timestamp in the PROFILE_UPDATE column is greater than the timestamp in the STATSLASTTIME column in SYSTABLESPACESTATS.

Group: Db2 catalog partitioned object exception conditions

Exceptions can be triggered based on various statistics that are contained in Db2 catalog tables.

Many of the catalog columns listed are standard catalog table columns. For specific information on the column contents, refer to the Db2 catalog table descriptions for your version of Db2 on IBM Knowledge Center.

The columns that are listed on this panel may differ depending on your version of Db2. For example, columns that were added to Db2 Version 12 tables will not appear on the panel for Db2 11 subsystems.

Columns marked with an asterisk (*) are Db2 Automation Expert exceptions that may be derived from catalog contents. These exceptions are not described with the Db2 catalog tables on the IBM Knowledge Center. The following tables provide information about these Db2 Automation Expert exceptions.

Table 31. Db2 Automation Expert-calculated partitioned object exceptions

Table	Exception	Description
SYSLOBSTATS	FREESPACE_PCT	The percentage of available space in the LOB table space. Calculated as (FREESPACE / total allocated space) x 100.
SYSINDEXPART	PERCOFFPOS	The percentage of rows not at their optimal position because of an INSERT into a full page. Calculated as ((NEAROFFPOSF + FAROFFPOSF) * 100) / CARDF.
SYSTABLEPART	TOTINDREF	The total number of rows that have been relocated from their original page. Calculated as (NEARINDREF + FARINDREF).
SYSTABLEPART	PERCINDREF	The percentage of rows relocated from their original page. Calculated as (TOTINDREF * 100) / CARDF.
SYSTABLEPART	DROPSPACE	The number of kilobytes occupied by rows of dropped tables. Calculated as (PERCDROP * SPACEF) / 100.

Updating an exception profile

You can update an exception profile any time to add, delete, or change conditions or settings in the profile.

About this task

Procedure

1. On the **Exceptions Profile Display**, enter U in the Cmd line next to the profile you want to update.
2. If the **Exception Processing Features** window is displayed, review the information and choose whether to show or hide this window in the future. Press Enter.

   Note: If you choose to hide this window, you can reinstate its appearance by entering the **SHOW DAJ$EPRF** command on the **Select Boolean Logic Exceptions** panel.
3. If the **Boolean Logic Warning** window is displayed, review the information and choose whether to show or hide this window in the future. Press Enter.

   Note: If you choose to hide this window, you can restore the display of this window by entering the **SHOW DAJ$EPRH** command on the **Edit Exceptions Boolean Logic** panel.
4. The **Edit Exceptions Boolean Logic** panel is displayed.

   Note: If the profile is empty, the **Update Exceptions Profile Display** is displayed so that you can select exception conditions before editing them. Refer to "Creating an exception profile" on page 227.

When to use multiple exception profiles

You might need to create more than one exception profile if you need to include the same condition more than once.

In that case, create two exception profiles, each with its own conditions, then add both exception profiles to a job profile.

For example, if you want to take an image copy for objects that have never had a full image copy (ICTYPE NE F in SYSCOPY) or if the number of days since the last full image copy is greater than 14 (ICTYPE EQ F in SYSCOPY AND DAYS GT 14 in SYSCOPY), you will need to create two exception profiles.

To have more than one DSNACCOX-like exception in the same job group, use multiple exception profiles, and specify `One at a time` in the **Evaluate Multiple Exception Profiles** field in the job generation options.

Maintaining and reporting on repository statistics

The Db2 Automation Expert repository is a set of Db2 tables (one set per Db2 subsystem) that can become full over time. You can maintain the repository and review reports on the statistics using an option from the Exceptions Profile Display.

Procedure

- To maintain or report on statistics, type Y in the Display Statistics Reports and/or Perform Statistics Maintenance field on the Exceptions Profile Display and press Enter.

  The Statistics Reports and Maintenance screen, shown in the following figure, appears:

```
AUTOXPRT V1R1 --- Statistics Reports and Maintenance ---  2023/10/20  14:49:13
Option  ===>

 Number of the statistics report to be displayed
 1 - SYSCOLSTATS    2 - SYSCOLUMNS  3 - SYSINDEXES   4 - SYSINDEXPART
 5 - SYSINDEXSTATS  6 - SYSTABLES   7 - SYSTABSTATS  8 - SYSTABLEPART
 9 - SYSTABLESPACE  10 - SLOG       11 - TRIGGERS
 OR
 Letter of the statistics maintenance function.
 C - Count number of rows in DAJ Repository
 D - Delete rows in DAJ Repository
 X - Exit Statistics Reports
 --------------------------------------------------------------------------------
 Db2 Subsystem ID: SS1A     Current SQLID:            User: TWUSRA
 --------------------------------------------------------------------------------
```

Figure 149. Statistics Reports and Maintenance screen

Results

You can report on the Db2 Automation Expert table spaces listed at the top of the panel. The statistics maintenance functions are listed in the middle of the panel.

Reporting on statistics

The Db2 Automation Expert repository tables that you can generate reports on are listed on the panel.

Procedure

1. To get a report, in the Option line, enter the number listed next to the desired table and press Enter.
2. To limit the data retrieved, enter filtering data on the selection criteria window.
3. Press Enter.

   The report is displayed in a panel. The fields on the report are described in the associated help panels.

Determining the number of rows in the repository

You can use this option to determine the number of rows that are in the Db2 Automation Expert repository.

Procedure

1. On the **Statistics Reports and Maintenance** panel, type C in the **Option** line and press Enter.

   The window shown in the following figure is displayed. This window shows how many rows are in the statistics tables and the time stamp of the last time the repository was updated with statistics.

```
    Count DAJ Repository Statistics/Triggers

There are 461,854
rows in the DAJ statistics/trigger tables.

The last time the DAJ statistics/trigger tables
were updated on Db2 Subsystem SS01 is
2023-10-24-01.36.56.000000
```

Figure 150. Statistics repository information

2. Press Enter to return to the **Statistics Reports and Maintenance** panel.

Deleting rows in the repository

You can maintain the statistics repository by deleting old rows.

Procedure

1. Type D in the **Option** line on the **Statistics Reports and Maintenance** panel and press Enter.
2. On the **Enter Maintenance Deletion Criteria** window, enter the number of days that you want to keep in the repository and press Enter.

   All rows in the table older than the specified number of days are deleted.

Porting repository statistics from one Db2 subsystem to another

You can use the DAJRSTAT job that is provided in SDAJSAMP to unload Db2 Automation Expert repository RUNSTATS statistics from one Db2 subsystem and load another Db2 subsystem with the statistics.

About this task

You can also use this job to migrate statistics between Db2 versions; for example, you can migrate the statistics repository from a Db2 12 subsystem to a Db2 V13 subsystem.

Procedure

• Edit and run the DAJRSTAT sample job; the instructions are contained in the member.

  Information about the number of unloaded repository RUNSTATS statistics rows is displayed during the unload phase. Information is also provided about the number of RUNSTATS statistics rows that are loaded during the load phase.

Chapter 11. Building jobs using job profiles

Job profiles combine the object profiles and utility profiles (and optionally exception profiles) into a set.

If no exception profile is included in the job profile, then each utility is run unconditionally on each object on the object list. You can combine multiple object profiles with multiple utility profiles, and can specify the job step order for the generated job. In addition, you can customize other job settings to produce a job built to your specifications. You can also use job groups in a job profile to perform a combination of maintenance functions within a single job profile.

When you build a job profile, the output can be a batch job, or can be actions that will run in a maintenance window. From the job generation options panel, you can create and schedule a maintenance window for the actions, or you can select an existing maintenance window.

If a job profile is built for active or passive action, the job profile must contain an exception profile.

Creating a job profile

Creating a job profile involves defining the profile and then selecting the object, utility, and exception profiles to be included.

Procedure

1. On the Db2 Automation Expert main menu, enter 4 in the **Option** field and press Enter.
2. Specify selection criteria in the **Profile Like** and **Creator Like** fields, or enter the number of recently accessed profiles that you want to see in the **Recent Profiles** field, or enter values in both sets of fields. Press Enter.

   The profiles that meet your selection criteria or have been recently accessed are listed on the **Jobs Profile Display**, as shown in the following figure:

```
AUTOXPRT V1R1    ---------- Jobs Profile Display --------- 2023/10/21  15:39:43
Option  ===>                                                 Scroll ===> CSR
-------------------------------------------------------------------------------
Line Commands: B - Build  C - Create  D - Delete  E - Export  H - History
               I - Import R - Rename  U - Update  V - View
-------------------------------------------------------------------------------
 Profile Like  *                                       Db2 Subsystem: SS01
 Creator Like  DAJSAMP* Recent Profiles 00        Row 1 of 19            +>
-------------------------------------------------------------------------------

Cmd  Name                           Creator   Updt
     BEST PRACTICE FULL INCR COPY   DAJSAMPL    V
     BEST PRACTICE PBR REORG        DAJSAMPL    V
     BEST PRACTICE REORG #1         DAJSAMPL    V
     BEST PRACTICE REORG #2         DAJSAMPL    V
     BEST PRACTICE REORG #3         DAJSAMPL    V
     BEST PRACTICE REORG #4         DAJSAMPL    V
     BEST PRACTICE REORG AVOIDANCE  DAJSAMPL    V
     BEST PRACTICE RUNSTATS         DAJSAMPL    V
     CONDITIONAL EXCEPTION PROFILE  DAJSAMPL    V
```

Figure 151. Jobs Profile Display

3. On the **Jobs Profile Display**, enter C in the **Cmd** field and press Enter.

   The window that is shown in the following figure is displayed:

```
                     Enter New Jobs Profile Data

      Creator . . . . TWUSR
      Profile Name  .
      Description . .
      Update Option . U  (U - Update, V - View only, N - No access)
```

*Figure 152. **Enter New Jobs Profile Data** window*

4. On the **Enter New Jobs Profile Data** window, enter the new profile creator, a profile description, and the profile update option in the fields on the window. The **Creator** field contains your user ID, but can be modified.

5. After you complete these fields, press Enter.

   The **Generation Options** window is displayed. This window is used to specify generation options for the job profile.

What to do next

Review and update the job generation options.

Assigning a maintenance window to a job profile

When the job profile build output will be active or passive actions, a maintenance window must be associated with the job profile. You can create and schedule a maintenance window for the actions from the **Generation Options** window. You can also select an existing maintenance window.

Procedure

1. On the **Generation Options** panel, in the **Build Output** field, specify A for active actions or P for passive actions.

   Active actions are scheduled to be run when a maintenance window opens. Passive actions do not run when a maintenance window opens, but allow you to review the actions, objects, and symptoms that generated the actions on the Automation Console panels. Passive builds are intended primarily for testing purposes.

2. Select or create a maintenance window.

   a) To select an existing window, enter S in the **Maintenance Window Option** field and press Enter.

      The **Maintenance Window** panel is displayed. For more information about maintenance window selection, see "Assigning a maintenance window to a job profile" on page 307.

   b) To create a new maintenance window, enter C in the **Maintenance Window Option** field and press Enter.

      The **Create Maintenance Window** panel is displayed. For more information about creating the maintenance window, see "Creating a maintenance window" on page 304

   c) To create a new maintenance window and automatically schedule it, enter A in the **Maintenance Window Option** field and press Enter.

      A maintenance window with the same name as the job profile is created, and the **Create Timeperiod** window is displayed so that you can create a time period for the maintenance window.

      Note: When you create and auto schedule a maintenance window from job profile options, the maintenance window name cannot be changed, and only one time period can be defined and scheduled. If you need more flexibility, consider first creating the maintenance window from the Automation Console; you can then associate it with the job profile.

      After you create a time period and press Enter, the maintenance window is created, and a corresponding task is added to the Db2 administrative task scheduler.

      For more information about creating and scheduling a maintenance window, see "Creating a maintenance window" on page 304 and "Scheduling a maintenance window" on page 306.

What to do next

The name of the maintenance window assigned to the job profile is contained in the Maintenance Window field.

Once a maintenance window is associated with the job profile, you can update or view the associated maintenance window using line commands.

Updating other job generation options

Additional job generation options that apply to most job profiles allow you to customize the job when the job profile is built.

Procedure

- The second portion of the **Generation Options** window is shown in the following figure:

```
            Generation Options for TWUSR.BEST PRACTICE PBR REORG

 Option  ===>

                                                         More:     +
 Build Output. . . . . . . B (A - Active actions,
                           B - Batch job,
                           P - Passive actions)
 Maintenance Window Option    (A - Create and Auto Schedule,
                           C - Create,
                           S - Select,
                           U - Update,
                           V - View,
                           Blank)
 Maintenance Window:
 Reorganization Avoidance Performance Window Options:
    Select Performance Window    N (Yes/No, C - Clear)
    Selected Performance Window
    Collection Duration  . . . .         (Number of days)
 Update Setup Override Options  . . . . . N (Yes/No)
 Update Template/Listdef/Option parms . . N (Yes/No)
 Update Job Group Break Down Options  . . N (Yes/No)
 Update Notifications . . . . . . . . . . N (Yes/No)
 Automatically Gen GDG Base . . . . . . . 000 (0-999 Limit)
 Load Balance jobs by . . . . . . . . . . N (T - Time, D - Dasd, N - None)
 Capture run times for Load Balancing . . N (Yes/No)
 Start spaces in Utility/Read Only  . . . N (N - No, U - Utility,
                                            R - Read only)
 Prefix Utility ID with jobname . . . . . N (J - Job, S - Step, B - Both,
                                            N - No)
 Set JCL member equal to jobname  . . . . N (Yes/No)
 Generate Job when Errors encountered . . Y (Y - Yes, N - No, W - Warnings)
 Preview Exception Report . . . . . . . . N (Y - Yes, N - No)
 Evaluate Multiple Exception Profiles . . A (A - All, O - One at a time)
 Recall Migrated Spaces . . . . . . . . . N (Yes/No)
 Use DSNACCOX Exception Table . . . . . . N (Yes/No)
 Include Job Registration Step. . . . . . Y (Yes/No)
 Suppress Build Message DAJB134I  . . . . N (Y - Yes, N - No)
 Utility work dataset high level  . . . . PDBJB    Optional
 Utility work dataset second qualifier .          Optional
 Pre-Generation User Exit Name. . . . . .          Optional
 Post-Generation User Exit Name . . . . .          Optional
 Control Card Dataset. . . . .
    Control Card Member Name Prefix . . .         Optional
 Retrieve Jobcard  Dataset . .
                Member  . .
 Jobname Template                         (Tt,O..,#..,%..,Pppp,D..)
    Override byte    1 2 3 4 5 6 7 8
 Static Job Build Dataset
                Member
```

*Figure 153. **Generation Options** window*

These fields allow you to set specific options that affect how the Db2 Automation Expert jobs are built. The following describes the options that you can set:

Reorganization Avoidance Performance Window Options:

> **Note:** These fields can only be edited when the setup parameters for Db2 Query Monitor have been specified (using Tools Customizer or option 0.7 from the Db2 Automation Expert main menu).

Select Performance Window
This field allows you to select the performance window for the current job. The performance window is the period of time when you expect that the most significant queries will be run. To select a performance window, type Y in this field and press Enter. To clear the current performance window, type C and press Enter.

Selected Performance Window
This field contains the name of the performance window that is selected for this job profile, if specified.

Collection Duration
Enter the number of days that Db2 Query Monitor should continue to monitor objects that are included in this build. If this number of days is reached before the job profile is rebuilt, Db2 Query Monitor stops monitoring the objects.

Select Maintenance Window
The **Select Maintenance Window** field allows you to select the maintenance window in which the output from a build is scheduled to run. A maintenance window must be specified for active or passive builds. To select a maintenance window, type Y in this field and press Enter. To clear the current maintenance window, type C and press Enter.

Selected Maintenance Window
If a maintenance window was selected, this field contains the name of the maintenance window.

Update Setup Override Options
To override the options that are configured in the Db2 Shared Profile Support setup panel, type Y in this field and press Enter.

Update Template/Listdef/Option parms
To define parameters for Db2 LISTDEF and TEMPLATE utility control statements, type Y in this field and press Enter.

Update Job Group Break Down Options
To specify how many objects are placed in a job group or step, and other job breakdown options, type Y in this field and press Enter.

Update Notifications
Type Y in this field to select an event notification profile to use for this job profile. When you select an event notification profile from the job generation options, it is assigned to the job profile and overrides any default event notification profile that was selected by using option 9 - Event Notifications from the **Automation Console**. For more information, see "Specifying the default event notification profile for job profiles" on page 320.

Automatically Gen GDG Base
This field allows Db2 Automation Expert to automatically create a GDG base for image copy data sets if the base does not exist. Type a GDG limit in this field. If you specify a GDG limit in this field and also specify the TEMPLATE option for COPY utilities, the GDG base creation step is only included if the GDG base does not exist. If you type 0, GDG bases are not automatically created. If your site is not SMS-managed, and you are required to include a model DSCB in your JCL, then the model DSCB name must be entered in the **Enter Db2 System Parameters** screen.

Load Balance jobs by
Use this field to specify how Db2 Automation Expert load balances utilities. Type T to load balance by time; you can use this option only for COPY, COPYTOCOPY, REORG, and MODIFY jobs and only if Db2 Automation Expert previously captured run times for load balancing. If there are no statistics, balancing by data set is done. Type D to load balance utilities by DASD. This option uses physical object size from the ICF catalog, where total space allocated for the object data set is used in the load balancing algorithm. The default is N, or no load balancing.

Capture run times for Load Balancing

Type Y in this field to save COPY, COPYTOCOPY, REORG, and MODIFY utility runtime statistics for use in load balancing.

Start spaces in Utility/Read Only

Indicate how spaces are to be started before the utilities are run. Type U in this field to start spaces with utility-only access. Type R to start spaces with read-only access. Type N to start spaces with read/write access. Spaces are restarted with read/write access after the utilities are complete.

Prefix Utility ID with jobname

Specify whether the utility ID is prefixed with job name, step name, both, or none. Type J to specify job; the utility ID is JOBNAME.UTILID Type S to specify step; the utility ID is STEPNAME.UTILID Type B to specify both; the utility ID is JOBNAME.STEPNAME.UTILID. Type N to specify none; only the UTILID is used.

Set JCL member equal to jobname

If you want to name the JCL member that is generated by Db2 Automation Expert the same as the job name in the job card, type Y in this field.

Generate Job when Errors encountered

Indicate how you want Db2 Automation Expert to proceed if errors are encountered during job generation. Type Y to generate the job even if errors (return code 8) or warnings (return code 4) are encountered. Type W to allow job generation when warnings are encountered, but not when errors are encountered. If you type N, no JCL is generated if errors or warnings are encountered.

Preview Exception Report

Type Y in this field to preview the objects that would be triggered by exception processing without generating JCL. When this option is set to Y, the build JCL is generated as a batch job. When the batch build job is run, exception processing triggers objects as usual. However, no utility JCL is generated and the SYSOUT DD in the job output displays the triggered objects report. This option allows you to create a job profile that contains only object profiles and exception profiles, but still see which objects get triggered by exception processing.

Evaluate Multiple Exception Profiles

Indicate how you want multiple exception profiles in a jobs profile evaluated. Type A to process all exception profiles together as one conglomerate exception profile. All specified exceptions are merged into one exception profile and all AND exception conditions in all the profiles must be met in order for an object to be triggered. Type 0 to process each exception profile one at a time. Only exception conditions within each profile are evaluated. Conditions in other exception profiles are not taken into account. Exception conditions that are met in any one of the exception profiles trigger an object.

Recall Migrated Spaces

Type Y to have migrated spaces recalled during the job build. When spaces have been migrated to tape, HRECALLs are issued when the job is built. The recalls are organized for maximum tape mounting efficiency. HSM queues the requests and recalls all the spaces that exist on same backup tape with one tape mount.

Note: The Db2 Automation Expert build process issues an HRECALL command for every migrated data set. The build process does not wait for the RECALL process to end.

Use DSNACCOR Exception Table

Type Y to exclude objects by using the information from the DSNACCOR exception table. The DSNACC.EXCEPT_TBL is an optional, user-populated table that contains objects that are to be excluded from utility processing. ERP applications, such as SAP, take advantage of the exception table to exclude certain table spaces from being selected for RUNSTATS, even though these table spaces might have certain true exception profile criteria. If you specify Y in this field, during the BUILD phase, Db2 Automation Expert looks at the DSNACC.EXCEPT_TBL table (if it exists) to avoid placing the inserted object names in the generated utility jobs. For more information about creating and populating the table, refer to the Db2 utility guide for your version of Db2. Only the following QueryType values are supported by Db2 Automation Expert:

```
COPY REORG RUNSTATS
```

SAP creates and inserts rows for SAP objects and utilities to be bypassed.

Include Job Registration Step
Type Y to include the registration step for job tracking in your generated jobs.

Utility work dataset high level
Type a high-level qualifier to be used with utility work data sets. This field is optional. If a value is not specified, temporary data sets are used.

Utility work dataset second qualifier
Type a second qualifier to be used with utility work data sets. This field is optional. If you specify a value in this field, you must also specify a value for the Utility work dataset high level qualifier. If specified, a value in this field overrides the default of job name for the second qualifier.

Pre-Generation User Exit Name
If you want to invoke a user exit before the JCL and control card generation stage of the build process, enter the member name of the load module. The load module must be accessible to Db2 Automation Expert.

Post-Generation User Exit Name
If you want to invoke a user exit after the JCL and control card generation stage of the build process, enter the member name of the load module. The load module must be accessible to Db2 Automation Expert.

Control Card Dataset
If you want Db2 Automation Expert to write build control cards to members of a partitioned data set based upon the step name, type the data set name. The generated JCL will include these members via SYSIN DD. The data set must be a PDS and must exist.

Control Card Member Name Prefix
Use this field to specify the first 5 characters of member names that are created in the control card data set. If you specify a 1-3 character prefix, a 5-character string representing the job number and step number is generated. If a 4-5 character prefix is specified, a 3 or 4 character string consisting of alphanumerics is generated.

Retrieve Jobcard
This field allows you to specify a data set containing a customized job card and comments that Db2 Automation Expert can include in the generated jobs. Type the data set name and member name (if a PDS). The data set can include one job card and as many comment cards as you want. Db2 Automation Expert generates a unique job name by incrementing the last character of the job name that is provided in the job card.

Jobname Template Override Byte
Use this field to specify how Db2 Automation Expert generates unique job names.

If the job name is unique, then multiple jobs can run concurrently. This can help you if you have a small batch window to run all maintenance-type utilities in as small a window as possible for applications that require high availability.

The template job name, which is supplied in the job card, affects the character substitution process, as it establishes the starting point for the sequence of characters that get generated in the resulting job names. Each character in the original job name is replaced by the values you specify in the Override byte field.

If an override byte is left blank, the character in that position of the original job name is used.

Type T in up to 2 bytes to replace the job name characters with the object type of the first object of the job. If you specify one T, the result is T for table space or I for index space; if you specify two Ts, the result is TS for table space or IX or indexspace.

Type 0 in up to all 8 bytes to replace the job name with the object name of the first object in the job.

Type the hash sign (#) to increment a numerical value in the specified position by 1.

Type the percent sign (%) to increment an alphanumeric value by 1. Values that are used are A - Z and 0 - 9; no special characters are used.

Note: If you set the eighth byte to %, and more job names are required than can be generated by using A-Z and 0-9 in the eighth byte, Db2 Automation Expert increments the seventh byte by one and begins again. For example, if you set the override to ABCDEFG%, the job naming starts with ABCDEFGA, and continues to ABCDEFG9. If more jobs are required, the seventh character is incremented (G to H in this case). The job naming continues with ABCDEFHA and continues from there.

Type P in up to 4 bytes to replace the job name characters with the partition number of the first object of the job. If in an object profile all partitions of a space are selected, either individually or wildcarded, the partition variable lists the first partition (0001). If all the partitions of a space are not selected, the lowest-numbered partition included is the partition variable. For non-partitioned spaces, the result is 0000.

Type D in up to all 8 bytes to replace the job name with the database name of the first object in the job.

Static Job Build Dataset and Member
If specified, these fields override the JCL generation data set and member name specified at build time. These fields are dependent on the **Set JCL member equal to jobname** field; if set to Yes, and the static job build data set name is provided, the member name must be left blank. If the **Set JCL member equal to jobname** field is set to No and the static job build data set name is provided, a valid member name must be provided. The data set entered in this field must exist. The member does not have to exist; if it does not exist, it will be created when the job is generated.

What to do next
When you finish entering the job generation options, press PF3. The next step is to add object, utility, or exception profiles to the job profile, or to add a new group to the job profile.
Related tasks
Adding object profiles
One or more object profiles can be added to the job profile.

Adding exception profiles
One or more exception profiles can be added to the job profile.

Adding utility profiles
One or more utility profiles can be added to the job profile.

Adding job groups
You can use job groups in a job profile to perform a combination of maintenance functions within a single job profile. Each group of object, exception, and utility profiles within a job profile can be thought of as a separate job profile that executes independently of the other groups within the job profile.

Overriding job setup options

Some job parameter options that have been configured on the Setup panels can be overridden.

About this task

When a job is built, some job parameters are derived from defaults that are input on the **Db2 Shared Profile Support - Update Parameters** screen. If needed, these values can be overridden a per job basis by updating the job profile and accessing the **Override Setup Options** screen.

Procedure

- To override these parameters, type Y in the **Update Setup Override Options** field on the **Generation Options** window.

  The following window is displayed:

```
                    Override Setup Options for TWUSR.DAJ V11

  Option  ===>                                          Scroll ===> CSR
                          Current Setup values             Override values
                                                              More:      +
    Work File Unit  . . .: SYSDA    (SYSDA, DISK, etc.)  . .
    Sort Work File Unit  : SYSDA    (SYSDA, DISK, etc.)  . .
    Job Track Db2 SubSys : ST43  . . . . . . . . . . . .
    Max Prim Space Alloc : 999999   (1-999999) T  (T,C,M)
    Secondary Alloc Perc : 010  . . (1-999)% of Prim Space
    Utility REGION Size  : 0008   . (0-2047)   M - (Megab)         M
    Db2 Fetch Buffer Size: 0004 . . (1-256)    M - (Megab)         M
    Parallel MVS Cat LOCs: 25 . . . (1-99) . . . . . . . .
    Term Utility if ABEND: N  . . . (Yes/No) . . . . . . . .
    Generate STEPLIB DDs : Y  . . . (Yes/No) . . . . . . .
    Gen Copy DSNs in GMT : Y  . . . (Yes/No) . . . . . . . .
    Exp IXs w/DEFN NO TSs: N  . . . (Yes/No) . . . . . . . .
    Altered Obj Adjustmnt: A  . . . (All/Part) . . . . . . .
    Build Info  Msg DD   : DAJERROR (8 Character Name) . . .
    Build Warn  Msg DD   : DAJERROR (8 Character Name) . . .
    Build Error Msg DD   : DAJERROR (8 Character Name) . . .

    Entering the following fields will override the calculated amount of Sort
    Work DD's space quantities and/or the number of DD's generated in the job
    Prim SortWork Space  :         . (1-99999)  C  (Cyls) . .
    Second SortWork Space:         . (1-99999)  C  (Cyls) . .
    Nbr of SortWork DDs  :      . . (1-99) . . . . . . . . .

    A blank Current Setup value indicates no value specified on Setup panel.
```

*Figure 154. **Override Setup Options** window*

This window lets you alter these setup values for only the selected job profile. Any value can be overridden. The setup values are shown on the left, and you can enter new values on the right side of the window. When you alter these values, the new values are used when the job is built. The changes remain in effect for all future builds of the job profile until you remove the override.

For specific information about these values, refer to "Entering job generation defaults and other product parameters" on page 101.

Specifying LISTDEF, TEMPLATE and OPTIONS utility control statements

Db2 Automation Expert can build LISTDEF, TEMPLATE and OPTIONS utility control statements.

About this task

Db2 Automation Expert can build syntax for the following utility control statements:

- The LISTDEF control statement defines a list of objects and assigns a name to the list.

  Restriction: LISTDEFS will not be generated for Db2 Recovery Expert image copy utility jobs.

- The TEMPLATE utility control statement lets you allocate data sets, without using JCL DD cards, during the processing of LISTDEF list. TEMPLATE syntax can only be built for COPY, COPYTOCOPY, and REORG TABLESPACE utilities.

  Restriction: TEMPLATE syntax cannot be generated for Db2 Recovery Expert image copy utility jobs.

- The OPTIONS utility control statement specifies processing options that are applicable across many utility executions in a job step.

Procedure

- To specify LISTDEF, TEMPLATE or OPTIONS syntax, on the **Generation Options** window, type Y in the **Update Template/Listdef/Option parms** field and press Enter.

  The window in the following figure appears:

```
            Utility Parms for TWUSR.DAJ 11

Option  ===>

Generate Templates. . . . . . . Y     (Yes/No)
Generate Listdefs . . . . . . . Y     (Yes/No)

Generate OPTION Statement:
 Preview Only . . . . . . . . . N     (Yes/No)
 Continue on Item Error . . . . N     (Yes/No)
 Return Code 0 on Warnings. . . N     (Yes/No)
```

Figure 155. Utility Parms window

This window allows you to specify the options described in the following section:

Generate Templates
Type Y in this field to generate COPY, COPYTOCOPY, or REORG TABLESPACE utility control statements using the TEMPLATE syntax. Y is also required in this field if you are specifying LISTDEFS for any other utility.

Generate Listdefs
Type Y in this field to generate utility control statements using LISTDEFS. If you want to use LISTDEFS, you must also specify Y in the Generate Templates field.

Preview Only
Type Y in this field to execute in PREVIEW mode. PREVIEW mode checks for syntax errors in all utility control statements, but normal utility execution does not take place. If syntax is valid, the utility expands all LISTDEF lists and TEMPLATE DSNs that appear in SYSIN and prints results to the SYSPRINT data set.

Continue on Item Error
Type Y in this field to continue processing if an error message with return code 8 is received. This event does not include abnormal terminations (ABENDS).

Return Code 0 on Warnings
Type Y in this field to lower the final return code of a single utility invocation that ends in a return code 4 to a return code of 0. Use this field to force a return code of 0 for warning messages.

> ⚠️ **CAUTION:** Specifying this option should generally be avoided. Warning messages document situations that generally should not be disregarded. Use this option only when return code 4 is expected, is acceptable, and other mechanisms are in place to validate the results of a utility execution.

Specifying job group breakdown options

The **Job Group Breakdown Options** window allows you to set specific options that affect how each job group is built. You can specify how many objects are included per job group or job step, the maximum number of jobs built per job group, and whether jobs should be padded if the maximum is not reached.

About this task

Important: Because each job group is treated as an individual job profile and results in a separate job, these breakdown options are applied to each job group. In addition, a job group is treated as a single job group if there is one of each profile type (object, utility, and optionally exception) in the job profile. If there is more than one of each profile in a job group, more than one set of jobs is generated. In this case, the job group breakdown options apply to each SET of jobs that are generated for the job group.

For example, if a job group has one object profile, two exception profiles, and one utility profile, two sets of jobs are typically produced: a set of jobs that runs a utility on objects that meet the first exception profile's criteria; and another set that performs the same utility on a set of objects that meets the second exception profile's criteria. In this case, job breakdown options apply to each set. If **Maximum number of jobs** is set to 2, each set that met the exception profile's criteria can generate up to two jobs. In this

scenario, up to four jobs in total might be generated for the entire job group (two jobs x two exception profiles).

To access these options, on the Generation Options window, type Y in the **Update Job Group Break Down Options** field and press Enter. The **Job Group Breakdown Options** window appears, as shown in the following figure:

```
              Job Group Breakdown Options

 Option  ===>

 Maximum nbr of jobs . . . . . . . . . . 1     (0-999)
 Maximum nbr of objects per job group. . 0     (0-99999)
 Maximum nbr of objects per step . . . . 99999 (0-99999)
 Pad Jobs if max not exceeded. . . . . . Y     (Yes/No)
```

Figure 156. Job Group Breakdown Options window

This window allows you to specify the options described in the following section:

Maximum nbr of jobs
Type in the maximum number of unique jobs that you want to be generated per job group. If you type 0, Db2 Automation Expert will determine the appropriate number of unique jobs based on the value in the Maximum nbr of objects per job field.

Db2 Automation Expert honors the job breakdown options unless the z/OS limit on steps overrides them. If the given constraints (such as one object per step or the z/OS limit on the number of steps allowed per job) force Db2 Automation Expert to generate more than this maximum, Db2 Automation Expert will create more than the maximum. You must adjust your settings to maintain this maximum. You can allow a higher maximum number of jobs (Db2 Automation Expert can pad with IEFBR14 dummy jobs to make up the difference if not needed) or allow more objects per step.

Note: If you specify one member with multiple jobs, you will not be able to use the restartability feature.

Maximum nbr of objects per job group
If you want to limit the number of objects included in each job group, enter the limit here. You can use this field with the Maximum nbr of jobs field to control how many jobs are generated per job group.

Maximum nbr of objects per step
If you want to specify how many objects are included in each job step, enter the limit here. Type 0 to allow Db2 Automation Expert to determine the number of objects in each step. Type 9999 to include all objects in a single step.

Note: To generate image copies of directory and catalog spaces to stacked tape, this field must be set to 1.

Pad Jobs if max not exceeded
Y in this field specifies that when the number of jobs generated is less than the maximum number of jobs specified in the Maximum nbr of jobs field, additional dummy jobs are created to meet the maximum number. For example, if the max number of jobs is 10 and only eight jobs are generated, two dummy jobs will also be generated. The dummy jobs contain JCL for the IEFBR14 program.

Adding object profiles

One or more object profiles can be added to the job profile.

Procedure

1. On the **Adding Profiles to the Job Profile** window, type Y in the **Add Objects Profiles** field and press Enter.

2. On the **Objects Profile Display**, enter selection criteria in the **Profile Like** and **Creator Like** fields, or enter the number of recently accessed profiles that you want to see in the **Recent Profiles** field, or enter values in both sets of fields. Press Enter.

   The profiles that meet your selection criteria or have been recently accessed are listed on the **Objects Profile Display**.

3. Enter S in the **Cmd** field next to the object profile that you want to include in the job profile and press Enter.

   A message is displayed confirming that the profile that you selected has been added to the job profile.

4. Select additional object profiles as required.

5. When you finish selecting object profiles, press PF3. The **Update Jobs Profile Display** is displayed, showing the object profiles that you selected.

Adding exception profiles

One or more exception profiles can be added to the job profile.

About this task

If a job profile is built for active or passive action, the job profile must contain an exception profile.

Procedure

1. On the **Adding Profiles to the Job Profile** window, type Y in the **Add Exception Profiles** field and press Enter.

2. On the **Exceptions Profile Display**, enter selection criteria in the **Profile Like** and **Creator Like** fields, or enter the number of recently accessed profiles that you want to see in the **Recent Profiles** field, or enter values in both sets of fields. Press Enter.

   The profiles that meet your selection criteria or have been recently accessed are listed on the **Exceptions Profile Display**.

3. Enter S in the **Cmd** field next to the exceptions profile that you want to include in the job profile and press Enter.

   A message is displayed confirming that the profile that you selected has been added to the job profile.

4. Select additional exception profiles as required.

5. When you finish selecting exception profiles, press PF3. The **Update Jobs Profile Display** is displayed, showing the exception profiles that you selected.

Adding utility profiles

One or more utility profiles can be added to the job profile.

Procedure

1. On the **Adding Profiles to the Job Profile** window, type Y in the **Add Utilities Profiles** field and press Enter.

2. On the **Utilities Profile Display**, enter selection criteria in the **Profile Like** and **Creator Like** fields, or enter the number of recently accessed profiles that you want to see in the Recent Profiles field, or enter values in both sets of fields. Press Enter.

   The profiles that meet your selection criteria or have been recently accessed are listed on the **Utilities Profile Display**.

3. Enter S in the **Cmd** field next to the utility profile that you want to include in the job profile and press Enter.

   A message is displayed confirming that the profile that you selected has been added to the job profile.

4. Select additional utility profiles as required.

5. When you finish selecting utility profiles, press PF3. The **Update Jobs Profile Display** is displayed, showing the utility profiles that you selected.

Adding job groups

You can use job groups in a job profile to perform a combination of maintenance functions within a single job profile. Each group of object, exception, and utility profiles within a job profile can be thought of as a separate job profile that executes independently of the other groups within the job profile.

About this task

Before you create and use job groups, note the following:

- When a job profile is created, a default job group name of DEFAULT GROUP #1 is assigned. If no other job groups are created in the job profile, all profiles within the existing job profile are part of the default job group.

- The **Excp Rule - Accepted** and **Excp Rule - Rejected** fields on the **Update Jobs Profile Display** allows you to control which utility profile applies to the accepted and rejected objects returned from exception processing. The exception rules that are defined in a job group override the exception rule that is defined in a utility profile.

- When a job profile contains multiple job groups, job generation and breakdown options are applied to each group individually.

- A job group is treated as a single job group if there is one of each profile type (object, utility, and optionally exception) in the job profile. If there is more than one of each profile in a job group, more than one set of jobs is generated. In this case, the job group breakdown options apply to each SET of jobs that are generated for the job group. Refer to "Specifying job group breakdown options" on page 275 for detailed information.

Example

You can use a single job profile to generate different image copy utility JCL for a set of table spaces based on a set of exceptions. Some of the table spaces might meet the exception criteria; those spaces would require a full image copy utility generated. The remaining table spaces that do not meet the exception criteria for a full image copy could have an incremental image copy utility generated. One job profile that uses a job group and the exception rules fields in the job profile can generate the JCL for both utilities.

Adding a job group to a job profile

About this task

When a job profile is created, a default job group name of DEFAULT GROUP #1 is assigned. If no other job groups are created in the job profile, all profiles within the existing job profile are part of the default job group. You can change the name of the default group profile or any job group added to the job profile.

Procedure

1. On the **Adding Profiles to the Job Profile** window, type Y in the **Add A Group** field and press Enter.

   The **Update Jobs Profile Display** is displayed, with a message that explains how job options apply to multiple job groups. Press Enter to continue.

2. Optional: The new job group is named DEFAULT GROUP #n. You can change it by editing the field.

3. In the **Cmd** field next to the new job group, enter A to add object, utility, and exception profiles to the group.

4. When you finish adding all of the profiles that you want to include in the group, ensure that the utilities are in the order that you want the job steps to be generated. Use the Order column to rearrange the order.

5. If you included an exception profile and want to associate a particular utility profile in the group with the objects that are accepted or rejected by exception processing, enter the corresponding utility profile number in the **Excp Rule - Accp** or **Excp Rule - Rjct** fields. For more information, press PF1 for help.

6. When you are finished editing the job group, press PF3 to save and exit.

Viewing the profiles included in the job profile

You can use the **Update Jobs Profile Display** to see the object, utility, and exception profiles that are included in the job profile, and how the profiles are grouped. You can also build the job from this panel.

The **Update Jobs Profile Display** is shown in the following figure:

```
AUTOXPRT V1R1   ------ Update Jobs Profile Display ------ 2023/10/21  15:50:06
Option  ===>                                              Scroll ===> CSR
------------------------------------------------------------------------------
Commands: Build - Build job profile.
Line Commands: V - View  A - Add  D - Delete  U - Update  R - Repeat
            G - show/hide Group
------------------------------------------------------------------------------
Creator: TWUSR        Profile: GROUPING                      User: TWUSR
                                                    Db2 Subsystem: SS01
------------------------------------------------------------------------------
Share Option U  (U - Update,    Description
                 V - View,
                 N - No)
Update Job Generation Options N  (Yes/No)  Row 1 of 9           +>
------------------------------------------------------------------------------
          Excp Rule
Cmd   Order  Accp Rjct  Type  Name                           Creator
        1                GRP   DEFAULT GROUP #1               DAJ
        1                OBJS  DLC OBJECTS                    TWUSR
        2      3    4    EXCP  IC 10 DAYS SINCE LAST          TWUSRA
        3                UTIL  FULL IMAGE COPY                TWUSRA
        4                UTIL  INCREMENTAL IMAGE COPY         TWUSRA
```

Figure 157. Update Jobs Profile Display

The **Type** field identifies the type of profile. The following profile types are valid:

- GRP is a job group profile.
- OBJS is an object profile.
- UTIL is a utility profile.
- EXCP is an exception profile.

You can add, delete, update, or view the profiles in the job profile by using the appropriate line commands. You can also build the job from this panel by entering BUILD in the **Option** line.

Building a job profile for automated utility execution

After a maintenance window has been assigned to the job profile, you must build the job profile to generate the actions that will be run during the maintenance window.

Procedure

1. On the Db2 Automation Expert main menu, enter 4 in the **Option** field and press Enter.
2. On the **Jobs Profile Display**, enter selection criteria in the **Profile Like** and **Creator Like** fields, or enter the number of recently accessed profiles that you want to see in the **Recent Profiles** field, or enter values in both sets of fields. Press Enter.
3. Enter B in the **Cmd** line next to the job profile that you want to build and press Enter.
4. On the **Maintwindow Build for** window, complete the fields.

You can build the job online or generate the job build as a batch build. You can also schedule the job build using the Db2 administrative task scheduler. Both of these are similar to building a JCL job profile online or in batch. For more information, see "Building a job online " on page 281 and "Building a JCL job in batch" on page 290.

5. After you complete the fields, press Enter.

Results

If the build is successful, the actions are scheduled in the selected maintenance window.

Viewing maintenance window builds and actions for a job profile

After you build the job profile, if the build generated active or passive actions, you can see the results of the build on the **Job Profile Execution History** panel.

About this task

You can also view the actions by entering the H line command on the **Jobs Profile Display** next to a job profile that is configured for active or passive actions.

Procedure

1. Access the list of actions for this job profile by:
   - After building the job profile, when the build completes, the build is displayed on the **Job Profile Execution Display** panel.
   - On the **Jobs Profile Display**, enter H next to the job profile and press Enter.

2. The **Job Profile Execution History** panel is shown in the following figure:

```
AUTOXPRT V1R1  -----   Job Profile Execution History ---- 2023/11/08  18:50:11
Option  ===>                                              Scroll ===> CSR
Line Commands: A - View Actions  O - View Output  W - Maintenance Window
------------------------------------------------------------------------------
Profile    : RCP CHECKS FULLJOB6740                   Db2 Subsystem: SS01
Creator    : CSDAJ9
Description:                                  Row 16 of 43            -+>
------------------------------------------------------------------------------
Cmd  Proc_Name               Retcd Start_TS
     MAINTWINDOW BUILD         0     2023-11-02-10.55.19.465789
     MAINTWINDOW BUILD         0     2023-10-30-16.36.18.574801
     MAINTWINDOW BUILD         0     2023-10-30-16.31.06.535640
     MAINTWINDOW BUILD         0     2023-10-30-14.56.43.787145
     MAINTWINDOW BUILD         0     2023-10-30-14.46.24.933718
     MAINTWINDOW BUILD         0     2023-10-30-13.43.48.806884
     MAINTWINDOW BUILD         0     2023-10-27-19.43.48.020247
     MAINTWINDOW BUILD         0     2023-10-27-18.59.02.437162
     MAINTWINDOW BUILD         0     2023-10-26-23.07.24.369704
     MAINTWINDOW BUILD         0     2023-10-26-17.37.54.507514
     MAINTWINDOW BUILD         0     2023-10-26-17.31.09.715804
     MAINTWINDOW BUILD         0     2023-10-26-14.44.53.363185
     MAINTWINDOW BUILD         0     2023-10-26-14.44.42.367709
```

*Figure 158. **Job Profile Execution History** panel*

3. To view actions generated by the automated build:

   a) Enter A next to a build and press Enter.

   If actions were generated, the **Maintwindow Actions** panel is displayed. This panel shows the actions generated by object.

   b) When you have finished reviewing the actions, press PF3 (END).

4. To view the output from the automated build:

   a) Enter the letter O next to a build and press Enter.

The **Maintwindow Execution Output** panel is displayed. This panel shows error messages that were issued during the procedure and the stored procedure output.

b) When you have finished reviewing the output, press PF3 (END).

5. To view the maintenance window associated with the job profile build:

a) Enter W next to a build and press Enter.

The **Maintenance Windows** panel is displayed. This panel shows the maintenance window that was assigned to the job profile build.

b) You can manage the maintenance window from this panel. For more information, see

c) When you have finished reviewing the maintenance window, press PF3 (END).

Building a job online

When you build a job, Db2 Automation Expert does one of the following: constructs a JCL job to run utilities on the objects that are specified in the object profile; schedules active actions to be run during the next maintenance window; or inserts passive actions into the action list, but does not schedule them. If you included an exception profile in the job profile, Db2 Automation Expert checks for exceptions during the job build. If a job profile is built for active or passive action, the job profile must contain an exception profile.

About this task

This topic describes building a job online that results in a JCL job. For building a job that generates active and passive actions, see .

Procedure

1. On the Db2 Automation Expert main menu, enter 4 in the **Option** field and press Enter.

2. On the **Jobs Profile Display**, enter B in the Cmd line next to the profile you want to build and press Enter.

   The window shown in the following figure is displayed:

```
                    Build Job for TWUSR.DAJ-13630

 Build Online or Batch. . O (O - Online, B - Batch)
 Schedule Job . . . . . . N (Yes/No)   Update options . . N (Yes/No)

 JCL Output Options:
  Edit Generated Job . . . Y (Yes/No)
  Build job in Data set. . TWUSR.DAJ.TEST
               Member . . V11 TS

  Job Cards:
 ==> //JOBCARD JOB TWUSRA,CLASS=A,NOTIFY=&SYSUID
 ==> //*
 ==> //*
 ==> //*
```

Figure 159. Build Job window

3. To build online, enter the letter O in the **Build Online or Batch** field.

4. To schedule a JCL job, enter Y in the **Schedule Job** field.

   Note: You cannot schedule an online job build for automated utility execution.

   For more information about scheduling a job, see .

5. To edit the generated JCL job, enter Y in the **Edit Generated Job** field.

6. Enter a valid data set and member name for the generated JCL job in the Build job in Data set and Member fields.

Scheduling the job for the Db2 administrative task scheduler

When building a Db2 Automation Expert job profile or UNLOAD utility job, you can specify to schedule the utility job via the Db2administrative task scheduler.

The **Schedule Db2 Admin Task** panel allows you to define the options for a task to be scheduled to run via the Db2 administrative task scheduler.

The **Schedule Db2 Admin Task** panel is shown in the following figure:

```
AUTOXPRT V1R1   -------- Schedule Db2 Admin Task -------- 2023/10/21  15:54:09
Option   ===>                                          Scroll ===> CSR
------------------------------------------------------------------------------
Commands: CANCEL - Exit without saving changes.
------------------------------------------------------------------------------
                                                  Db2 Subsystem: SS1A
Task Name  . . . . AUTOMATION EXPERT UTIL: &JOBNAME                  >
Task Description                                                     >
                                                      More:     +
Begin Timestamp  . . &CURRENT                   (Db2 Timestamp)
End Timestamp  . . . 2023-10-21-16.10.22.340221 (Db2 Timestamp)
Max Invocations  . . 1          (Integer, Blank)
SSID . . . . . . . . SS1A       (Blank for any datasharing member)
Job Wait . . . . . . Y          (Y - Yes, N - No, P - Purge)
Execution Threads. . 001        (Integer)

Invocation Options:
  Interval (minutes)            (Integer, Blank)
        -Or-
  Trigger:
    Task Name . . .                                          >
    Cond  . . . . .             (GT,GE,EQ,LT,LE,NE)
    Code  . . . . .             (Integer, Blank)
        -Or-
  Point in Time . .                                          >
```

*Figure 160. **Schedule Db2 Admin Task** panel*

The following describes the fields on the **Schedule Db2 Admin Task** panel:

Task Name
(Required) Enter a unique task name to differentiate this from other Db2 administrative task scheduler tasks. The following variables are allowed to ensure unique task names when multiple jobs are created:

- &JOBNAME resolves to the actual job name for the JCL job.
- &PROFILE resolves to the job profile name.
- &SEQ resolves to a sequential number that is incremented when referenced.
- &TIMESTAMP resolves to the Db2 timestamp returned from the CURRENT TIMESTAMP when the job is added to the Db2 administrative task scheduler.

Task Description
Enter a description for the task.

Begin Timestamp
If you want the task to execute at a specific starting time, enter it in the format CCYY-MM-DD-HH.MM.SS.thmiju. If not specified, the task may be executed immediately. The variable &CURRENT can be specified to use the current timestamp when the job is added to the Db2 administrative task scheduler. &CURRENT can be combined with any valid Db2 timestamp expression to specify a future time. For example:

```
&CURRENT + 5 DAYS
&CURRENT + YEAR
```

End Timestamp
If you want the task to end at a specific time, enter it in the format CCYY-MM-DD-HH.MM.SS.thmiju. If not specified, the task may be executed as scheduled indefinitely. The variable &CURRENT can be specified to use the current timestamp when the job is added to the Db2 administrative task

scheduler. &CURRENT can be combined with any valid Db2 timestamp expression to specify a future time. For example:

```
&CURRENT + 5 DAYS
&CURRENT + YEAR
```

Max Invocations

Enter the maximum number of times this task can be executed. If not specified, there is no limit to the number of executions.

SSID

Enter a particular subsystem that should execute the task. If not specified, the task may execute on any member of a data sharing group.

Job Wait

Indicate whether the job can be executed synchronously. Valid values are:

- Y: Synchronous execution
- N: Asynchronous execution
- P: Synchronous execution, after which the job status in z/OS is purged.

Execution Threads

Enter the number of parallel tasks to schedule.

Invocation Options

Select one of the following invocation options.

Interval (minutes)

Specify the time in minutes to execute a repeating task.

Trigger

These fields allow you to define the parameters that cause the task to be triggered.

Task Name

Specify another Db2 administrative task scheduler task that, when complete, triggers the execution of this task.

Cond

Specify the type of comparison to be made on the condition code of the triggered task. If not specified, the task is triggered upon completion of the trigger task without regard to its condition code.

Code

Specify the condition code to compare to determine if task gets triggered.

Point in Time

Specify a point-in-time string in UNIX cron format that indicates one or more specific times to begin task execution. The format is:

```
minute hour day_of_the_month month_of_the_year day_of_the_week
```

where:

- *minute* can be 0-59
- *hour* can be 0-23
- *day_of_the_month* can be 1-31
- *month_of_the_year* can be 1-12 or upper-, lower-, or mixed-case three-character strings, based on the English name of the month: jan, feb, mar, apr, may, jun, jul, aug, sep, oct, nov, or dec
- *day_of_the_week* can be 1-7 or upper-, lower-, or mixed-case three-character strings, based on the English name of the day: mon, tue, wed, thu, fri, sat, or sun

Each field must be separated by a blank. For more information on the unix CRON format for the Db2 administrative task scheduler, refer to the Db2 Administration Guide for your version of Db2 .

When finished, press Enter, then PF3. The Build Job window is displayed; the Schedule Job field is set to Y.

Reviewing build process messages

After a job is built, you can optionally view messages resulting from the build or a job/step/object summary.

About this task

The Build Process Message Display shows the messages produced during the job build.

Procedure

1. When you build the job online, after the job has been built, the window shown in the following figure is displayed:

```
            Messages Generated for TWUSR.DAJ V11 TEST

     33 Informational,       15 Warning, and        0 Error
 Messages were created while building the job online for JOBS
 profile TWUSR.DAJ V11 TEST

 View messages? . . . . Y (Yes/No)
 View job summary?. . . N (Yes/No)
```

Figure 161. Messages Generated for window

2. On the Messages Generated for window, type Y in the View messages field and press Enter.

   The Build Process Message Display is shown in the following figure:

```
AUTOXPRT V1R1 ------ Build Process Message Display ------ 2023/10/21  15:59:21
Option  ===>                                               Scroll ===> CSR
-------------------------------------------------------------------------------
Db2 Subsystem ID: SS1A     Current SQLID:              User:         TWUSR
                                                         Row 1 of 52 +>
       33 Informational       15 Warning        0 Error Messages
                             Order messages by S (S - Sequence, T - Type)
-------------------------------------------------------------------------------
DAJB027I Jobs Generation Options follow:
DAJB028I Maximum Number of Jobs....................1
DAJB029I Maximum Number of Objects per Job.........0
DAJB375I Maximum Number of Objects per Step........99999
DAJB376I Pad Jobs if Max not Exceeded..............Y
DAJB030I Automatically generate GDG Base...........000
DAJB031I Load Balance Jobs by......................N
DAJB032I Capture Run Times for Load Balancing......N
DAJB033I Process Spaces in Utility (UT) Mode.......N
DAJB034I Prefix Utility ID with Jobname............N
DAJB035I Set JCL Member Name to Jobname............N
DAJB036I Generate Job When Errors Encountered......Y
DAJB106I Evaluate Multiple Exception Profiles......All together
DAJB112I Recall Migrated Spaces....................N
DAJB113I Use DSNACCOR Exception Table..............N
DAJB203I Rebind Dependent Plans / Packages.........N
DAJB037I Utility Dataset High Level Qualifier......
DAJB039I Retrieve Jobcard and Comments from Dataset
DAJB040I   Dataset:
DAJB041I   Member:
DAJB042I Jobname Template " - - - - - - - "
DAJB176I Generate Templates........................Y
DAJB177I Generate Listdefs.........................Y
DAJB178I Preview Only..............................N
DAJB179I Continue on Item Error....................N
DAJB180I Return Code 0 on Warnings.................N

DAJB049I Using JOBS Profile    TWUSR.DAJ V11 TEST                    that
DAJB050I       EXCP Profile    TWUSR.DAJ V11 WEEKDAYS ONLY
DAJB050I       OBJS Profile    TWUSR.DAJ V11 TEST
DAJB050I       OBJS Profile    TWUSR.TEST
DAJB050I       UTIL Profile    TWUSR.DAJ V11 QUIESCE
DAJB050I       UTIL Profile    TWUSR.DAJ V11 COPY

         IX Creator   IndexSpc
 Msg ID  TS Database TableSpc Part# Message
DAJB085W TS ABPRLDB1 ABPRLPR1  ALL  Underlying file has been Migrated;  Space q
DAJB085W TS ABPRLDB1 ABPRLPR2  ALL  Underlying file has been Migrated;  Space q
DAJB085W TS ABPRLDB1 ABPRLPR2  ALL  Underlying file has been Migrated;  Space q
DAJB085W TS ABPRLDB1 ABPRLPR3  ALL  Underlying file has been Migrated;  Space q
DAJB085W TS ABPRLDB1 ABPRLPR3  ALL  Underlying file has been Migrated;  Space q
DAJB085W TS ABPRLDB1 ABPRLPR3  ALL  Underlying file has been Migrated;  Space q
DAJB085W TS ABPRLDB1 ABPRLPR4  ALL  Underlying file has been Migrated;  Space q
DAJB085W TS ABPRLDB1 ABPRLPR4  ALL  Underlying file has been Migrated;  Space q
DAJB085W TS ABPRLDB1 ABPRLPR4  ALL  Underlying file has been Migrated;  Space q
DAJB085W TS ABPRLDB1 ABPRLPR4  ALL  Underlying file has been Migrated;  Space q
DAJB085W TS ABPRLDB1 ABPRLPR5  ALL  Underlying file has been Migrated;  Space q
DAJB085W TS ABPRLDB1 ABPRLPR5  ALL  Underlying file has been Migrated;  Space q
DAJB085W TS ABPRLDB1 ABPRLPR5  ALL  Underlying file has been Migrated;  Space q
DAJB085W TS ABPRLDB1 ABPRLPR5  ALL  Underlying file has been Migrated;  Space q
DAJB085W TS ABPRLDB1 ABPRLPR5  ALL  Underlying file has been Migrated;  Space q
DAJB007I 00006 Objects were triggered by Exception Processing
***************************** Bottom of Data **********************************
```

Figure 162. Build Process Message Display

You can customize the display of the messages by using the Order messages by field at the top of the panel. Type S to have the build messages displayed in sequential order (the order in which the messages were issued by the build process). Type T to sort messages by type; all informational messages will be displayed first, followed by all warning messages, and then followed by all error messages.

The first part of the Build Process Message Display lists informational messages about the job generation options and profiles in use. Any warning or error messages appear after the informational messages. The following describes the fields in Build Process Message screen:

nn Informational nn Warning nn Error messages
This header line lists the number of informational, warning, and error messages issued by Db2 Automation Expert.

Msg ID
The message number. The build messages are documented in "Messages" on page 459.

IX Creator/IndexSpc/TS Database TableSpace Name Part#
For messages related to specific objects, this area lists the table space or index creator and name; database and partition number if applicable.

Message
This area contains the informational, warning, or error message issued.

3. When you have finished reviewing the messages, press PF3 to continue.

When you press PF3, if the job generation options are set to Generate job when errors encountered = No or Warnings, the following window, shown in the following figure, might appear:

```
Continue building TWUSR.DAJ V11 TEST

        Continue Building Job ?

             Y (Yes,No)

    Press ENTER to process or PF3 to Cancel
```

Figure 163. Continue building confirmation window

This window gives you the opportunity to cancel the job or to continue building the job. If you enter N and press Enter, the Jobs Profile Display appears and the message `DAJM242I - Building of Jobs Profile profile_creator.profile_name has been canceled` appears.

Reviewing jobs, steps and objects

The Build Jobs Display allows you to see a tree structure of jobs, utility steps, and objects as they will be generated in the build output.

Procedure

1. On the **Messages Generated for** window, enter Y in the **Do you wish to view job summary** field and press Enter.

The **Build Jobs Display** is shown in the following figure:

```
AUTOXPRT V1R1    ----------- Build Jobs Display ---------- 2023/10/21  15:59:21
Option  ===>                                                 Scroll ===> CSR
  -----------------------------------------------------------------------------
      Commands: Explode - Explode all  Implode - Implode all
  Line Commands: E - Explode I - Implode              Db2 Subsystem: SS01
  -----------------------------------------------------------------------------
Cmd Jobname   Stepname  Type DB Name   Creator   Name              Part
    TWUSRAA             Number of steps=003
**************************** Bottom of Data ********************************
```

Figure 164. Build Jobs Display

This panel allows you to see at a glance the jobs, their associated job steps, and the objects to be processed in each step. You can use the EXPLODE primary command to expand all jobs to show all steps and objects, and the IMPLODE primary command to collapse the structure. For example if you enter the EXPLODE command in the Option line, the previous example is exploded as follows:

```
AUTOXPRT V1R1    ---------- Build Jobs Display ---------- 2023/10/21  15:59:21
Option  ===>                                              Scroll ===> CSR
  -----------------------------------------------------------------------------
        Commands: Explode - Explode all  Implode - Implode all
   Line Commands: E - Explode I - Implode              Db2 Subsystem: SS01
  -----------------------------------------------------------------------------
Cmd Jobname     Stepname   Type DB Name    Creator    Name                Part
    TWUSRAA                Number of steps=003
                REG00101   Register              Number of objects=006
                           TS  ABPRLDB1  xxxxxxxx  ABPRLPR1            ALL
                           TS  ABPRLDB1  xxxxxxxx  ABPRLPR2            ALL
                           TS  ABPRLDB1  xxxxxxxx  ABPRLPR3            ALL
                           TS  ABPRLDB1  xxxxxxxx  ABPRLPR4            ALL
                           TS  ABPRLDB1  xxxxxxxx  ABPRLPR5            ALL
                           TS  DAHDB     xxxxxxxx  DAHTS              0000
                QUI00102   Quiesce               Number of objects=006
                           TS  ABPRLDB1  xxxxxxxx  ABPRLPR1            ALL
                           TS  ABPRLDB1  xxxxxxxx  ABPRLPR2            ALL
                           TS  ABPRLDB1  xxxxxxxx  ABPRLPR3            ALL
                           TS  ABPRLDB1  xxxxxxxx  ABPRLPR4            ALL
                           TS  ABPRLDB1  xxxxxxxx  ABPRLPR5            ALL
                           TS  DAHDB     xxxxxxxx  DAHTS              0000
                IMC00103   Image copy            Number of objects=006
                           TS  ABPRLDB1  xxxxxxxx  ABPRLPR1            ALL
                           TS  ABPRLDB1  xxxxxxxx  ABPRLPR2            ALL
                           TS  ABPRLDB1  xxxxxxxx  ABPRLPR3            ALL
                           TS  ABPRLDB1  xxxxxxxx  ABPRLPR4            ALL
                           TS  ABPRLDB1  xxxxxxxx  ABPRLPR5            ALL
                           TS  DAHDB     xxxxxxxx  DAHTS              0000
****************************** Bottom of Data **********************************
```

Figure 165. Build Jobs Display - Explode command results

The following section describes the fields that are on this panel.

Jobname
The job name.

Stepname
The step name.

Type
If text appears in this column on a job line, the text provides information about the number of steps in the job. If text appears on a stepname line, the text provides information about the type of step and the number of objects in the step. For object lines, the type of object (TS or IX) is listed in this column.

DB Name
For object lines, the name of the database.

Creator
The creator name (for indexes only).

Name
The table space or indexspace name.

Part
If the object is partitioned, the partition number.

2. When you have finished reviewing the information on this panel, press PF3 to continue.

   The **Jobs Profile Display** is displayed, or if you specified to edit the JCL, the job appears in an edit session.

Reviewing the job output

After building a job, you can review the output in an edit session.

If you choose to edit the generated job, the job appears in an edit session as shown in the following figure:

```
000001 //TWUSRAA JOB TWUSR,CLASS=A,NOTIFY=&SYSUID
000002 //*
000003 //*
000004 //*
000005 //*
000006 //** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
000007 //*                                                                 *
000008 //*   Job Generated by IBM Db2 Automation Expert V1R1.01            *
000009 //*                                                                 *
000010 //*   Db2 SSID: SS1A                                                 *
000011 //*   SQLID:                                                        *
000012 //*   Profile:  TWUSR.DAJ V11 TEST                                  *
000013 //*   Desc:                                                         *
000014 //*   User:     TWUSR                                               *
000015 //*   Date:     Wednesday October 25, 2023                          *
000016 //*   Time:     21:22:32.94                                         *
000017 //*                                                                 *
000018 //** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
000019 //*                                                                 *
000020 //** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
000021 //*                                                                 *
000022 //*   Step:     REGISTER                                            *
000023 //*                                                                 *
000024 //*   Desc:     This step will communicate with the Execution      *
000025 //*             facility and register this job as active.          *
000026 //*                                                                 *
000027 //*   Input:    JOB_TRACK_SSID   - Execution Facility STC Subsystem *
000026 //*                                                                 *
000027 //*   Input:    JOB_TRACK_SSID   - Execution Facility STC Subsystem *
000028 //*             Db2_SUBSYSTEM    - Db2 Subsystem Id            - *
000029 //*             CLIENT           - Invoking Db2 Tool Product       *
000030 //*             PROFILE          - Executing Profile Name          *
000031 //*             CREATOR          - Executing Profile Creator       *
000032 //*             ID               - Currently the Jobname           *
000033 //*             ABEND            - Generated Unique Identifier for job *
000034 //*             WTO              - Issue Write to Operators messages *
000035 //*                                                                 *
000036 //** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
000037 //*                                                                 *
000038 //REG00101 EXEC PGM=DAJREGST,REGION=0008M
000039 //STEPLIB  DD DSN=DAJ.WRK0110.LOADLIB,DISP=SHR
000040 //         DD DSN=FEC.WRK0130.LOADLIB,DISP=SHR
000041 //         DD DSN=FEC.MNT0130.LOADLIB,DISP=SHR
000042 //         DD DSN=SS1A.SDSNEXIT,DISP=SHR
000043 //         DD DSN=DSN.VD10.SDSNLOAD,DISP=SHR
000044 //DB2PARMS DD DSN=PDUSRA.DAJV32W.DB2.CONTROL,DISP=SHR
000045 //DLCPARMS DD   *
000046    JOB_TRACK_SSID    (D8A)                                    -
000047    DB2_SUBSYSTEM     (SS1A)                                   -
000048    CLIENT            (DAJ)                                    -
000049    USERIND           (DAJ)                                    -
000050    VERSION           (V1R1M0)                                 -
000051    PROFILE           ('DAJ V11 TEST')                         -
000052    CREATOR           (TWUSR)                                  -
000053    PROFILE_ID        (C80A073FE030E520)                       -
000054    JOB_ID            (C80A10AA402F76A2)                       -
000055    ABEND             (NO)                                     -
000056    WTO               (YES)                                    -
```

Figure 166. Generated job in edit session - Part 1

```
000057 //REG#OBJT DD   *
000058 REGISTER_OBJECTS (                                           -
000059 RO '21 TS ABPRLDB1 ABPRLPR1 ALL '                            -
000060 RO '21 TS ABPRLDB1 ABPRLPR2 ALL '                            -
000061 RO '21 TS ABPRLDB1 ABPRLPR3 ALL '                            -
000062 RO '21 TS ABPRLDB1 ABPRLPR4 ALL '                            -
000063 RO '21 TS ABPRLDB1 ABPRLPR5 ALL '                            -
000064 RO '21 TS DAHDB    DAHTS       '                             -
000065         )
000066 /*
000067 //*
000068 //** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
000069 //*                                                             *
000070 //*  Step:    QUI00102                                          *
000071 //*                                                             *
000072 //*  Desc:    This step will invoke the IBM Quiesce Utility     *
000073 //*                                                             *
000074 //** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
000075 //*                                                             *
000076 //QUI00102 EXEC  PGM=DSNUTILB,REGION=0008M,COND=(4,LT),
000077 //           PARM=(SS1A)
000078 //*
000079 //STEPLIB  DD DSN=DAJ.WRK0110.LOADLIB,DISP=SHR
000080 //         DD DSN=FEC.WRK0130.LOADLIB,DISP=SHR
000081 //         DD DSN=FEC.MNT0130.LOADLIB,DISP=SHR
000082 //         DD DSN=SS1A.SDSNEXIT,DISP=SHR
000083 //         DD DSN=DSN.VD10.SDSNLOAD,DISP=SHR
000084 //SYSPRINT DD SYSOUT=*
000085 //SYSOUT   DD SYSOUT=*
000086 //UTPRINT  DD SYSOUT=*
000087 //*
000088 //SYSIN    DD *
000089    LISTDEF QUI01002
000090            INCLUDE TABLESPACE ABPRLDB1.ABPRLPR1
000091            INCLUDE TABLESPACE ABPRLDB1.ABPRLPR2
000092            INCLUDE TABLESPACE ABPRLDB1.ABPRLPR3
000093            INCLUDE TABLESPACE ABPRLDB1.ABPRLPR4
000094            INCLUDE TABLESPACE ABPRLDB1.ABPRLPR5
000095            INCLUDE TABLESPACE DAHDB.DAHTS
000096
000097    QUIESCE LIST QUI01002
000098        WRITE   YES
000099
```

Figure 167. Generated job in edit session - Part 2

```
000100 /*
000101 //*
000102 //** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
000103 //*                                                               *
000104 //*  Step:     IMC00103                                           *
000105 //*                                                               *
000106 //*  Desc:     This step will invoke the IBM Copy Utility         *
000107 //*                                                               *
000108 //** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
000109 //*                                                               *
000110 //IMC00103 EXEC  PGM=DSNUTILB,REGION=0008M,COND=(4,LT),
000111 //          PARM=(SS1A)
000112 //*
000113 //STEPLIB  DD DSN=DAJ.WRK0110.LOADLIB,DISP=SHR
000114 //         DD DSN=FEC.WRK0130.LOADLIB,DISP=SHR
000115 //         DD DSN=FEC.MNT0130.LOADLIB,DISP=SHR
000116 //         DD DSN=SS1A.SDSNEXIT,DISP=SHR
000117 //         DD DSN=DSN.VD10.SDSNLOAD,DISP=SHR
000118 //SYSPRINT DD SYSOUT=*
000119 //SYSOUT   DD SYSOUT=*
000120 //UTPRINT  DD SYSOUT=*
000121 //*
000122 //SYSIN    DD *
000123    TEMPLATE C1LP0001
000124             UNIT     3390
000125             DSN               'TWUSR.&DB..&SN..DBP167'
000127             MAXPRIME 00066666
000128             UNCNT    5
000129             DISP     (MOD,CATLG,CATLG)
000130
000131    LISTDEF CPY001U1
000132          INCLUDE TABLESPACE ABPRLDB1.ABPRLPR1
000133          INCLUDE TABLESPACE ABPRLDB1.ABPRLPR2
000134          INCLUDE TABLESPACE ABPRLDB1.ABPRLPR3
000135          INCLUDE TABLESPACE ABPRLDB1.ABPRLPR4
000136          INCLUDE TABLESPACE ABPRLDB1.ABPRLPR5
000137          INCLUDE TABLESPACE DAHDB.DAHTS
000138
000139    COPY LIST CPY001U1
000140        FULL        YES
000141        COPYDDN     (C1LP0001)
000142
000143        SHRLEVEL       REFERENCE
000144        SCOPE          ALL
000145
000146 /*
000147 //*
****** **************************** Bottom of Data ****************************
```

Figure 168. Generated job in edit session - Part 3

You can review, edit and submit the job from the edit session.

Building a JCL job in batch

When you choose to build a job in batch, Db2 Automation Expert creates a build job that calls its build program, DAJ@BULD. The job profile name is passed in to the build program on the job control cards. You can place the build job into the Db2 administrative task scheduler immediately before executing the utility job that it will generate. This allows Db2 Automation Expert to pick up any changes to objects in the object profile before the utility is executed.

About this task

Note: If the job contains a utility profile that specifies RUNSTATs *and* any exception profile, the job must be built in batch.

Procedure

1. Select B to build the job in batch and press Enter. The following window is displayed:

```
                    Build Job for TWUSR.DAJ V11 TEST

 You have selected your job to be built in a batch mode.  The
 batch generation JCL will be stored in dataset
 TWUSR.DAJ.TEST(DAJV11TS)
 Please specify in the dataset and member below where you want the
 JCL built by the batch module to be placed.

 Schedule Job  . . . . . N (Yes/No)   Update options . . N (Yes/No)

 Build job in Dataset. . TWUSR.DAJ.TEST
            Member . .

 Jobcard data to be used on the generated job:
 ==> //*JOBCARD JOB TWUSR,CLASS=A,NOTIFY=&SYSUID
 ==> //*
 ==> //*
 ==> //*
```

Figure 169. Build Job window for batch builds

2. On this window, type in the data set name (and member name, if the data set is a PDS) to hold the utility job that will be generated by the batch JCL job. You must also enter a valid job card to be included in the utility JCL.

3. If you want to schedule the build with the Db2 administrative task scheduler, enter Y in the Schedule Job field and enter Y in the corresponding Update options field.

   When you press Enter, the **Schedule Db2 Admin Task** panel is displayed.

4. Press Enter to process the job.

   Note: During the build process, you can add a parameter to ISPSTART for several purposes, as follows:

   - To define an alternate return code value if the maximum number of jobs steps is exceeded. To use this feature, add the following to ISPSTART PGM(DAJ@BULD):

     ```
     PARM(USERJOBS=nn)
     ```

     where *nn* is the return code.

     Example: set the return code to 06 when max number of jobs is exceeded:

     ```
     ISPSTART PGM(DAJ@BULD) PARM(USERJOBS=06)
     ```

   - Message DAJB605W defaults to a warning message, but can be treated as an error or informational message by adding the following to ISPSTART PGM(DAJ@BULD):

     ```
     PARM(DAJB605=[E | I]
     ```

     Example: Set the message to an error message:

     ```
     ISPSTART PGM(DAJ@BULD) PARM(DAJB605=E)
     ```

Scheduling the batch build of the job profile for the Db2 administrative task scheduler

You can specify to schedule the batch build of the job via the Db2 administrative task scheduler.

On the Build Job profile window, you can specify to build the job profile in batch, and then also specify to schedule the batch build in the Schedule Job fields. When you press Enter, the **Schedule Db2 Admin Task** panel is displayed.

This panel allows you to define the options for the scheduled task that will run the batch build, and is shown in the following figure:

```
AUTOXPRT V1R1   -------- Schedule Db2 Admin Task -------- 2023/10/21  16:10:22
Option   ===>                                           Scroll ===> CSR
-------------------------------------------------------------------------------
Commands: CANCEL - Exit without saving changes.
-------------------------------------------------------------------------------
                                              Db2 Subsystem: SS1A
Task Name  . . . . AUTOMATION EXPERT BUILD: &PROFILE               >
Task Description                                                   >
                                                     More:    +
Begin Timestamp  . . &CURRENT                   (Db2 Timestamp)
End Timestamp  . . . 2023-10-21-16.10.22.340221 (Db2 Timestamp)
Max Invocations  . . 1          (Integer, Blank)
SSID . . . . . . . . SS1A       (Blank for any datasharing member)
Job Wait . . . . . . Y          (Y - Yes, N - No, P - Purge)
Execution Threads. . 001        (Integer)

Invocation Options:
  Interval (minutes)            (Integer, Blank)
        -Or-
  Trigger:
    Task Name . . .                                               >
    Cond  . . . . .             (GT,GE,EQ,LT,LE,NE)
    Code  . . . . .             (Integer, Blank)
        -Or-
  Point in Time . .                                               >
```

Figure 170. **Schedule Db2 Admin Task** *panel*

The following describes the fields on the **Schedule Db2 Admin Task** panel:

Task Name
> (Required) Enter a unique task name to differentiate this from other Db2 administrative task scheduler tasks. The following variables are allowed to ensure unique task names when multiple jobs are created:
>
> - &JOBNAME resolves to the actual job name for the JCL job.
> - &PROFILE resolves to the job profile name.
> - &SEQ resolves to a sequential number that is incremented when referenced.
> - &TIMESTAMP resolves to the Db2 timestamp returned from the CURRENT TIMESTAMP when the job is added to the Db2 administrative task scheduler.
>
> **Tip:** Because trigger task names cannot contain variables, you should avoid using variables in the task name if the utility job generated by the batch build will be triggered based on batch build task.

Task Description
> Enter a description for the task.

Begin Timestamp
> If you want the task to execute at a specific starting time, enter it in the format CCYY-MM-DD-HH.MM.SS.thmiju. If not specified, the task may be executed immediately. The variable &CURRENT can be specified to use the current timestamp when the job is added to the Db2 administrative task scheduler. &CURRENT can be combined with any valid Db2 timestamp expression to specify a future time. For example:

```
&CURRENT + 5 DAYS
&CURRENT + YEAR
```

End Timestamp
> If you want the task to end at a specific time, enter it in the format CCYY-MM-DD-HH.MM.SS.thmiju. If not specified, the task may be executed as scheduled indefinitely. The variable &CURRENT can be specified to use the current timestamp when the job is added to the Db2 administrative task scheduler. &CURRENT can be combined with any valid Db2timestamp expression to specify a future time. For example:

```
&CURRENT + 5 DAYS
&CURRENT + YEAR
```

Max Invocations

Enter the maximum number of times this task can be executed. If not specified, there is no limit to the number of executions.

SSID

Enter a particular subsystem that should execute the task. If not specified, the task may execute on any member of a data sharing group.

Job Wait

Indicate whether the job can be executed synchronously. Valid values are:

- Y: Synchronous execution
- N: Asynchronous execution
- P: Synchronous execution, after which the job status in z/OS is purged.

Execution Threads

Enter the number of parallel tasks to schedule.

Invocation Options

Select one of the following invocation options.

Interval (minutes)

Specify the time in minutes to execute a repeating task.

Trigger

These fields allow you to define the parameters that cause the task to be triggered.

Task Name

Specify another Db2 administrative task scheduler task that, when complete, triggers the execution of this task.

Cond

Specify the type of comparison to be made on the condition code of the triggered task. If not specified, the task is triggered upon completion of the trigger task without regard to its condition code.

Code

Specify the condition code to compare to determine if task gets triggered.

Point in Time

Specify a point-in-time string in UNIX cron format that indicates one or more specific times to begin task execution. The format is:

```
minute hour day_of_the_month month_of_the_year day_of_the_week
```

where:

- *minute* can be 0-59
- *hour* can be 0-23
- *day_of_the_month* can be 1-31
- *month_of_the_year* can be 1-12 or upper-, lower-, or mixed-case three-character strings, based on the English name of the month: jan, feb, mar, apr, may, jun, jul, aug, sep, oct, nov, or dec
- *day_of_the_week* can be 1-7 or upper-, lower-, or mixed-case three-character strings, based on the English name of the day: mon, tue, wed, thu, fri, sat, or sun

Each field must be separated by a blank. For more information on the unix CRON format for the Db2 administrative task scheduler, refer to the Db2 Administration Guide for your version of Db2.

When finished, press Enter, then PF3. The Build Job window is displayed; the Schedule Job field is set to Y.

Scheduling the job for the Db2 administrative task scheduler

When building a Db2 Automation Expert job profile or UNLOAD utility job, you can specify to schedule the utility job via the Db2administrative task scheduler.

The **Schedule Db2 Admin Task** panel allows you to define the options for a task to be scheduled to run via the Db2 administrative task scheduler.

The **Schedule Db2 Admin Task** panel is shown in the following figure:

```
AUTOXPRT V1R1    -------- Schedule Db2 Admin Task -------- 2023/10/21  15:54:09
Option   ===>                                             Scroll ===> CSR
-------------------------------------------------------------------------------
Commands: CANCEL - Exit without saving changes.
-------------------------------------------------------------------------------
                                              Db2 Subsystem: SS1A
Task Name  . . . . AUTOMATION EXPERT UTIL: &JOBNAME                >
Task Description                                                   >
                                                     More:     +
Begin Timestamp  . . &CURRENT                  (Db2 Timestamp)
End Timestamp   . . . 2023-10-21-16.10.22.340221 (Db2 Timestamp)
Max Invocations  . . 1          (Integer, Blank)
SSID . . . . . . . . SS1A       (Blank for any datasharing member)
Job Wait . . . . . . Y          (Y - Yes, N - No, P - Purge)
Execution Threads. . 001        (Integer)

Invocation Options:
  Interval (minutes)            (Integer, Blank)
        -Or-
  Trigger:
    Task Name . . .                                               >
    Cond  . . . . .             (GT,GE,EQ,LT,LE,NE)
    Code  . . . . .             (Integer, Blank)
        -Or-
  Point in Time . .                                               >
```

Figure 171. ***Schedule Db2 Admin Task*** *panel*

The following describes the fields on the **Schedule Db2 Admin Task** panel:

Task Name
> (Required) Enter a unique task name to differentiate this from other Db2 administrative task scheduler tasks. The following variables are allowed to ensure unique task names when multiple jobs are created:
>
> - &JOBNAME resolves to the actual job name for the JCL job.
> - &PROFILE resolves to the job profile name.
> - &SEQ resolves to a sequential number that is incremented when referenced.
> - &TIMESTAMP resolves to the Db2 timestamp returned from the CURRENT TIMESTAMP when the job is added to the Db2 administrative task scheduler.

Task Description
> Enter a description for the task.

Begin Timestamp
> If you want the task to execute at a specific starting time, enter it in the format CCYY-MM-DD-HH.MM.SS.thmiju. If not specified, the task may be executed immediately. The variable &CURRENT can be specified to use the current timestamp when the job is added to the Db2 administrative task scheduler. &CURRENT can be combined with any valid Db2 timestamp expression to specify a future time. For example:

```
&CURRENT + 5 DAYS
&CURRENT + YEAR
```

End Timestamp
> If you want the task to end at a specific time, enter it in the format CCYY-MM-DD-HH.MM.SS.thmiju. If not specified, the task may be executed as scheduled indefinitely. The variable &CURRENT can be specified to use the current timestamp when the job is added to the Db2 administrative task

scheduler. &CURRENT can be combined with any valid Db2 timestamp expression to specify a future time. For example:

```
&CURRENT + 5 DAYS
&CURRENT + YEAR
```

Max Invocations

Enter the maximum number of times this task can be executed. If not specified, there is no limit to the number of executions.

SSID

Enter a particular subsystem that should execute the task. If not specified, the task may execute on any member of a data sharing group.

Job Wait

Indicate whether the job can be executed synchronously. Valid values are:

- Y: Synchronous execution
- N: Asynchronous execution
- P: Synchronous execution, after which the job status in z/OS is purged.

Execution Threads

Enter the number of parallel tasks to schedule.

Invocation Options

Select one of the following invocation options.

Interval (minutes)

Specify the time in minutes to execute a repeating task.

Trigger

These fields allow you to define the parameters that cause the task to be triggered.

Task Name

Specify another Db2 administrative task scheduler task that, when complete, triggers the execution of this task.

Cond

Specify the type of comparison to be made on the condition code of the triggered task. If not specified, the task is triggered upon completion of the trigger task without regard to its condition code.

Code

Specify the condition code to compare to determine if task gets triggered.

Point in Time

Specify a point-in-time string in UNIX cron format that indicates one or more specific times to begin task execution. The format is:

```
minute hour day_of_the_month month_of_the_year day_of_the_week
```

where:

- *minute* can be 0-59
- *hour* can be 0-23
- *day_of_the_month* can be 1-31
- *month_of_the_year* can be 1-12 or upper-, lower-, or mixed-case three-character strings, based on the English name of the month: jan, feb, mar, apr, may, jun, jul, aug, sep, oct, nov, or dec
- *day_of_the_week* can be 1-7 or upper-, lower-, or mixed-case three-character strings, based on the English name of the day: mon, tue, wed, thu, fri, sat, or sun

Each field must be separated by a blank. For more information on the unix CRON format for the Db2 administrative task scheduler, refer to the Db2 Administration Guide for your version of Db2 .

When finished, press Enter, then PF3. The Build Job window is displayed; the Schedule Job field is set to Y.

Batch job output

Sample output from a job built in batch is shown in this topic.

Refer to the following figure:

```
//TUSERAA JOB TUSER,CLASS=A,NOTIFY=&SYSUID,REGION=0M
//*
//*
//*
//** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
//*                                                                  *
//*  Job Generated by IBM Db2 Automation Expert V1R1.01              *
//*                                                                  *
//*  Db2 SSID: SS2                                                   *
//*  SQLID:                                                          *
//*  Profile:  TUSER.##V11 TEST                                      *
//*  Desc:                                                           *
//*  User:     TUSER                                                 *
//*  Date:     Wednesday, October 23, 2023                           *
//*  Time:     19:58:59.74                                           *
//*                                                                  *
//** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
//*                                                                  *
//** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
//*                                                                  *
//*  Step:     DAJ@BULD                                              *
//*                                                                  *
//*  Desc:     This job will generate the JCL for jobs profile       *
//*            TUSER.##V11 TEST in a batch mode.                     *
//*            The generated job will be placed in dataset           *
//*            TUSER.DAJ.TEST(BTCHOUT).                              *
//*                                                                  *
//*  Return Codes:                                                   *
//*                                                                  *
//*  (00) - Job was built successfully with no warnings or errors    *
//*                                                                  *
//*  (04) - Job was built with warning messages and the Build Job on *
//*         Errors indicator was a "Y" or "W"                        *
//*                                                                  *
//*  (06) - Job was not built - Exception processing did not flag    *
//*         any objects to process.                                  *
//*                                                                  *
//*  (08) - Job was built with error messages and the Build Job on   *
//*         Errors indicator was a "Y"                               *
//*                                                                  *
//*  (12) - Job was not built - Errors were detected and the Build Job *
//*         on Errors indicator was not a "Y"                        *
//*                                                                  *
//*  Note:  Build Job on Errors is an option in the Jobs Profile     *
//*         Options screen.  This option has the following values:   *
//*         "Yes" - Build job on Errors or Warnings                  *
//*         "No"  - Do not build job on Errors or Warnings           *
//*         "Warnings" - Build job only if highest severity is a     *
//*                      warning message.                            *
//*                                                                  *
//** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
//* Create temp dataset to bypass enqueue failure in ISPF           *
//** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
//PROFILE  EXEC  PGM=IEFBR14
//TEMP     DD DSN=&&TEMP,DISP=(NEW,PASS,DELETE),
//            UNIT=SYSDA,SPACE=(TRK,(1,1,5)),
//            DCB=ISP.SISPTENU
//*
    .
    .
// Processing DDs
    .
    .
```

Figure 172. Sample output from batch build: Part 1

```
//DAJ#DATA DD *
  GENERATE_UTILITY_JOB (                                              -
    DB2_SUBSYSTEM      SS2                                            -
    USER_INDICATOR     DAJ                                            -
    PROFILE_NAME       '#V11 TEST'                                    -
    PROFILE_CREATOR    TUSER                                          -
    EXECUTION_LIB_2    DAJ.WRK0110.LOADLIB                            -
    EXECUTION_LIB_3    FEC.WRK0130.LOADLIB                            -
    EXECUTION_LIB_4    FEC.MNT0130.LOADLIB                            -
    GEN_TO_DATASET     TUSER.DAJ.TEST                                 -
    DEBUG_MODE         OFF                                            -
    GEN_TO_MEMBER      BTCHOUT                                        -
    JOB_CARD_1_1       '//JOBCARD JOB TUSER,CLASS=A,NOTIFY=&SYSU'     -
    JOB_CARD_1_2       'ID'                                           -
    JOB_CARD_2_1       '//*'                                          -
    JOB_CARD_3_1       '//*'                                          -
    JOB_CARD_4_1       '//*'                                          -
                       )
//*
**************************** Bottom of Data ****************************
```

Figure 173. Sample output from batch build: Part 2

The DAJ#DATA DD contains control cards that are input to the build. The control cards describe the Db2subsystem, profile source, job cards and member name to be used for output. The DEBUG_MODE parameter is automatically set to OFF. This parameter is used for troubleshooting, and should be changed only upon instruction from IBM Software Support.

Batch build error reporting

When a job is built in batch, the error messages are output to the DAJERROR DD generated by the batch build program.

The following is an example of message output:

```
IBM Shared Profile Support -- Print Build Process Messages --  V01.10 Run Date 2

DAJB048I Db2 SubSystem ID:SS2; Db2 Version:0810; SQLID:; ZUSER:TUSER
DAJB027I Jobs Generation Options follow:
DAJB028I Maximum Number of Jobs...................1
DAJB029I Maximum Number of Objects per Job.........0
DAJB030I Automatically generate GDG Base...........000
DAJB031I Load Balance Jobs by......................N
DAJB032I Capture Run Times for Load Balancing......N
DAJB033I Process Spaces in Utility (UT) Mode.......N
DAJB034I Prefix Utility ID with Jobname............N
DAJB035I Set JCL Member Name to Jobname............N
DAJB036I Generate Job When Errors Encountered......Y
DAJB106I Evaluate Multiple Exception Profiles......All together
DAJB112I Recall Migrated Spaces....................N
DAJB113I Use DSNACCOR Exception Table..............N
DAJB203I Rebind Dependent Plans / Packages.........N
DAJB037I Utility Dataset High Level Qualifier......TEST
DAJB039I Retrieve Jobcard and Comments from Dataset
DAJB040I    Dataset:
DAJB041I    Member:
DAJB042I Jobname Template " - - - - - - - - "
DAJB176I Generate Templates........................Y
DAJB177I Generate Listdefs.........................Y
DAJB178I Preview Only..............................N
DAJB179I Continue on Item Error....................N
DAJB180I Return Code 0 on Warnings.................N

DAJB049I Using JOBS Profile    TUSER.#V11 TEST                         that i
DAJB050I       OBJS Profile    TUSER.#V11 TEST TS ONLY
DAJB050I       UTIL Profile    TUSER.#MY CLIST

DAJB025I Build JCL will be written to TUSER.DAJ.TEST.
DAJB026I Build JCL member "BATCHBLD" successfully written.
****************************** BOTTOM OF DATA ******************************
```

Figure 174. Message output from batch build

The build error messages are documented in .

Return codes generated by a batch job build are described in the following table:

Table 32. Batch job build return codes

Return code	Job Built	Result
00	Yes	Job was built successfully with no warnings or errors.
04	Yes	Job was built with warning messages and the Generate Job when Errors encountered field was a "Y" or "W".
06	No	Job was not built because exception processing did not flag any objects to process.
08	Yes	Job was built with error messages and the Generate Job when Errors encountered field was a "Y".
12	No	Job was not built because errors were detected and the Generate Job when Errors encountered field was not a "Y".

Exception profile batch reporting

When a job is built in batch, a report of exception processing is produced in two SYSOUT DDs.

The first report appears in the EXCEPTNS DD and shows the values of the exception conditions in all the exception profiles included in the job profile:

```
IBM Shared Profile Support -- Print Exception Conditions --  V01.10 Run Date 2023/10/17 Run Time 20:18:45

Use Statistics from the DAJ REPOSITORY

Combine IX/TS Exceptions when evaluating an IX triggering a TS Condition: N

Catalog Table----- Column------------ Cond ------------Value------------- And|Or Type-
DAY OF WEEK        MONDAY             EQ                                   AND  NOVAL

Catalog Table----- Column------------ Cond ------------Value------------- And|Or Type-
DAY OF WEEK        TUESDAY            EQ                                   OR   NOVAL
****************************** BOTTOM OF DATA ******************************
```

The second report is in the TRIGGERS DD and shows how the settings in the exception profiles trigger the objects. If no objects are triggered, the report states that "0 objects are triggered."

```
IBM Shared Profile Support -- Print Exception Triggers --  V01.10 Run Date 2023/10/17 Run Time 20:18:45

1 Triggers created...

Statistics Type--- Column------------ Type- Cond ---------Exception Value------
DAY OF WEEK        TUESDAY            NOVAL EQ

DBNAME-- TSNAME-- RUNSTATS Column--- RUNSTATS Index---- TBOWNER- IXCRTR-- PART# -------RUNSTATS Value
                                                                          00000 TUESDAY

****************************** BOTTOM OF DATA ******************************
```

Building a job online without saving changes to the job profile

If you want to make temporary changes to a job profile and then build the changed job profile, you can do so on the **Update Jobs Profile Display** using the **BUILD** command.

About this task

You can update job generation options, alter existing job groups by adding or removing profiles, or add or remove job groups without saving the profile. Using the **BUILD** command allows you to build an unscheduled job online; batch builds or scheduling the build is not allowed. After submitting the build, you can examine the message output and the generated job to determine whether you want to save the changes.

Procedure

1. On the **Update Jobs Profile Display**, make changes to the job profile.

   Note: If you update the contents of the object, exception, or utility profiles from within the job profile, the changes to those profiles are saved when you return to the **Update Jobs Profile Display**.

2. Enter BUILD in the **Option** line and press Enter.

3. On the **Build Job** window, verify or update the **Build job in Data set** and **Member** fields and the job cards.

4. On the **Build Job** window, enter Y in the **Edit Generated Job** field to see the output of the build and press Enter.

5. Optional: On the **Messages Generated** window, enter Y in the **View Messages** and **View Job summary** fields and press Enter.

   If you enter Y in these fields, the **Build Process Message Display** and the **Build Jobs Display** appear in succession. When finished reviewing each screen, press PF3 (END) to continue.

6. Optional: On the **Messages Generated** window, enter Y in the **View Messages** field and press Enter.

   If you enter Y in this field, review the **Build Process Message Display** and press PF3 (END) when finished.

7. The generated job is displayed in an ISPF edit session. Review the generated job to determine whether you want to keep the changes to the profile.

8. Press PF3 (END) to exit the ISPF edit session.

9. On the **Update Jobs Profile Display**, press PF3 (END) to save the changes that you made to the job profile, or enter CANCEL in the **Option** line to discard the changes.

Updating a job profile

You can update a job profile at any time to add or delete profiles or to change job generation options.

Procedure

1. On the Db2 Automation Expert main menu, enter 4 in the **Option** field and press Enter.

2. On the **Jobs Profile Display**, enter selection criteria in the **Profile Like** and **Creator Like** fields, or enter the number of recently accessed profiles that you want to see in the **Recent Profiles** field, or enter values in both sets of fields. Press Enter.

3. Enter U in the Cmd line next to the profile you want to update and press Enter.

4. On the **Update Jobs Profile Display**, you can do the following:

   • Use line commands to add, delete, or update the object, exception, and utility profiles.

   • Update job generation options by entering Y in the **Update Job Generation Options** field. For information, see "Updating other job generation options" on page 269.

   • Build the job profile by entering the BUILD command in the **Option** line. For more information, see "Building a job online without saving changes to the job profile" on page 298.

How job step and LISTDEF names are generated

This topic explains how job step and LISTDEF names are generated when a job is built.

Db2 Automation Expert generates job step names as follows:

```
SSSJJJNN
```

Where:

• SSS is a three-character step identifier. For example, RTS is used for REORG TABLESPACE.

• JJJ is a three-digit hexadecimal sequential job number.

- NN is a two-digit hexadecimal sequential step number.

As a general rule, LISTDEF names begin with a utility identifier followed by a unique number. LISTDEF names are not standardized across utilities, due to differences within each utility.

Restarting failed jobs

It is possible to restart Db2 Automation Expert jobs that abended using the restart feature.

This capability relies on a job tracking task to track jobs and their completion codes. You must implement the job tracking task as described in Chapter 4, "Customizing Db2 Automation Expert," on page 73 and "Add the IEFACTRT exit to the SMFPRMxx member of SYS1.PARMLIB" on page 20 in order to use the restart feature.

Note: Job restartability is not possible if the job you want to restart is in a member that contains multiple jobs.

How Db2 Automation Expert restarts jobs

The job tracking task keep information about the execution of each job step in its own repository. If a job abends during execution, Db2 Automation Expert tracks the failure and can restart the job at the appropriate point.

For example: you build a job, submit it, and it abends. You can see the results in the Execution Reports Job Display, in the following figure. Note the return code of 8:

```
AUTOXPRT V1R1   ---- Execution Reports Job Display    ---- 2023/10/21  16:15:20
Option  ===>                                               Scroll ===> CSR
------------------------------------------------------------------------------

Line Commands: B - Build  D - Delete  O - Objects  R - Restart  S - Steps
 Profile    Like  *                               Db2 Subsystem: SS01
 Creator    Like  TWUSR*   Database Like  *          Row 1 of 1              >
 Space Type =     A  (I - Index, T - Tablespace, A - Any)
 Space      Like  *                      Date From  10/20/2023 to  10/22/2023
                                         Time From  16:15:47   to  16:15:47
 Partition  =            (0-4096, * - All, blank)
 Jobname    Like  *              View Type  J  (J - Jobs, O - Objects)
 Jobnum     Like  *
       ------------------------------------------------------------------------

 Cmd  Jobname   Jobnum    Completion  Reason Code   Creator   Profile ID
      CRTRPR3   J0700256      R0008      00000000    DAJQA     C89DF30452AB91B1
 **************************** Bottom of Data *********************************
```

Figure 175. Execution Reports Job Display

If you select the same job profile for a build, Db2 Automation Expert knows that an abend occurred the last time this profile was built and submitted. Before you are allowed to build the JCL again, you can decide how to proceed:

- You can restart the existing JCL. Db2 Automation Expert adds the RESTART parameter to utility steps that abended with a completion code of 04x, so the job can pick up from where it abended.
- You can also ignore the previous abend and allow Db2 Automation Expert to rebuild the JCL.

How to use the restartability feature

The Db2 Automation Expert restartability feature can be used when you attempt to build a job profile, but the previous execution of the job failed.

About this task

In that instance, the window shown in the following figure appears:

```
                    Rebuild Job for DAJQA.CRT REPAIR3

     One or more of the jobs generated from this profile did not
     execute properly.  This job needs to be restarted or you can
     force completion of this job.  Job information is as follows:

     Job Name . . . . : CRTRPR3         Job Number      : J0700256
     Step Name  . . . : REP00102        Completion Code : R0008
     Job Id . . . . . : C89DF30588C80231
     Generated Dataset: RSQA.DAJ310.JCLSS01.RITA
     Generated member : CRTRPR3

     Restart or Force Completion    R  (R - Restart,
                                        F - Force Completion)
     Terminate existing Utility ID  N  (Yes/No)
     Submit Job . . . . . . . . . . N  (Yes/No)

     Build job in Dataset    RSQA.DAJ110.JCLSS01.RITA
                 Member
```

Figure 176. Rebuild Job window

The following describes the job information:

Job Name
    The job name.

Job Number
    The job number.

Step Name
    The job step name that failed.

Completion Code
    The job step completion code.

Job ID
    An internal job identification used by Db2 Automation Expert to track the job results.

Generated Dataset
    The data set name the JCL was generated to.

Generated member
    The member name that contains the JCL.

You can specify how to process the abended job using the following fields:

Restart or Force completion
    Type R to restart the job from the proper point. Db2 Automation Expert will 1) insert a RESTART=REGISTER statement on the job card and 2) move the registration step needed by the job tracking task prior to the step that failed, allowing the job to be tracked when re-executed. Type F to force a new build of the job. When you specify F, the abended job is cleared from the job tracking task's registry, and you can rebuild the job again.

Terminate existing utility ID
    Type Y to terminate the existing utility ID. If you are attempting to restart a utility, terminating the utility ID will not allow the utility to restart. Refer to the *Db2 Utility Guide and Reference* for your version of Db2 for more information about restartability and the utility ID.

Submit job
    Type Y to submit the job automatically after viewing the job in an edit session.

Build job in Dataset
    Specify a data set name that you want to save the restarted job JCL in.

Member
    Specify the member name for the restart JCL. You should use a different member name than was used for the original JCL.

Chapter 12. Running automated utilities using maintenance windows

You can use Db2 Automation Expert stored procedures and repository to facilitate automation of ongoing database monitoring and maintenance tasks for your applications.

The Db2 Automation Expert Automation Console panels contain extended functionality to allow you to set up and control automated running of your utilities. Use the Automation Console panels to:

- Create and schedule the maintenance windows in which utilities are permitted to run.
- View the exceptions (also called symptoms) and utilities (also call actions) that are generated by a Db2 Automation Expert build.
- Review utility execution output run in the maintenance window.
- Evaluate your maintenance window workload.
- Fine-tune the maintenance workload by adjusting priorities for actions, symptoms, and objects, thereby ensuring your most important jobs are run first when the maintenance window opens.
- Configure Db2 Automation Expert to send notifications by email or text message when Db2 Automation Expert job profiles are built in batch.

Utility actions are generated when Db2 Automation Expert job profiles that are configured for active or passive action are built. From output of a job profile build, Db2 Automation Expert creates either active actions that are scheduled to be run when the assigned maintenance window opens, or passive actions that do not run when the maintenance window opens. For both active and passive actions, you can review the actions, objects, and symptoms that generated the actions on the Automation Console panels.

Both the Db2 Automation Expert utility JCL batch builds and builds that generate actions resolve wildcarded and dependent objects, gather object information, and evaluate exception criteria. However, instead of writing JCL, builds that generate actions update several Db2 Automation Expert repository tables, as follows:

- Utility actions on the objects are written to a Db2 Automation Expert actions table.
- Exception criteria that triggered the action is written to a Db2 Automation Expert symptoms table.

To allow the Db2 Automation Expert stored procedure to run the actions in the actions table, you must define a maintenance window and then schedule the maintenance window to run. A maintenance window is a specific time period that allows the actions to be run on your objects.

Once a maintenance window is associated with the job profile, when you build the job profile, the actions are generated from the build. After the associated maintenance window is scheduled and the time period that it is scheduled to run opens, the Db2 Automation Expert stored procedure retrieves actions from the table and starts running them, until it runs out of actions to perform or the maintenance window closes.

On the Db2 Automation Expert Main Menu, enter **11** in the **Option** line. The **Automation Console** is displayed as shown in the following figure:

```
AUTOXPRT V1R1 ------------ Automation Console ----------- 2023/10/05  14:14:51
Option  ===>
---------------------------------------------------------------------------
        Options: 1 - Object Prioritization       Db2 Subsystem ID: SS01
                 2 - Maintenance Windows          Current SQLID . :
                 3 - Execution History            Userid  . . . . : TWUSR
                 4 - Actions
                 5 - Statistics Monitor Profiles  Configuration ID: DAJ
                 6 - Symptom Registry Editor
                 7 - Action Registry Editor
                 8 - Action/Object/Symptom Priority
                 9 - Event Notifications
```

*Figure 177. **Automation Console** panel*

Prerequisites

If you want to use the Db2 administrative task scheduler to schedule maintenance windows, it must
be configured and active on the Db2 subsystems on which you are running Db2 Automation Expert. For
information about configuring the task scheduler, refer to the Db2 Administration Guide for your version of
Db2.

Additional software and authorization requirements apply; refer to "Verify that your environment meets
software requirements" on page 13.

Supported utilities

- CHECK DATA
- COPY (full or incremental)
- COPYTOCOPY
- Table space REORG
- Creating a mapping table (as part of a table space REORG)
- Dropping a mapping table (as part of a table space REORG)
- Index REORG
- QUIESCE
- MODIFY
- REPAIR
- RECOVER
- RUNSTATS

The following utilities are not supported:

- Image copies from system level backups taken by Db2 Recovery Expert
- Space reallocation
- Load accelerator tables for IBM Db2 Analytics Accelerator for z/OS

Creating a maintenance window

Maintenance windows define the time periods in which actions (utilities) might be run on objects.
Maintenance windows are required to be created and then scheduled for active builds.

About this task

You can review the sample maintenance windows that are installed with Db2 Automation Expert for
typical examples. See "Sample maintenance windows reference" on page 306 for information.

Procedure

1. On the Db2 Automation Expert main menu, enter 11 in the **Option** field and press Enter.
2. On the **Automation Console** panel, enter 2 in the **Option** field and press Enter.
3. On the **Maintenance Windows** panel, enter D in the **Source** field, and enter selection criteria in the **Window Like** field. Press Enter.
4. Enter C in the **Cmd** line and press Enter.
5. On the **Create Maintenance Window** panel, in the **Window Name** field, enter a name for the maintenance window and enter a description in the **Window Description** field. Press Enter.

   A message prompts you to enter a time period.
6. To create a time period, press Enter.

   The **Create Timeperiod** window is displayed, as shown in the following figure:

```
                        Create Timeperiod

Window Name  . . . . CUSTOMER DATABASE MAINTENANCE
Window Description
SSID . . . . . . . . SS01
--------------------------------------------------------------------------
Window Start:
  Day of Week . . . . .       (0-6, Sun-Sat, *)
  Month . . . . . . . .       (1-12, Jan-Dec, *)
  Day of Month   . . .        (1-31, *)
  Time of Day . . . . . 00:00 (HH:MM)
Options:
  Duration    . . . . . 0001:00:00 (HHHH:MM:SS)
  Overrun     . . . . . 0000:05:00 (HHHH:MM:SS)
  Max Tasks   . . . . . 5          (Integer)
```

*Figure 178. **Create Timeperiod** window*

7. Enter the time period in which you want to allow actions to run and other options for the window. All fields are required. When you complete all of the fields, press Enter.
8. The information that you entered creates a single time period for the maintenance window. The time period is displayed on the **Create Maintenance Window** panel, as shown in the following figure:

```
AUTOXPRT V1R1   ------- Create Maintenance Window  ------ 2023/06/21  12:30:53
Option  ===>                                             Scroll ===> CSR
-----------------------------------------------------------------------------
Line Commands:  V - View  C - Create  D - Delete  R - Repeat  U - Update
            S - Schedule Timeperiod  X - Unschedule Timeperiod
-----------------------------------------------------------------------------
Window Name  . . . . CUSTOMER DATABASE MAINTENANCE
Window Description
SSID . . . . . . . . SS01        (Blank for any datasharing member)
Event Notifications  N  (Yes/No)                      Row 1 of 1
   Selected Event Notification Profile:
     Creator:        Name:
-----------------------------------------------------------------------------
    Day of       Day of Time of                        Max
Cmd Week   Month Month  Day     Duration   Overrun    Tasks Admin Task Name
    *       *     *      00:00   0001:00:00 0000:05:00    5 TWUSER.JOB PROF WITH
**************************** Bottom of Data ********************************


        DAJ597I - Timeperiod has been successfully created.
```

Figure 179. New time period entered in the maintenance window

9. Press Enter to continue.
10. Use the line commands to create more time periods, or to modify or delete time periods as desired.

    You can have as many time periods in a maintenance window as you want.
11. Optional: Specify event notifications for this maintenance window by entering Y in the **Event Notifications** field.

a) Enter Y in the **Event Notifications** field

The **Event Notifications** panel is displayed.

b) Enter S next to a notification profile and press Enter.

A message confirms that the profile has been selected for the associated maintenance window.

c) Press PF3 (END).

The **Create Maintenance Window** panel is displayed. The selected event notification profile fields display the selected notification profile creator and name.

For more information about notification profiles, see the topic "Configuring and using event notifications" on page 318.

Sample maintenance windows reference

Several sample maintenance windows are installed that are configured for common time periods for running maintenance activities. The default content that is provided can easily be modified to suit your needs.

Table 33. Sample maintenance windows

Name	Default contents
SAMPLE: END OF QUARTER	Contains four time periods that open the last day of each quarter at 10 pm.
SAMPLE: END OF YEAR	Contains one time period that opens on December 31 at 4:30 a.m.
SAMPLE: EVERY SUNDAY	Contains one time period that opens every Sunday at 8:00 pm.
SAMPLE: EVERY WEEKEND	Contains two time periods that open each Saturday and Sunday at 3:00 pm.
SAMPLE: MONTHLY	Contains one time period that opens the first day of every month at 1:00 a.m.

Scheduling a maintenance window

Once you have created a maintenance window and at least one time period for the maintenance window, you must schedule the maintenance window. No actions can be run in the maintenance window until it has been scheduled. Db2 Automation Expert makes it easy to schedule a maintenance window using the Db2 administrative task scheduler.

About this task

The steps in this task describe how to use the Db2 Automation Expert panels to schedule a maintenance window.

Procedure

1. On the Db2 Automation Expert main menu, enter 11 in the **Option** field and press Enter.
2. On the **Automation Console** panel, enter 2 in the **Option** field and press Enter.
3. On the **Maintenance Window** panel, enter D in the **Source** field, and enter selection criteria in the **Window Like** field. Press Enter.
4. Enter S in the **Cmd** line next to the maintenance window that you want to schedule and press Enter.
5. If two or more time periods are defined in the maintenance window, the **Schedule Maintenance Window** panel is displayed with a message that prompts you to select a time period. Select a time period by entering S in the **Cmd** line and press Enter.

6. On the **Schedule Db2 Admin Task** panel, the Task Name field contains the maintenance window name, and the Task Description field contains a Db2 Automation Expert generated task description. In addition, the Point in Time field contains a cron string representation of the time period in the maintenance window that will be scheduled.

The **Schedule Db2 Admin Task** panel is shown in the following figure:

```
AUTOXPRT V1R1    -------- Schedule Db2 Admin Task -------- 2023/10/05  14:30:52
Option   ===>                                            Scroll ===> CSR
------------------------------------------------------------------------------
Commands: CANCEL - Exit without saving changes.
------------------------------------------------------------------------------
                                          Db2 Subsystem: SS01
Task Name  . . . . CUSTOMER DATABASE MAINTENANCE 28               >
Task Description   MAINTENANCE WINDOW                             >
                                                    More:     +
Begin Timestamp  . .                     (Db2 Timestamp)
End Timestamp  . . .                     (Db2 Timestamp)
Max Invocations  . .          (Integer, Blank)
SSID . . . . . . . . SS01     (Blank for any datasharing member)
Job Wait . . . . . . Y        (Y - Yes, N - No, P - Purge)
Execution Threads. . 001      (Integer)

Invocation Options:
  Interval (minutes)          (Integer, Blank)
        -Or-
  Trigger:
    Task Name . . .                                        >
    Cond  . . . . .           (GT,GE,EQ,LT,LE,NE)
```

Figure 180. **Schedule Db2 Admin Task** *panel*

7. Complete the remainder of the fields as required.

8. When you have completed all the fields, press PF3 (END).

The **Db2 Admin Task Scheduler** panel is displayed with a message that confirms that the task has been scheduled.

Assigning a maintenance window to a job profile

Active builds of a job profile require that a maintenance window be assigned to the job profile. Follow the steps in this topic to assign a maintenance window to a job profile.

Procedure

1. On the Db2 Automation Expert main menu, enter 4 in the **Option** field and press Enter.

2. On the **Jobs Profile Display**, enter selection criteria in the **Profile Like** and **Creator Like** fields, or enter the number of recently accessed profiles that you want to see in the **Recent Profiles** field, or enter values in both sets of fields. Press Enter.

3. Enter U in the **Cmd** line next to the job profile that you want to update and press Enter.

4. On the **Update Jobs Profile Display**, enter Y in the **Update Job Generation Options** field and press Enter.

5. On the **Generation Options** window, complete the following fields:

```
                     Generation Options for TWUSR.TEST

      Option  ===>

                                                        More:    +
      Build Output. . . . . . . A (A - Active actions,
                                  B - Batch job,
                                  P - Passive actions)
      Maintenance Window Option   (A - Create and Auto Schedule,
                                  C - Create,
                                  S - Select,
                                  U - Update,
                                  V - View,
                                  Blank)
      Maintenance Window:
```

Build output must be set to A or P before you can select a maintenance window. Enter A to create actions from the output of the build that are scheduled to run when the maintenance window opens. Enter P to create actions from the output of the build, but do not run the actions when the maintenance window opens; however, you can still review the actions, objects, and symptoms that generated the actions on the panels. Passive actions are intended primarily for testing purposes.

6. After you specify the build output type, enter S in the **Select Maintenance Window** field and press Enter.

   The **Maintenance Window** panel is displayed.

7. On the **Maintenance Window**, enter selection criteria in the **Window Like** field and press Enter.

8. Enter S in the **Cmd** line next to the maintenance window profile that you want to select and press Enter.

   The **Generation Options** panel is displayed with the name of the selected maintenance window in the **Selected Maintenance Window** field.

Building a job profile for automated utility execution

After a maintenance window has been assigned to the job profile, you must build the job profile to generate the actions that will be run during the maintenance window.

Procedure

1. On the Db2 Automation Expert main menu, enter 4 in the **Option** field and press Enter.

2. On the **Jobs Profile Display**, enter selection criteria in the **Profile Like** and **Creator Like** fields, or enter the number of recently accessed profiles that you want to see in the **Recent Profiles** field, or enter values in both sets of fields. Press Enter.

3. Enter B in the **Cmd** line next to the job profile that you want to build and press Enter.

4. On the **Maintwindow Build for** window, complete the fields.

   You can build the job online or generate the job build as a batch build. You can also schedule the job build using the Db2 administrative task scheduler. Both of these are similar to building a JCL job profile online or in batch. For more information, see "Building a job online " on page 281 and "Building a JCL job in batch" on page 290.

5. After you complete the fields, press Enter.

Results
If the build is successful, the actions are scheduled in the selected maintenance window.

Reviewing action execution history

You can review the output and the actions that were generated by automated builds during a scheduled maintenance window by using the execution history panels. You can use line commands to view the

objects that were triggered for action and to review the results of utilities that ran in maintenance windows.

Procedure

1. On the Db2 Automation Expert main menu, enter 11 in the **Option** field and press Enter.
2. On the **Automation Console** panel, enter 3 in the **Option** field and press Enter.
3. On the **Automation Execution History** panel, enter Y in the **Show Maintenance Window Build** field or the **Show Maintenance Window Execution** field or both, and press Enter.

   The **Automation Execution History** panel is refreshed with a list of automated builds that were run, listed in the PROC_NAME column as follows:

   - MAINTWINDOW BUILD: Build of a job profile that is configured for actions with maintenance windows (active or passive).
   - MAINTWINDOW EXECUTION: Execution of the actions that were generated by an build in a maintenance window.
4. To view the output from the automated procedures:
   a) Enter the letter 0 next to a procedure and press Enter.

      The **Maintwindow Execution Output** panel is displayed. This panel shows error messages that were issued during the procedure and the stored procedure output.
   b) When you have finished reviewing the output, press PF3 (END).
5. To view actions generated by an automated build:
   a) Enter A next to a procedure and press Enter.

      If actions were generated, the **Maintwindow Actions** panel is displayed. This panel shows the actions generated by object.
   b) When you have finished reviewing the actions, press PF3 (END).

Reviewing actions and symptoms

Once a job profile is built for automated actions, you can review the actions that were generated by the build and the exceptions or symptoms that triggered the actions.

Procedure

1. On the Db2 Automation Expert main menu, enter 11 in the **Option** field and press Enter.
2. On the **Automated Console**, enter 4 in the **Option** field and press Enter.
3. On the **Actions** panel, enter T in the **Source** field and press Enter.
4. To view actions for specific objects, enter object selection criteria in the **Target Qualifier** and **Target Object** fields and press Enter.

   A list of the actions for the objects that meet your selection criteria is displayed, as shown in the following figure:

```
AUTOXPRT V1R1    --------------- Actions --------------- 2023/10/21  16:21:29
Option  ===>                                             Scroll ===> CSR
-----------------------------------------------------------------------------
Commands: REFRESH - Refresh action status.
Line Commands: D - Delete action  G - Group  O - Output  P - oPtions
               S - Symptoms  T - change build outpuT
-----------------------------------------------------------------------------
 Target Qualifier NMHA*
 Target Object    *
 Source T (S - AutoStats, T - Automation Expert)
 Status * (C - Completed, E - Error, I - Inprogress, O - Open, * - All)
 Db2 Subsystem: SS1A                              Row 1 of 26401        +>
-----------------------------------------------------------------------------
    Target          Target             Target Priority
Cmd Qualifier       Object             Part   Override    Priority
    NMHA7348        TS734802           0003      0            9
    NMHA7348        TS734802           0004      0            9
    NMHA7348        TS734802           0005      0            9
    NMHA7348        TS734802           0005      0            9
    NMHA7348        TS734801           ALL       0           10
    NMHA7348        TS734801           ALL       0           10
    NMHA7348        TS734802           0001      0            9
```

Figure 181. Actions panel

This panel shows the action (utility) that was run (or will be run) by object. You can filter the view by the status of the action by changing the value in the **Status** header field. You can review the status of the action, the object priority and the priority override (if set), the return code from the action, and other information. Scroll right to see all the fields.

What to do next

- To change the type of action (active to passive or passive to active), enter T next to an open or active action and press Enter. Enter Y on the **Confirm Action Type Change** confirmation dialog to confirm the change.

- To delete an action, enter D next to the action and press Enter. Enter Y on the **Confirm Action Delete** confirmation dialog to confirm the change.

- To view the exceptions (symptoms) that triggered the action for an object, enter S next to an action and press Enter. The **Symptoms** panel is displayed, which shows the exception that was specified and that triggered the utility, along with the actual trigger value that was found.

- To view the output from the action or the control cards that were generated for the utility, follow these steps.

  Note: Some builds generate several individual actions as a group to run a utility. For example, a REORG might generate three individual actions: create a temporary mapping table, the REORG, and drop the temporary mapping table. When an action requires several individual actions, the **Action Group** panel is displayed first, with each action listed separately. For each of those individual actions, you can view the output or the options that were specified in control cards for each individual action from this panel.

  – To view the output from the action, enter the letter O next to an action and press Enter. The **Execution Output** panel is displayed. This panel shows error messages that were generated during the action, and the output from the stored procedure. The following figure shows a portion of output from a CHECK DATA utility:

```
AUTOXPRT V1R1  ----------  Execution Output  ----------  2023/10/21  16:21:35
Option  ===>                                           Scroll ===> CSR
Db2 Subsystem: SS01                          Row 1 of 22                +
--------------------------------------------------------------------------------
                           Error Messages

No Error Messages

                          Stored Procedure Output

1DSNU000I    230 12:40:00.76 DSNUGUTC - OUTPUT START FOR UTILITY, UTILID = A114
                       5
 DSNU1045I   230 12:40:00.86 DSNUGTIS - PROCESSING SYSIN AS UNICODE UTF-8
0DSNU050I    230 12:40:00.87 DSNUGUTC -  CHECK DATA TABLESPACE NMHA7348.TS73480
                       2 PART 3 SHRLEVEL REFERENCE SCOPE
 PENDING AUXERROR REPORT LOBERROR REPORT XMLERROR REPORT EXCEPTIONS 0
 DSNU737I   !SS01 230 12:40:00.87 DSNUKINP - TABLESPACE 'NMHA7348.TS734802' PART
                       ITION '3' IS NOT
           CHECK PENDING
 DSNU749I    230 12:40:00.87 DSNUK001 - CHECK DATA COMPLETE,ELAPSED TIME=00:00:
                       00
 DSNU010I    230 12:40:00.87 DSNUGBAC - UTILITY EXECUTION COMPLETE, HIGHEST RET
```

Figure 182. **Execution Output** *panel*

– To view the options that are specified on the control cards, enter P next to an action and press Enter. The **Action Options** panel shows the control cards that were generated to run the utility. The following figure shows the control cards from the same CHECK DATA utility:

```
AUTOXPRT V1R1  ------       Action Options         ------ 2023/10/21  16:25:33
Option  ===>                                           Scroll ===> CSR
Db2 Subsystem: SS01                          Row 1 of 11
--------------------------------------------------------------------------------
                              Options

  CHECK DATA
    TABLESPACE NMHA7348.TS734802 PART 0003
      SHRLEVEL REFERENCE
      SCOPE PENDING
      AUXERROR REPORT
      LOBERROR REPORT
      XMLERROR REPORT
      EXCEPTIONS 0

**************************** Bottom of Data *********************************
```

Figure 183. **Action Options** *panel*

Reviewing maintenance window workload

Once a maintenance window has been defined and scheduled, you can select the window to review what is scheduled to run when the window is open. The objects and the actions (utilities) to be run are displayed in a list, including the object priority as assigned by Db2 Automation Expert. You can manually override the object priority, or select an action to see the utility control cards and the exceptions (symptoms) that triggered the utility to be run.

Procedure

1. On the Db2 Automation Expert main menu, enter 11 in the **Option** field and press Enter.
2. On the **Automation Console**, enter 2 in the **Option** field and press Enter.
3. On the **Maintenance Window** panel, enter D in the **Source** field, and enter selection criteria in the **Window Like** field. Press Enter.
4. Enter W in the **Cmd** line next to the maintenance window that you want to review and press Enter.

A list of the open actions on the objects that meet your selection criteria is displayed, as shown in the following figure:

```
AUTOXPRT V1R1    ---------- Maintwindow Actions ---------- 2023/10/05  17:42:54
Option  ===>                                             Scroll ===> CSR
-------------------------------------------------------------------------------
Commands: REFRESH - Refresh action status.
Line Commands: D - Delete action  G - Group  O - Output  P - oPtions
              S - Symptoms  T - change Type
-------------------------------------------------------------------------------
Window Name  . . .   TWUSR.BEST PRACTICE REORG #1
Window Description
SSID . . . . . . . . SS01      (Blank for any datasharing member)
View Action Type . . B  (A - Active, P - Passive, B - Both)
                                                  Row 1 of 1          >
-------------------------------------------------------------------------------
     Target            Target               Target Priority
Cmd Qualifier         Object               Part   Override    Priority
    DSN8DB01          DSN8S01              ALL       0          100
***************************** Bottom of Data **********************************
```

Figure 184. Maintwindow Actions

This panel shows the action (utility) that is scheduled to run when this maintenance window is open, by object. Scroll right to see all the fields. You can review the action for each object along with its priority (if one was assigned) by scrolling through the list.

5. To change the object priority for an open action, on the **Maintwindow Actions** panel:

   a) Enter a value in the **Priority Override** column.

   The new priority value must be numeric and from 1-100 (100 is the highest priority). This value overrides the order that is assigned using the **Object Prioritization** panel (refer to "Prioritizing objects for actions" on page 313).

   b) Press Enter.

   The priority override value is saved for that object.

   c) When you exit the **Maintwindow Actions** panel, the **Priority Override Confirmation** panel is displayed.

   This panel lists all the objects that have had the object priority changed.

   d) To confirm the priority overrides, enter Y in the **Confirm Priority Override Changes** field and press Enter.

   The changes are applied and the **Maintenance Windows** panel is displayed.

6. To view the output from the action or the control cards that were generated for the utility, on the **Maintwindow Actions** panel, do one of the following:

   • To view the output from the action, enter the letter O next to an action and press Enter. The **Execution Output** panel is displayed. This panel shows error messages that were generated during the action, and the output from the stored procedure.

   • To view the options that are specified on the control cards, enter P next to an action and press Enter. The **Action Options** panel shows the control cards that were generated to run the utility.

   • To view the exceptions (symptoms) that triggered the action for an object, enter S next to an action and press Enter. The **Symptoms** panel shows the exception that was specified and that triggered the utility, and the actual trigger value that was found.

7. To view an action with other actions in its group, enter G next to an action and press Enter.

   The **Action Group** panel is displayed with each action listed separately. For each of those individual actions, you can view the output or the options that were specified in control cards for each individual action from this panel.

8. To delete an action from the maintenance window:

   a) Enter D next to an action and press Enter.

b) Enter Y to confirm the changes on the **Confirm Action Delete** window and press Enter.

The action is deleted from the maintenance window.

Fine-tuning actions

You can control which actions are run first when a maintenance window opens by using the action and symptom registry editors, along with object prioritization.

Prioritizing objects for actions

You can define priorities for actions by object. Db2 Automation Expert uses the object priority to help determine the order that objects are processed in a maintenance window, allowing you to ensure that your business critical objects are processed first.

About this task

If object priorities are defined, they apply to all Db2 Automation Expert actions. Object priorities are not directly associated with maintenance windows or with job profiles.

Procedure

1. On the Db2 Automation Expert main menu, enter 11 in the **Option** field and press Enter.
2. On the **Automation Console**, enter 1 in the **Option** field and press Enter.
3. On the **Object Prioritization** panel, enter C in the **Cmd** field and press Enter.
4. On the **Create Object Prioritization Entry** window, enter the following:

   a) Enter a database name and table space or index space name in the **Object Database Name** or **Object Name** fields.

   You can use wildcarding in the form of an asterisk (*) at the end of the fields. The wildcard pattern is restricted to a single asterisk that must be at the end of the database or object name. An asterisk means zero or more matching characters.

   Note: The object priorities are analyzed by most restrictive pattern match first. For example, for an object named DB.ABC, and if two object priority entries exist as follows:

   ```
   DB*= Priority 5
   DB.AB* = Priority 4
   ```

   The object DB.ABC would be assigned priority 4.

   b) Specify the type of object in the **Object Type** field.

   c) Specify the priority in the **Object Priority** field. The highest priority is 100; you can specify an integer between 1 and 100.

   To cancel an entry, press PF3 (END)

5. When you have completed the fields, press Enter.

   A message is displayed that confirms the addition of the object priority entry.

6. Use the line commands to create more object priority entries or to modify or delete entries as desired. You can define as many object priority entries as you want.

Overriding the priority of an object for an open action

You can define priorities for actions by object by using the **Object Prioritization** panel, but you can also override the object priority for actions that have been scheduled but not yet run.

About this task

You can override object priorities in the **Priority Override** column on either the **Actions** panel or from the **Maintwindow Actions** panel.

Procedure

1. On either the **Maintwindow Actions** panel or the **Actions** panel, locate the object and action for which you want to change the priority.

2. Enter a value in the **Priority Override** column.

   The new priority value must be numeric and from 1-100 (100 is the highest priority). This value overrides the order that is assigned using the **Object Prioritization** panel (refer to "Prioritizing objects for actions" on page 313).

3. Press Enter.

   The priority override value is saved for the object for that action.

4. When you exit the panel, the **Priority Override Confirmation** panel is displayed.

   This panel lists all the objects that have had the object priority changed.

5. To confirm the priority overrides, enter Y in the **Confirm Priority Override Changes** field and press Enter.

   The changes are applied.

Modifying priorities for actions

During product customization, all actions are assigned a default priority value of 50 (on scale of 1 to 100, 100 being the highest priority). You can customize the priorities of individual action types by editing the action registry. For example, if you consider the COPY utility to be a more important action, you can set the priority to a higher value (such as 75) to give it more importance. The action priority value is saved with each action when a job is built for active or passive automated execution. Db2 Automation Expert uses the action priority (along with the object and symptom priorities) to calculate the workload for a maintenance window.

Procedure

1. On the Db2 Automation Expert main menu, enter 11 in the **Option** field and press Enter.
2. On the **Automation Console**, enter 7 in the **Option** field and press Enter.
3. On the **Action Registry Editor** panel, enter AUTOXPRT in the **Source** field and press Enter.
4. To filter actions by name, enter selection criteria in the **ACTION_KEY** field and press Enter.

   A list of the actions for that meet your selection criteria is displayed, as shown in the following figure:

```
AUTOXPRT V1R1  -----   Action Registry Editor      ---- 2023/10/06  09:43:14
Option  ===>                                            Scroll ===> CSR
                                                     Db2 Subsystem: SS01
ACTION_KEY  *
SOURCE. . . AUTOXPRT                         Row 1 of 13
----------------------------------------------------------------------------
Source    Action Key                        Priority
AUTOXPRT  QUIESCE                              100
AUTOXPRT  IMAGECOPY                             50
AUTOXPRT  REORGIX                               50
AUTOXPRT  REORGTS                               50
AUTOXPRT  CHECKDATA                             50
AUTOXPRT  MODIFY                                50
AUTOXPRT  REPAIR                                50
AUTOXPRT  RECOVER                               50
AUTOXPRT  COPYTOCOPY                            50
AUTOXPRT  RUNSTATS                              50
AUTOXPRT  CREATEMAPTABLE                        50
AUTOXPRT  DROPMAPTABLE                          50
AUTOXPRT  TERMUTIL                              50
***************************** Bottom of Data ********************************
```

Figure 185. Action Registry Editor panel

5. Enter the default priority to be given to an action in the **Priority** field next to action and press Enter.

   The new priority value must be numeric and from 1-100 (100 is the highest priority).

6. When you are finished modifying priorities, press PF3 (END).

The **Automation Console** is displayed with a message that confirms the update of the action registry.

Modifying priorities for Db2 Automation Expert symptoms

The symptom registry editor enables you to customize the priority of each symptom. These priorities can be used in conjunction with object prioritization and the action registry editor to fine tune the priorities of actions, symptoms, and objects. The new symptom values will be used by Db2 Automation Expert when creating new symptoms for objects triggered by exception processing.

About this task

During product customization, symptoms are assigned a default priority value of M (medium), which correlates to 50 on scale of 1 to 100 (100 being the highest priority). You can customize the priorities of individual symptoms by editing the symptom registry. For example, you might want the SYSCOPY exception DAYS and ICTYPE processed before any other symptoms. In that case, you can set the priority to a higher value (such as 75) to give it more importance. The symptom priority value is saved with each action when a job is built for active or passive automated execution. Db2 Automation Expert uses the action priority (along with the object and symptom priorities) to calculate the workload for a maintenance window.

For symptoms with mathematical exception conditions (such as DAYS in the previous example), the difference between the exception condition value that was specified and its actual value also is used in calculations. This difference, called the "variance," is used as an additional multiplier. For example, if the exception is defined as DAYS_SINCE_LACT_IC > 5, and the actual number of days since an image copy was taken for an object is 9, then the resulting variance is 4. The variance is multiplied by the symptom multiplier, which has the effect of placing more importance on objects that have had longer periods of time since an image copy was performed.

Procedure

1. On the Db2 Automation Expert main menu, enter 11 in the **Option** field and press Enter.
2. On the **Automation Console**, enter 6 in the **Option** field and press Enter.
3. On the **Symptom Registry Editor** panel, enter AUTOXPRT in the **Source** field and press Enter.
4. To filter symptoms by name, enter selection criteria in the **SYMPTOM_KEY** field and press Enter.

   A list of the symptoms that meet your selection criteria is displayed, as shown in the following figure:

```
AUTOXPRT V1R1  -----    Symptom Registry Editor       ---- 2023/10/06  09:49:50
Option  ===>                                              Scroll ===> CSR
                                                       Db2 Subsystem: SS01

SYMPTOM_KEY *
SOURCE. . . AUTOXPRT                      Row 1 of 223                    +
   ----------------------------------------------------------------------
Source    Symptom Key                     UserSev Sev SevMultiplier
AUTOXPRT DAY_OF_WEEK.SUNDAY                  M     50      1.0
AUTOXPRT DAY_OF_WEEK.MONDAY                  M     50      1.0
AUTOXPRT DAY_OF_WEEK.TUESDAY                 M     50      1.0
AUTOXPRT DAY_OF_WEEK.WEDNESDAY               M     50      1.0
AUTOXPRT DAY_OF_WEEK.THURSDAY                M     50      1.0
AUTOXPRT DAY_OF_WEEK.FRIDAY                  M     50      1.0
AUTOXPRT DAY_OF_WEEK.SATURDAY               M     50      1.0
AUTOXPRT DAY_OF_MONTH.NTH_SUNDAY            M     50      1.0
AUTOXPRT DAY_OF_MONTH.NTH_MONDAY            M     50      1.0
AUTOXPRT DAY_OF_MONTH.NTH_TUESDAY           M     50      1.0
AUTOXPRT DAY_OF_MONTH.NTH_WEDNESDAY         M     50      1.0
AUTOXPRT DAY_OF_MONTH.NTH_THURSDAY          M     50      1.0
AUTOXPRT DAY_OF_MONTH.NTH_FRIDAY            M     50      1.0
AUTOXPRT DAY_OF_MONTH.NTH_SATURDAY          M     50      1.0
AUTOXPRT DAY_OF_MONTH.NTH_DAY               M     50      1.0
```

Figure 186. Symptom Registry Editor panel

5. Modify the symptom severity and multiplier as follows:

Option	Description
UserSev	Use this field to define the relative importance of a symptom. The importance of the symptom is translated to a numeric value that is displayed in the corresponding **SEV** read-only column. The default is Medium. Valid values are: • I: Ignore. • L: Low • M: Medium • H: High • C: Critical.
Sev Multiplier	Use this column to fine-tune the relative importance of a symptom; the higher the value, the more importance is given to a symptom. The value must be between 1 and 100 and must be a whole number or a decimal number with one digit. The default is 1.0. The Sev Multiplier is applied to the variance, which the difference between specified exception value and the actual value. For example, for the SYSCOPY exception DAYS (the number of days since the last image copy), this multiplier gives an object with a variance of 10 days since the last image copy a higher priority than an object with a variance of 5 days.

6. When you are finished modifying these values, press PF3 (END).

The **Automation Console** is displayed with a message that confirms the update of the symptom registry.

Setting the overall priorities for actions, symptoms, and objects

You can customize the importance of actions, objects, and symptoms as they are related to each other. These priority weighting factors are used by Db2 Automation Expert when calculating the priority of an action in a maintenance window. A higher priority causes an action to be processed first in a maintenance window. You can also specify how Db2 Automation Expert is to treat actions with multiple symptoms.

About this task

Each priority represents the percentage of its weight as compared to the other priorities. Items with a higher priority are processed before items with a lower priority. The total allocation must be less than or equal to 100%. A priority of 0 indicates that those items will be ignored.

Procedure

1. On the Db2 Automation Expert main menu, enter 11 in the **Option** field and press Enter.
2. On the **Automation Console**, enter 8 in the **Option** field and press Enter.

   The **Action Object Symptom Priority** panel is displayed, as shown in the following figure:

```
AUTOXPRT V1R1   -----  Action Object Symptom Priority ---- 2023/11/01  14:10:48
Option  ===>                                          Db2 Subsystem: SS01

 This panel allows you to specify the overall priority of actions, objects,
 and symptoms. The priority tells maintenance windows what items are more
 important to you. Items with a higher priority are ranked higher than the
 other items and will be processed before items with a lower priority. The
 total allocation must be less than or equal to 100%. A priority of 0
 indicates that those items will be ignored.

                           Priority (percent)
          Actions . . . . . .   0    (0-100)
          Objects . . . . . . 100    (0-100)
          Symptoms  . . . . .   0    (0-100)
                               ---
          Total . . . . . . . 100
                                                              More:     +
 When there are multiple symptoms for an action, you must define how the
 symptoms are to be evaluated. A averages the priorities of the symptoms.
 H uses the symptom with the highest priority.


          Multiple Symptom Processing A (A - Average, H - Highest)
```

Figure 187. Action Object Symptom Priority panel

3. Modify the action, symptom, and object priorities as desired.

   Enter each priority as a percentage. Valid values are from 0 to 100. The total of all three values must be less than or equal to 100%. If you enter 0, the item will be ignored when Db2 Automation Expert evaluates actions for processing.

4. Specify a value in the **Multiple Symptom Processing** field.

   When there are multiple symptoms for one action, this field specifies how the priority of the action will be calculated. Enter A to use the average of the priorities of multiple symptoms for an action. Enter H to use the symptom with the highest priority.

5. When you are finished modifying these values, press PF3 (END).

   The **Automation Console** is displayed with a message that confirms the update.

Deleting a maintenance window

If you delete a maintenance window, you can decide the disposition of any open actions that are assigned to that maintenance window.

Procedure

1. On the Db2 Automation Expert main menu, enter 11 in the **Option** field and press Enter.
2. On the **Automation Console** panel, enter 2 in the **Option** field and press Enter.
3. On the **Maintenance Windows** panel, enter D in the **Source** field, and enter selection criteria in the **Window Like** field. Press Enter.
4. Enter D in the **Cmd** line next to the maintenance window that you want to delete and press Enter. One of the following is displayed:

   - If no actions are assigned to the maintenance window, the **Confirm delete/unschedule** window is displayed. Enter Y in the **Delete and unschedule** field and press Enter. A message confirms the maintenance window deletion.
   - If actions are assigned to the maintenance window, the **Maint Window Action Disposition** panel is displayed, containing the list of open and active actions assigned to the maintenance window being deleted. Enter one of the following in the **Action Disposition** field:
     - Specify R to reassign these actions to another maintenance window. When you press Enter, the **Maintenance Window** panel is displayed; select a different maintenance window for the actions to be assigned to and press Enter. A message is displayed to indicate which maintenance window

the action will be assigned to and a confirmation window is displayed to confirm deletion of the maintenance window.

   – Specify N to not reassign the actions and press Enter.

     Important: These actions will not be resolved unless they are reassigned to another maintenance window.

   – Specify Y to delete all actions from the maintenance window.

5. To confirm, enter Y in the **Delete and unschedule** field and press Enter.

Configuring and using event notifications

You can configure Db2 Automation Expert to send notifications by email or text message when Db2 Automation Expert job profiles are built in batch or when a maintenance window opens or ends.

About event notifications

You enter the type of notification and the sender and recipient's information in an event notification profile, and then associate the notifications profile to a job profile or to a maintenance window.

Event notification profiles contain information about the type of notification that is sent (email or text), and the type of events that you want be notified about. You can configure the notification profile to send notifications of:

- Batch build of a job profile begins
- Batch build of a job profile ends
- The number or list of triggered objects at batch build end
- Maintenance window opens
- Maintenance window closes

For most events, you can customize the return code at which you want to be notified.

System requirements

The following requirements must be met to use event notifications:

- The customization steps to configure event notifications must be completed. See "Worksheets: Gathering parameter values for Db2 Automation Expert" on page 21
- TCP/IP and SMTP must be installed and configured on z/OS.
- The SMTP server configuration file statement IPMAILERADDRESS must be configured to your current SMTP mail server.

For more information, refer to the information on IBM Documentation about customizing a TCP/IP connection for z/OS.

Creating an event notification profile

Creating an event notification profile consists of defining the profile, specifying the events that trigger notification, and specifying the type of notification to be sent.

Procedure

1. On the Db2 Automation Expert main menu, enter 11 in the **Option** field and press Enter.
2. On the **Automation Console**, enter 9 in the **Option** field and press Enter.
3. On the **Event Notifications** panel, specify selection criteria and press Enter.

   If profiles exist that meet your selection criteria, they are listed on the **Event Notifications** panel.

4. On the **Event Notifications** panel, enter C in the **Cmd** field and press Enter.

5. On the **Enter New Notification Profile** window, enter the profile creator, a profile description, and the profile update option in the fields on the window. The **Creator** field contains your user ID, but can be modified.

6. After you complete these fields, press Enter.

7. On the **Update Notification Recipients** panel, enter C in the **Cmd** line and press Enter.

8. Specify the settings for this event as follows:

   • In the **Type** field, specify E for email or T for text notifications.

   • In the **Recipient** field, specify the recipient's email address or mobile phone number.

   • In the **Sender** field, specify the email address or mobile phone number from where the notification is sent.

   Note: For text notifications, the mobile phone number must be entered in the following format:

   ```
   1112223333@carrier.com
   ```

   The notifications process uses an email-to-SMS messaging format. Refer to your mobile phone carrier's website to determine the valid SMS email address, or use an SMTP to SMS gateway.

9. When you have finished entering the fields, press Enter.

   A message is displayed that prompts you to specify the events for this notification.

10. Enter U in the **Cmd** line.

    The **Update Notification Events** panel is displayed.

11. Enter A in the **Cmd** line.

    The **Select Events** panel is displayed.

12. To see all the events that can be selected, enter * in the **Source** field.

13. Select one or more events by entering S next to the event.

    You can view a description for each event by entering the V line command next to an event.

14. Press Enter.

    A message confirms the successful selection of the event.

15. When you have finished selecting all events, press PF3 (END).

    The **Update Notification Events** panel is displayed. The events that you selected for inclusion in the profile are listed on the panel.

16. Optional: If an event allows it, specify the return code for which you want to be notified.

    The following figure shows that two types of notifications will be sent: one when a Db2 Automation Expert batch build ends with a return code of 4 or greater, and another notification that contains a list or number of triggered objects when the batch build ends with a return code of 4 or less.

    Figure 188. Setting conditions for notifications

    ```
                                          Op    Return
       Cmd   Event Name                   Code  Code    Source
             AUTOMATION EXPERT BUILD END          GE    4       AUTOXPRT
             AUTOMATION EXPERT TRIGGERED OBJECTS  LE    4       AUTOXPRT
    ```

    If an event does not allow you to specify a return code, the **Op Code** and **Return Code** fields will not be available for editing.

17. Press PF3 (END).

    The **Update Notification Recipients** panel is displayed.

18. Press PF3 (END).

    The profile is saved, and a message confirming the successful creation of the profile is displayed on the **Event Notifications** panel.

What to do next

- To associate an event notification profile with a job profile, see the topic "Updating other job generation options" on page 269.
- To associate an event notification profile with a maintenance window, see the topic "Creating a maintenance window" on page 304.

Related tasks

Viewing a profile
You can view your own profile or one created by another user if the profile was created with a Share option of View or Update.

Deleting a profile
You can delete profiles created under your user ID, regardless of the Share option. You can also delete a profile created by another user if the profile was created with a Share option of Update.

Renaming a profile
You can use the Rename line command to change the name or creator of a profile. Db2 Automation Expert automatically updates any job profiles that use that profile to reflect the new profile name.

Specifying the default event notification profile for job profiles

You can select any notification profile to be your default notification profile for Db2 Automation Expert job profiles. The default notification profile is used for jobs that are submitted under your user ID that do not have a notification profile specified.

About this task

Setting the default notification profile does not apply to maintenance windows.

Procedure

1. On the Db2 Automation Expert main menu, enter 11 in the **Option** field and press Enter.
2. On the **Automation Console**, enter 9 in the **Option** field and press Enter.
3. On the **Event Notifications** panel, specify selection criteria and press Enter.

   If profiles exist that meet your selection criteria, they are listed on the **Event Notifications** panel.
4. On the **Event Notifications** panel, enter S in the **Cmd** field next to the profile that you want to make the default notification profile. Press Enter.

   A message is displayed confirming that the profile that you selected is now the default notification profile.

Results

On the **Event Notifications** panel, the default profile is listed in the **Default Profile** field. This profile is used as the notification profile for all job profiles built with your user ID.

Related tasks

Removing the default event notification profile for job profiles
If you do not want a default notification profile to be associated with all job profiles built under your user ID, remove the default notification profile by following these steps.

Removing the default event notification profile for job profiles

If you do not want a default notification profile to be associated with all job profiles built under your user ID, remove the default notification profile by following these steps.

Procedure

1. On the Db2 Automation Expert main menu, enter 11 in the **Option** field and press Enter.
2. On the **Automation Console**, enter 9 in the **Option** field and press Enter.

3. On the **Event Notifications** panel, specify selection criteria and press Enter.

   If profiles exist that meet your selection criteria, they are listed on the **Event Notifications** panel.
4. On the **Event Notifications** panel, enter REMOVE in the **Option** field and press Enter.
5. On the **Confirm Removal** window, enter **Y** in the **Remove** field and press Enter.

   A message is displayed confirming that the default notification profile has been removed.

Related tasks

Specifying the default event notification profile for job profiles

You can select any notification profile to be your default notification profile for Db2 Automation Expert job profiles. The default notification profile is used for jobs that are submitted under your user ID that do not have a notification profile specified.

Chapter 13. Smarter reorganization recommendations with Db2 Automation Expert and Db2 Query Monitor

Db2 index and table space reorganizations are frequently used to improve application performance, and real-time statistics can be useful in indicating whether a REORG is needed. However, there are times when real-time statistics might indicate that a REORG is needed, but the application is accessing data in a way that is not impacted by disorganized data. Db2 Automation Expert can work with IBM Db2 Query Monitor for z/OS to leverage the SQL performance data that Db2 Query Monitor collects on your application objects to determine if a reorganization is necessary. Using these products together helps your organization avoid unnecessary reorganizations, thereby reducing CPU cycles, memory use, disk space usage, and the impact on your applications.

Db2 Query Monitor is an SQL statement monitor that can identify problem SQL activity and determine the tables and indexes that are used by the problem SQL statement.

In summary, implementing smarter reorganization recommendations involves the following steps:

1. Configure Db2 Automation Expert and Db2 Query Monitor for reorganization recommendations.
2. In Db2 Query Monitor, customize the settings for performance monitoring.
3. In Db2 Automation Expert:
   a. Define a performance window (one or more periods of time in which Db2 Query Monitor monitors object performance).
   b. Create a job profile that specifies a REORG TABLESPACE utility and an exception profile that contains the QUERY MONITOR REORG_OVERRIDE (in addition to other relevant exceptions) and
   c. Associate the job profile with a performance window.
   d. Build the job profile. After you build the job, Db2 Query Monitor begins monitoring the objects during the performance window time periods.
4. On subsequent builds of the job profile, you can review build messages that report whether Db2 Query Monitor recommends or does not recommend the reorganization, based on analysis of the performance data collected during a performance window. You can explore the data that was analyzed by using the Reorganization Recommendation Monitor in the Db2 Query Monitor CAE browser client.

Prerequisites

Using the smarter reorganization recommendation feature requires Db2 Automation Expert V1.1 and Db2 Query Monitor V3.3 or later.

Before you begin

Before setting up smarter reorganization recommendations, ensure the following:

- Db2 Automation Expert is set up for reorganization recommendations. For more information, see "Worksheets: Gathering parameter values for Db2 Automation Expert" on page 21.
- Db2 Query Monitor is set up for reorganization recommendations as follows:
  - The Db2 Query Monitor subsystem, CAE agent, and CAE server are installed and configured.
  - AT-TLS and PAGENT must be configured to allow the Db2 Query Monitor certificate to be used by the Db2 Query Monitor CAE server. For more information, see "Customizing AT-TLS security for smarter reorganization recommendations" on page 16.
  - The Db2 Query Monitor subsystem and CAE agent should run on the same LPAR on which the Db2 subsystem is located and for which recommendation is to be requested.

- You must run a bind job (generated using Tools Customizer or customized from SCQMSAMP member CQMBIND) to be able to use smarter reorganization recommendation.
- To access the reorganization recommendation monitor in the CAE browser client, you must have administrator authority to CAE components, which means that you must have UPDATE access to the CQM.CAE.ADMINISTRATOR RACF profile. For more information, see "Reviewing and setting proper authorizations" in the Db2 Query Monitor V3.3 or later documentation.

Terminology

The reorganization recommendation feature includes several unique terms. You should review and understand these terms before you begin using smarter reorganization recommendations.

baseline performance window
A baseline performance window is an interval (or set of intervals) created by Db2 Query Monitor to which the comparison performance window is compared. The baseline performance window is always older than the comparison performance window. The baseline performance window is newer than the REORG time for the table space.

A baseline performance window represents a window of optimum performance. The baseline performance window is maintained over time so that comparison performance windows (which change often) can be compared to the "optimum" or baseline performance window.

CAE agent
The CAE agent provides TCP/IP access to the data from all Db2 Query Monitor subsystems.

CAE server
The CAE server consolidates data from one or multiple CAE agents and presents it to one or more CAE browser clients. The CAE server can be installed on Windows or on USS.

CAE browser client
The CAE browser client is a Db2 Query Monitor component that enables you to view data for one or more Db2 subsystems, regardless of z/OS and sysplex boundaries.

comparison performance window
A comparison performance window is an interval (or set of intervals) that is captured by Db2 Query Monitor and that is compared to the baseline performance window. The comparison performance window is the interval (or set of intervals) for which you want to diagnose a problem, such as decreased performance.

interval
An interval is a unit of time into which Db2 Query Monitor divides and stores data. Intervals have a start time, an end time, an interval number, and other information that uniquely identifies the interval. Data collected by Db2 Query Monitor is stored in performance history files on the mainframe on a per-interval basis.

performance window
A performance window is a pre-defined time frame during which application performance data is collected for use in determining reorganization recommendations. You should define this time frame as a duration that encompasses execution of the most significant SQL queries that are run on a given Db2 subsystem.

reorganization recommendation monitor
The reorganization recommendation monitor is a component of the Db2 Query Monitor CAE browser client that enables you to analyze and review performance windows and reorganization recommendations. When you review performance windows, data is shown in the activity browser.

How smarter reorganization recommendations work

Db2 Automation Expert initiates smarter reorganization recommendations by providing the objects to be monitored and the timeframe that they are to be monitored to Db2 Query Monitor. Db2 Query Monitor collects performance data on queries that are run against those objects during that timeframe. Db2 Query Monitor then analyzes the data and provides information to Db2 Automation Expert as to whether or not a reorganization is recommended.

How Db2 Automation Expert initiates object monitoring for reorganization recommendations

The initial (setup) build of a Db2 Automation Expert job profile that specifies a REORG TABLESPACE utility, the QUERY PERFORMANCE REORG OVERRIDE exception, and at least one additional exception condition starts the interaction between Db2 Query Monitor and Db2 Automation Expert.

When the job profile is built, the following process is set into motion:

1. Db2 Automation Expert sends information about the objects and the time period to be monitored (the performance window) to Db2 Query Monitor. The setup build initiates reorganization recommendation monitoring during the specified time period, so that Db2 Query Monitor can later make recommendations as to whether or not the objects need to be reorganized. During performance windows, the CAE server analyzes data for the intervals to decide whether to keep or ignore the intervals (if they do not have sufficient data).

   Note: Reorganization recommendation monitoring does not affect Db2 Query Monitor SQL monitoring.

2. To start making recommendations, Db2 Query Monitor needs a baseline performance window. The baseline performance window is the first occurrence of the performance window after the last completed REORG for a table space and contains one or more Db2 Query Monitor intervals. Db2 Query Monitor checks to see when the last REORG was performed for an object and whether performance data has already been collected on the objects during the performance window that was passed in by Db2 Automation Expert.

   - If past intervals exist during which performance data was collected for the object and that precisely fit the time period, those past intervals are used to create the baseline performance window.

   - If the interval that contains the collected performance data does not precisely align with the requested time period, Db2 Query Monitor marks a larger period of collected intervals as the baseline performance window. For example, if you have four intervals of collected performance data:

     1 pm - 2 pm

     2 pm - 3 pm

     3 pm - 4 pm

     4 pm - 5 pm

     and Db2 Automation Expert requests the performance window from 2:30 pm to 3:30 pm, Db2 Query Monitor saves two intervals as the baseline performance window:

     2 pm - 3 pm

     3 pm - 4 pm

     In this case, the performance window (2:30 pm – 3:30 pm) overlaps these two Db2 Query Monitor intervals, which together include the full baseline performance window.

3. Reorganization recommendation monitoring is started.

How Db2 Query Monitor performs reorganization recommendation monitoring

At the beginning of each performance window, Db2 Query Monitor queries the Db2 system tables to see when the latest REORG TABLESPACE was performed for the object.

Db2 Query Monitor then determines the actions to take.

- If a REORG has been performed, no baseline performance window has been defined, and the data in the interval meets the thresholds, then Db2 Query Monitor defines the baseline performance window.

- If a REORG has been performed that is more recent than the start of the currently defined baseline performance window and the data in the interval meets the thresholds, then Db2 Query Monitor deletes

the baseline performance window (and comparison performance window, if it exists) and creates a new baseline with data from the current performance window. This creates a new baseline performance window with the most up-to-date metrics.

- If Db2 Query Monitor cannot find information about the objects in the Db2 system tables, then Db2 Query Monitor deletes the baseline performance window (and the comparison performance window, if it exists) for the object.

Once the baseline performance window is established, at the beginning of the next performance window, Db2 Query Monitor creates a comparison performance window. Db2 Query Monitor saves data from the current performance window to the comparison performance window. When each successive performance window opens, Db2 Query Monitor continues to overwrite the comparison performance window with data from the current performance window, as long as the baseline is in place and the data in the interval meets the thresholds.

The baseline and comparison performance window metrics are used to make recommendations the next time that the job profile is built by Db2 Automation Expert.

Db2 Query Monitor retains the performance history files (a set of files that contain data about monitored objects on a per-interval basis) that are created during any intervals that fall within the baseline performance window and the comparison performance window. Consequently, a Db2 Query Monitor user might notice that, when using smarter reorganization recommendations, performance history files for prior intervals are kept or released in a manner that differs from the keep/release behavior that has been configured for normal (non-reorganization recommendation) processing.

At the end of each performance window, the CAE server checks whether or not each pageset has enough statements to be saved as a baseline or comparison performance window. For example, the CAE server does not save a performance window if it contains no SQL statements. The CAE server executes the equivalent query to the one executed in the activity browser using the Pageset (CURRENT_PAGESET) > SQL drilldown. Therefore, if the job profile has *n* pagesets then the CAE server must make *n* such requests.

Additionally, at the end of a performance window, Db2 Query Monitor splits the interval. The CAE server cannot query an interval while it is being split, so the CAE server must wait for this process to complete. If, for example, it takes about 1 minute to split an interval, then the time the CAE server requires to process the end of a performance window is roughly equal to:

1 minute + (count-of-pagesets * time-to-check-one-pageset)

How the reorganization recommendation request is processed

Subsequent builds of the Db2 Automation Expert job profile initiate a request to Db2 Query Monitor to provide a reorganization recommendation.

The reorganization recommendation process between Db2 Automation Expert and Db2 Query Monitor is as follows:

1. Db2 Automation Expert first uses its own statistics to evaluate whether a REORG should be performed on the object.
2. If Db2 Automation Expert determines the REORG should be performed and the QUERY MONITOR REORG_OVERRIDE exception is selected (in Db2 Automation Expert), a request is sent to Db2 Query Monitor to make a recommendation.
3. Db2 Query Monitor compares the performance of queries from the baseline performance window with the performance of queries from the comparison performance window. Db2 Query Monitor compares the performance of queries from the baseline performance window with the performance of queries from the comparison performance window and uses threshold % (default values are 10% for CPU time or 20% for elapsed time).

   - If performance has degraded, then Db2 Query Monitor recommends the REORG.
   - If performance is the same, then Db2 Query Monitor does not recommend the REORG.

- If baseline or comparison performance windows are not yet defined, then Db2 Query Monitor does not make any recommendations. In this case, for each triggered pageset, Db2 Query Monitor sends a message to Db2 Automation Expert that not enough information is available.

How Db2 Query Monitor uses metrics to make a reorganization recommendation

To make a reorganization recommendation, Db2 Query Monitor compares the performance of SQL statements that were run on the object during the baseline performance window against the performance of SQL statements that were run on the object during the comparison performance window.

The default metrics that are compared are elapsed time and Db2 CPU time. Using the baseline metrics, Db2 Query Monitor calculates the elapsed and Db2 CPU time per SQL call that would be expected in the comparison performance window if SQL performance has not degraded. Db2 Query Monitor compares it to actual elapsed and Db2 CPU times per SQL call that were recorded during the comparison performance window. If the difference is significant (greater than 10% for CPU time or greater than 20% for elapsed time), a REORG is recommended.

Since many statements are typically run on an object, for its calculations Db2 Query Monitor uses statements that have been run in both the baseline and comparison performance windows. If there are not enough statements that have been run in both windows to make a reliable recommendation (default value of low threshold % is 60% of the same statements that have been run in both performance windows), Db2 Query Monitor returns a message that not enough information is available.

The metrics that Db2 Query Monitor uses to make a reorganization recommendation can be customized in Db2 Query Monitor. For more information, see the "Customizing metrics and thresholds" topic in the Db2 Query Monitor V3.3 or later documentation.

How Db2 Query Monitor creates a baseline performance window

When Db2 Automation Expert performs a build with the **PERFORMANCE_OVERRIDE exception** option specified in the exception profile, Db2 Query Monitor evaluates intervals and creates a baseline performance window.

If a reorganization is not needed, then Db2 Query Monitor proceeds to create a baseline performance window as follows:

- All intervals that are currently available in Db2 Query Monitor are analyzed to determine if they align with the performance window.
- If there are intervals that align with the performance window, those intervals are used to create a baseline.
- If no intervals align with the performance window, then Db2 Query Monitor selects a longer period than the performance window.
- If there are no intervals that align with the performance window timestamps, then Db2 Query Monitor waits for the next performance window.

If a reorganization is needed (the **Reorg is needed** flag is **Y**), then Db2 Query Monitor proceeds as follows:

- Db2 Query Monitor does not create a baseline because the object might be in an inappropriate state, as indicated by the fact that Db2 Automation Expert recommends a reorganization. If Db2 Query Monitor were to create a baseline, then all subsequent reorganizations would be rejected due to the inappropriate baseline.
- Db2 Query Monitor waits for the next performance window to determine if a baseline can be created at that time. When the next performance window occurs, Db2 Query Monitor determines the most recent reorganization of the objects of interest. If a reorganization was made against the objects of interest, then Db2 Query Monitor analyzes the performance window. Otherwise, a baseline is not created and Db2 Query Monitor continues to wait for the next performance window.

How Db2 Query Monitor clears or overrides a baseline performance window

At the beginning of a performance window, Db2 Query Monitor checks the system tables to determine when the latest reorganization was completed for the objects of interest.

- If the reorganization was completed after the baseline performance window start time, Db2 Query Monitor deletes the baseline performance window and creates a new one with data from current performance window. This overriding of the existing baseline performance window with a new one is done to ensure the use of the latest statistics.
- If Db2 Query Monitor does not find information about the objects in the system tables, it deletes the baseline for the objects.

The CQM_REORG_METRICS parameter is applied when Db2 Query Monitor receives information about the objects and the time period to be monitored (the performance window) from Db2 Automation Expert. The metrics that Db2 Query Monitor collects are stored in the reorganization history (knowledge/site/qm/reorg/history). Changes made to CQM_REORG_METRICS are not applied to previously collected metrics.

The metrics are later used to evaluate the baseline and performance windows for a reorganization profile, with the values that were in place when the profile was received from Db2 Automation Expert.

When a job profile is built, Db2 Automation Expert sends information about the objects and the time period to be monitored (the performance window) to Db2 Query Monitor.

Best practices for smarter reorganization recommendations

Review these best practices before using smarter reorganization recommendation.

Db2 Automation Expert best practices

When specifying a performance window in Db2 Automation Expert, be sure that the performance window you specify includes the time when you expect a workload of interest to run.

To avoid difficulties when verifying Db2 Query Monitor intervals, it is recommended that you do not specify complicated Db2 Automation Expert time periods in the performance window, such as the following:

- Each Friday from 12:00 till 13:00
- Each 31st day of month from 12:30 till 13:00

Complicated time periods, such as those listed above, overlap occasionally and can be problematic for Db2 Query Monitor when analyzing performance windows for reorganization recommendation.

Db2 Query Monitor best practices

We recommend that you set the MaxCollectionWindowLength parameter to be a whole integer multiple of the Db2 Query Monitor interval length (that is defined in CQMPARMS using the INTERVAL parameter). For example, if your INTERVAL parameter is 2 hours, we recommend a MaxCollectionWindowLength setting of 7200000 (2 hours) or 14400000 (4 hours). This ensures the intervals will divide evenly into the performance window. For more information, see "Customizing the maximum collection window length" in the Db2 Query Monitor V3.3 or later documentation.

When using smarter reorganization recommendation, we recommend that you specify INTERVAL_MIDNIGHT(Y) in your Db2 Query Monitor CQMPARMS file to align interval start times to midnight. For more information, see "Db2 Query Monitor subsystem parameters - CQMPARMS" in the Db2 Query Monitor V3.3 or later documentation.

If you plan to use the Db2 Query Monitor offload process concurrently with the smarter reorganization recommendation feature, be sure to use INTERVAL_UNITS(DAYS). If you use INTERVAL_UNITS(INTERVALS), the interval splitting associated with reorganization recommendation processing might result in fewer intervals than expected being offloaded. Using INTERVAL_UNITS(DAYS) ensures all intervals are offloaded regardless of any extra intervals that are split for reorganization

recommendation. For more information, see "Db2 offload parameters" in the Db2 Query Monitor V3.3 or later documentation.

Setting up, starting, and using smarter reorganization recommendations

Follow these steps to set up, start, and use reorganization recommendation monitoring.

About this task

A general description of the steps that are required to implement smarter reorganization recommendations follows. These steps assume that you already know how to create Db2 Automation Expert object, utility, exception and job profiles. Additional information is provided in topic links.

Procedure

1. Start the Db2 Query Monitor subsystem. For more information, see "Starting the Db2 Query Monitor subsystem" in the Db2 Query Monitor V3.3 or later documentation.

2. In Db2 Query Monitor, specify the appropriate reorganization recommendation settings, either in a monitoring profile or in the Db2 Query Monitor subsystem parameter file, CQMPARMS. Configure the monitoring profile or CQMPARMS file to collect data about the objects and SQLText associated with the SQL workloads of interest for reorganization recommendation monitoring.

   For more information, see:

   - "Creating a monitoring profile" (ISPF client)
   - "Creating a monitoring profile" (CAE browser client)
   - "Db2 Query Monitor subsystem parameters - CQMPARMS"

   in the Db2 Query Monitor V3.3 or later documentation.

3. (Optional) Customize the metrics that Db2 Query Monitor will use for reorganization analysis. Perform this step if you want to change the default metrics that are used for reorganization analysis. For more information, see "Customizing metrics and thresholds" in the Db2 Query Monitor V3.3 or later documentation.

4. (Optional) If you need to ensure that your performance data does not consume too much space, customize the maximum collection window length as needed. For more information, see "Customizing the maximum collection window length" in the Db2 Query Monitor V3.3 or later documentation.

5. Activate the monitoring agent for the Db2 subsystem you want to monitor. You can activate the monitoring agent using the ISPF client or the CAE browser client. For more information, see "Activating a monitoring agent - ISPF client" or "Activating a monitoring agent - CAE browser client" in the Db2 Query Monitor V3.3 or later documentation.

6. Start the CAE agent on the LPAR where the Db2 Query Monitor subsystem is running. For more information, see "Starting the CAE agent" in the Db2 Query Monitor V3.3 or later documentation.

7. Start the CAE server. For more information, see "Starting the CAE server" in the Db2 Query Monitor V3.3 or later documentation.

8. Verify that the CAE agent is connected to the CAE server. For more information, see "Verifying that the CAE agent and the CAE server are connected" in the Db2 Query Monitor V3.3 or later documentation.

9. In Db2 Automation Expert, create the required object, utility, and exception profiles. At a minimum, a REORG TABLESPACE must be included in the utility profile and the QUERY MONITOR REORG_OVERRIDE exception must be specified in the exception profile. In addition to the REORG_OVERRIDE exception, you must select at least one other exception to trigger smarter reorganization recommendations. It is recommended that you choose an exception that evaluates whether the objects in the job profile require reorganization (such as the real-time statistic exception DAYS_SINCE_LAST).

10. In Db2 Automation Expert, create a performance window.

    For more information, see "Creating and associating performance windows" on page 330.

11. In Db2 Automation Expert, combine the object, utility and exception profiles into a job profile.

    When defining the job profile, associate the performance window that you created with this job profile. You can also optionally associate the job profile with a maintenance window.

12. Run the Db2 Automation Expert build. This sets up the initial monitoring.

13. (Optional) Re-run the job profile build on a regular basis (such as weekly) to re-evaluate all reorganization recommendations.

14. (Optional) After you perform a Db2 Automation Expert build for reorganization recommendation, you can use the CAE browser client to view, analyze, and review performance windows that have been captured as potential candidates for reorganization recommendation or to stop reorganization recommendation monitoring. For more information, see "Using the Reorganization Recommendation Monitor" in the Db2 Query Monitor V3.3 or later documentation.

Results

The objects in the object profile are now monitored for smarter reorganization recommendations.

What to do next

On subsequent builds of the same Db2 Automation Expert job profile that requests a reorganization recommendation, review the messages that are returned from the build. The recommendation from Db2 Query Monitor is included in message DAJB662I. Additional DAJB messages may accompany this message that provide information about why a recommendation was or was not made.

If you want to stop reorganization recommendation monitoring for one or more job profiles (before the job profile is configured to end, as specified in the Db2 Automation Expert build), see "Stopping reorganization recommendation monitoring" on page 332.

Creating and associating performance windows

Performance windows are created and managed in Db2 Automation Expert. They define the time periods in which Db2 Query Monitor monitors the performance of SQL against table spaces and indexes. After you create the performance window, you must associate the window with the job profile that you want to use for reorganization recommendations.

Procedure

1. Create the performance window.

   a) On the Db2 Automation Expert main menu, enter 12 in the **Option** field and press Enter.

   b) On the **Reorganization Avoidance** panel, enter 1 in the **Option** field and press Enter.

   c) Specify selection criteria and press Enter.

      If performance windows exist that meet your selection criteria, they are listed on the panel.

   d) Enter C in the **Cmd** field and press Enter.

   e) On the **Create Performance Window** panel, enter a performance window name and optionally a description and press Enter.

      A message prompts you to enter a time period.

   f) To create a time period, press Enter.

      The Create Timeperiod window is shown in the following figure:

```
                          Create Timeperiod

Window Name  . . . . CUSTOMER APPL
Window Description
-------------------------------------------------------------------
Window Start:
  Day of Week . . . . .        (0-6, Sun-Sat, *)
  Month . . . . . . . .        (1-12, Jan-Dec, *)
  Day of Month   . . .         (1-31, *)
  Time of Day . . . . . 00:00 (HH:MM)
Options:
  Duration    . . . . . 0001:00:00 (HHHH:MM:SS)
```

*Figure 189. **Create Timeperiod** window*

g) Enter the performance window information, including the window start information and duration. All fields are required.

Important: The performance window should be a time period likely to contain typical workloads on the tables that are in the object profile, and when performance impacts would be most important. Some examples of well-defined performance windows are:

- Each business day from 9:00 AM till 5:00 PM
- Each day from 9:00 AM till 11:00 AM and from 14:00 PM till 16:00 PM

When you complete all of the fields, press Enter.

h) The information that you entered creates a single time period for the performance window. The time period is displayed on the **Create Performance Window** panel.

i) Press Enter to continue.

j) Use the line commands to create additional time periods, or to modify or delete time periods as desired. You can have as many time periods in a performance window as you want.

k) Press PF3 (END) to exit and save the performance window.

2. Associate the performance window with the job profile.

a) Update the job profile that will be used for reorganization recommendations.

b) Enter Y in the **Update Job Generation Options** field and press Enter.

c) Enter Y in the **Select Performance Window** field.

d) Specify selection criteria and press Enter.

If performance windows exist that meet your selection criteria, they are listed on the panel.

e) Enter S next to a performance window to select it and press Enter.

f) In the **Collection Duration** field, enter the number of days that Db2 Query Monitor is to collect the SQL performance metrics without another job profile build. If Db2 Automation Expert does not build the job profile before this time period elapses, Db2 Query Monitor will stop monitoring the SQL for the objects in this job profile.

g) Press PF3 to exit and save the job profile.

What to do next

To set up initial monitoring of the objects in the job profile, run the Db2 Automation Expert build.

Stopping reorganization recommendation monitoring

Once a job profile has been built and Db2 Query Monitor is providing reorganization recommendations for the objects, you can view the job profiles that are being monitored and stop monitoring one or more job profiles using the Db2 Automation Expert ISPF interface.

Procedure

1. On the Db2 Automation Expert main menu, enter 12 in the **Option** field.
2. On the **Reorganization Avoidance** panel, enter 2 in the **Option** field.
3. On the **Monitored Job Profiles** panel, enter job profile selection criteria and press Enter. A list of profiles that are being monitored is displayed.
4. To stop monitoring a profile, enter S next to the job profile and press Enter.

   A confirmation window is displayed.
5. Enter Y to stop reorganization recommendation monitoring.

Results

After you stop reorganization recommendation monitoring, the CAE server releases any intervals associated with the baseline performance window or comparison performance window (if these intervals are not used for other objects for which reorganization avoidance monitoring is still active). The CAE server clears the Reorganization recommendation monitor panel (the objects are no longer shown on that panel after reorganization recommendation monitoring is stopped).

Chapter 14. Automated statistics using Db2 Automation Expert

Db2 Automation Expert automated statistics functionality acts as an interface to Db2's autonomics statistics. Db2 supplies a set of procedures and catalog tables that allow you to ensure that statistics are up to date so Db2 can effectively optimize queries. Db2 autonomic statistics also ensure that statistics are not recollected unnecessarily. The automated statistics functionality in the Db2 Automation Expert Automation Console provides an interface to these stored procedures, the catalog tables required to use them, and the Db2 administrative task scheduler.

Overview: automated statistics

This section provides a condensed overview of automated statistics using Db2 stored procedures.

Note: This section is provided to aid in understanding only Db2 Automation Expert automated statistics functionality. For more detailed information about Db2's autonomic statistics, refer to IBM Knowledge Center.

The two Db2 stored procedures provided are ADMIN_UTL_MONITOR and ADMIN_UTL_EXECUTE. The Db2 administrative task scheduler is used to call these procedures.

The ADMIN_UTL_MONITOR procedure:

1. Detects objects with out-of-date statistics that require a RUNSTATS utility.
2. Writes an alert (a recommendation that RUNSTATS needs to be run) for the object to a SYSAUTOALERTS table.
3. Optionally executes RUNSTATS (ADMIN_UTL_EXECUTE) to resolve alerts.

The ADMIN_UTL_EXECUTE procedure:

1. During specified maintenance windows (defined in SYSAUTOTIMEWINDOWS), resolves as many alerts as it can by calling the RUNSTATS utility.
2. Writes the results of the alert resolution to a SYSAUTORUNS_HIST history file.
3. Optionally, if any alerts remain unresolved, reschedules RUNSTATS (ADMIN_UTL_EXECUTE) to run in the next maintenance window.

The following catalog tables are used for Db2 autonomic statistics:

- SYSIBM.SYSTABLES_PROFILES
- SYSIBM.SYSAUTOTIMEWINDOWS
- SYSIBM.SYSAUTOALERTS
- SYSIBM.SYSAUTORUNS_HIST

About the Db2 Automation Expert automated statistics interface

Db2 Automation Expert provides an ISPF interface and its own stored procedure (DLC.ADMIN_UTL_MONITOR) to help you:

- Create a statistics monitor profile. This profile acts as input to ADMIN_UTL_MONITOR and defines the criteria under which statistics are considered out of date and defines the objects that you want to monitor for outdated statistics.
- Execute the statistics monitor profile (which calls the ADMIN_UTL_MONITOR stored procedure), either immediately or scheduled via the Db2 administrative task scheduler.
- After a statistics monitor profile has been executed, you can view alerts that were written during the execution, as well as view execution results and output if the alert was resolved immediately.

- Define the specified maintenance window in which RUNSTATS can be run to resolve alerts via ADMIN_UTL_EXECUTE.
- Schedule an execution of ADMIN_UTL_EXECUTE from within a specified maintenance window. This allows you to resolve alerts using the stored procedure outside of using the statistics monitor profiles.
- View history and output from all executions of the statistics stored procedures, and the alerts associated with them.

The Db2 Automation Expert interface with the Db2 administrative task scheduler is used for scheduling tasks.

At a minimum, to use the Db2 Automation Expert automated statistics functionality, you must:

- Ensure prerequisites are met (see the following section).
- Create statistics monitor profiles to define what statistics are considered outdated and optionally define which objects to check.
- Execute or schedule execution of a statistics monitoring profile.
- Create one or more maintenance windows that define when a RUNSTATS could be run to resolve outdated statistics.

Prerequisites
Refer to the topic "Verify that your environment meets software requirements" on page 13 for prerequisites.

Creating a statistics monitor profile

The statistics monitor profile defines criteria against which object statistics can be evaluated, and can also filter the Db2 table spaces on which to monitor statistics. This topic explains how to create a statistics monitor profile.

About this task
The criteria you define in the statistics monitor profile is used as input to the Db2 ADMIN_UTL_MONITOR stored procedure.

Procedure
1. On the Db2 Automation Expert main menu, enter 11 in the **Option** field and press Enter.
2. On the **Automation Console**, enter 5 in the **Option** field and press Enter.
3. On the **Enter New Stats Monitor Profile Data** window, in the **Profile Name** field, enter a name for the statistics monitor profile and enter a description in the **Description** field. Press Enter.

   The **Update Stats Monitor Profile** panel is displayed, as shown in the following figure:

```
AUTOXPRT V1R1   ----- Update Stats Monitor Profile   ---- 2023/10/21  21:18:26
Option  ===>                                               Scroll ===> CSR
-------------------------------------------------------------------------------
Creator: TWUSR          Profile: TEST STATS MONITOR PROFILE     User: TWUSR
                                                      Db2 Subsystem: SS1A

-------------------------------------------------------------------------------
Description  . . . . .
Share Option . . . . . U  (U - Update, V - View, N - No)
-------------------------------------------------------------------------------
Stand Alone  . . . . . N   (Y - Yes, N - No)
Statistics Scope . . . B   (B - Basic, P - Profile, C - Profile Consistency)
Sampling Rate  . . . .     (1-100, Blank)
Sampling Threshold . . 500000    (Integer, Blank)
Number of Changes  . . 0         (Integer, Blank)
Number of Mass Deletes 0         (Integer, Blank)
Percent Changes  . . . 20        (0.0 - 100.0, Blank)
Update Inconsistency Thresholds N (Y - Yes, N - No)

Restrict Tablespace                                                        >
   Test Restrict Tablespace      N (Y - Yes, N - No)
```

*Figure 190. **Update Stats Monitor Profile** panel*

4. Complete the fields as required. When you have completed the fields, press PF3 (END).

What to do next

Profiles can be updated, deleted, exported and imported, renamed and viewed in the same manner as Db2 Automation Expert object, exception, utility, and job profiles. Refer to Chapter 16, "Managing profiles," on page 349 for additional information.

You can also use the following line commands:

- X - Execute the statistics monitor profile.
- S - Schedule the statistics monitor profile for execution via the Db2 administrative task scheduler.
- H - View the execution history for the selected statistics monitor profile. This option displays the same panel as in "Viewing execution history of Db2 autonomic statistics procedures" on page 340, but lists only executions of the selected statistics monitor profile.

Specifying thresholds for inconsistent statistics

This panel allows you to specify thresholds for inconsistent statistics. Whenever one of these thresholds is exceeded, a RUNSTATS alert is written.

About this task

Each threshold is a percentage difference when related statistics are compared. Unless otherwise specified, valid values for these thresholds are real numbers from 0.0 to 100.0 inclusive. These criteria are used as input to the Db2 ADMIN_UTL_MONITOR stored procedure.

Procedure

1. On the **Update Stats Monitor Profile** panel, enter Y in the **Update Inconsistency Thresholds** field and press Enter.

   The **Update Inconsistency Threshold** panel is displayed, as shown in the following figure:

```
AUTOXPRT V1R1 ------ Update Inconsistency Threshold ----- 2023/10/21  21:20:51
Option   ===>                                              Scroll ===> CSR

  Creator: TWUSR        Name: TEST STATS MONITOR              User: TWUSR
                                                     Db2 Subsystem: SS1A
  ------Statistic Threshold------                       (0.0-100.0, Blank)
  colgroup-card-greater-than-superset-colgroup-card        0.1
  different-colgroup-card-from-coldist-and-index           0.1
  different-colgroup-card-from-indexes                     0.1
  different-single-col-colgroup-card-from-coldist-and-index 0.1
  different-single-col-colgroup-card-from-indexes          0.1
  drf-greater-than-tabcard                                 0.1
  drf-less-than-npages                                     0.1
  frequency-out-of-range                                  0.1
  index-fullkeycard-less-than-any-key-card                0.1
  index-fullkeycard-less-than-firstkeycard                0
  maximum-frequency-less-than-reciprocal-of-colgroup-card 0.1
  number-of-frequency-records-greater-than-colgroup-card  0.1
  product-of-colcard-less-than-colgroup-card              0
  quantile-card-greater-than-colcard                      0.1
  quantile-card-greater-than-colgroup-card                0.1
  quantile-frequency-out-of-range                         0
  single-col-index-fullkeycard-not-equal-firstkeycard     0.1
  sum-of-frequency-greater-than-one                       0.1
  sum-of-histogram-frequency-greater-than-one             0
  sum-of-histogram-greater-than-colcard                   0.1
  sum-of-histogram-greater-than-colgroup-card             0.1
  tabcard-less-than-colcard                               0.1
  tabcard-less-than-colgroup-card                         0.1
  tabcard-less-than-index-keycard                         0.1
  tabcard-not-equal-unique-index-fullkeycard              0.1
```

Figure 191. **Update Inconsistency Threshold** *panel*

2. Verify or change the statistics thresholds. If the field is left blank, the threshold is not used. For information about the fields, press PF1 for help.

3. When you have completed the required fields, press PF3 (END).

   The **Update Stats Monitor Profile** panel is displayed.

Displaying a list of table spaces to be monitored

You can use the **Test Restrict Tablespace** field to generate a list of table spaces that meet the WHERE clause that you entered in the **Restrict Tablespace** field.

Procedure

1. From the **Update Stats Monitor Profile** panel, enter Y in the **Test Restrict Tablespace** field and press Enter.

   If the WHERE clause you entered on the **Update Stats Monitor Profile** panel is not valid, a message panel explaining the error is displayed.

   If the WHERE clause is valid, the **Tablespace Stats Display** panel is displayed, as shown in the following figure:

```
AUTOXPRT V1R1    -------- Tablespace Stats Display ------- 2023/10/21  21:20:51
Option  ===>                                              Scroll ===> CSR

Where   DBNAME LIKE 'DLCDB%' AND INSTANCE = 1         >   Db2 Subsystem: SS1A
                                                     Row 1 of 29          +>
-------------------------------------------------------------------------------

Name                    DBName    Partition Instance DBid  PSid   Extents
ARCHIV11                DLCDB2     00000     00001 01988 00124   00001
ARCHIV11                DLCDB      00000     00001 00267 00124   00001
DLCLP11                 DLCDB      00000     00001 00267 00088   00009
DLCLP11                 DLCDB2     00000     00001 01988 00088   00001
DLCUTS11                DLCDB2     00000     00001 01988 00101   00001
DLCUTS11                DLCDB      00000     00001 00267 00101   00001
DRCOPY11                DLCDB      00000     00001 00267 00119   00001
DRCOPY11                DLCDB2     00000     00001 01988 00119   00001
ETRIGS31                DLCDB2     00000     00001 01988 00074   00001
ETRIGS31                DLCDB      00000     00001 00267 00074   00001
EXCPTN11                DLCDB      00000     00001 00267 00029   00001
EXCPTN11                DLCDB2     00000     00001 01988 00029   00001
JOBS11                  DLCDB2     00000     00001 01988 00017   00001
JOBS11                  DLCDB      00000     00001 00267 00017   00013
OBJECT13                DLCDB2     00000     00001 01988 00007   00001
OBJECT13                DLCDB      00000     00001 00267 00007   00005
OBJEXT31                DLCDB      00000     00001 00267 00012   00001
OBJEXT31                DLCDB2     00000     00001 01988 00012   00001
PAGELOG3                DLCDB      00000     00001 00267 00109   00002
PAGELOG3                DLCDB2     00000     00001 01988 00109   00001
PROFIL11                DLCDB      00000     00001 00267 00002   00003
PROFIL11                DLCDB2     00000     00001 01988 00002   00001
```

Figure 192. **Tablespace Stats Display** *panel*

2. This panel lists the table spaces that meet the WHERE clause listed in the top of the panel. Review the list of objects. If you want to modify the list of table spaces, you can edit the **Where** field at the top of the panel and press Enter.

   The columns listed for each table space are directly from the SYSIBM.SYSTABLESPACESTATS catalog table. Refer to the Db2 for z/OS documentation for a description of these fields.

3. When you have finished editing or reviewing the list, press PF3 (END).

   The **Update Stats Monitor Profile** panel is displayed.

Running a statistics monitor profile

When a statistics monitor profile is run, Db2 Automation Expert calls the ADMIN_UTL_MONITOR stored procedure using the parameters and criteria specified in the profile.

About this task

There are two ways to run a statistics monitor profile:

- On demand (immediately)
- Schedule the run via the Db2 administrative task scheduler

Procedure

- To run the statistics monitor profile immediately, enter X in the line command area next to the profile and press Enter.

  The Executing Statistics Monitor window displays while the profile is running.

  When the profile finishes running, the results are displayed in a panel, and the information is stored in the Db2 catalog table SYSIBM.SYSAUTORUNS_HIST. The following figure shows the **Maintwindow Execution Output** panel:

```
AUTOXPRT V1R1  ------ Maintwindow Execution Output ------ 2023/10/21  21:25:30
Option  ===>                                              Scroll ===> CSR
Db2 Subsystem: SS1A                          Row 13 of 238              -+
--------------------------------------------------------------------------------
                           Stored Procedure Output

2023-08-18 12:07:57.563784> Executing SYSPROC.ADMIN_UTL_MONITOR
2023-08-18 12:07:57.563795> with options: RESTRICT-TS="DBNAME LIKE 'DLCDB%' AND
                              INSTANCE = 1",STAND-ALONE=NO,STATISTICS-SCOPE=PROF
                              ILE-CONSISTENCY,SAMPLING-THRESHOLD=500000,NUM-CHANG
                              ES=0,NUM-MASS-DELETES=0,PCT-CHANGES=20,COLGROUP-CAR
                              D-GREATER-THAN-SUPERSET-COLGROUP-CARD=0.1,DIFFERENT
                              -COLGROUP-CARD-FROM-COLDIST-AND-INDEX=0.1,DIFFERENT
                              -COLGROUP-CARD-FROM-INDEXES=0.1,DIFFERENT-SINGLE-CO
                              L-COLGROUP-CARD-FROM-COLDIST-AND-INDEX=0.1,DIFFEREN
                              T-SINGLE-COL-COLGROUP-CARD-FROM-INDEXES=0.1,DRF-GRE
                              ATER-THAN-TABCARD=0.1,DRF-LESS-THAN-NPAGES=0.1,FREQ
                              UENCY-OUT-OF-RANGE=0.1,INDEX-FULLKEYCARD-LESS-THAN-
                              ANY-KEY-CARD=0.1,INDEX-FULLKEYCARD-LESS-THAN-FIRSTK
                              EYCARD=0,MAXIMUM-FREQUENCY-LESS-THAN-RECIPROCAL-OF-
                              COLGROUP-CARD=0.1,NUMBER-OF-FREQUENCY-RECORDS-GREAT
                              ER-THAN-COLGROUP-CARD=0.1,PRODUCT-OF-COLCARD-LESS-T
                              HAN-COLGROUP-CARD=0,QUANTILE-CARD-GREATER-THAN-COLC
                              ARD=0.1,QUANTILE-CARD-GREATER-THAN-COLGROUP-CARD=0.
                              1,QUANTILE-FREQUENCY-OUT-OF-RANGE=0,SINGLE-COL-INDE
                              X-FULLKEYCARD-NOT-EQUAL-FIRSTKEYCARD=0.1,SUM-OF-FRE
                              QUENCY-GREATER-THAN-ONE=0.1,SUM-OF-HISTOGRAM-FREQUE
                              NCY-GREATER-THAN-ONE=0,SUM-OF-HISTOGRAM-GREATER-THA
                              N-COLCARD=0.1,SUM-OF-HISTOGRAM-GREATER-THAN-COLGROU
                              P-CARD=0.1,TABCARD-LESS-THAN-COLCARD=0.1,TABCARD-LE
```

*Figure 193. **Maintwindow Execution Output** panel*

- To schedule the execution via the Db2 Automation Expert interface to the Db2 administrative task scheduler, enter S in the line command area next to the statistics monitor profile and press Enter.

  The **Schedule Db2 Admin Task** panel is displayed, as shown in the following figure:

```
AUTOXPRT V1R1   -------- Schedule Db2 Admin Task -------- 2023/10/21  21:30:07
Option   ===>                                             Scroll ===> CSR
--------------------------------------------------------------------------------
Commands: CANCEL - Exit without saving changes.
--------------------------------------------------------------------------------
                                              Db2 Subsystem: SS1A
Task Name  . . . . AUTOXPRT STATMONITOR: TEST                        >
Task Description                                                     >
                                                       More:     +
Begin Timestamp  . . &CURRENT                (Db2 Timestamp)
End Timestamp  . . . &CURRENT + 5 MINUTES    (Db2 Timestamp)
Max Invocations  . . 1         (Integer, Blank)
SSID . . . . . . . . SS1A      (Blank for any datasharing member)

Invocation Options:
  Interval (minutes)          (Integer, Blank)
         -Or-
  Trigger:
    Task Name . . .                                           >
    Cond  . . . . .           (GT,GE,EQ,LT,LE,NE)
    Code  . . . . .           (Integer, Blank)
         -Or-
```

*Figure 194. **Schedule Db2 Admin Task** panel*

Complete the fields as required. For information about the fields, press PF1 for help.

When you are finished, press Enter, then PF3. A message displays that confirms that the task has been scheduled.

What to do next

- You can view a statistics monitor profile's execution history by using the H line command on the **Statistics Monitor Profiles** panel.
- You can also view scheduled executions of a statistics monitor profile using option 11 from the Db2 Automation Expert main menu.

Managing maintenance windows for automated statistics

Use this option to define and manage maintenance windows in which RUNSTATS utilities can be run to update object statistics.

About this task

This function is used to view and update the SYSAUTOTIMEWINDOWS Db2 catalog table, which defines when the RUNSTATS stored procedure can be run.

Procedure

1. From the **Automation Console** panel, enter 2 in the **Option** field and press Enter.
2. On the **Maintenance Windows** panel, enter S in the **Source** field and press Enter.
3. If prompted, enter * in the Window Like field.
4. To create a new maintenance window, enter T in the line command area and press Enter.

   The **Create Maintenance Window** panel is displayed. as shown in the following figure:

```
                 Create Maintenance Window

SSID . . . . . . . . SS01       (Blank for any datasharing member)
Max Tasks  . . . . . 1          (Integer, Blank)

Month or Week  . . . M (M - Month, W - Week)
Month. . . . . . . .   (1-12, blank)
Day  . . . . . . . .   (1-31, blank)
Time From  . . . . . 00:00:00 (HH:MM:SS)
Time To  . . . . . . 00:00:00 (HH:MM:SS)
```

*Figure 195. **Create Maintenance Window** window*

5. Complete the fields as required. For information about the fields, press PF1 for help.

6. When you have entered the required fields, press Enter, then PF3 to create the maintenance window.

   The maintenance window appears as a row on the **Maintenance Windows** panel. You might need to scroll down to see the row that was added.

What to do next

Once you have created a maintenance window, you can:

- Update it using the U line command.
- Create a new window using the T command.
- Copy an existing maintenance window and edit it to create a new maintenance window; use the R (repeat) line command
- Schedule RUNSTATS to run in the selected maintenance window; use the S line command.

Scheduling RUNSTATS via the Db2 administrative task scheduler

You can schedule a RUNSTATS task from the **Maintenance Windows** panel. The Db2 administrative task scheduler schedules the ADMIN_UTL_EXECUTE stored procedure to run RUNSTATS against any object that has an alert in the SYSAUTOALERTS table.

Enter S in the **Cmd** field next to a statistics maintenance window on the **Maintenance Windows** panel. The **Schedule Db2 Admin Task** panel is displayed, as shown in the following figure:

```
AUTOXPRT V1R1   -------- Schedule Db2 Admin Task -------- 2023/10/21  21:31:32
Option   ===>                                            Scroll ===> CSR
-------------------------------------------------------------------------------
Commands: CANCEL - Exit without saving changes.
-------------------------------------------------------------------------------
                                          Db2 Subsystem: SS1A
Task Name  . . . . RUNSTATS WINDOW ID:5308                        >
Task Description                                                  >
                                                    More:    +
Begin Timestamp  . . 2023-10-11-00.00.00.000000 (Db2 Timestamp)
End Timestamp  . . .                             (Db2 Timestamp)
Max Invocations  . . 1           (Integer, Blank)
SSID . . . . . . . . SS1A         (Blank for any datasharing member)
Stand Alone  . . . . Y            (Yes/No)

Invocation Options:
  Interval (minutes)            (Integer, Blank)
        -Or-
  Trigger:
    Task Name . . .                                        >
    Cond  . . . . .              (GT,GE,EQ,LT,LE,NE)
    Code  . . . . .              (Integer, Blank)
        -Or-
  Point in Time . .                                        >
```

*Figure 196. **Schedule Db2 Admin Task** panel*

Complete the fields as required. For information about the fields, press PF1 for help.

When you are finished, press Enter, then PF3. The **Maintenance Windows** panel is displayed.

Viewing execution history of Db2 autonomic statistics procedures

Db2 Automation Expert provides an interface to view a history of Db2 autonomic statistics procedures that have been run. This function allows you see the results from the Db2 autonomic statistics procedure execution and a list of related alerts.

Procedure

1. On the Db2 Automation Expert main menu, enter 11 in the **Option** field and press Enter.
2. On the **Automation Console**, enter 3 in the **Option** field and press Enter.
3. On the **Automation Execution History** panel, enter Y in the **Show AutoStats Monitor** field or the **Show Autostats Execute** field, or both, and press Enter.

   The **Automation Execution History** panel is refreshed with a list of Db2 autonomic statistics procedures that were run, listed in the PROC_NAME column as follows:

   - SYSPROC.ADMIN_UTL_MONITOR: The ADMIN_UTL_MONITOR stored procedure, which detects objects with out-of-date statistics and notes the actions to be taken.
   - SYSPROC.ADMIN_UTL_EXECUTE: The ADMIN_UTL_EXECUTE stored procedure, which resolves the out-of-date statistics by running RUNSTATS during a maintenance window.

Viewing output of Db2 autonomic statistics procedures

You can view the error messages and output from a Db2 autonomic statistics procedure that was run by using the O line command.

Procedure

- On the **Automation Execution History** panel, enter O in the line command area.

  The **Maintwindow Execution Output** panel is displayed, as shown in the following figure:

```
AUTOXPRT V1R1   ------ Maintwindow Execution Output ------ 2023/10/21  21:40:05
Option  ===>                                             Scroll ===> CSR
Db2 Subsystem: SS1A                          Row 1 of 29                 +
-------------------------------------------------------------------------------
                             Error Messages

DSNA649I
DSNX7EXE RUNSTATS ALERTS COULD NOT BE RESOLVED BY PROCEDURE. REASON 1

                          Stored Procedure Output

2023-08-19 09:52:33.019090> Executing SYSPROC.ADMIN_UTL_EXECUTE
2023-08-19 09:52:33.019109> with options: STAND-ALONE=YES
2023-08-19 09:52:33.019121> stored procedure begins at 2023-08-19 09:52:33.0191
                            13
2023-08-19 09:52:33.024085> running in Db2 subsystem SS1A
2023-08-19 09:52:33.024096> ---------------------->>Used parameters<<---------
                            --------------
2023-08-19 09:52:33.024109> STAND-ALONE=YES
2023-08-19 09:52:33.035048> ---------------------->>Step 1: detect new alerts<
                            <----------------------
2023-08-19 09:52:33.215914> 1 new alerts with action RUNSTATS detected
2023-08-19 09:52:33.216027> ---------------------->>Step 2: get maintenance wi
                            ndows<<----------------------
2023-08-19 09:52:33.216674> DSNA649I  DSNX7EXE RUNSTATS ALERTS COULD NOT BE RES
                            OLVED BY PROCEDURE. REASON 1
2023-08-19 09:52:33.217024> ---------------------->>Execution summary<<-------
                            ----------------
2023-08-19 09:52:33.217037> RUNSTATS alerts solved: 0
2023-08-19 09:52:33.217046> RUNSTATS duplicated alerts completed: 0
```

Figure 197. **Maintwindow Execution Output** *panel*

This output report panel contains the following two sections:

Error Messages
  Indicates the start of the error messages. If the return code was zero, there are no error messages and 'No Error Messages' is displayed.

Stored Procedure Output
  Indicates the start of the output from the execution of the stored procedure.

For additional information about the error messages output from the stored procedures, refer to the Db2 autonomic procedures documentation for your version of Db2.

What to do next

Press PF3 to return to the previous panel.

Viewing alerts from statistics procedures

You can view the alerts that triggered an statistics stored procedure execution by using the A line command.

Procedure

- On the **Automation Execution History** panel, enter A in the line command area.

The **Maintwindow Actions** panel is displayed, as shown in the following figure:

```
AUTOXPRT V1R1    ---------- Maintwindow Actions ---------- 2023/10/21  21:43:04
Option  ===>                                               Scroll ===> CSR
-------------------------------------------------------------------------------
Line Commands: O - Output  P - oPtions
-------------------------------------------------------------------------------
Profile    :                                         Db2 Subsystem: SS1A
Creator    :
Description:                                     Row 1 of 1              >
-------------------------------------------------------------------------------
Cmd  Alert ID  History ID  Target Qualifier  Target Object    Target Part
     64131     1018        NMHAQA23          TSQA2301         0
***************************** Bottom of Data ***********************************
```

*Figure 198. **Maintwindow Actions** panel*

For information about the fields, press PF1 for help.

What to do next

Press PF3 to return to the previous panel.

Viewing automated statistics alerts

This option allows you to view a list of automated statistics alerts. An alert is a recommendation from stored procedures that RUNSTATS needs to be run.

About this task

These alerts are contained in the SYSIBM.SYSAUTOALERTS catalog table.

Procedure

1. From the **Automation Console** panel, enter 4 in the **Option** field and press Enter.
2. On the **Actions** panel, enter S in the **Source** field and press Enter.
3. Verify or change the selection criteria in the **Target Qualifier**, **Target Object**, and **Alert Status** fields. You can limit the alerts to be listed on the panel by changing the values in these fields. Wildcarding can be used for the **Target Qualifier** and **Target Object** fields. When finished, press Enter.

   The **Actions** panel is displayed again, as shown in the following figure:

```
AUTOXPRT V1R1   --------------- Actions --------------- 2023/10/21  21:58:28
Option  ===>                                         Scroll ===> CSR
-------------------------------------------------------------------------------
Line Commands: O - Output  P - oPtions  S - Symptoms
-------------------------------------------------------------------------------
 Target Qualifier T*
 Target Object    *
 Source S (S - AutoStats, T - Automation Expert)
 Status C (C - Completed, E - Error, I - Inprogress, O - Open, * - All)
 Db2 Subsystem: SS01                                Row 1 of 12           +>
-------------------------------------------------------------------------------
     Target          Target          Target                   Active/
 Cmd Qualifier       Object          Part  Action   Status    Passive
     TSKXH           PARTBIG2        ALL   RUNSTATS COMPLETED ACTIVE
     TSQXXDB         TSQTSA          ALL   RUNSTATS COMPLETED ACTIVE
     TESTDB07        TESTTS07        ALL   RUNSTATS COMPLETED ACTIVE
     TESTDB08        TESTTS08        ALL   RUNSTATS COMPLETED ACTIVE
     TESTDB13        TESTTS13        ALL   RUNSTATS COMPLETED ACTIVE
     TSKXH           PARTBIG         ALL   RUNSTATS COMPLETED ACTIVE
     TSKXH           PARTPBG         ALL   RUNSTATS COMPLETED ACTIVE
     TSXJIPDB        PTS             ALL   RUNSTATS COMPLETED ACTIVE
     TSXJIDB         TS              ALL   RUNSTATS COMPLETED ACTIVE
```

Figure 199. **Actions** *panel*

This panel lists the alerts that meet your selection criteria.

4. Press PF3 to return to the **Automation Console**.

Viewing output from alerts

You can view the output from an alert execution by using the O line command.

Procedure

- On the **Actions** panel, enter O in the line command area.

  The **Execution Output** panel is displayed, as shown in the following figure:

```
AUTOXPRT V1R1  ------ Execution Output            ------ 2023/10/21  22:00:14
Option  ===>                                          Scroll ===> CSR
Db2 Subsystem: SS1A                        Row 1 of 73                +
-------------------------------------------------------------------------------
                          Error Messages

No Error Messages

                       Stored Procedure Output

2023-08-05 15:12:42.032372> 1DSNU000I    217 15:12:40.78 DSNUGUTC - OUTPUT STAR
                            T FOR UTILITY, UTILID = X71X011B01000010
2023-08-05 15:12:42.032388>  DSNU1045I   217 15:12:40.95 DSNUGTIS - PROCESSING
                            SYSIN AS UNICODE UTF-8
2023-08-05 15:12:42.032402> 0DSNU050I    217 15:12:40.95 DSNUGUTC -  RUNSTATS T
                            ABLESPACE DLCDB.EXCPTN11 TABLE("DLC"."EXCEPTIONS_V1
                            1") USE
2023-08-05 15:12:42.032419>  PROFILE TABLE("TST"."EXCEPTIONS_V11") USE PROFILE
2023-08-05 15:12:42.032433>  DSNU1361I !SS1A 217 15:12:40.95 DSNUGPRF - THE STA
                            TS PROFILE WITH STATSTIME = 0000-00-00-00.00.00.000
                            000  FOR TABLE
2023-08-05 15:12:42.032448>  EXCEPTIONS_V11 HAS BEEN USED
2023-08-05 15:12:42.032462>  DSNU1368I   217 15:12:40.95 DSNUGPRB - PARSING STA
                            TS PROFILE FOR TABLE EXCEPTIONS_V11
2023-08-05 15:12:42.032477>  DSNU1369I   217 15:12:40.96 DSNUGPRB - PARSING STA
                            TS PROFILE FOR TABLE EXCEPTIONS_V11 COMPLETED
2023-08-05 15:12:42.032492>  DSNU1361I !SS1A 217 15:12:40.96 DSNUGPRF - THE STA
                            TS PROFILE WITH STATSTIME = 0000-00-00-00.00.00.000
                            000  FOR TABLE
2023-08-05 15:12:42.032508>  EXCEPTIONS_V11 HAS BEEN USED
```

Figure 200. **Execution Output** *panel*

This output report panel contains the following two sections:

Error Messages
Indicates the start of the error messages. If the return code was zero, there are no error messages and 'No Error Messages' is displayed.

Stored Procedure Output
Indicates the start of the output from the execution of the stored procedure.

For additional information about the error messages and output from the stored procedure, refer to the Db2 autonomic procedures documentation for your version of Db2.

What to do next

Press PF3 to return to the previous panel.

Viewing alert options

You can view the options used for RUNSTATS syntax when an alert was run by using the P line command.

Procedure

- On the **Actions** panel, enter P in the line command area and press Enter.

  The **Action Options** panel is displayed, as shown in the following figure:

```
AUTOXPRT V1R1  ------      Action Options           ------ 2023/10/21  22:02:34
Option  ===>                                                    Scroll ===> CSR
Db2 Subsystem: SS1A                            Row 1 of 4
-------------------------------------------------------------------------------
                                Options

TABLE("DLC"."EXCEPTIONS_V11") USE PROFILE
TABLE("TST"."EXCEPTIONS_V11") USE PROFILE
***************************** Bottom of Data **********************************
```

Figure 201. **Action Options** *panel*

This output report panel contains the RUNSTATS syntax that was used to resolve the alert. This information is retrieved from the OPTIONS column of the SYSAUTOALERTS table associated with the selected row of the **Actions** panel. For additional information about the error messages and output from the stored procedure, refer to the Db2 autonomic procedures documentation for your version of Db2.

What to do next

Press PF3 to return to the previous panel.

Chapter 15. Configuring and using event notifications

You can configure Db2 Automation Expert to send notifications by email or text message when Db2 Automation Expert job profiles are built in batch or when a maintenance window opens or ends.

About event notifications

You enter the type of notification and the sender and recipient's information in an event notification profile, and then associate the notifications profile to a job profile or to a maintenance window.

Event notification profiles contain information about the type of notification that is sent (email or text), and the type of events that you want be notified about. You can configure the notification profile to send notifications of:

- Batch build of a job profile begins
- Batch build of a job profile ends
- The number or list of triggered objects at batch build end
- Maintenance window opens
- Maintenance window closes

For most events, you can customize the return code at which you want to be notified.

System requirements

The following requirements must be met to use event notifications:

- The customization steps to configure event notifications must be completed. See "Worksheets: Gathering parameter values for Db2 Automation Expert" on page 21
- TCP/IP and SMTP must be installed and configured on z/OS.
- The SMTP server configuration file statement IPMAILERADDRESS must be configured to your current SMTP mail server.

For more information, refer to the information on IBM Documentation about customizing a TCP/IP connection for z/OS.

Creating an event notification profile

Creating an event notification profile consists of defining the profile, specifying the events that trigger notification, and specifying the type of notification to be sent.

Procedure

1. On the Db2 Automation Expert main menu, enter 11 in the **Option** field and press Enter.
2. On the **Automation Console**, enter 9 in the **Option** field and press Enter.
3. On the **Event Notifications** panel, specify selection criteria and press Enter.

   If profiles exist that meet your selection criteria, they are listed on the **Event Notifications** panel.
4. On the **Event Notifications** panel, enter C in the **Cmd** field and press Enter.
5. On the **Enter New Notification Profile** window, enter the profile creator, a profile description, and the profile update option in the fields on the window. The **Creator** field contains your user ID, but can be modified.
6. After you complete these fields, press Enter.
7. On the **Update Notification Recipients** panel, enter C in the **Cmd** line and press Enter.
8. Specify the settings for this event as follows:

- In the **Type** field, specify E for email or T for text notifications.
- In the **Recipient** field, specify the recipient's email address or mobile phone number.
- In the **Sender** field, specify the email address or mobile phone number from where the notification is sent.

Note: For text notifications, the mobile phone number must be entered in the following format:

```
1112223333@carrier.com
```

The notifications process uses an email-to-SMS messaging format. Refer to your mobile phone carrier's website to determine the valid SMS email address, or use an SMTP to SMS gateway.

9. When you have finished entering the fields, press Enter.

   A message is displayed that prompts you to specify the events for this notification.
10. Enter U in the **Cmd** line.

    The **Update Notification Events** panel is displayed.
11. Enter A in the **Cmd** line.

    The **Select Events** panel is displayed.
12. To see all the events that can be selected, enter ✳ in the **Source** field.
13. Select one or more events by entering S next to the event.

    You can view a description for each event by entering the V line command next to an event.
14. Press Enter.

    A message confirms the successful selection of the event.
15. When you have finished selecting all events, press PF3 (END).

    The **Update Notification Events** panel is displayed. The events that you selected for inclusion in the profile are listed on the panel.
16. Optional: If an event allows it, specify the return code for which you want to be notified.

    The following figure shows that two types of notifications will be sent: one when a Db2 Automation Expert batch build ends with a return code of 4 or greater, and another notification that contains a list or number of triggered objects when the batch build ends with a return code of 4 or less.

Figure 202. Setting conditions for notifications

```
                                      Op   Return
 Cmd   Event Name                     Code Code   Source
       AUTOMATION EXPERT BUILD END    GE   4      AUTOXPRT
       AUTOMATION EXPERT TRIGGERED OBJECTS  LE  4  AUTOXPRT
```

If an event does not allow you to specify a return code, the **Op Code** and **Return Code** fields will not be available for editing.
17. Press PF3 (END).

    The **Update Notification Recipients** panel is displayed.
18. Press PF3 (END).

    The profile is saved, and a message confirming the successful creation of the profile is displayed on the **Event Notifications** panel.

What to do next

- To associate an event notification profile with a job profile, see the topic "Updating other job generation options" on page 269.
- To associate an event notification profile with a maintenance window, see the topic "Creating a maintenance window" on page 304.

Related tasks

Viewing a profile
You can view your own profile or one created by another user if the profile was created with a Share option of View or Update.

Deleting a profile
You can delete profiles created under your user ID, regardless of the Share option. You can also delete a profile created by another user if the profile was created with a Share option of Update.

Renaming a profile
You can use the Rename line command to change the name or creator of a profile. Db2 Automation Expert automatically updates any job profiles that use that profile to reflect the new profile name.

Specifying the default event notification profile for job profiles

You can select any notification profile to be your default notification profile for Db2 Automation Expert job profiles. The default notification profile is used for jobs that are submitted under your user ID that do not have a notification profile specified.

About this task

Setting the default notification profile does not apply to maintenance windows.

Procedure

1. On the Db2 Automation Expert main menu, enter 11 in the **Option** field and press Enter.
2. On the **Automation Console**, enter 9 in the **Option** field and press Enter.
3. On the **Event Notifications** panel, specify selection criteria and press Enter.

   If profiles exist that meet your selection criteria, they are listed on the **Event Notifications** panel.
4. On the **Event Notifications** panel, enter S in the **Cmd** field next to the profile that you want to make the default notification profile. Press Enter.

   A message is displayed confirming that the profile that you selected is now the default notification profile.

Results

On the **Event Notifications** panel, the default profile is listed in the **Default Profile** field. This profile is used as the notification profile for all job profiles built with your user ID.

Related tasks

Removing the default event notification profile for job profiles
If you do not want a default notification profile to be associated with all job profiles built under your user ID, remove the default notification profile by following these steps.

Removing the default event notification profile for job profiles

If you do not want a default notification profile to be associated with all job profiles built under your user ID, remove the default notification profile by following these steps.

Procedure

1. On the Db2 Automation Expert main menu, enter 11 in the **Option** field and press Enter.
2. On the **Automation Console**, enter 9 in the **Option** field and press Enter.
3. On the **Event Notifications** panel, specify selection criteria and press Enter.

   If profiles exist that meet your selection criteria, they are listed on the **Event Notifications** panel.
4. On the **Event Notifications** panel, enter REMOVE in the **Option** field and press Enter.
5. On the **Confirm Removal** window, enter **Y** in the **Remove** field and press Enter.

   A message is displayed confirming that the default notification profile has been removed.

Related tasks

Specifying the default event notification profile for job profiles
You can select any notification profile to be your default notification profile for Db2 Automation Expert job profiles. The default notification profile is used for jobs that are submitted under your user ID that do not have a notification profile specified.

Chapter 16. Managing profiles

Db2 Automation Expert profiles can be easily managed using line commands. You can view, delete, and rename object profiles, utility profiles, exception profiles, job profiles, and event notification profiles.

In addition, object, utility, exception, and job profiles can be imported and exported to data sets or other subsystems. You can unload and load many object, utility, exception, and job profiles at once using a batch program.

Viewing recently accessed profiles

You can view a list of recently accessed profiles on the object, exception, utility, and job profile panels. Recently accessed profiles are sorted to the top of the profile panel and are displayed regardless of values that are entered in the selection criteria fields. Up to 25 profiles can be listed in the recently accessed profile list.

Before you begin

A recently accessed profile is a profile that was created, updated, viewed, or renamed on a Db2 Automation Expert profile panel. Deleted profiles are not considered recently accessed.

The recently accessed profile list is generated per user ID. To track recently accessed profiles, Db2 Automation Expert uses a table that is created when APAR PH25439 or later is applied and product customization is completed. Therefore, when you first begin to use the **Recent Profiles** field, the number of recently accessed profiles in the list may be less than the number that you enter in the **Recent Profiles** field.

About this task

Note: When a value other than zero is entered in the **Recent Profiles** field, column sorting is not allowed on the profile panel.

Procedure

1. Access the object, exception, utility or job profile panel.
2. In the **Recent Profiles** field, enter a value from 0-25 and press Enter.
3. A list of recently accessed profiles is displayed above the **END OF RECENT PROFILES** line.

   If no profiles have been recently accessed, the **END OF RECENT PROFILES** line is not displayed.

Viewing a profile

You can view your own profile or one created by another user if the profile was created with a Share option of View or Update.

About this task
To view a profile:

Procedure

1. Access the profile list for the profile type that you want to delete.
2. Type V in the Cmd line next to the profile you want to view.

Results

On the screen that appears, you can view profile details, but cannot make any changes. For utility profiles, you can only view the utility options for those utilities that are included in the profile.

Deleting a profile

You can delete profiles created under your user ID, regardless of the Share option. You can also delete a profile created by another user if the profile was created with a Share option of Update.

About this task

Note: Deleting a job profile does not delete the object, utility, or exception profiles associated with the job profile.

Procedure

1. Access the profile list for the type of profile that you want to delete.
2. Enter D in the Cmd line next to the profile you want to delete and press Enter.

   If the profile you selected for deletion is not included in any job profiles, the window shown in the following figure is displayed:

```
                    Confirm deletion

 Confirm delete of profile TWUSR.DAJ-5706

       Delete  N  (Yes/No)
```

Figure 203. Deletion confirmation window

3. If the profile is included in a job profile, a warning window is displayed to confirm deletion of the profile. The window lists the number of job profiles in which the profile that is being deleted is included. Enter Y in the **Delete** field and press Enter.
4. A message is displayed that confirms the profile deletion.

Renaming a profile

You can use the Rename line command to change the name or creator of a profile. Db2 Automation Expert automatically updates any job profiles that use that profile to reflect the new profile name.

About this task

You can rename profiles created under your user ID, regardless of the Share option. You can also rename a profile created by another user if the profile was created with a Share option of Update.

Procedure

1. Access the profile list for the profile type that you want to delete.
2. Type R in the Cmd line next to the profile you want to rename.

   When you press Enter, the window shown in the following figure is displayed:

```
            Rename JOBS Profile

Existing Profile:
 Creator . . . : TWUSR
 Profile Name  : DAJ 11
 Description . :

 ----------------------------------------------------

New Profile:
 Creator . . . : TWUSR
 Profile Name  : DAJ 11
 Description . :
```

Figure 204. Rename profile window

3. Do one of the following:

   - To cancel the rename, press PF3.

   - To rename the profile, type the new profile name in the **Profile Name** field. You can also change the creator and the description by entering new values in the **Creator** and **Profile Description** fields. When you press enter, a confirmation window, shown in the following figure, is displayed:

```
            CONFIRM RENAME

   Confirm rename of JOBS profile
            From:
             TWUSR.DAJ 11
            To:
             TWUSR.DAJ 11 TEST RENAME

            Rename  N  (Yes/No)
```

Figure 205. Rename profile window

   Type Y in the **Rename** field to rename the profile.

4. If the profile is included in a job profile, a warning window is displayed to confirm the rename. The window lists the number of job profiles in which the profile that is being renamed is included. Type Y in the **Rename** field and press Enter.

5. A message is displayed that confirms the profile rename.

Viewing job profiles that use a profile

If you want to see which job profiles are using a specific object, utility, or exception profile, you can use line commands.

Procedure

1. Type J in the Cmd line next to an object, utility, or exception profile and press Enter.

   The Jobs Display panel appears, as shown the following figure:

```
AUTOXPRT V1R1   ------------- Jobs Display ------------ 2023/10/21  16:29:42
Option  ===>                                             Scroll ===> CSR
------------------------------------------------------------------------
Line Commands: V - View
------------------------------------------------------------------------
 Profile Name: ALL OBJECTS                       Db2 Subsystem: SS01
 Creator Name: DAJSAMPL         Type: OBJS        Row 1 of 3          >
------------------------------------------------------------------------

Cmd  Name                        Creator   Updt
     BEST PRACTICE FULL INCR COPY    DAJSAMPL    V
     BEST PRACTICE REORG AVOIDANCE   DAJSAMPL    V
     BEST PRACTICE RUNSTATS          DAJSAMPL    V
**************************** Bottom of Data *********************************
```

Figure 206. Jobs Display panel

This panel shows all job profiles that include the selected profile.

2. To view the contents of a job profile, enter V next to the job profile.

The View Jobs Profile Display is displayed. You can view all profile information and settings, but cannot make changes.

Importing and exporting profiles

Db2 Automation Expert allows you to set up profiles on one subsystem and then export the profiles either to a data set or directly to another subsystem. You can then import the profiles to the same subsystem and rename them, or import them to another subsystem.

About this task

Profiles can also be imported and exported via a batch job. Refer to .

⚠️ **Attention:** We do not recommended importing a profile that was exported from a more recent maintenance level of Db2 Automation Expert than the maintenance level of Db2 Automation Expertthat you want to import the profile to. Because internal changes to profiles may be implemented between maintenance releases, unpredictable results may occur.

Exporting profiles

Once you configure a profile on one subsystem, you can then export the profile either to a data set or directly to another subsystem.

About this task
To export a profile:

Procedure

1. Type E in the line command area next to the profile you want to export and press Enter.
   The Export Options window is displayed, as shown in the following figure:

```
                              Export Options
AUTOXPRT V1R1                                    2023/10/21  16:31:41
Option  ===>                                          Scroll ===> CSR
--------------------------------------------------------------------------
Export SSID . . . . . . SS1A                    Row 1 of 1           >
-----------------------------------or-------------------------------------
Export to Data Set  . .  N  (Yes/No)
Create Export Data Set   N  (Yes/No)
Dataset Name  . . . . . TWUSR.DAT.EXPORT
Member  . . . . . . . . V11TSTEX (Required if DSN is a PDS)
--------------------------------------------------------------------------
Typ Name                            Creator  Upd Status
OBJ DAJ V11 TEST                    TWUSR     U  OK
***************************** Bottom of Data *****************************
```

Figure 207. Export Options window

2. On the Export Options window, fill in the fields.

   The following describes the fields on the Export Options window:

   Export SSID
   Enter the SSID where you want to export the profile. If you do not export to a data set, the new profile will be directly exported to this subsystem.

   Export to Dataset
   If you want to export the profile to a data set, type Y in this field.

   Create Export Dataset
   If you want to export the profile to a data set, indicate if Db2 Automation Expert should create the data set for you. Type Y in this field to have Db2 Automation Expert create the data set. Type N to use an existing data set. Existing data sets must be FB type data sets with an LRECL of 4096.

   Dataset Name
   If you want to export the profile to a data set, type the data set name in this field.

   Member
   If you want to export the profile to a PDS, type the member name in this field.

   Typ
   The type of profile you are exporting. This field is read only. Valid types are OBJ, UTL, EXC, or JOB.

   Name
   The name of the profile that you are exporting.

   Creator
   The creator ID of the profile that you are exporting.

   Upd
   The update option of the profile that you are exporting.

   Status
   This field displays the status of the listed profile.

   - `OK`: The profile is ready to be exported

   - `Warning - Profile no longer exists`: This message might appear if you are exporting a job profile, and one of the object, utility, or exception profiles contained in the job profile has been deleted, but is still included in the job profile.

   - `Warning - User not authorized to export`: This message appears when a profile's Share Option is set to None, and your user ID is not the profile creator ID. You cannot export the profile unless the Share option was set to Update or View by the profile creator.

   - `Warning - Version incompatibility`: This message appears when a profile was created under a different version of Db2 Automation Expert. The profile cannot be exported.

3. Press Enter.

   One of the following occurs:

   - If you are exporting to another subsystem, when you press Enter, the Import Options window is displayed. You can then import the profile on that subsystem.

- If you are exporting to a data set, a confirmation window is displayed; press Enter and the profile is exported.

Importing profiles

You can import profiles either from a data set, or directly from another subsystem.

From a data set

When you export a profile to a data set, you can then import the profile from the data set to the same subsystem or to another subsystem.

About this task

To import from a data set, type I in the line command area of any profile display (Objects Profile Display, Utilities Profile Display, Exceptions Profile Display, or Jobs Profile Display). When you press Enter, the Import Dataset window appears, as shown in the following figure:

```
                        Import Dataset


 Target SSID . . . SS1A

 Source Data Set

   Name . . . TWUSR.DAT.EXPORT
   Member . . V31TSTEX (Required if DSN is a PDS)
```

Figure 208. Import Data set Window

The following describes the fields on the Import Data set window:

Target SSID
Enter the SSID where you want to import the profile.

Source Data Set Name
Enter the name of the data set that contains the profiles you want to import.

Source Data Set Member
If the source data set is a PDS, type the member name in this field.

When you press Enter, the Import Options window is displayed.

Directly from another subsystem

Upon import, Db2 Automation Expert checks for the existence of the profile on the target subsystem. If the profile already exists with the same creator and profile name, a warning message appears. You must then specify whether to overwrite the existing profile or to change the imported profile's name or creator.

About this task

Note: A profile's share option setting affects whether you can import or overwrite profiles on a target subsystem; you cannot import or overwrite profiles that you do not have access to.

The **Import Options** window appears, as shown in the following figure:

```
                              Import Options
AUTOXPRT V1R1                                    2023/10/21  19:10:09
Option  ===>                                          Scroll ===> CSR
Line Commands: E - Edit  O - Overwrite
--------------------------------------------------------------------------
Import SSID: SS1A                       Row 1 of 1              >
--------------------------------------------------------------------------
Cmd Typ Name                            Creator  Upd Status
    OBJ DAJ V11 TEST                    TWUSR     U  Warning - Duplicate pr
**************************** Bottom of Data ****************************
```

Figure 209. **Import Options** window

The following describes the fields on the **Import Options** window:

Import SSID
   This read-only field contains the SSID to which profile will be imported.

Cmd
   This field is used when profile conflicts exist; refer to the Status field description for further information.

Typ
   The type of profile you are importing. This field is read only. Valid types are OBJ, UTL, EXC, or JOB.

Name
   The name of the profile that you are importing.

Creator
   The creator ID of the profile that you are importing.

Updt
   The update option of the profile that you are importing.

Status
   This field displays the status of the listed profile.

   • OK: The profile is ready to be imported.

   • OK. Overwrite duplicate profile: The profile is a duplicate of a profile that already exists on the subsystem. The existing profile will be overwritten by the imported profile.

   • Warning - Profile not exported: This message might appear if you attempted to export a profile that no longer exists or that cannot be exported because the profile's share option is set to N.

   • Warning - User not authorized to overwrite existing profile: This message appears when the existing profile's share option is set to View, and your user ID is not the existing profile's creator ID. You cannot overwrite the existing profile unless the Share option was set to Update by the profile creator.

   • Warning - Duplicate profile found. Enter "O" to overwrite or "E" to edit: This message appears when a profile with the same creator and profile name already exists on the subsystem. You must either rename the imported profile or specify to overwrite the existing profile; otherwise, the existing profile remains on the target subsystem as is.

      – If you type O to overwrite, the profile that currently exists on the subsystem will be overwritten with the imported profile. When you press Enter, the message "OK. Overwrite duplicate profile" appears in the Status column.

      – If you type E to edit the profile, when you press Enter, the **Edit Profile** window appears. On this window, change the creator name and/or the profile name to make it unique on the subsystem. When you press Enter, the **Import Options** window appears. If the conflict has been resolved, the **Status** field changes to OK and the new creator ID and/or profile name appear.

You can globally change the creator of the profiles in the list to be imported using a primary command. To do this, type CREATOR *creator_name* in the Option line and press Enter. The creator column changes to reflect the new creator name. If the creator change results in a duplicate profile name on the subsystem, you will receive a warning message in the Status field. You can individually edit the creator name, overwrite the existing profile, or use the **CREATOR** command to assign a different unique creator.

When profiles are ready to import, press Enter. A confirmation message appears; press Enter to proceed with the import or press PF3 to continue editing the profile information.

If you press Enter, the profiles are imported and a message appears to confirm successful import.

If you press PF3 to edit, the **Import Options** window reappears and you may make additional changes.

To cancel the import, press PF3 or type CANCEL in the option line on the **Import Options** window.

Loading and unloading profiles in batch

Several batch jobs are provided that allow you to unload profiles. The unloaded profiles can then be loaded onto the same Db2 subsystem or another Db2 subsystem with the same or different creator.

You can export and import profiles using a Tools Customizer task. For more information, see "Task: Export and import profiles" on page 36.

Alternatively, you can copy and modify JCL from the Db2 Automation Expert sample library. The JCL for the export and import jobs is provided in *dajhilvl*.SDAJSAMP. Detailed instructions for editing the JCL are included in the JCL comments in the members. The members are as follows:

- DAJPROFE: This job unloads all types of profiles -- object, utility, exception, and job profiles -- to a data set. This utility is useful for porting profiles from one Db2 subsystem to another. You can specify filters by creator ID, profile name, and profile type to export specific profiles.
- DAJPROFI: This job loads profiles that were exported to a data set by the DAJPROFE job. You can specify new creator names, whether to overwrite existing profiles, and other options.

Note: Do not use these jobs for unloading or loading profiles created in an earlier version of Db2 Automation Expert.

When DAJPROFE and DAJPROFI are run, the shared profile support tables that are unloaded and loaded are:

- *creator_name*.PROFILES_V11
- *creator_name*.EXCEPTIONS_V11
- *creator_name*.JOBS_V11
- *creator_name*.JOBS_OPTIONS_V12
- *creator_name*.OBJECTS_V11
- *creator_name*.UTILITIES_V11

Note: If you receive the message The input Db2 Subsystem ID is invalid; processing terminated, the Db2 subsystem for the load and/or unload has not been defined in the control file.

Chapter 17. Viewing the utility history catalog table

The SYSIBM.SYSUTILITIES catalog table stores runtime information on Db2 utilities. Db2 Automation Expert's user interface allows you to display and delete rows from this table on Db2 13 and later subsystems.

About utility history

SYSIBM.SYSUTILITIES contains real-time and historical information for utility executions. A row is inserted for each Db2 utility execution that contains information such as utility name, job name, starting and ending timestamps, elapsed time, CPU time, zIIP time, final return code, and other conditions.

Db2 Automation Expert's ISPF interface displays rows from the utility history table. You can filter the display to see only utilities run during a specific time period, as well as filter by utility name, job name, user ID, return code, and condition.

System requirements

Viewing the utility history display requires the following:

- The SYSIBM.SYSUTILITIES table is only available on subsystems running Db2 13 FL501 and later.
- The Db2 install option (DSNZPARM) UTILITY_HISTORY must be set to UTILITY to activate utility history information collection.

For more information, refer to the information on IBM Documentation about the SYSIBM.SYSUTILITIES table.

Viewing and deleting utility history rows

You can view and delete rows from the utility history table using Db2 Automation Expert's **Utility History** panel.

Procedure

1. On the Db2 Automation Expert main menu, enter 13 in the **Option** field and press Enter.
2. On the **Utility History** panel, specify selection criteria to filter the utility history rows, or press Enter without entering selection criteria to see all rows. The utility history rows that meet your selection criteria are listed on the **Utility History** panel. An example is shown in the following figure:

```
AUTOXPRT V1R1    ------------ Utility History ------------ 2023/10/21  19:19:01
Option  ===>                                                Scroll ===> CSR
-------------------------------------------------------------------------------
Commands: Delete - Delete all
Line Commands: O - Overview  D - Delete
-------------------------------------------------------------------------------
 Utility Name   *
 Started From                                      (Timestamp expression)
 Started To     &CURRENT                           (Timestamp expression)
 Return Code >= 0    (Integer, NULL, Blank)
 Condition      (E-Ended, T-Term, F-Forced, Blank)    Db2 Subsystem: SS1A
 Job Name       *         Userid   *                   Row 1 of 2086        +>
-------------------------------------------------------------------------------
                         Ret  C R Number  Elapsed Time    CPU Time
Cmd Utility       Jobname Code o e Objects HH:MM:SS:NNNNNN HH:MM:SS:NNNNNN
    COPY          SS1APARG 0    E N 7       00:00:24:459268 00:00:01:779859
    CHECK INDEX   SS1APARG 0    E N 7       00:00:08:911991 00:00:00:589626
    COPY          SS1APARG 0    E N 7       00:00:20:233142 00:00:01:835927
    COPY          SS1APARS 0    E N 7       00:00:00:297051 00:00:00:105610
    COPY          SS1APARS 0    E N 7       00:00:13:737685 00:00:00:880574
    COPY          SS1APARS 0    E N 7       00:00:22:771098 00:00:01:308898
    CHECK INDEX   SS1APARS 0    E N 7       00:00:12:161515 00:00:00:638375
```

Figure 210. **Utility History** *panel*

3. To view all of the values of a utility history row on one panel, enter O next to a row and press Enter.

   The **Utilities History Overview** panel shows the contents of the selected utility history row on one non-scrollable panel.

   Press PF3 to return to the **Utility History** panel.

4. To delete one or more rows from the utility history table, do one of the following:

   ⚠ **Warning:** Deleting utility history rows cannot be undone without recovering the entire table.

   - To delete a history row, enter D next to a row and press Enter.
   - To delete all history rows that are currently displayed, enter DELETE in the Option line and press Enter.

   A window is displayed to confirm deletion of the row.

   - To delete the row, enter YES in the **Confirm** field and press Enter.
   - To cancel, press PF3.

5. When finished viewing utility history, press PF3 (END).

Chapter 18. Streaming data to analytics platforms with IBM Z OMEGAMON Data Provider

Db2 Automation Expert can stream real-time statistics data to external data visualization analytics platforms such as Elastic or Splunk via an API with OMEGAMON Data Provider. After the interface between Db2 Automation Expert and OMEGAMON Data Provider is configured, Db2 Automation Expert collects the data and streams it through Db2 Automation Expert. You can start analyzing data using the sample Elastic dashboards provided by Db2 Automation Expert.

Prerequisites

- Db2 Automation Expert 1.1, installed using SMP/E.
- One or both of the following:
  - IBM Z OMEGAMON Data Provider 5.6 (FMID HKOA110) or later with APAR OA64880 applied.
  - If you do not have IBM Z OMEGAMON Data Provider installed as part of an OMEGAMON suite, OMEGAMON Data Provider installation samples FMID JKOA11A is required.

Installing and configuring IBM Z OMEGAMON Data Provider

If you have OMEGAMON Data Provider 5.6 or later already installed, you can use the same instance of OMEGAMON Data Provider for the Db2 Automation Expert API. Alternatively, you can install OMEGAMON Data Provider using FMIDs HKOA110 and JKOA11A to use with the Db2 Automation Expert API.

About this task
The OMEGAMON Data Broker component of OMEGAMON Data Provider must run on the same LPAR as Db2 Automation Expert.

Procedure

1. If OMEGAMON Data Provider is already installed, find and make a note of the broker name and store name for the OMEGAMON Data Broker component of OMEGAMON Data Provider. You will need these values for the Db2 Automation Expert Tools Customizer configuration steps.

   - The OMEGAMON Data Provider KAYOPEN parameter file contains the existing store name. Look for the following line:

     ```
     KAY.CIDB.FWD.forwarder_id.SOURCE_STORE=store_name
     ```

   - The broker name is in the JCL for the started task for OMEGAMON Data Broker. You can find that via Configuring OMEGAMON Data Broker. For example, look at your system for a proc like the following:

     ```
     //KAYSIS01 PROC NAME='ODP_BROKER',MEM=00,RGN=0M
     …
     //BROKER   EXEC PGM=KAYSIS01,REGION=&RGN,
     //         PARM='NAME=&NAME,MEM=&MEM'
     //STEPLIB  DD DSNAME=omegamon.TKANMODP,DISP=SHR
     //PARMLIB  DD DSNAME=SYS1.PARMLIB,DISP=SHR
     //SYSPRINT DD SYSOUT=*
     ```

   For more information, see OMEGAMON Data Broker configuration parameters.

2. If OMEGAMON Data Provider is already installed but not configured, or if you are installing OMEGAMON Data Provider for the first time:

   a) If you are installing OMEGAMON Data Provider for the first time, download and install the product. Refer to the OMEGAMON Data Provider documentation for information.

b) Follow these instructions for configuring OMEGAMON Data Provider: Getting started with OMEGAMON Data Provider.

Note: The default values for the broker and store name are recommended in the OMEGAMON Data Provider documentation as ODP_BROKER for the broker name and OMEGAMON for the store name. These values are also the default values provided in Db2 Automation Expert Tools Customizer configuration steps. For those reasons, using the defaults is recommended. If you decide to use different values, take note of the values for the Db2 Automation Expert configuration steps.

3. Communication between Db2 Automation Expert and OMEGAMON Data Provider uses authorized services. You must establish SAF access for users as follows:

- READ access to ZWES.IS in the FACILITY class
- UPDATE access to KAY.STORE.*store_name* in the FACILITY class. You can find the value of *store_name* as described in Step 1.

Copying the Db2 Automation Expert mapping extension JAR file

After Db2 Automation Expert SMP/E installation, a mapping extension JAR file must be copied to a user directory and the OMEGAMON Data Connect component of OMEGAMON Data Provider must be reloaded.

Before you begin

Ensure that after Db2 Automation Expert SMP/E installation, the following JAR file is installed in this user directory: `/usr/lpp/IBM/db2ae/v1r1/bin/daj-odp.jar`.

Procedure

1. Copy the JAR file from `/usr/lpp/IBM/db2ae/v1r1/bin/daj-odp.jar` to the OMEGAMON Data Connect user directory.

   See OMEGAMON Data Connect user directory for information.

   Note: If you encounter authorization errors when copying the file, ask your systems administrator for assistance.

2. Restart OMEGAMON Data Connect.

   See Reloading OMEGAMON Data Connect configuration for information.

3. Restart OMEGAMON Data Broker.

   See Reloading OMEGAMON Data Broker configuration for information.

Configuring Db2 Automation Expert for OMEGAMON Data Provider in Tools Customizer

Procedure

1. Start Tools Customer for configuring Db2 Automation Expert.

2. Select the task to update the Db2 Automation Expert control file.

   a) Select **Update the control file task**.

   b) Enter the OMEGAMON Data Provider broker name. The default is ODP_BROKER. If a different broker name was used during configuration, as described in "Installing and configuring IBM Z OMEGAMON Data Provider" on page 359, specify that name here.

   c) Enter the OMEGAMON Data Provider store name. The default is OMEGAMON. If a different store name was used during configuration, as described in "Installing and configuring IBM Z OMEGAMON Data Provider" on page 359, specify that name here.

3. Select the **OMEGAMON Data Provider support** task and enter the OMEGAMON Data Provider load library name.

4. Generate the Tools Customizer jobs.

   Three relevant jobs are produced: *ss*CNTFL, either *ss*CF2A*dd* (non-data sharing) or *ss*CF2B*dd* (data sharing), and *ss*ODPC.

5. Submit the *ss*CNTFL and the *ss*CF2A*dd* or *ss*CF2B*dd* jobs.

What to do next

The *ss*ODPC job is a batch job that streams the real-time RUNSTATS statistics data to analytics platforms. Before submitting the *ss*ODPC job, you must define the data collection parameters in the PARM statement. For more information, refer to "Defining the data collection parameters in the Db2 Automation Expert JCL" on page 361.

Defining the data collection parameters in the Db2 Automation Expert JCL

The parameters to control data collection of real-time statistics must be added to the EXEC statement in the *ss*ODPC JCL job that was generated during Tools Customizer customization.

Procedure

1. Change *#SSID#* to a valid Db2 SSID.
2. Specify the time interval in which to retrieve real-time statistics in the next three parameters.

   The parameters are two numeric digits and are day, hour, and minutes in DD, HH, and MM format. A minimum of 1-minute intervals is required.
3. In the last parameter, specify which statistics to retrieve.

   - Specify **A** to send all SYSTABLESPACESTATS and SYSINDEXSPACESTATS statistics retrieved from the specified time interval. This is recommended for the first execution of the job, or to send a full set of updated data.
   - Specify **L** send the statistics collected since the last run.

Submit or schedule the Db2 Automation Expert JCL

After adding parameters to the job that streams the real-time statistics, submit or schedule the job.

Procedure

- You can submit the *ss*ODPC JCL as a batch job, or it can be scheduled using the Db2 administrative task scheduler (or other task scheduler) to send statistics at regular intervals.

Elastic sample dashboards

You can use sample Elastic dashboards that are available on the z Open Data public GitHub repository as a starting point for analyzing the data gathered by Db2 Automation Expert.

Elastic setup

Follow the instructions in the *Configuring Elastic* topic in the OMEGAMON Data Provider Elastic samples documentation here: https://z-open-data.github.io/odp-elastic-samples/.

Installing the sample dashboards

The sample dashboards for the Db2 Automation Expert data stream are available on the z Open Data public GitHub organization: https://github.com/z-open-data/daj-odp-elastic-samples.

To use the samples:

1. Download the samples.
2. Import the samples into your Kibana space.

   a. Click **Stack Management** > **Saved Objects**.

   b. Click **Import**.

   c. Click **Import** and select the downloaded file.

Messages

These messages are issues as WTO messages and might be encountered when configuring or using the API with OMEGAMON Data Provider.

Unable to LOAD program KAY4ODP. System Return Code: *return_code* **System Reason Code:** *reason_code*

Explanation: An error occurred when loading the KAY4ODP program.

User Response: Refer to OMEGAMON Data Provider documentation for user response based on the return and reason codes.

Bad Return Code from $ODPPUB while sending data from SYSIBM.SYSTABLESPACESTATS. Return Code: *return_code* **Reason Code:** *reason_code*

Explanation: A bad return code was encountered while sending table space statistics data.

User response: Refer to OMEGAMON Data Provider documentation for user response based on return and reason codes.

Number of SYSTABLESPACE statistics sent: *counter*

Explanation: This message displays the number of SYSTABLESPACE statistics sent to OMEGAMON Data Provider.

User Response: No action is required.

Bad Return Code from $ODPPUB while sending data from SYSIBM.INDEXSPACESTATS. Return Code: *return_code* **Reason Code:** *reason_code*

Explanation: A bad return code was encountered while sending index space statistics data.

User Response: Refer to OMEGAMON Data Provider documentation for user response based on return and reason codes.

Number of SYSINDEXSPACE statistics sent: *counter*

Explanation: This message displays the number of SYSINDEXSPACE statistics sent to OMEGAMON Data Provider.

User Response: No action is required.

PROCESSING TERMINATED WITH RETURN CODE 16.

Explanation: The job failed due to errors that are identified in previous messages.

User Response: Refer to the previous messages, correct the problems, and resubmit the job.

INVALID PARAMETER LIST - EXPECTED SSID,DD,HH,MM,A FORMAT.

Explanation: An invalid parameter list was entered.

User Response: Enter a valid parameter list in the format SSID,DD,HH,MM,A.

INVALID DAY - VALUE MUST BE NUMERIC IN A RANGE OF 00-99.

Explanation: An invalid day value was entered in the parameters list.

User Response: Enter a valid numeric value as described in the message text.

INVALID HOUR - VALUE MUST BE NUMERIC IN A RANGE OF 00-23.

Explanation: An invalid hour value was entered in the parameters list.

User Response: Enter a valid numeric value as described in the message text.

INVALID MINUTE - VALUE MUST BE NUMERIC IN A RANGE OF 00-59.

Explanation: An invalid minute value was entered in the parameters list.

User Response: Enter a valid numeric value as described in the message text.

INVALID TYPE PARAMETER. DEFAULTING TO ALL.
Explanation: An invalid type parameter was entered in the parameters list.

User Response: No action is required; the value to is defaulted to ALL. If you want to send the latest statistics, change the parameter to L.

INVALID SSID
Explanation: The SSID passed from the parameter list is not available in the Db2 Automation Expert control file. The SSID must exist in the control file in order to pass in the parameter list.

User Response: Ensure that the SSID that you want to collect statistics on has been configured in Db2 Automation Expert.

No ODP STATISTICS entry was found in DAJ_SETTINGS. Statistics type "L"atest is changed to "A"ll.
Explanation: In the DAJ_SETTINGS repository table, an ODP STATISTICS type entry was not found. This entry is required for streaming data with OMEGAMON Data Provider. The entry will be created as part of processing.

User Response: No action is required. The L value for the Type parameter will be replaced with A in the parameters list.

program_name **No table space | index space statistics sent.**
Explanation: No table space or index space statistics were sent.

User response: No action is required.

Statistics have never been streamed to ODP. Statistics type "L"atest is changed to "A"ll.
Explanation: In the DAJ_SETTINGS repository table, the ODP_LAST_SENT_TIMESTAMP column for the ODP STATISTICS type entry is empty. This means that the Db2 Automation Expert API has not yet been used to stream statistics to OMEGAMON Data Provider.

User Response: No action is required. The L value for the Type parameter will be replaced with A in the parameters list.

To send ALL the statistics from a certain period of time. Enter a value in DD,HH,MM..
Explanation: A value of A for the Type parameter was passed in the parameters list, but a valid time period was not provided.

User Response: To send all the statistics, enter a valid time period in DD,HH,MM format.

Chapter 19. Running ad-hoc utilities with the Db2 Automation Expert API

You can use the Db2 Automation Expert API to run several utilities on table spaces or index spaces. The API interfaces with the IBM Unified Management Server for z/OS to generates and run Db2 utilities. Sample Ansible playbooks are available to help you get started.

Installing and configuring the ad-hoc utility API for Db2 Automation Expert

Once Db2 Automation Expert has been installed via SMP/E, several customization tasks must be completed to use the ad-hoc utility API.

Before you begin

If you plan to use the Db2 Automation Expert ad-hoc utility API, ensure that the prerequisites listed in "Requirements for the Db2 Automation Expert ad-hoc utility API" on page 14 are met.

Procedure

1. In the Db2 Automation Expert *highlevel*.SDAJSAMP library, update the DAJYCUST YAML file for IBM Unified Management Server for z/OS discoverability.

   ```
   PathToProductYaml:  DSN:<Yaml file dataset>

   Installation target libraries (V13 TAR used as typical install

   SYSPROC:  <sysproc dataset>
   SYSEXEC:  <sysexec dataset>
   LINKLIB:  <linklib dataset>
   ISPLLIB:  <ispllib dataset>
   ISPMLIB:  <ispmlib dataset>
   ISPPLIB:  <ispplib dataset>
   SAMPLIB:  <samplib dataset>
   ISPSLIB:  <ispslib dataset>
   ISPTLIB:  <isptlib dataset>
   ```

2. Start Tools Customer for configuring Db2 Automation Expert.
3. On the **Specify the Product or Pack Metadata Library** panel, select or specify your metadata library.
4. On the **Customizer Workplace** panel, enter E next to the **Product parameters** field.
5. Select the **API support** task.
6. Generate the Tools Customizer jobs.

   Two relevant jobs are produced: *ss*PRUTG and *ss*PRUTX.

7. Submit the *ss*PRUTG and *ss*PRUTX jobs.

   Running the two jobs produces two JCL PROCS, DAJPRUTG and DAJPRUGX. The procs are used by the APIs for utility generation and running the utility, respectively.

8. Move the DAJPRUTG and DAJPRUGX procs to your relevant system PROCLIB library and define them as started tasks.

   Note: The started tasks will be started as needed by the APIs. They must not be automatically started by your system or running continuously.

9. Configure UMS for Db2 Automation Expert.
10. Add the following to the STEPLIB DD in the Zowe ZIS AUX started task (ZWESASTC):

    ```
    hlq.SDAJLOAD,DISP=SHR
    fec-hlq.SFECLOAD,DISP=SHR
    ```

where hlq.SDAJLOAD is the installed Db2 Automation Expert load libary and $fec\text{-}hlq$.SFECLOAD is the installed FEC common code library.

11. Add the following to the Zowe ZIS AUX started task (ZWESASTC):

```
//DB2PARMS DD hlq.CONTROL,DISP=SHR
//DAJ#DATA DD   *
DAJ_CONFIG_ID DAJ
```

where hlq.`control` is the Db2 Automation Expert control file.

12. Start Db2 Automation Expert, enter option 11.2, and ensure that a maintenance window named IZP AD HOC with the description **AD HOC UTILITY EXECUTIONS** has been created on the subsystem that you will be using the API.

This maintenance window is required for ad-hoc utilities via the API.

Ansible playbook samples

Three Ansible playbook samples are provided for the Db2 Automation Expert API: list of supported utilities, list available Db2 Automation Expert profiles, and run ad-hoc utilities for a list of objects.

About this task

The playbooks are provided in IBM's public GitHub repository for z/OS Ansible sample playbooks, located here: https://github.com/IBM/z_ansible_collections_samples/tree/main/zos_subsystems/db2.

Refer to the README.MD files for information about the available playbooks and their parameters.

Chapter 20. Using Quick Build

The Quick Build feature allows you to quickly generate a utility job for specified objects. The intent of Quick Build is to allow you to easily create a simple job, such as for a one-time REPAIR to reset a table space's CHECK PENDING status.

Quick Build essentially uses the same screens as when building object, utility, and job profiles. The difference is that the job is *not* saved as a profile, and as such cannot be retrieved or edited as a profile once you finish the Quick Build process. However, you can always save and edit the generated JCL if desired.

You can use Quick Build to create a job without having to create an object or utility profile. In addition, you can initiate a Quick Build from the Objects Profile Display or the Utilities Profile Display using line commands.

Exception processing cannot be specified when using Quick Build.

About Quick Build

The topic explains general features of Quick Build.

You can access Quick Build from the Db2 Automation Expert main menu, the Objects Profile Display, or the Utilities Profile Display.

During the Quick Build, you may notice messages that indicate the *creator_name*.QUICKBUILD profile has been saved. Db2 Automation Expert temporarily saves the data in order to facilitate processing. However, the profile generated during Quick Build is not a true profile and is not accessible from any of the profile screens. If you want to save a profile for future use, use the Jobs Profile option of Db2 Automation Expert instead of Quick Build.

Quick Build from the Db2 Automation Expert Main Menu

Table 34 on page 367 describes the screens in order that they appear when selecting option 5, Quick Build, from the Db2 Automation Expert Main Menu. For details on these screens, refer to the corresponding documentation section listed in the information column.

Table 34. Quick Build from the Db2 Automation Expert Main Menu

Screen	Purpose	For more information
Tablespace/Index/Volume selection window	Specify the type of objects you want to include in the job	
Object selection screen (Tablespace/ Index/Volume selection)	Select the objects	"Adding table spaces from a list" on page 121 "Adding indexes from a list" on page 134 "Adding spaces on specific volumes from a list" on page 142
Update Object Profile Display	Confirm the object list; press PF3 when finished	"Updating an object profile" on page 151
Utility Profile Options	Specify the utilities to be included	"Creating a utility profile" on page 157

Screen	Purpose	For more information
Appropriate utility options screen(s) (These screens show up automatically if you've never set the utility options before; otherwise you must specify to update the options)	Specify options for the utilities	Refer to the topic on the specific utility that you are including.
Generation Options for *creator_name*.QUICKBUILD	Set job generation options. Press PF3 when finished.	"Updating other job generation options" on page 269
Build Job for *creator_name*.QUICKBUILD	Specify build options (online or batch and data set information) and job card information. Press Enter when finished.	"Building a job online " on page 281
If build in batch specified, additional batch window	Specify the data set in which you want the output from the batch build placed. Press Enter when finished.	"Building a JCL job in batch" on page 290
If scheduling a job with the DB2®Db2 administrative task scheduler, the Schedule Db2 Admin Task panel	Specify task options for this job	"Scheduling the job for the Db2 administrative task scheduler" on page 282
Edit session or back to Db2 Automation Expert Main Menu		

Quick Build from the Objects Profile Display

When you use the Q line command next to an object profile on the Objects Profile Display, the object selection screens are bypassed. Quick Build uses the objects specified in the selected object profile.

The remainder of the Quick Build screens appear as described in the following table. For details on these screens, refer to the corresponding documentation section.

Table 35. Quick Build from the Objects Profile Display

Screen	Purpose	For more information
Utility Profile Options	Specify the utilities to be included	"Creating a utility profile" on page 157
Appropriate utility options screen(s) (These screens show up automatically if you've never set the utility options before; otherwise you must specify to update the options)	Specify options for the utilities	Refer to the topic on the specific utility that you are including.
Generation Options for *creator_name*.QUICKBUILD	Set job generation options. Press PF3 when finished	"Updating other job generation options" on page 269
Build Job for *creator_name*.QUICKBUILD	Specify build options (online or batch and data set information) and job card information. Press Enter when finished.	"Building a job online " on page 281

Table 35. Quick Build from the Objects Profile Display (continued)

Screen	Purpose	For more information
If build in batch specified, additional batch window	Specify the data set in which you want the output from the batch build placed. Press Enter when finished.	"Building a JCL job in batch" on page 290
If scheduling a job with the Db2 administrative task scheduler, the Schedule Db2 Admin Task panel	Specify task options for this job	"Scheduling the job for the Db2 administrative task scheduler" on page 282
Edit session or back to Db2 Automation Expert Main Menu.		

Quick Build from the Utilities Profile Display

When you use the Q line command next to a utility profile on the Utilities Profile Display, the utility selection screens are bypassed. Quick Build uses the utilities specified in the select utility profile.

The remainder of the Quick Build screens appear as described in the following table. For details on these screens, refer to the corresponding documentation section.

Table 36. Quick Build from the Utilities Profile Display

Screen	Purpose	For more information
Tablespace/Index/Volume selection window	Specify the type of objects you want to include in the job	"Adding objects" on page 152
Enter Tablespaces Like to Display/ Enter Indexes Like to Display/ Enter Volumes Like to Display	Enter selection criteria for the object list	"Adding table spaces" on page 120 "Adding indexes" on page 133 "Adding spaces on specific volumes" on page 142
Object selection screen (Tablespace/ Index/Volume selection)	Select the objects	"Adding table spaces from a list" on page 121 "Adding indexes from a list" on page 134 "Adding spaces on specific volumes from a list" on page 142
Update Object Profile Display	Confirm the object list; press PF3 when finished	"Updating an object profile" on page 151
Generation Options for *creator_name*.QUICKBUILD	Set job generation options. Press PF3 when finished	"Updating other job generation options" on page 269
Build Job for *creator_name*.QUICKBUILD	Specify build options (online or batch and data set information) and job card information. Press Enter when finished.	"Building a job online " on page 281
If build in batch specified, additional batch window	Specify the data set in which you want the output from the batch build placed. Press Enter when finished.	"Building a JCL job in batch" on page 290
If scheduling a job with the Db2 administrative task scheduler, the Schedule Db2 Admin Task panel	Specify task options for this job	"Scheduling the job for the Db2 administrative task scheduler" on page 282

Table 36. Quick Build from the Utilities Profile Display (continued)

Screen	Purpose	For more information
Edit session or back to Db2 Automation Expert Main Menu.		

Chapter 21. Using the execution reports feature

The execution reports feature allows you to track the results of Db2 Automation Expert-submitted jobs. If a job abends, details such as location and cause are easy to identify. You can also rebuild or restart a job from the **Execution Reports Job Display**.

Execution reporting relies on a job tracking task to track jobs and their completion codes. To use the restart feature, you must implement the job tracking task as described in Chapter 4, "Customizing Db2 Automation Expert," on page 73 and "Add the IEFACTRT exit to the SMFPRMxx member of SYS1.PARMLIB" on page 20.

Viewing jobs

You can view a list of the results of Db2 Automation Expert-submitted jobs by using the **Execution Reports Job Display.** This panel contains details about the job steps and the objects in the job, and allows you to rebuild a job or restart a job that did not complete successfully.

Procedure

1. On the Db2 Automation Expert main menu, enter 6 in the **Option** field press Enter.
2. On the **Execution Reports Job Display**, enter J in the **View Type** field. You can also enter more selection criteria in the header fields. Press Enter.
3. The **Execution Reports Job Display** lists the jobs that were processed by Db2 Automation Expert and that meet the specified selection criteria.

   The following figure shows the **Execution Reports Job Display**:

   ```
   AUTOXPRT V1R1  ---- Execution Reports Job Display    ---- 2023/10/21  19:23:18
   Option  ===>                                              Scroll ===> CSR
   -------------------------------------------------------------------------------

   Line Commands: B - Build  D - Delete  O - Objects  R - Restart  S - Steps
    Profile    Like  *                                 Db2 Subsystem: SS01
    Creator    Like  PD*      Database Like  *           Row 1 of 21         +>
    Space Type =    A  (I - Index, T - Tablespace, A - Any)
    Space      Like  *                        Date From  10/20/2023 to  10/22/2023
                                              Time From  00:01:00   to  23:00:00
    Partition  =    4        (0-4096, * - All, blank)
    Jobname    Like  *              View Type  J  (J - Jobs, O - Objects)
    Jobnum     Like  *
   -------------------------------------------------------------------------------

   Cmd   Jobname   Jobnum    Completion   Reason Code    Creator    Profile ID
         PDUSERAA  J0953825       R0004      00000000    PDUSER     CB44BF11AE7544AE
         PDUSERAZ  J0953838       R0012      00000000    PDUSER     CB44BF7013DBBA20
         PDUSERAZ  J0953844       R0000      00000000    PDUSER     CB44BF7013DBBA20
         PDUSERAZ  J0953907       R0000      00000000    PDUSER     CB44C48D736DA8A2
         PDUSERAZ  J0953908       R0000      00000000    PDUSER     CB44C4C6CDBBC7B0
         PDUSERAZ  J0953914       R0004      00000000    PDUSER     CB44C5423EF2AC30
         PDUSERAZ  J0953916       R0000      00000000    PDUSER     CB44C5792EF49E22
   ```

   Figure 211. Execution Reports Job Display

What to do next

You can use the line commands that are described in the following table to process a job or to review related information about a job:

Table 37. Execution reports line commands

Line command	Description
B	Rebuild the job. For more information, see "Building a job online " on page 281. If the previous execution of the job did not successfully complete, Db2 Automation Expert asks if you want to rebuild the job with a RESTART parameter, or rebuild the job. For more information, see "Restarting failed jobs" on page 300.
D	Delete a job from the Execution Reports repository. **Note:** This does not delete the job from SDSF or other job handing facility.
O	Select a job to see the objects that are processed by that job.
S	Select a job to see the job steps and completion codes for each step.

Viewing objects

You can view a list of the objects that were processed by Db2 Automation Expert-submitted jobs by using the **Execution Reports Object Display.** This panel contains details about the objects that were processed, and allows you to select the objects to view all the jobs that processed them.

Procedure

1. On the Db2 Automation Expert main menu, enter 6 in the **Option** field press Enter.
2. On the **Execution Reports Job Display**, enter 0 in the **View Type** field. You can also enter more selection criteria in the header fields. Press Enter.
3. The **Execution Reports Object Display** lists the objects that were processed by Db2 Automation Expert and that meet the specified selection criteria.

   The following figure shows the **Execution Reports Object Display**:

```
AUTOXPRT V1R1   ---- Execution Reports Object Display ---- 2023/10/21  19:27:23
Option  ===>                                              Scroll ===> CSR
-------------------------------------------------------------------------------
Line Commands: S - Select

 Profile    Like  *                                    Db2 Subsystem: SS01
 Creator    Like  PD*      Database Like  *         Row 1 of 6
 Space Type =    A  (I - Index, T - Tablespace, A - Any)
 Space      Like  *                      Date From  01/01/2023 to  04/18/2023
                                         Time From  00:01:00   to  23:00:00
 Partition  =     4      (0-4096, * - All, blank)
 Jobname    Like  *              View Type  O  (J - Jobs, O - Objects)
 Jobnum     Like  *
-------------------------------------------------------------------------------

Cmd  Type       Database Name  Space Name     Partition
     IX         H7241DB        H7241XB2          4
     IX         H7241DB        H7241XC2          4
     TS         H7241DB        H7241TSA          4
     TS         H7241DB        H7241TSB          4
     TS         H7241DB        H7241TSC          4
     TS         NMHACHNG       TSCHNG01          4
***************************** Bottom of Data ********************************
```

Figure 212. Execution Reports Object Display

4. To view job information for an object, enter S next to the object and press Enter.

   The **Object Job Display** shows all the jobs that acted upon the object, including the completion and reason codes. The following figure shows the **Object Job Display**:

```
AUTOXPRT V1R1    ----------- Object Job Display ----------- 2023/10/21 19:28:22
Option  ===>                                                Scroll ===> CSR
--------------------------------------------------------------------------------
Line Commands: D - Delete  O - Objects  S - Steps
--------------------------------------------------------------------------------
     Database Name  H7241DB                           Db2 Subsystem: SS01
     Space Name     H7241XB2
     Space Type     IX                                Row 1 of 6          >
--------------------------------------------------------------------------------

Cmd  Jobname   Jobnum    Completion   Reason Code    Creator    Profile ID
     PDUSERAZ  J0681457     R0000       00000000      PDUSER     CB1E9D32F528C5A0
     PDUSERAZ  J0681485     R0008       00000000      PDUSER     CB1E9F78F7C433B0
     PDUSERAZ  J0681491     R0000       00000000      PDUSER     CB1E9F78F7C433B0
     PDUSERAZ  J0681567     R0000       00000000      PDUSER     CB1EA67A4D6E5C30
     PDUSERAZ  J0681571     R0000       00000000      PDUSER     CB1EA6BE4E226427
     PDUSERAZ  J0681618     R0000       00000000      PDUSER     CB1EA8AE88CD08A1
****************************** Bottom of Data *********************************
```

What to do next

On the **Object Job Display**, you can use the line commands that are described in the following table to process a job or to review related information about the job:

Table 38. Object job line command descriptions

Line command	Description
D	Delete a job from the Execution Reports repository. **Note:** This does not delete the job from SDSF or other job handling facility.
O	Select a job to see all of the objects that were processed by that job.
S	Select a job to see the job steps in the job and the completion codes for each step.

Viewing objects that were processed by a job

The **Job Object Display** lists all the objects that were processed by a Db2 Automation Expert job.

Procedure

1. On the **Execution Reports Job Display** or the **Object Job Display**, enter 0 next to a job and press Enter.
2. The **Job Object Display**, which is shown in the following figure, lists all the objects that were processed by the selected job.

```
AUTOXPRT V1R1     ------------ Job Object Display ----------- 2023/10/21 19:33:0
Option  ===>                                              Scroll ===> CSR

     Jobname: CRTIXR1                                   Db2 Subsystem: SS01
     Jobnum : J0136630                              Row 1 of 22          +


--------------------------------------------------------------------------------
     Type       Database Name  Space Name    Partition
     IX         NMHAQA25       I2501011           0
     IX         NMHAQA25       I2502011          ALL
     IX         NMHAQA25       I2502012           0
     IX         NMHAQA40       I4001011           4
     IX         NMHAQA40       I4001011           1
     IX         NMHAQA40       I4001011           5
     IX         NMHAQA40       I4001011           2
     IX         NMHAQA40       I4001011           3
     IX         NMHAQA40       I4001012           3
     IX         NMHAQA40       I4001012           4
     IX         NMHAQA40       I4001012           5
     IX         NMHAQA40       I4001012           1
     IX         NMHAQA40       I4001012           2
     IX         NMHAQA40       I4001013           0
```

Viewing job steps in a job

The **Job Step Display** lists the job steps in a job and displays the step completion codes, CPU and elapsed time, and other processing-related information.

Procedure

1. On the **Execution Reports Job Display** or the **Object Job Display**, enter S next to a job and press Enter.
2. The **Job Step Display**, which is shown in the following figure, lists all the job steps for the selected job, and includes information such as the job step completion code.

```
AUTOXPRT V1R1     ------------ Job Step Display ----------- 2023/10/21  19:34:52
Option  ===>                                              Scroll ===> CSR
--------------------------------------------------------------------------------
     Jobname: PDUSRAAZ                                  Db2 Subsystem: SS01
     Jobnum : J0681457                              Row 1 of 7              >
--------------------------------------------------------------------------------

Step# Stepname    Completion   Reason Code    Start Time
   1  REG00101          R0000     00000000     2023-03-26-16.12.55.880000
   2  IMC00102          R0000     00000000     2023-03-26-16.12.55.950000
   3  PRN00103          R0000     00000000     2023-03-26-16.13.00.350000
   4  PRS00103          R0000     00000000     2023-03-26-16.13.00.420000
   5  RTS00104          R0000     00000000     2023-03-26-16.13.00.860000
   6  PRN00105          R0000     00000000     2023-03-26-16.13.15.120000
   7  PRS00105          R0000     00000000     2023-03-26-16.13.15.150000
***************************** Bottom of Data ********************************
```

Deleting a job from the execution reports repository

You can delete a job from the execution reports repository by using a line command. The job is deleted from the execution reports repository, but is not deleted from SDSF queues.

Procedure

1. On the **Execution Reports Job Display** or the **Object Job Display**, enter D next to a job and press Enter.
2. The **Confirm Deletion** window, which is shown in the following figure, prompts you to confirm deletion:

```
              Confirm Deletion

   Confirm delete of job PDUSERAA J0953825

                      Delete  Y  (Yes/No)

   Turn delete confirmation off  N  (Yes/No)
```

3. To confirm deletion, enter Y in the **Delete** field and press Enter.

   You can turn off deletion confirmation for subsequent jobs by entering Y in the **Turn delete confirmation off** field.

Chapter 22. Using the Db2 Command Processor

The Db2 Command Processor allows you to enter and issue Db2 commands for a specified subsystem, and review the output and messages from the command execution on an output panel. The output from the command can also be captured in a SYSOUT data set by issuing the PRINTX command while the output is displayed.

Accessing the Db2 Command Processor

The Db2 Command Processor can be accessed from the Db2 Automation Expert main menu or can be invoked from any Db2 Automation Expert panel that contains a command line.

Before you begin
To use the Db2 Command Processor from Db2 Automation Expert panels, ensure that the DAJCP CLIST member has been copied to your site's CLIST library. Refer to customization instructions for additional information.

About this task

- From any Db2 Automation Expert panel, enter TSO DAJCP.
- From the Db2 Automation Expert main menu, type 7 and press Enter.

The **Db2 Command Processor** panel, shown in the following figure, is displayed:

```
FECDBC --------------------- Db2 Command Processor ------ 2023/10/30  14:23:21
Command ==>                                              Scroll ===> CSR
SSID ==> SS1A                 ? (or clear) to see a selection list
History Size Limit ==> 20     0-999
Datasharing Member ==>        ? to see a selection list for this SSID

Commands: HIST (PF4); HRETP (PF6); ? (PF13); HRETN (PF18); HCLEAR (PF24)
------------------------------------------------------------------------------
                                    Row 1 of 57                       +
***  Enter Command Below:  ***************************************************
```

*Figure 213. **Db2 Command Processor** panel*

Fields on the Db2 Command Processor panel

This topic describes the fields on the **Db2 Command Processor** panel.

The fields on the **Db2 Command Processor** panel are as follows:

SSID
> Enter the SSID on which you want to issue the command. The subsystem entered must be defined in the Db2 control data set in the Db2 Automation Expert setup. For a list of valid subsystems, clear the field and enter a question mark (?). Refer to "The SSID selection function" on page 98 for information on this feature.

History Size Limit
> Enter the maximum number of prior commands to be saved in the command history. To disable the command history, enter 0 in this field.

Datasharing Member
> If the SSID specified in the SSID field is a member of a data sharing group, and you want to direct the Db2 command to another member of the same data sharing group, enter the group member in this field. For a list of members in the data sharing group, enter a question mark (?) in this field.

The SSID selection function

The Db2 command processor provides a list of active Db2 subsystems that exist in the active Db2 control data set.

To access this panel, enter a ? in the SSID field and press Enter. The SSID Selection panel is displayed, as shown in the following figure:

```
FECSLST ----------------         SSID Selection        ----- 2023/10/14  12:35:45
Option  ===>                                                   Scroll ===> CSR

Select with S line command or just place cursor and press ENTER; To Exit: PF3
--------------------------------------------------------------------------------
                                            Row 1 of 10                  CPOS
Cmd SSID Status
    DACM Active
    SS1A Active
**************************** Bottom of Data *********************************
```

Figure 214. SSID Selection panel

This panel lists all active Db2 subsystems that have been defined in the Db2 control data set, which is configured in the System Parameters section of Db2 Automation Expert setup. To select a subsystem, type S next to the SSID and press Enter, or place your cursor in the desired row and press Enter. To cancel, press PF3.

The datasharing member selection function

If you enter a ? in the Datasharing Member field on the **Db2 Command Processor** panel, a list of active Db2 subsystems that exist in the active Db2 control data set is displayed.

To access this panel, enter a ? in the Datasharing Member field and press Enter. The Datasharing Member Selection panel is displayed, as shown in the following figure:

```
FECDGP ---------------- Datasharing Member Selection ----- 2023/10/29  12:39:32
Option  ===>                                                   Scroll ===> CSR
Select with S line command or place cursor and press ENTER;
--------------------------------------------------------------------------------
                                            Row 1 of 4
Cmd DB2      ID  SUBSYS CMDPREF     STATUS   DB2 SYSTEM
    MEMBER                                   LVL NAME
-   -------- --- ----   --------    -------- --- --------
    D8A2MEM    1 D8A    !D8A        ACTIVE   810 RS22
    D8B2MEM    2 D8B    !D8B        ACTIVE   810 RS23
    D8C2MEM    3 D8C    !D8C        ACTIVE   810 RS22
    D8D2MEM    4 D8D    !D8D        ACTIVE   810 RS23
**************************** Bottom of Data *********************************
```

Figure 215. SSID Selection panel

This panel list all datasharing members of the selected Db2 subsystem. To select a data sharing member, type S next to the member and press Enter, or place the cursor in the desired row and press Enter. The member name is transferred to the Datasharing Member field on the **Db2 Command Processor** panel, and all commands issue will be routed to that member.

To cancel from this panel, press PF3.

Commands on the Db2 Command Processor panel

These commands are available on the **Db2 Command Processor** panel. Enter a command on the Command line and press Enter, or use the corresponding PF key.

HIST

(PF4) The **HIST** (history) command displays a list of the most recently issued commands; the commands can be selected for execution.The maximum number of prior commands saved in the history is controlled by the value entered in the History Size Limit field.

HRETP

(PF6) The **HRETP** command populates the input command area with the next most recent command issued. You can repeat the HRETP command to cycle through the command list, from the most recent command to the oldest.

?

(PF13) Entering '**?**' in the command line displays a list of Db2 commands. If you select a command, a syntax diagram for the command is inserted about the input area on the **Db2 Command Processor** panel.

HRETN

(PF18) The **HRETN** command populates the input command area with the oldest command issued that is on the history list. For example, say the history contains the issued commands in this order: 1, 2, 4, 5, 3. HRETN will issue command 3. You can repeat the HRETN command to cycle through the command list, from the oldest command to the most recent.

HCLEAR

(PF24) The **HCLEAR** command clears the history database.

PRINTX

The **PRINTX** command can be used to write the output from a Db2 command that is displayed on the panel to a SYSOUT file. The output is created using the default output class defined on the system. If you do not know where your SYSOUT output is written to, check the HELD and OUTPUT queues with jobname=your user ID, or ask your systems programmer.

Entering Db2 commands

There are several ways to enter Db2 commands on the **Db2 Command Processor** panel.

About this task
To enter Db2 commands:

- Type the command in the command input area.
- Retrieve a prior command from the command history. You can optionally edit the command before submitting it.
- Enter '?' in the Command line to review a list of supported commands for the version of Db2 associated with the SSID.

```
FECDHP ------------------ Db2 Command List ----------- 2023/11/11   12:42:05
Option  ===>                                              Scroll ===> CSR

Select with S line command or just place cursor and press ENTER; To Exit: PF3
--------------------------------------------------------------------------------
                                          Row 1 of 47                    +
Cmd Data
    ACCESS DATABASE
    ACTIVATE NEW FUNCTION
    ALTER BUFFERPOOL
    ALTER GROUPBUFFERPOOL
    ALTER UTILITY
    ARCHIVE LOG
    CANCEL THREAD
    DISPLAY ARCHIVE
    DISPLAY BUFFERPOOL
    DISPLAY DATABASE
    DISPLAY DDF
    DISPLAY FUNCTION SPECIFIC
    DISPLAY GROUP
    DISPLAY GROUPBUFFERPOOL
    DISPLAY LOCATION
    DISPLAY LOG
    DISPLAY PROCEDURE
    DISPLAY PROFILE
    DISPLAY RLIMIT
    DISPLAY THREAD
    DISPLAY TRACE
    DISPLAY UTILITY
    MODIFY TRACE
    RECOVER BSDS
```

*Figure 216. **Db2 Command List** panel*

Enter S next to a command to select it, or place the cursor on the line of the desired command and press ENTER. When you select a command, a syntax diagram for the command is retrieved and placed before the command input area on the **Db2 Command Processor** panel. You can use the diagram as a reference while typing your command. For example, if you select the ALTERBUFFERPOOL command, the following panel is displayed:

```
FECDBC --------------------- Db2 Command Processor ------ 2023/11/11  12:43:31
Command ==>                                               Scroll ===> CSR
SSID ==> SS1A                ? (or clear) to see a selection list
History Size Limit ==> 20        0-999
Datasharing Member ==>           ? to see a selection list for this SSID

Commands: HIST (PF4); HRETP (PF6); ? (PF13); HRETN (PF18); HCLEAR (PF24)
--------------------------------------------------------------------------------
                                          Row 1 of 77                    +
***  Input area below syntax diagram  **************************************
>>-ALTER BUFFERPOOL--(bpname)--+---------------+--------------------->
                               |_VPSIZE(integer)_|

>--+-----------------+--+----------------+------------------------->
   |_VPSEQT(integer)_|  |_VPPSEQT(integer)_|

>--+------------------+--+--------------+------------------------->
   |_VPXPSEQT(integer)_|  |_DWQT(integer)_|

>--+-----------------------+--+------------------+--------------->
   |_VDWQT(integer1,integer2)_|  |_PGSTEAL(___LRU____)_|
                                            |_FIFO_|
                                            |_NONE_|

>--+-----------------+--+-------------------+--------------------><
   |        ._NO__.   |  |          ._NO__.   |
   |_PGFIX(_|_YES_|_)_|  |_AUTOSIZE(_|_YES_|_)_|


***  Enter Command Below:  ************************************************
```

*Figure 217. Syntax retrieved to the **Db2 Command Processor** panel*

Scroll down to reach the command input area.

Note: The syntax diagrams are provided for your convenience. The definitive source for syntax diagrams is the Db2 command reference for your version of Db2.

Reviewing command results

After the Db2 command is submitted, the command results are displayed on the **Db2 Command Output** panel.

The **Db2 Command Output** panel is shown in the following figure:

```
FECDCO ----------------      Db2 Command Output      ----- 2023/11/12  12:52:13
Option  ===>                                              Scroll ===> CSR
------------------------------------------------------------------    CPOS
                                                  Row 1 of 25
DSNT360I  !SS1A **********************************
DSNT361I  !SS1A *  DISPLAY DATABASE SUMMARY
              *    GLOBAL
DSNT360I  !SS1A **********************************
DSNT362I  !SS1A    DATABASE = ABPRLDB1  STATUS = RW
              DBD LENGTH = 8066
DSNT397I  !SS1A
NAME    TYPE PART  STATUS            PHYERRLO PHYERRHI CATALOG  PIECE
-------- ---- ----- ----------------- -------- -------- -------- -----
ABPRLPR1 TS    0001 RW
ABPRLPR1 TS         RW
ABPRLPR2 TS    0001 RW
   -THRU      0002
ABPRLPR2 TS         RW
ABPRLPR3 TS    0001 RW
   -THRU      0003
ABPRLPR3 TS         RW
ABPRLPR4 TS    0001 RW
   -THRU      0004
ABPRLPR4 TS         RW
ABPRLPR5 TS    0001 RW
   -THRU      0005
ABPRLPR5 TS         RW
****** DISPLAY OF DATABASE ABPRLDB1 ENDED      **********************
DSN9022I  !SS1A DSNTDDIS 'DISPLAY DATABASE' NORMAL COMPLETION
```

*Figure 218. **Db2 Command Output** panel*

Refer to the Db2 command reference for your version of Db2 for information about the contents of the command output.

While the output is displayed, you can issue the PRINTX command to send the output to a SYSOUT data set.

Chapter 23. Using Dataset Manager

Dataset Manager is a powerful, flexible tool that enables you to view, evaluate, and relocate Db2 data sets.

When you move data sets using Dataset Manager, you can change the characteristics of the target data set, as well as the location. Dataset Manager takes care of the tasks required when a Db2 data set is moved, such as stopping and starting the associated database and updating the Db2 catalog.

Dataset Manager supports all types of data set allocations, including storage group, user-defined, and data sets managed using SMS. The following types of moves are supported:

- Move a user-defined data set to a storage group
- Move a user-defined data set to the same VCAT or from one VCAT to a different VCAT
- Move a storage group-defined data set to a user-defined VCAT
- Move a storage group-defined data set to the same storage group or a different storage group

You can modify the following data set characteristics when moving a data set:

- The primary allocation and secondary allocation values
- The target volume(s) when moving a non SMS-managed user-defined data set
- The SMS class information when moving a user-defined data set

The online displays offer various levels of information about the data sets, from the database level down to the individual extent level. You select the desired data sets to be moved, either interactively from within TSO/ISPF or by using the batch function.

If an error occurs when moving a data set, Dataset Manager backs out the move request and returns the data set to its state prior to the move request.

Authorizations required

To use Dataset Manager, you must have the required authorizations.

The authorizations required are:

- Db2 authority to STOP, ALTER, and START objects that will be moved.
- z/OS authorization to create and delete the data set names being moved.
- z/OS authorization to create and update data sets generated by DSM that use the following naming convention:

```
tsouserid.DAJMOVE.*
```

For batch moves, DSM generates a sequential data set that contains the move JCL using this naming convention.

For online moves, DSM generates a data set using this naming convention that contains the results of the online move. This data set is created so that results can be viewed via ISPF browse and then retained for tracking purposes.

To cover both move types, have your system security group grant or allow create and update authority on the data set naming convention.

Using Dataset Manager's online interface

Dataset Manager's ISPF screens enable you to select desired data sets to be relocated and to specify the target data set characteristics to be used when the data set is moved.

About this task

Once data sets are selected and data set characteristics specified, you can choose to process the move requests online or in batch. Online moves are executed within your TSO/ISPF address space. When batch processing is selected, the execution JCL is generated with necessary move utility control cards. You can then view and modify the JCL generated prior to submitting the job in batch.

Using the Dataset Manager user interface is highly recommended to build your move data set requests, but it is not required to generate the JCL for batch execution. Refer to "Using Dataset Manager in batch " on page 418 for information about creating JCL and control cards to use Dataset Manager in batch.

To begin using the online interface for Dataset Manager, type 8 in the Option line on the Db2 Automation Expert main menu and press Enter.

The Specify Dataset Selection type window appears as shown in the following figure:

```
    Specify Dataset Selection Type
  _  1   Database
     2   Tablespace
     3   Indexspace
     4   Stogroup
     5   User Defined
     6   Vcat
     7   Volume
```

Figure 219. Specify Dataset Selection type window

On this window, specify how you want to select the data sets. Data sets that reside on the Db2 subsystem listed on the Db2 Automation Expert main menu can be selected.

- Type 1 to select data sets by database or database creator.
- Type 2 to select data sets by table space.
- Type 3 to select data sets by index space.
- Type 4 to select data sets by storage group.
- Type 5 to select user-defined data sets using a VCAT.
- Type 6 to select user- and Db2-defined data sets using a VCAT.
- Type 7 to select data sets by volume.

Using function keys with Dataset Manager

Program function keys facilitate movement between objects on object selection screens and help you quickly access the move queue. When these keys are available, they are listed on the bottom of the object selection screen.

These keys allow you to scroll between objects without having to press PF3 to return to a previous screen and then select another object. For example, say that Database A and Database B are listed on the DSM Database Summary screen. If you select Database A from this screen, the DSM Database Spacenames screen appears listing all of Database A's data sets. To view Database B's data sets, use the PF18 key ("next DB"). The database name in the Database header field changes to Database B, and the spaces belong to Database B are listed.

In addition, you can use the PF4 key from all Dataset Manager object selection screens to access the move queue. If objects have been added to the move queue, the DSM Move Dataset Queue screen appears. You can also enter the QEDIT command in the option line to access the move queue.

Table 39 on page 385 summarizes the function key capabilities:

Table 39. Function key capabilities

Key	Function
PF4	View the contents of the move queue.
PF17 Prev *object*	Move to the previous object.
PF18 Next *object*	Move to the next object.
PF19 First *object*	Move to the first object.
PF20 Last *object*	Move to the last object.

Selecting data sets from databases

You can select a database to move all the specific data sets from a database, or drill down to view specific data sets for your selection.

About this task

To select data sets from the database level, type 1 on the Specify Dataset Selection Type input line and press Enter. The Specify Database Selection window appears.

The Specify Database Selection window, shown in the following figure, lets you narrow the list of databases that appears on the next panel. Enter a database name, creator, or both in the Database and Database Creator fields. Selection criteria (*) are allowed.

Note: The Database Creator field allows up to 128 bytes. To scroll this field, place the cursor in the field and use the PF11 key to scroll right and the PF10 key to scroll left.

```
    Specify Database Selection

 Database          *
 Database Creator  PDTRC*    >
```

Figure 220. Specify Database Selection window

When you press Enter, the panel shown in the following figure is displayed:

```
 AUTOXPRT V1R1    ---------  DSM Database Summary  -------- 2023/10/21  19:39:10
 Option  ===>                                               Scroll ===> CSR
 -------------------------------------------------------------------------------
 Line Commands: S - View Spacenames  Q - Add to MoveQ           PF4 View MoveQ
               D - Del from MoveQ
 -------------------------------------------------------------------------    >
 SSID: SS1A              Database: *              Creator: PDMER*   >
 -------------------------------------------------------------------------------
 Cmd   DBname   Creator    TSct  ISct DSNct AvgExt MaxExt SpcUse SpaceUse SpaceAlc
       DBGPRI01 PDUSRAA       3     4     7             0   0.0%      0K       0K
       EXCPDB   PDUSRAA       1     0     1    1.0      1 100.0%   576.0K   576.0K
       PDUSRABP PDUSRAA       1     1     2             0   0.0%      0K       0K
       PDUSRAX  PDUSRAA       1     1     2             0   0.0%      0K       0K
 **************************** Bottom of Data ********************************
```

Figure 221. DSM Database Summary panel

The DSM Database Summary panel lists the databases that meet your selection criteria. On this panel, you can select a database to move all data sets associated with the database, or you can drill down to select specific table space or index space data sets.

The following section describes the fields on the DSM Database Summary panel.

SSID

The Db2 subsystem ID.

Database

The database name or mask you specified appears here. This field is read only.

Creator

The database creator name or mask you specified appears here. This field is read only.

DBname

The name of the database. If one or more data sets in the database are in the move queue, this field is highlighted. If all data sets in the database are in the move queue, an asterisk (*) appears next to the database name. If some of the data sets in the database are in the move queue, a plus sign (+) appears next to the database name.

Creator

The user ID of the creator of the database. If all data sets in the database are in the move queue, this field is highlighted.

TSct

The number of table spaces in the database.

ISct

The number of index spaces in the database.

DSNct

The total number of data sets allocated for both the table spaces and index spaces in the database.

AvgExt

The average number of extents taken per data set.

MaxExt

The highest number of extents taken to date by a data set in the database.

SpcUse

The percentage of space allocated that is currently used by data sets owned by the database. The value is derived by totaling all space used for all data sets within the database and dividing it by all space allocated for the database. Space used is derived from data set high used RBA. Space allocated is derived from data set high allocated RBA.

SpaceUse

The amount of space in use by all data sets in the database, in kilobytes (K), megabytes (M), gigabytes (G), or terabytes (T).

SpaceAlc

The amount of space allocated by the data sets in the database, in kilobytes (K), megabytes (M), gigabytes (G), or terabytes (T).

UsrDef

The number of user-managed data sets in the database.

StgDef

The number of Db2-managed data sets in the database.

DBid

The database identifier.

The line commands that can be used on the DSM Database Summary screen are described in the following table:

Table 40. DSM Database Summary screen line commands

Line command	Description
S	View the spaces in the database.

Table 40. DSM Database Summary screen line commands (continued)

Line command	Description
Q	Add the database to the move queue; all data sets associated with the database will be selected. After you add a database to the move queue, enter QEDIT in the command line to view the list of data sets to be moved.
D	Delete all database data sets from the data set move queue. This command may be used on multiple lines on the screen.

Working with table space and index space data sets

You can select a table space or index space to move all the data sets from the space, or drill down to view specific data sets to select.

The DSM Database Spacenames screen, shown in the following figure, lists the table spaces and index spaces for the selected database. You can select a space to move all data sets associated with the space, or you can drill down to select specific data sets or index space data sets.

```
AUTOXPRT V1R1   -------  DSM Database Spacenames -------  2023/10/21  19:42:18
Option  ===>                                          Scroll ===> CSR
Line Commands: S - View Spacename  Q - Add to MoveQ  D - Del from Moveq
--------------------------------------------------------------------    >
SSID: SS1A            Database: DBGPRI01        Creator: PDUSRAA  >
-------------------------------------------------------------------------------
Cmd   Spacenam Creator   Type  DSNct    AvgExt  MaxExt  SpcUse SpaceUse  SpaceAlc
      TSDEPT   PDUSRAA   TS       1       0.0       0    0.0%      0K        0K
      TSEMP    PDUSRAA   TS       1       0.0       0    0.0%      0K        0K
      TSHIRE   PDUSRAA   TS       1       0.0       0    0.0%      0K        0K
      DEPT     PDUSRAA   IS       1       0.0       0    0.0%      0K        0K
      DEPTX    PDUSRAA   IS       1       0.0       0    0.0%      0K        0K
      EMPX     PDUSRAA   IS       1       0.0       0    0.0%      0K        0K
      SSRNUMBE PDUSRAA   IS       1       0.0       0    0.0%      0K        0K
**************************** Bottom of Data *********************************

 PF4 View MoveQ    PF17 Prev DB    PF18 Next DB    PF19 First DB    PF20 Last DB
```

Figure 222. DSM Database Spacenames screen

The following section describes the fields on DSM Database Spacenames screen.

SSID
The Db2 subsystem ID.

Database
The database name or mask you specified appears here. This field is read only.

Creator
The database creator name or mask you specified appears here. This field is read only.

Spacenam
The name of the space. If one or more data sets in the space are in the move queue, this field is highlighted. If all data sets in the space are in the move queue, an asterisk (*) appears next to the space name. If some of the data sets in the space are in the move queue, a plus sign (+) appears next to the space name.

Creator
The user ID of the creator of the space. If all data sets in the space are in the move queue, this field is highlighted.

Type
The object type: TS for simple table space, PTTS for partitioned table space, IS for index space, or PTIS for partitioned index space.

DSNct
The total number of data sets allocated for the space.

AvgExt
The average number of extents taken per data set.

MaxExt
The highest number of extents taken to date by a data set in the space.

SpcUse
The percentage of space allocated that is currently used by data sets owned by the index space. The value is derived by totaling all space used for all data sets within the index space and dividing it by all space allocated for the data sets. Space used is derived from data set high used RBA. Space allocated is derived from data set high allocated RBA.

SpaceUse
The amount of space in use by the data sets in the space, in kilobytes (K), megabytes (M), gigabytes (G), or terabytes (T).

SpaceAlc
The amount of space allocated by all the data sets in the space, in kilobytes (K), megabytes (M), gigabytes (G), or terabytes (T).

UsrDef
The number of user-managed data sets in the space.

StgDef
The number of Db2-managed data sets in the space

OBid
The data object identifier.

PSid
The page set ID.

The line commands that can be used on the DSM Database Spacenames screen are described in the following table:

Table 41. DSM Database Spacenames screen line commands

Line command	Description
S	View the data sets for the space.
Q	Add the space to the move queue; all data sets associated with the space will be selected. After you add a space to the move queue, enter QEDIT in the command line to view the list of data sets to be moved.
D	Delete all the space's data sets from the data set move queue. This command may be used on multiple lines on the screen.

Working with data sets for a selected space

You can select specific data sets to move or view extents for a data set.

The DSM Spacename Datasets screen, shown in the following figure, lists all the data sets that make up the selected space. You can select one or more data sets to move, or you can drill down to see extent information for the data set.

```
AUTOXPRT V1R1   --------  DSM Spacename Datasets -------  2023/10/21  19:44:53
Option  ===>                                             Scroll ===> CSR
Line Commands: S - View Dataset  Q - Add to MoveQ  D - Del from MoveQ
------------------------------------------------------------------------    >
SSID: SS1A            Database: DBGPRI01         Spacename: TSDEPT
--------------------------------------------------------------------------------
Cmd  Dsn  Vcatname Stogroup Exts VLct Volume SpcUse SpaceUse SpaceAlc Qty  Pqty
     0001 SS1A     SYSDEFLT    0    0 MIGRAT   0.0%       0K       0K CYL    -1
**************************** Bottom of Data *********************************



 PF4 View MoveQ    PF17 Prev SP    PF18 Next SP    PF19 First SP    PF20 Last SP
```

Figure 223. DSM Spacename Datasets screen

The following section describes the fields on the DSM Spacename Datasets screen.

SSID
The Db2 subsystem ID.

Database
The database name or mask you specified appears here. This field is read only.

Spacename
The name of the space.

Dsn
The data set number. This field is highlighted and an asterisk (*) appears next to the Dsn if the data set is in the move queue.

Vcatname
The volume catalog name.

Stogroup
The storage group, if the data set is Db2-managed.

Exts
The number of extents that the data set has taken.

VLct
The number of volumes on which the data set resides.

Volume
The volume serial number on which the data set resides.

SpcUse
The percentage of space allocated that is currently used the data set. The value is derived by dividing space used by space allocated. Space used is obtained from data set high used RBA. Space allocated is obtained from data set high allocated RBA.

SpaceUse
The amount of space in use by the data set, in kilobytes (K), megabytes (M), gigabytes (G), or terabytes (T).

SpaceAlc
The amount of space allocated by the data set, in kilobytes (K), megabytes (M), gigabytes (G), or terabytes (T).

Qty
The unit of space allocation. TRK is tracks, CYL is cylinders.

Pqty
The primary space allocation amount, in the specified units.

Sqty
The secondary space allocation amount, in the specified units.

TrksAlc
    The number of tracks allocated for the data set.

HURBA_Dec
    The high used RBA for the data set, in decimal format.

HARBA_Dec
    The high allocated RBA for the data set, in decimal format.

HURBA_Hex
    The high used RBA for the data set, in hexadecimal format.

HARBA_Hex
    The high allocated RBA for the data set, in hexadecimal format.

The line commands that can be used on the DSM Spacename Datasets screen are described in the following table:

Table 42. DSM Spacename Datasets screen line commands

Line command	Description
S	View data set extent information.
Q	Add the data set to the move queue. After you add a data set to the move queue, enter QEDIT in the command line to view the list of data sets to be moved.
D	Delete the data set from the data set move queue. This command may be used on multiple lines on the screen.

Viewing extent information for a data set

Before moving a data set, you can view its extents using the DSM Dataset Extents panel.

The DSM Dataset Extents panel, shown in the following figure, displays information about the selected data set's extents.

```
AUTOXPRT V1R1    ---------  DSM Dataset Extents ---------  2023/10/21  19:46:25
Option  ===>                                            Scroll ===> CSR
--------------------------------------------------------------    >
Database: EXCPDB       Spacename: EXCPTS                    DSN: 0001
------------------------------------------------------------------------------
Eid Volume ATyp   AQty      LRBA_Dec       HRBA_Dec    LRBA_Hex      HRBA_Hex
001 DBP121 TRKS     12             0         589823           0         8FFFF
**************************** Bottom of Data *********************************


 PF4 View MoveQ   PF17 Prev DSN   PF18 Next DSN   PF19 First DSN   PF20 Last DSN
```

Figure 224. DSM Dataset Extents panel

The following section describes the fields on the DSM Datasets Extents panel.

Database
    The database name.

Spacename
    The name of the space.

Dsn
    The data set number.

Eid
    The extent number.

Volume
    The volume on which the extent resides.

ATyp

The unit of space allocation. TRK is tracks, CYL is cylinders.

AQty

The amount of space allocated by the extent, in the specified units.

LRBA_Dec

The low relative byte address of the extent, in decimal format.

HRBA_Dec

The high relative byte address of the extent, in decimal format.

LRBA_Hex

The low relative byte address of the extent, in hexadecimal format.

HRBA_Hex

The high relative byte address of the extent, in hexadecimal format.

StrtCCHH

The starting cylinder, cylinder, head, head address of the extent.

EndCCHH

The ending cylinder, cylinder, head, head address of the extent.

When you have finished viewing information on this panel, press PF3 to return to the DSM Spacename Datasets panel.

Selecting data sets from table spaces

You can select a table space to move all the data sets from the space, or drill down to view specific data sets for the space.

About this task

To select data sets from the table space level, type 2 on the Specify Dataset Selection Type input line and press Enter. The Specify Tablespace Selection window appears.

The Specify Tablespace Selection window, shown in the following figure, lets you narrow the list of table spaces that appears on the next panel. Enter a table space name, table space creator, database name, or a combination of any of these fields. Selection criteria (*) are allowed.

Note: The Tablespace Creator field allows up to 128 bytes. To scroll this field, place the cursor in the field and use the PF11 key to scroll right and the PF10 key to scroll left.

```
    Specify Tablespace Selection

 Tablespace          *
 Tablespace Creator  PDUSRA*  >
 Database            *
```

Figure 225. Specify Tablespace Selection window

When you press Enter, the panel shown in the following figure is displayed:

```
AUTOXPRT V1R1   ----------  DSM Tablespaces  ----------   2023/10/21  19:49:06
Option ===>                                          Scroll ===> CSR
Line Commands: S - View Datasets  Q - Add to MoveQ             PF4 View MoveQ
          D - Del from MoveQ
------------------------------------------------------------------------   >
SSID: SS1A          Tablespace: *              Creator: PDUSRA*  >
------------------------------------------------------------------------------
Cmd  TSname   Creator  DBname   Dsnct  AvgExt  MaxExt  SpcUse SpaceUse SpaceAlc
     CMP00102 PDUSRAA  PDUSRAX      1     0.0       0    0.0%      0K      0K
     CMP00502 PDUSRAA  PDUSRABP     1     0.0       0    0.0%      0K      0K
     DEPTREMP PDUSRAA  DSN01186     1     0.0       0    0.0%      0K      0K
     DEPTREXC PDUSRAA  DSN01185     1     0.0       0    0.0%      0K      0K
     EMPREXCP PDUSRAA  DSN01187     1     0.0       0    0.0%      0K      0K
     EXCPTS   PDUSRAA  EXCPDB       1     1.0       1  100.0%  576.0K  576.0K
     STMON41  PDUSRAA  DLCDB        1     1.0       1  100.0%  144.0K  144.0K
     TSDEPT   PDUSRAA  DBGPRI01     1     0.0       0    0.0%      0K      0K
     TSEMP    PDUSRAA  DBGPRI01     1     0.0       0    0.0%      0K      0K
     TSHIRE   PDUSRAA  DBGPRI01     1     0.0       0    0.0%      0K      0K
**************************** Bottom of Data *********************************
```

Figure 226. DSM Tablespaces panel

The DSM Tablespaces panel lists the table spaces that meet your selection criteria. On this panel, you can select a table space to move all data sets associated with the space, or you can drill down to select specific data sets.

The following section describes the fields on the DSM Tablespaces panel:

SSID
The Db2 subsystem ID.

Tablespace
The table space name or mask you specified appears here. This field is read only.

Creator
The table space creator name or mask you specified appears here. This field is read only.

TSname
The name of the table space. This field is highlighted if one or more data sets in the table space are in the move queue. If one or more data sets in the table space are in the move queue, this field is highlighted. If all data sets in the table space are in the move queue, an asterisk (*) appears next to the table space name. If some of the data sets in the table space are in the move queue, a plus sign (+) appears next to the table space name.

Creator
The user ID of the creator of the table space. If all data sets in the table space are in the move queue, this field is highlighted.

DBname
The database name that owns the table space.

DSNct
The total number of data sets allocated for the table space.

AvgExt
The average number of extents for a single data set owned by the table space.

MaxExt
The maximum number of extents for a single data set owned by the table space.

SpcUse
The percentage of space allocated that is currently used by data sets owned by the table space. The value is derived by totaling all space used for all data sets within the table space and dividing it by all space allocated for the data sets. Space used is derived from data set high used RBA. Space allocated is derived from data set high allocated RBA.

SpaceUse
The amount of space in use by all data sets owned by the table space, in kilobytes (K), megabytes (M), gigabytes (G), or terabytes (T).

SpaceAlc

The amount of space allocated by all data sets owned by the table space, in kilobytes (K), megabytes (M), gigabytes (G), or terabytes (T).

UsrDef

The number of user-managed data sets in the database.

StgDef

The number of Db2-managed data sets in the database.

Type

The object type. TS is a simple table space. PTTS is a partitioned table space.

DBid

The database identifier of the data base owning the table space.

OBid

The table space object identifier.

PSid

The table space pageset object identifier.

The line commands that can be used on the DSM Tablespaces panel are shown in the following table:

Table 43. DSM Tablespaces panel line commands

Line command	Description
S	View the data sets owned by the selected table space.
Q	Add the table space to the move queue; all data sets associated with the table space will be selected. After you add a table space to the move queue, enter QEDIT in the command line (or press PF4) to view the list of data sets to be moved. This command may be used on multiple lines on the panel.
D	Delete all table space data sets in the data set move queue. This command may be used on multiple lines on the panel.

Selecting data sets from index spaces

You can select an index space to move all the data sets from the space, or drill down to view specific data sets for the space.

About this task

To select data sets from the index space level, type 3 on the Specify Dataset Selection Type input line and press Enter. The Specify Indexspace Selection window appears.

The Specify Indexspace Selection window, shown in the following figure, lets you narrow the list of index spaces that appears on the next panel. Enter a index space, index name, index creator, or database name, or a combination of any of these fields. Selection criteria (*) are allowed.

Note: The Indexname and Index Creator fields allow up to 128 bytes. To scroll these fields, place the cursor in the field and use the PF11 key to scroll right and the PF10 key to scroll left.

```
    Specify Indexspace Selection

 Indexspace      *
 Indexname       DSN*              >

 Index Creator   *         >
 Database        *
```

Figure 227. Specify Indexspace Selection window

When you press Enter, the panel shown in the following figure is displayed:.

```
AUTOXPRT V1R1   ----------   DSM Indexspaces   ----------   2023/10/21  19:51:36
Option  ===>                                          Scroll ===> CSR
Line Commands: S - View Datasets  Q - Add to MoveQ            PF4 View MoveQ
               D - Del from MoveQ
------------------------------------------------------------------------  +>
SSID: SS1A    Indexname: DSN*           >    Creator: *        >
------------------------------------------------------------------------
Cmd  ISname   Creator  DBname   Dsnct  AvgExt  MaxExt   SpcUse SpaceUse SpaceAlc
     DSNACX01 SYSIBM   DSNDB06    1      4.0       4   100.0%    4.9M     4.9M
     DSNADH01 SYSIBM   DSNDB06    1      2.0       2   100.0%    2.1M     2.1M
     DSNADX01 SYSIBM   DSNDB06    1      2.0       2   100.0%    2.1M     2.1M
     DSNAGH01 SYSIBM   DSNDB06    1      2.0       2   100.0%    5.6M     5.6M
     DSNAGX01 SYSIBM   DSNDB06    1      1.0       1   100.0%   11.2M    11.2M
     DSNAPH01 SYSIBM   DSNDB06    1      1.0       1   100.0%    2.1M     2.1M
     DSNAPX01 SYSIBM   DSNDB06    1      1.0       1     3.3%   48.0K     1.4M
     DSNARL01 SYSIBM   DSNRLST    1      1.0       1   100.0%  720.0K   720.0K
     DSNATX01 SYSIBM   DSNDB06    1      2.0       2   100.0%    4.9M     4.9M
     DSNATX02 SYSIBM   DSNDB06    1      1.0       1   100.0%    8.4M     8.4M
     DSNATX03 SYSIBM   DSNDB06    1      2.0       2   100.0%    6.3M     6.3M
     DSNATX04 SYSIBM   DSNDB06    1      2.0       2   100.0%    6.3M     6.3M
     DSNAUH01 SYSIBM   DSNDB06    1      2.0       2   100.0%    2.1M     2.1M
     DSNAUX02 SYSIBM   DSNDB06    1      1.0       1   100.0%    2.1M     2.1M
     DSNCAX01 SYSIBM   DSNDB06    1      1.0       1     .4%    20.0K     4.2M
     DSNCCX01 SYSIBM   DSNDB06    1      3.0       3     .5%    48.0K     9.1M
     DSNCCX02 SYSIBM   DSNDB06    1      5.0       5     .7%    48.0K     6.3M
     DSNCDX01 SYSIBM   DSNDB06    1      2.0       2     .4%    20.0K     4.2M
     DSNCDX02 SYSIBM   DSNDB06    1      1.0       1     .4%    20.0K     4.2M
     DSNCHX01 SYSIBM   DSNDB06    1      1.0       1   100.0%    4.2M     4.2M
     DSNCNX01 SYSIBM   DSNDB06    1      1.0       1   100.0%    1.4M     1.4M
     DSNCNX02 SYSIBM   DSNDB06    1      1.0       1   100.0%    1.4M     1.4M
```

Figure 228. DSM Indexspaces panel

The DSM Indexspaces panel lists the index spaces that meet your selection criteria. On this panel, you can select an index space to move all data sets associated with the space, or you can drill down to select specific data sets.

The following section describes the fields on the DSM Indexspaces panel:

SSID
    The Db2 subsystem ID.

Indexspace
    The index space name or mask you specified appears here. This field is read only.

Creator
    The index space creator name or mask you specified appears here. This field is read only.

ISname
    The name of the index space. If one or more data sets in the index space are in the move queue, this field is highlighted. If all data sets in the index space are in the move queue, an asterisk (*) appears next to the index space name. If some of the data sets in the index space are in the move queue, a plus sign (+) appears next to the index space name.

Creator
    The user ID of the creator of the index space. If all data sets in the index space are in the move queue, this field is highlighted.

DBname
    The database name that owns the index space.

DSNct
    The number of data sets in the index space.

AvgExt
    The average number of extents for a single data set owned by the index space.

MaxExt
    The maximum number of extents for a single data set owned by the index space.

SpcUse

The percentage of space allocated that is currently used by data sets owned by the index space. The value is derived by totaling all space used for all data sets within the index space and dividing it by all space allocated for the data sets. Space used is derived from data set high used RBA. Space allocated is derived from data set high allocated RBA.

SpaceUse

The amount of space in use by all data sets owned by the index space, in kilobytes (K), megabytes (M), gigabytes (G), or terabytes (T).

SpaceAlc

The amount of space allocated by all data sets owned by the index space, in kilobytes (K), megabytes (M), gigabytes (G), or terabytes (T).

UsrDef

The number of user-managed data sets in the index space.

StgDef

The number of Db2-managed data sets in the index space.

Type

The object type. IS is a simple index space. PTIS is a partitioned index space.

Indexname

The name of the index residing in the index space.

Tablename

The table name associated with the index.

Tcreator

The creator of the table associated with the index.

DBid

The database identifier of the data base owning the index space.

OBid

The index object identifier.

PSid

The index space pageset object identifier. This is the ISOBID.

The line commands that can be used on DSM Indexspaces panel are described in the following table:

Table 44. DSM Indexspaces panel line commands

Line command	Description
S	View the data sets owned by the selected index space.
Q	Add the index space to the move queue; all data sets associated with the index space will be selected. After you add an index space to the move queue, enter QEDIT in the command line (or press PF4) to view the list of data sets to be moved. This command may be used on multiple lines on the panel.
D	Delete all index space data sets from the data set move queue. This command may be used on multiple lines on the panel.

Selecting data sets from storage groups

You can select a storage group to move all the data sets from the storage group, or drill down to view specific data sets.

About this task

To select data sets beginning at the storage group level, type 4 on the Specify Dataset Selection Type input line and press Enter. The Specify Storage Group window appears.

The Specify Storage Group window, shown in the following figure, lets you narrow the list of storage groups that appears on the next panel. Enter a storage group name in the Storage Group field. Selection criteria (*) are allowed.

Note: The Storage Group field allows up to 128 bytes. To scroll this field, place the cursor in the field and use the PF11 key to scroll right and the PF10 key to scroll left.

```
        Specify Storage Group

  Storage Group    S*        >
```

Figure 229. Specify Storage Group window

When you press Enter, the panel shown in the following figure is displayed:

```
AUTOXPRT V1R1    --------  DSM Stogroup Summary  --------  2023/10/21  19:54:49
Option  ===>                                           Scroll ===> CSR
Line Commands: S - View Database                          PF4 View MoveQ
----------------------------------------------------------------------  +>
SSID: SS1A               Stogroup: S*      >
-------------------------------------------------------------------------------
Cmd Stogroup Creator  StgVcat  SMS VLct  DBct  TSct  ISct DSNct SpcUse SpaceUse
    SG1084   RSTEST   SS1A     Y    *     0     0     0     0    0.0%       0K
    SGAINLAB CSKUAN   SS1A     N    1     1     3     0     3    0.0%       0K
    SGAINLOB CSMINIA  SS1A     N    1     1     2     0     2    0.0%       0K
    SGALA01  PDPRID   SS1A     Y    *     0     0     0     0    0.0%       0K
    SGARY65  ARYTEST  SS1A     Y    *     1     1     0     1    0.0%       0K
    SGAU3909 CSKUAN   SS1A     N    1     1     4     0    20    0.0%       0K
    SGAU3911 CSKUAN   SS1A     N    1     1     6     0    10    0.0%       0K
    SGAU8202 CSKUAN   SS1A     N    1     1     1     0     5    0.0%       0K
    SGAUA203 CSMINIA  SS1A     N    1     1     1     0     0    0.0%       0K
    SGAUB701 CSKUAN   SS1A     N    1     0     0     0     0    0.0%       0K
    SGAUH306 CSKUAN   SS1A     N    1     1     6     0    10    0.0%       0K
    SGAUH309 CSKUAN   SS1A     N    1     1     1     0     5    0.0%       0K
    SGAUI402 CSKUAN   SS1A     N    1     1     6     0    10    0.0%       0K
    SGAUY203 CSKUAN   SS1A     N    1     1     1     0     5    0.0%       0K
    SGDOOD1  PDDUDE   SS1A     Y    *     1     1     0     1    0.0%       0K
    SGH30961 CSDAJ2   SS1A     Y    *     1     1     0     1  100.0%    48.0K
    SGH30965 CSKUAN   SS1A     N    1     1     1     0     5  100.0%   240.0K
    SGHAQA28 CSKUAN   SS1A     N    1     1     6     0    10   31.9%   460.0K
    SGHAQA32 CSKUAN   SS1A     N    1     1     4     0    20  100.0%    14.1M
    SGHAQA33 CSKUAN   SS1A     N    1     1     1     0     5  100.0%     5.9M
    SGLA0101 CSCRALA  SS1A     N    1     1     2     0     0    0.0%       0K
    SGPITT01 ARYTEST  SS1A     Y    *     0     0     0     0    0.0%       0K
    SGRE0101 ARYTEST  SS1A     Y    *     1     1     0     1    0.0%       0K
```

Figure 230. DSM Stogroup Summary panel

The DSM Stogroup Summary panel lists the storage groups that meet your selection criteria. On this panel, you can select a storage group to view all the databases using the storage group.

The following describes the fields on the DSM Stogroup Summary panel.

SSID
    The Db2 subsystem ID.

Stogroup
    This header field shows the storage group name or mask you entered on the previous window.

Stogroup
    The storage group name.

StgVcat
    The VCAT on which the storage group resides.

SMS
    This column contains Y if the device is SMS-managed or N if the device is not SMS-managed.

VLct

If the storage group is SMS-managed, this column contains *; otherwise, this column contains the number of volumes used for the storage group.

DBct

The number of databases using the storage group.

TSct

The number of table spaces in the storage group.

ISct

The number of index spaces in the storage group.

DSNct

The number of data sets in the storage group.

SpcUse

The percentage of space allocated that is currently used by data sets within the storage group. The value is derived by totaling all space used for all data sets within the storage group and dividing it by all space allocated for the data sets. Space used is derived from data set high used RBA. Space allocated is derived from data set high allocated RBA.

SpaceUse

The amount of space in use by the storage group, in kilobytes (K), megabytes (M), gigabytes (G), or terabytes (T).

SpaceAlc

The amount of space allocated by the storage group, in kilobytes (K), megabytes (M), gigabytes (G), or terabytes (T).

AvgExt

The average number of extents taken for a single data set in the storage group.

MaxExt

The maximum number of extents taken for a single data set in the storage group.

Creator

The name of the storage group creator.

The line command that can be used on the DSM Stogroup Summary panel is described in the following table:

Table 45. DSM Stogroup Summary panel line command

Line command	Description
S	View the databases using the storage group.

Selecting databases in a storage group

You can select a data base in a storage group and move all the data sets from the database, or drill down to view specific data sets.

The DSM Stogroup DB Summary panel, shown in the following figure, lists the databases in the selected storage group. You can select a database to move all data sets associated with the database, or you can drill down to select specific data sets or index space data sets.

```
AUTOXPRT V1R1    -------  DSM Stogroup DB Summary  ------  2023/10/21  20:01:04
Option  ===>                                             Scroll ===> CSR
Line Commands: S - View Spacenames  Q - Add to MoveQ  D - Del from MoveQ
-----------------------------------------------------------------------    >
SSID: SS1A            Stogroup: SGAINLAB >
--------------------------------------------------------------------------------
Cmd  DBname   Creator   TSct  ISct DSNct AvgExt MaxExt SpcUse SpaceUse SpaceAlc
     DBAINLAB CSKUAN      3     2    5            0   0.0%       0K       0K
**************************** Bottom of Data *********************************

PF4 View MoveQ   PF17 Prev STG   PF18 Next STG   PF19 First STG   PF20 Last STG
```

Figure 231. DSM Stogroup DB Summary panel

The following section describes the fields on the DSM Stogroup DB Summary panel.

SSID
The Db2 subsystem ID.

Stogroup
This header field shows the storage group name you selected on the previous panel.

DBname
The name of the database. If one or more data sets in the database are in the move queue, this field is highlighted. If all data sets in the database are in the move queue, an asterisk (*) appears next to the database name. If some of the data sets in the database are in the move queue, a plus sign (+) appears next to the database name.

Creator
The user ID of the database creator. If all data sets in the database are in the move queue, this field is highlighted.

TSct
The number of table spaces in the database.

ISct
The number of index spaces in the database.

DSNct
The total number of data sets allocated for the space.

AvgExt
The average number of extents taken per data set.

MaxExt
The highest number of extents taken to date by a data set in the database.

SpcUse
The percentage of space allocated that is currently used by data sets owned by the database. The value is derived by totaling all space used for all data sets within the database and dividing it by all space allocated for the database. Space used is derived from data set high used RBA. Space allocated is derived from data set high allocated RBA.

SpaceUse
The amount of space in use by the data sets in the database, in kilobytes (K), megabytes (M), gigabytes (G), or terabytes (T).

SpaceAlc
The amount of space allocated by all the data sets in the database, in kilobytes (K), megabytes (M), gigabytes (G), or terabytes (T).

UsrDef
The number of user-managed data sets in the database.

StgDef
The number of Db2-managed data sets in the database

DBid
The database identifier.

The line commands that can be used on DSM Stogroup DB Summary panel are described in the following table:

Table 46. DSM Stogroup DB Summary panel line commands

Line command	Description
S	View the spaces in the database.
Q	Add the database to the move queue; all data sets associated with the database will be selected. After you add a database to the move queue, enter QEDIT in the command line (or press PF4) to view the list of data sets to be moved. This command may be used on multiple lines on the panel.
D	Delete all of the database data sets from the data set move queue. This command may be used on multiple lines on the panel.

Selecting user-defined data sets using the VCAT

This topic explains how to select user-defined data sets using the VCAT name.

About this task

To select user-defined Db2 data sets from a VCAT name, type 5 on the Specify Dataset Selection Type input line and press Enter. The Specify User Defined Selection window appears.

The Specify User Defined Selection window, shown in the following figure, lets you narrow the list of VCAT names that appears on the next panel. Enter a VCAT group in the Using Vcat name field. Selection criteria (*) are allowed.

```
Specify User Defined Selection

Using Vcat name    D*
```

Figure 232. Specify User Defined Selection window

When you press Enter, the panel shown in the following figure is displayed:

```
AUTOXPRT V1R1   ------   DSM User Defined Summary  ------   2023/10/21  20:03:47
Option  ===>                                               Scroll ===> CSR
Line Commands: S - View Database                              PF4 View MoveQ
-----------------------------------------------------------------------
SSID: SS1A           Using Vcat: D*
-------------------------------------------------------------------------
Cmd  Vcat      DBct  TSct  ISct  DSNct  SpcUse  SpaceUse  SpaceAlc AvgExt MaxExt
     SS1A         2    21   164    185   64.1%    606.0M    944.7M    1.6      6
***************************** Bottom of Data **********************************
```

Figure 233. DSM User Defined Summary panel

The DSM User Defined Summary panel lists the VCATs that meet your selection criteria. On this panel, you can select a VCAT to view all the databases on the VCAT.

The following section describes the fields on the DSM User Defined Summary panel.

SSID
  The Db2 subsystem ID.

Using Vcat
  This header field shows the VCAT name you entered on the previous window.

Vcat

The volume catalog on which the user-defined data sets reside.

DBct

The number of databases with user-defined data sets using the VCAT.

TSct

The number of table spaces with user-defined data sets using the VCAT.

ISct

The number of index spaces with user-defined data sets using the VCAT.

DSNct

The total number of data sets allocated for the databases on the VCAT.

SpcUse

The percentage of space allocated that is currently used by user-defined data sets using the VCAT. The value is derived by totaling all space used for applicable data sets and dividing it by all space allocated for the data sets. Space used is derived from data set high used RBA. Space allocated is derived from data set high allocated RBA.

SpaceUse

The amount of space in use by all user-defined data sets on the VCAT, in kilobytes (K), megabytes (M), gigabytes (G), or terabytes (T).

SpaceAlc

The amount of space allocated by user-defined data sets on the VCAT, in kilobytes (K), megabytes (M), gigabytes (G), or terabytes (T).

AvgExt

The average number of extents taken for a single user-defined data set on the VCAT.

MaxExt

The maximum number of extents taken for a single user-defined data set on the VCAT.

The line command that can be used on the DSM User Defined Summary panel is described in the following table:

Table 47. DSM User Defined Summary panel line command

Line command	Description
S	View the databases with user-defined data sets on this VCAT.

Selecting databases with user-defined data sets

The DSM User Defined Databases panel lists the databases that contain user-defined data sets.

You can select a database to move all data sets associated with the database, or you can drill down to select specific data sets in the database.

```
AUTOXPRT V1R1    -----  DSM User Defined Databases  -----  2023/10/21  20:06:03
Option  ===>                                             Scroll ===> CSR
Line Commands: S - View Spacenames  Q - Add to MoveQ  D - Del from MoveQ
-----------------------------------------------------------------------    >
SSID: SS1A           Using Vcat: SS1A
---------------------------------------------------------------------------------
Cmd  DBname   Creator     TSct  ISct DSNct AvgExt MaxExt SpcUse SpaceUse SpaceAlc
     DSNDB06  SYSIBM        21   164   185    1.6      6  64.1%   606.0M   944.7M
**************************** Bottom of Data ********************************

 PF4 View MoveQ   PF17 Prev Vct   PF18 Next Vct   PF19 First Vct  PF20  Last Vct
```

Figure 234. DSM User Defined Databases panel

The following sections describes the fields on the DSM User Defined Databases panel.

SSID
The Db2 subsystem ID.

Using Vcat
This header field shows the VCAT name you selected on the previous panel.

DBname
The name of the database. If one or more data sets in the database are in the move queue, this field is highlighted. If all data sets in the database are in the move queue, an asterisk (*) appears next to the database name. If some of the data sets in the database are in the move queue, a plus sign (+) appears next to the database name.

Creator
The user ID of the database creator. If all data sets in the database are in the move queue, this field is highlighted.

TSct
The number of table spaces in the database with user-defined data sets.

ISct
The number of index spaces in the database with user-defined data sets.

DSNct
The total number of user-defined data sets allocated for the database.

AvgExt
The average number of extents taken per data set.

MaxExt
The highest number of extents taken to date by a data set in the database.

SpcUse
The percentage of space allocated that is currently used by data sets owned by the database. The value is derived by totaling all space used for all data sets within the database and dividing it by all space allocated for the database. Space used is derived from data set high used RBA. Space allocated is derived from data set high allocated RBA.

SpaceUse
The amount of space in use by the data sets in the database, in kilobytes (K), megabytes (M), gigabytes (G), or terabytes (T).

SpaceAlc
The amount of space allocated by the data sets in the database, in kilobytes (K), megabytes (M), gigabytes (G), or terabytes (T).

UsrDef
The number of user-managed data sets in the database.

StgDef
The number of Db2-managed data sets in the database

DBid
The database identifier.

The line commands that can be used on the DSM User Defined Databases panel are described in the following table:

Table 48. DSM User Defined Databases panel line commands

Line command	Description
S	View the database's user-defined data sets using the VCAT.
Q	Add all the database's user-defined data sets using the VCAT to the move queue. After you add a database to the move queue, enter QEDIT in the command line (or press PF4) to view the list of data sets to be moved. This command may be used on multiple lines on the panel.

Table 48. DSM User Defined Databases panel line commands (continued)

Line command	Description
D	Delete all of the database's user-defined data sets using the selected VCAT from the data set move queue. This command may be used on multiple lines on the panel.

Selecting user- and Db2-defined data sets using the VCAT

This topic explains how to select both user- and Db2-defined data sets using the VCAT name.

About this task

To select both user-defined and Db2-defined data sets from a VCAT name, type 6 on the Specify Dataset Selection Type input line and press Enter. The Specify Vcat Selection window, shown in the following figure, is displayed.

The Specify Vcat Selection window lets you narrow the list of VCAT names that appears on the next panel. Enter a VCAT name in the Vcat name field. Selection criteria (*) are allowed.

```
  Specify Vcat Selection

 Vcat name    DA*
```

Figure 235. Specify Vcat Selection window

When you press Enter, the panel shown in the following figure is displayed:

```
AUTOXPRT V1R1   ----------- DSM Vcat Summary ---------- 2023/10/21  20:07:50
Option  ===>                                                Scroll ===> CSR
-----------------------------------------------------------------------
Line Commands: S - View Database                              PF4 View MoveQ
-----------------------------------------------------------------------   >
SSID: SS1A              Vcat: DA*
-----------------------------------------------------------------------
Cmd  Vcat     DBct  TSct  ISct  DSNct  SpcUse  SpaceUse  SpaceAlc AvgExt MaxExt
     SS1A     1204  2765  4436   9187   89.4%     11.8G     13.2G   0.7    197
**************************** Bottom of Data ********************************
```

Figure 236. DSM Vcat Summary panel

The DSM Vcat Summary panel lists the VCAT names that meet your selection criteria. On this panel, you can select a VCAT to view the databases on the VCAT and their storage group and user-defined Db2 data sets.

The following section describes the fields on the DSM Vcat Summary panel.

SSID
    The Db2 subsystem ID.

Vcat
    This header field shows the VCAT name you entered on the previous window.

Vcat
    The volume catalog name.

DBct
    The number of databases using the VCAT.

TSct
    The number of table spaces using the VCAT.

ISct
    The number of index spaces using the VCAT.

DSNct
    The total number of data sets allocated for the databases on the VCAT.

SpcUse
    The percentage of space allocated that is currently used by data sets using the VCAT. The value is derived by totaling all space used for all applicable data sets and dividing it by all space allocated for the data sets. Space used is derived from data set high used RBA. Space allocated is derived from data set high allocated RBA.

SpaceUse
    The amount of space in use by all data sets using the VCAT, in kilobytes (K), megabytes (M), gigabytes (G), or terabytes (T).

SpaceAlc
    The amount of space allocated by data sets using the VCAT, in kilobytes (K), megabytes (M), gigabytes (G), or terabytes (T).

AvgExt
    The average number of extents taken per data set.

MaxExt
    The maximum number of extents taken for a single Db2 data set using the VCAT.

UsrDef
    The number of user-managed data sets using the VCAT.

StgDef
    The number of Db2-managed data sets using the VCAT

The line command that can be used on the DSM Vcat Summary panel are described in the following table:

Table 49. DSM Vcat Summary panel line command

Line command	Description
S	View the databases containing data sets using this VCAT.

Selecting databases using a specified VCAT

The DSM Vcat Database panel lists the databases that are using the specified VCAT. You can select a database to move all data sets associated with the database, or you can drill down to select specific data sets in the database.

The following figure shows the DSM Vcat Databases panel:

```
AUTOXPRT V1R1   ----------  DSM Vcat Databases  --------- 2023/10/21  20:13:29
Option  ===>                                              Scroll ===> CSR
-----------------------------------------------------------------------
Line Commands: S - View Spacenames  Q - Add to MoveQ  D - Del from MoveQ
----------------------------------------------------------------------   +>
SSID: SS1A                  Vcat: SS1A
-----------------------------------------------------------------------
Cmd  DBname   Creator   TSct  ISct DSNct AvgExt MaxExt SpcUse SpaceUse SpaceAlc
     ABP1043D TSBAC       1     3    22           0   0.0%      0K       0K
     ABP1092D CSJENN      1     1     2           0   0.0%      0K       0K
     ABP1092G PDRICK      1     1     2           0   0.0%      0K       0K
     ABP1092R PDRICK      1     1    16           0   0.0%      0K       0K
     ABP21DB  CSJENN     21    31    52           0   0.0%      0K       0K
     ABP21TDB CSJENN      1     0     1           0   0.0%      0K       0K
     ABPBC01  ABPSTC     21    31    52    0.0    1 100.0%   720.0K   720.0K
     ABPBC01T ABPSTC      1     0     1           0   0.0%      0K       0K
     ABPDK01T ABPSTC      1     0     1    1.0    1 100.0%    48.0K    48.0K
     ABPDK02T ABPSTC      1     0     1    1.0    1 100.0%    48.0K    48.0K
     ABPDK21T ABPSTC      1     0     1           0   0.0%      0K       0K
     ABPDK22  ABPSTC     21    31    52           0   0.0%      0K       0K
     ABPDK22T ABPSTC      1     0     1           0   0.0%      0K       0K
     ABPDKD1  ABPSTC     21    31    52    1.0    1 100.0%    36.6M    36.6M
     ABPDKDB  ABPSTC     22    31    53    1.0    1  94.4%    35.2M    37.3M
     ABPHASHD PDRICK      1     1     2    1.5    2  99.0%    73.8M    74.5M
     ABPPDZ01 PDZAKI      1     1     2           0   0.0%      0K       0K
     ABPRH22  ABPSTC     21    30    30           0   0.0%      0K       0K
     ABPRH22M ABPSTC      1     0     1           0   0.0%      0K       0K
     ABPRLDB1 CSJENN      5     0    15           0   0.0%      0K       0K
     ABPRSDB1 PDKILIA     5     5    30    1.0    1  93.6%    24.4M    26.0M
 PF4 View MoveQ   PF17 Prev Vct   PF18 Next Vct   PF19 First Vct  PF20  Last Vct
```

Figure 237. DSM Vcat Databases panel

The following section describes the fields on the DSM Vcat Databases panel.

SSID
The Db2 subsystem ID.

Vcat
This header field shows the VCAT name you selected on the previous panel.

DBname
The name of the database. If one or more data sets in the database are in the move queue, this field is highlighted. If all data sets in the database are in the move queue, an asterisk (*) appears next to the database name. If some of the data sets in the database are in the move queue, a plus sign (+) appears next to the database name.

Creator
The user ID of the database creator. If all data sets in the database are in the move queue, this field is highlighted.

TSct
The number of table spaces in the database.

ISct
The number of index spaces in the database.

DSNct
The total number of data sets allocated for both the table spaces and index spaces in the database.

AvgExt
The average number of extents taken per data set.

MaxExt
The highest number of extents taken to date by a data set in the database.

SpcUse
The percentage of space allocated that is currently used by data sets owned by the database. The value is derived by totaling all space used for all data sets within the database and dividing it by all space allocated for the database. Space used is derived from data set high used RBA. Space allocated is derived from data set high allocated RBA.

SpaceUse

The amount of space in use by all data sets in the database, in kilobytes (K), megabytes (M), gigabytes (G), or terabytes (T).

SpaceAlc

The amount of space allocated by the data sets in the database, in kilobytes (K), megabytes (M), gigabytes (G), or terabytes (T).

UsrDef

The number of user-managed data sets in the database.

StgDef

The number of Db2-managed data sets in the database.

DBid

The database identifier.

The line commands that can be used on the DSM Vcat Databases panel are described in the following table:

Table 50. DSM Vcat Databases panel line commands

Line command	Description
S	View the spaces in the database.
Q	Add the database's data sets using the VCAT to the move queue; all data sets associated with the database will be selected. After you add a database to the move queue, enter QEDIT in the command line (or press PF4) to view the list of data sets to be moved. This command may be used on multiple lines on the panel.
D	Delete all of the database's data sets using the selected VCAT from the data set move queue. This command may be used on multiple lines on the panel.

Selecting data sets by volume
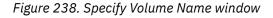
You can select a volume to move all the data sets from the volume, or drill down to view specific data sets on the volume.

About this task

To select data sets by volume name, type 7 on the Specify Dataset Selection Type input line and press Enter. The Specify Volume Name window appears.

The Specify Volume Name window, shown in the following figure, lets you narrow the list of volumes that appears on the next panel. Enter a volume name in the Volume field. Selection criteria (*) are allowed.

```
    Specify Volume Name

 Volume   D*
```

Figure 238. Specify Volume Name window

When you press Enter, the panel shown in the following figure is displayed:

```
AUTOXPRT V1R1    --------- DSM Volume Summary  --------- 2023/10/21  20:14:37
Option  ===>                                            Scroll ===> CSR
Line Commands: S - View Volume  Q - Add to MoveQ              PF4 View MoveQ
            D - Del from MoveQ
------------------------------------------------------------------------  +>
SSID: SS1A               Volume: D*
------------------------------------------------------------------------------
Cmd  Volume Addr Type Sta Mnt Alc SMS DSNct PctUse FreeCyls FreeExts  FreeMax
     DBF103 A12E 3390 ONL PRV N    Y   1087  42.8%      636       19      629
     DBF102 A12D 3390 ONL PRV N    Y   1061  10.1%     1000       38      988
     DBF106 A131 3390 ONL PRV N    Y   1050  10.1%     1000        1     1000
     DBF101 A12C 3390 ONL PRV N    Y   1030   8.8%     1015       23      981
     DBF105 A130 3390 ONL PRV N    Y   1021  11.0%      990        3      981
     DBF100 A12B 3390 ONL PRV N    Y    984   9.8%     1003       59      976
     DBP167 A51E 3390 ONL PRV Y    Y    361  90.8%     2996      803      280
     DBP16B A505 3390 ONL PRV Y    Y    357  87.7%     4010      511      290
     DBP169 7200 3390 ONL PRV Y    Y    336  88.4%     3479      690      259
     DBP136 761B 3390 ONL PRV Y    Y    298  90.9%      302      335       35
     DBP15B A4A9 3390 ONL PRV Y    Y    243  89.6%      345      203       46
     DBP142 7651 3390 ONL PRV Y    Y    232  91.7%      277      213       54
     DBP14F 765E 3390 ONL PRV Y    Y    230  89.1%      364      193      110
     DBP164 A217 3390 ONL PRV Y    Y    216  89.4%     1052      412       30
     DBP134 7619 3390 ONL PRV Y    Y    210  95.1%      162      208       18
     DBP120 A488 3390 ONL PRV Y    Y    203  92.9%      234      246       40
     DBP161 A27F 3390 ONL PRV Y    Y    202  89.1%      362      187       77
     DBP148 7657 3390 ONL PRV Y    Y    202  90.0%      334      295       46
     DBP153 A4AE 3390 ONL PRV Y    Y    198  89.6%      346      306       79
     DBP147 7656 3390 ONL PRV Y    Y    192  90.0%      331      340       23
     DBP14C 765B 3390 ONL PRV Y    Y    187  92.1%      263      268       17
     DBP12F 760E 3390 ONL PRV Y    Y    187  91.1%      295      244       31
```

Figure 239. DSM Volume Summary panel

The DSM Volume Summary panel lists the volumes that meet your selection criteria. On this panel, you can select a volume to move all data sets associated with the volume, or you can drill down to select specific data sets on the volume.

The following section describes the fields on DSM Volume Summary panel.

SSID
> The Db2 subsystem ID.

Volume
> This header field shows the volume name or mask you entered on the previous window.

Volume
> The volume name. If one or more data sets on the volume are in the move queue, this field is highlighted. If all data sets on the volume are in the move queue, an asterisk (*) appears next to the volume name. If some of the data sets on the volume are in the move queue, a plus sign (+) appears next to the volume name.

Addr
> The volume address. If all data sets on the volume are in the move queue, this field is highlighted.

Type
> The device type.

Sta
> The volume status. Possible values are:
>
> - ONL: Volume is online
> - OFF: Volume is offline
> - GOF: Volume is currently going offline

Mnt
> The volume mount status. Possible values are:
>
> - PRV: Volume is mounted as private.
> - PUB: Volume is mounted as public.

- STR: Volume is mounted as storage.

Alc
> The volume allocation status. Possible values are:

- Y: The volume is currently allocated.
- N: The volume is not currently allocated.

SMS
> Whether the device is SMS managed:

- Y: The device is SMS-managed.
- N: The device is not SMS-managed.

DSNct
> The total number of data sets on the volume owned by the Db2 subsystem being viewed.

PctUse
> The percentage of total space on the volume that is currently allocated and in use by all data sets allocated on the volume.

FreeCyls
> The total number of free cylinders available on the volume.

FreeExts
> The total number of free extents available on the volume.

MaxExt
> The largest free extent on the volume, in cylinders.

TotCyls
> The total number of cylinders on the volume.

The line commands that can be used on the DSM Volume Summary panel are described in the following table:

Table 51. DSM Volume Summary panel line commands

Line command	Description
S	View the data sets on the volume.
Q	Add all Db2 subsystem data sets on the volume to the move queue. After you add the volume data sets to the move queue, enter QEDIT in the command line (or press PF4) to view the list of data sets to be moved. This command may be used on multiple lines on the panel.
D	Delete all of the Db2 subsystem's data sets on the volume from the data set move queue. This command may be used on multiple lines on the panel.

Selecting data sets on a volume

You can select one or more the data sets that reside on a volume to be moved, or you can drill down to see extent information for the data sets.

The DSM Volume Datasets panel, shown in the following figure, lists all the data sets that reside on the selected volume.

```
AUTOXPRT V1R1   --------- DSM Volume Datasets -------- 2023/10/21  20:16:40
Option  ===>                                              Scroll ===> CSR
Line Commands: S - View Dataset  Q - Add to MoveQ  D - Del from MoveQ
------------------------------------------------------------------------   +>
SSID: SS1A               Volume: DBF103              DSN Count:  1087
-------------------------------------------------------------------------
Cmd  DBname   Spacenam  Dsn   Type Exts VLct  FVol    SpcUse  SpaceUse
     GARYDB   PART15Y7  0002  NCAT  1    1    DBF103  100.0%    720.0K
     GARYDB   PBGTABLE  0001  IS    1    1    DBF103  100.0%    720.0K
     GARYDB   PBGTS01   0001  PTTS  3    1    DBF103  100.0%    265.8M
     GARYDB   PBRTABLE  0003  PTIS  1    1    DBF103  100.0%    720.0K
     GARYDB   PBRTS01   0002  PTTS  1    1    DBF103  100.0%    720.0K
     GARYDB   TS4PARTS  0001  PTTS  1    1    DBF103  100.0%     48.0K
     GARYMT   FLSHTST1  0001  NCAT  1    1    DBF103  100.0%     48.0K
     GARYMT   FLSHTST5  0001  NCAT  1    1    DBF103  100.0%     48.0K
     GARYPART TS0500    0007  NCAT  1    1    DBF103  100.0%     48.0K
     GARYPART TS0500    0010  NCAT  1    1    DBF103  100.0%     48.0K
     GARYPART TS0500    0015  NCAT  1    1    DBF103  100.0%     48.0K
     GARYPART TS0500    0016  NCAT  1    1    DBF103  100.0%     48.0K
     GARYPART TS0500    0018  NCAT  1    1    DBF103  100.0%     48.0K
     GARYPART TS0500    0023  NCAT  1    1    DBF103  100.0%     48.0K
     GARYPART TS0500    0024  NCAT  1    1    DBF103  100.0%     48.0K
     GARYPART TS0500    0030  NCAT  1    1    DBF103  100.0%     48.0K
     GARYPART TS0500    0034  NCAT  1    1    DBF103  100.0%     48.0K
     GARYPART TS0500    0039  NCAT  1    1    DBF103  100.0%     48.0K
     GARYPART TS0500    0041  NCAT  1    1    DBF103  100.0%     48.0K
     GARYPART TS0500    0044  NCAT  1    1    DBF103  100.0%     48.0K
     GARYPART TS0500    0050  NCAT  1    1    DBF103  100.0%     48.0K
     GARYPART TS0500    0052  NCAT  1    1    DBF103  100.0%     48.0K
 PF4 View MoveQ   PF17 Prev Vol   PF18 Next Vol   PF19 First Vol   PF20 Last Vol
```

Figure 240. DSM Volume Datasets panel

The following section describes the fields on the DSM Volume Datasets panel.

SSID
> The Db2 subsystem ID.

Volume
> This header field shows the volume name you selected on the previous window.

DSN Count
> The total number of data sets on the volume owned by the Db2 subsystem being viewed.

DBname
> The name of the database. This field is highlighted and an asterisk (*) appears next to the database name if the data set is in the move queue.

Spacenam
> The name of the space.

Dsn
> The data set number.

Type
> The object type: TS for simple table space, PTTS for partitioned table space, IS for index space, or PTIS for partitioned index space.

Exts
> The number of extents that the data set has taken.

VLct
> The number of volumes on which the data set resides.

FVol
> The volume on which the data set resides; if a multi-volume data set, this field contains only the first volume.

SpcUse
> The percentage of space allocated that is currently used by the data set. The value is derived by dividing space used by space allocated. Space used is obtained from data set high used RBA. Space allocated is obtained from data set high allocated RBA.

SpaceUse
> The amount of space in use by the data set, in kilobytes (K), megabytes (M), gigabytes (G), or terabytes (T).

SpaceAlc
> The amount of space allocated by the data set, in kilobytes (K), megabytes (M), gigabytes (G), or terabytes (T).

Vcat
> The volume catalog on which the data set resides.

Stogroup
> The storage group, if the data set is Db2-managed.

QTY
> The unit of space allocation. TRK is tracks, CYL is cylinders.

Pqty
> The primary space allocation amount, in the specified units.

Sqty
> The secondary space allocation amount, in the specified units.

TrksAlc
> The number of tracks allocated for the data set.

HURBA_Dec
> The high used RBA for the data set, in decimal format.

HARBA_Dec
> The high allocated RBA for the data set, in decimal format.

HURBA_Hex
> The high used RBA for the data set, in hexadecimal format.

HARBA_Hex
> The high allocated RBA for the data set, in hexadecimal format.

The line commands that can be used on the DSM Volume Datasets panel are described in the following table:

Table 52. DSM Volume Datasets panel line commands

Line command	Description
S	View data set extent information.
Q	Add the data set to the move queue. After you add a data set to the move queue, enter QEDIT in the command line (or press PF4) to view the list of data sets to be moved. This command may be used on multiple lines on the panel.
D	Delete the data set from the data set move queue. This command may be used on multiple lines on the panel.

Using the move queue

The DSM Move Dataset Queue panel lists the data sets you have selected to move. This panel allows you to specify the new location and reallocations (if any) to be made during the move.

On this panel, you can:

- Specify where you want to move the data sets, either using VCAT or storage group
- Specify new primary or secondary quantities to reallocate space for the data sets
- Select to process the move in batch or online
- Select a data set to change individual values for the move

The data sets listed remain in the move queue until you process the move (batch or online), or until you return to the Specify Database Selection window.

You can add more data sets from any of the Dataset Manager panels and return to the move queue by entering the QEDIT command in the option line, or using the PF4 key.

The following figure shows the DSM Move Dataset Queue:

```
AUTOXPRT V1R1   --------  DSM Move Dataset Queue ------- 2023/10/21  20:20:14
Option  ===>                                           Scroll ===> CSR
Line Commands: S - Update entry  D - Del from queue
------------------------------------------------------------------------  >
Update Column          From          >  To          >    Dsn Count ==> 7
 Where Like DB          SP              DSN              Reset Queue ==>  (S)
Process Queue _  B - Batch  O - Online
Allow STG Vols to be specified N (Yes/No)
------------------------------------------------------------------------------
Cmd  DBname   Spacenam Dsn  Type Vcat      Stogroup Pqty_KB  Sqty_KB Vlct
     DBGPRI01 DEPT     0001 IS            SYSDEFLT      0        0    0

     DBGPRI01 DEPTX    0001 IS   _____ SYSDEFLT _____0 _____0    0

     DBGPRI01 EMPX     0001 IS   _____ SYSDEFLT _____0 _____0    0

     DBGPRI01 SSRNUMBE 0001 IS   _____ SYSDEFLT _____0 _____0    0

     DBGPRI01 TSDEPT   0001 TS   _____ SYSDEFLT _____0 _____0    0

     DBGPRI01 TSEMP    0001 TS   _____ SYSDEFLT _____0 _____0    0

     DBGPRI01 TSHIRE   0001 TS   _____ SYSDEFLT _____0 _____0    0
                                 _____ _____ _____ _____
****************************** Bottom of Data *********************************
```

Figure 241. DSM Move Dataset Queue

The following describes the fields on the DSM Move Dataset Queue panel.

Update Column From/To
Use this field to change the location and space allocation of the target data sets. Refer to "Using the Update Column and Where fields to change target allocations " on page 412 for information on using this field.

DSN Count
The total number of data sets in the move queue.

Where Like DB = _____ SP = _____ DSN =
Use these field in conjunction with the Update Column From/To fields to selectively apply changes to the data sets. Refer to "Using the Update Column and Where fields to change target allocations " on page 412 for information on using this field.

Reset Queue
Type S in this field and press Enter to remove all data sets from the move queue.

Process Queue
Indicate how you want to process the move: B for batch or O for online.

Allow STG Vols to be specified
Use this option to enable and disable the ability to specify target volume names when the target data set is Db2-managed.

- N: (Default) If N is specified, you cannot specify volume names for target data sets that are Db2-managed.
- Y: If Y is specified, you can specify specific target volumes within the target stogroup for any target data set that is Db2-managed. Confirmation displays will be issued if volume(s) specified do not exist in the target stogroup assigned to the Db2-managed target data set.

DBname
The name of the database.

Spacenam
The name of the space.

Dsn
The data set number.

Type
The object type: TS for simple table space, PTTS for partitioned table space, IS for index space, or PTIS for partitioned index space.

Vcat
The volume catalog on which the data set resides, if it is a user-managed data set.

Stogroup
The storage group in which the data set resides, if it is a Db2-managed data set.

Pqty_KB
The primary space allocation amount in kilobytes.

Sqty_KB
The secondary space allocation amount in kilobytes.

Vlct
The number of volumes on which the data set resides.

Fvol
The volume on which the data set resides; if a multi- volume data set, this field contains only the first volume.

SMSStorC
If the data set is SMS-managed, its SMS storage class.

SMSMgmtC
If the data set is SMS-managed, its SMS management class.

SMSDataC
If the data set is SMS-managed, its SMS data class.

Exts
The number of data set extents.

Qty
The unit of space allocation. TRK is tracks, CYL is cylinders.

Pqty
The primary space allocation amount, in the specified units.

Sqty
The secondary space allocation amount, in the specified units.

SpcUse
The percentage of the allocated data set that is in use.

SpUse_KB
The number of 1024-byte units of space in use by the data set.

SpAlc_KB
The number of 1024-byte units of space allocated for the data set.

SpUse_PG
The number of 4K pages in use by the data set.

SpAlc_PG
The number of 4K pages allocated for the data set.

HURBA_Dec
The high used RBA for the data set, in decimal format.

HARBA_Dec
The high allocated RBA for the data set, in decimal format.

HURBA_Hex
The high used RBA for the data set, in hexadecimal format.

HARBA_Hex
    The high allocated RBA for the data set, in hexadecimal format.

Using the Update Column and Where fields to change target allocations

The Update Column and Where fields allow you to change the location and space allocation of the target data sets.

About this task

To change these values, use the following steps:

Procedure

1. Type the column name you want to change in the Update Column field. Refer to for valid column abbreviations that can be used. For VCAT-defined data sets, you can change the Vcat, Fcol, Pqty_KB, Sqty_KB, and the SMSStorC, SMSMgmtC, and SMSDataC columns. For storage group-defined data sets, you can change the Stogroup, Pqty_KB, and Sqty_KB columns; the Fvol column can be changed for Db2-managed data sets if the Allow STG Vols to be specified field is set to Y.
2. Type the old column value in the From field. To change the column value regardless of the original value, type '*' in this field.
3. Type the new column value in the To field. When altering primary and secondary quantities, you can enter a percentage to allow DSM to determine the new quantity.
4. If you want to apply these changes only to specific data sets, use the Where Like fields to specify the data sets.

   Masking using an asterisk or percent sign is allowed.

   a) Type the database name in the Where Like DB = field. You must supply the database name if SP or DSN is specified.

   b) Type the space name in the Like SP field. You must supply the space name if the DSN is specified.

   c) Type the DSN number in the DSN field to apply changes to specific data sets only.

       If you do not specify the data set, the changes will be applied to all data sets in the move queue.
5. Press Enter. The new target values appear in the *CHANGED data line beneath the selected data set(s) detail line.

Results

Column abbreviations supported on the Move Dataset Queue panel

When using the Update Column fields, use the supported column abbreviations described in the following table.

Table 53. Valid Update Column field abbreviations

Column	Abbreviation
Vcat	VC or 1
Stogroup	ST or 2
Pqty_KB	PQ or 3
Sqty_KB	SQ or 4
Fvol	FV or 5
SMSStorC	SC or 6

Table 53. Valid Update Column field abbreviations (continued)

Column	Abbreviation
SMSMgmtC	MC or 7
SMSDataC	DC or 8

Using percentages for primary and secondary space allocations

When allocating space, you can specify a new quantity as a percentage of space initially allocated, currently allocated, or currently used.

About this task

Enter the percentages as follows:

Table 54. Quantity specifications for space allocation

Enter	Result
n%-nnnn%	Change primary or secondary quantity to *n*% of current primary or secondary quantity allocation values.
n%-nnnn%A	Change primary or secondary quantity to n% of current data set allocated size value.
n%-nnnn%U	Change primary or secondary quantity to n% of current data set used size value.

Note: If the calculated quantity results in a value less than 12 or greater than 4,194,304, the value is ignored.

For example, if you want to change the primary space allocations for the target data set to 110% of the space the data set currently uses, do the following:

Procedure

1. Enter the following in the Update Column fields: `Update Column PQ_____ From *_____ To 110%U___`
2. Press Enter.
3. The primary quantities are changed as follows:

   Note the *CHANGED indicator and the new primary quantity:

   ```
   Cmd   DBname   Spacenam Dsn Type Vcat      Stogroup  Pqty_KB  Sqty_KB Vlct Fvol
    _    ADHDBEMP ADHEMPTS 001 TS                   48      144       48   1 ABC001
         *CHANGED                      _____ _____ ____1584 _____
    _    ADHDBEMP ADHEMPIX 001 IS             SYSDEFLT       48       96   1 ABC001
         *CHANGED                      _____ _____ _____264 _____
   ```

Line commands

The line commands that can be used on this panel are described in the following table.

Table 55. Move Dataset Queue panel line commands

Line command	Description
S	Select a data set to update target information for the data set.
D	Delete a data set from the queue.

Updating target information for a data set

The Update Move Dataset Entry panel allows you to change characteristics of the selected data set.

Refer to the following figure

```
AUTOXPRT V1R1 -------- Update Move Dataset Entry -------- 2023/10/21  20:22:22
Option  ===>
Source DSN: SS1A.DSNDBC.DBGPRI01.DEPT.I0001.A001               1    of 7
                    Source      Target      Source Dataset Information
Using Vcat  . . . . :                       Alloc Type
Stogroup  . . . . . : SYSDEFLT >          > Alloc PQTY                     0
                                            Alloc SQTY                     0
Primary QTY in KB . : 0                     Space Used Pct          .0%
Secondary QTY in KB : 0                     Space Used KB                  0
                                            Space Alloc KB                 0
Volume Count  . . . : 0                     Space Used Pages               0
First Volume  . . . :                       Space Alloc Pages              0
Update Mult-Vol List . . . . . .            Extents                        0
                                            High Used RBA dec 0
SMS Storage Class . :                       High Alc RBA dec  0
SMS Management Class                        High Used RBA hex   0
SMS Data class  . . :                       High Alc RBA hex    0

PF7 Prev    PF8 Next   PF10 First   PF11 Last   PF6 Copy Prev Target Values
```

Figure 242. Update Move Dataset Entry panel

The following describes the fields on the Update Move Dataset Entry panel.

Source DSN
The fully qualified name of the selected source data set.

n of nnn
The relative data set number within the Move Dataset Queue and the total number of data sets within the Move Dataset Queue.

Vcat
If you want a Db2-managed data set to be user-managed, or you want to move a user-managed data set to a new volume, enter the volume catalog name in the Target field.

Stogroup
If you want a user-managed data set to be Db2-managed, or you want to move a Db2-managed data set to a new storage group, enter the new storage group in the Stogroup Target field.

Primary QTY in KB
To change the primary allocation quantity, enter the new quantity (in KB) in the Primary QTY in KB Target field.

Secondary QTY in KB
To change the secondary allocation quantity, enter the new quantity (in KB) in the Secondary QTY in KB Target field.

Volume Count
The number of volumes on which the data set currently resides.

First Volume
To change the volume where the data set is located (or in the case of a multi-volume data set, the first volume only) enter the new volume in the Volume Target field.

Update Mult-Vol List
For multi-volume data sets, you can update the list of volumes available for the data set. Type Y in this field to view or update the volume list.

SMS Storage Class
If the data set is SMS managed, you can change its class or classes by typing in the new class in the Target field.

SMS Management Class

If the data set is SMS managed, you can change its class or classes by typing in the new class in the Target field.

SMS Data class

If the data set is SMS managed, you can change its class or classes by typing in the new class in the Target field.

Source Dataset Information

This area of the panel displays information about the data set allocations, space usage, and extents. This information is read only.

Updating a data set volume list

The Update Dataset Volume List panel allows you to specify volumes on which a multi-volume data set may reside when the data set is moved or reallocated.

This panel, shown in the following figure, appears when you enter Y in the Update Mult-Vol List field on the Update Move Dataset Entry panel, and the target allocation type is user-defined (Vcat).

```
AUTOXPRT V1R1 -------- Update Dataset Volume List ------- 2023/10/21  20:24:16
Option  ===>

Source DSN: SS1A.DSNDBC.DBGPRI01.DEPT.I0001.A001

-------------------------------------------------------------------------------

Modify Volume List and press ENTER , when complete press PF3

TCK002  _____  _____  _____  _____  _____  _____  _____  _____  _____

_____  _____  _____  _____  _____  _____  _____  _____  _____  _____

_____  _____  _____  _____  _____  _____  _____  _____  _____  _____

_____  _____  _____  _____  _____  _____  _____  _____  _____  _____

_____  _____  _____  _____  _____  _____  _____  _____  _____  _____

_____  _____  _____  _____  _____  _____  _____  _____  _____
```

Figure 243. Update Dataset Volume List panel

The source DSN is listed at the top of the panel. Add volumes by typing the volume name in the provided input areas. Press Enter, then PF3 to return to the Update Move Dataset Entry panel.

Submitting the job to move the data sets

When you are ready to submit the job to move the data sets, specify the value in the Process move queue field to generate the job in batch or online.

Submitting the move in batch

This topic describes the steps to submit a data set move job in batch.

About this task

When you specify to submit the job in batch, the window shown in the following figure is displayed:

```
                    Move Dataset in Batch Confirmation

You have requested to execute BATCH moves for all modified datasets
contained in the move dataset queue.

When the JCL generated is executed all datasets moved will be STOPPED
using the Db2 STOP command. When a dataset move has completed it will
be started using the Db2 START command.

Supply a valid JCL jobcard, then select the desired processing option
and press ENTER to continue.

  1 Generate JCL for Batch execution and enter ISPF EDIT
  2 Terminate the Move request and return

//JOBCARD JOB TUSER,CLASS=A,NOTIFY=&SYSUID


Optional dataset prefix USER1
```

Figure 244. Move Dataset in Batch Confirmation window

To generate the JCL for batch execution, specify a valid job card in this window. Optionally, enter a data set prefix for Db2 Automation Expert to use when allocating the data set to contain the move JCL; the default high level qualifier is your TSO user ID. Type 1 in the processing option field. When you press Enter, the move job appears in an edit session, from which you can submit the job. When finished, press PF3 to continue.

To cancel JCL generation, type 2 in the processing option field and press Enter. The JCL is not generated, and the DSM Move Dataset Queue panel reappears.

Submitting the move online

This topic explains how to submit a data set move job online.

When you specify to submit the job online, the window shown in the following figure is displayed:

```
                    Move Datasets Online Confirmation

You have requested to execute ONLINE moves for all modified datasets
contained in the move dataset queue. The moves will be executed
online, from within your TSO/ISPF session.

During move execution all datasets moved will be STOPPED using
the Db2 STOP command. Each dataset will be stopped for the amount of
time it takes to move the individual dataset. The dataset will be
started using the Db2 START command once the move has completed.

Select desired processing option and press ENTER to continue.

  1 Execute the ONLINE Dataset Move
  2 Terminate the Move request and return

Optional dataset prefix USER1
```

Figure 245. Move Dataset Online Confirmation window

To cancel the online move, type 2 in the processing option field and press Enter. The DSM Move Dataset Queue panel is displayed.

To execute the online data set move, type 1 in the processing option field. Optionally, enter a data set prefix for Db2 Automation Expert to use when allocating a data set used for move messages; the default high level qualifier is your TSO user ID. When you press Enter, the move is processed online.

After the move is processed, a report appears in a browse window showing the results of the move. The following figure shows a sample report.

```
 BROWSE    TUSERA.DAJMOVE.ONLINE.DT021204.TM114925    Line 00000000 Col 001 080
 Command ===>                                          Scroll ===> PAGE
******************************** Top of Data ********************************

HADM0020 - 13:33:48.099 PROCESSING OF INPUT PARAMETERS HAS STARTED
HADM0010 - INPUT PARAMETERS LOCATED ARE AS FOLLOWS:
   DB2SSID(SS01)
   PLANNAME(DAJT2V21)
   MAXMOVERS(02)
   MOVEDATASET (
   SOURCEDSN SS01.DSNDBC.ADHDBASE.ADHMAPIX.I0001.A001
   INDEXNAME TUSER.ADHMAPIX
   TARGETSTOGROUP SYSDEFLT
   TARGETQTY KILOBYTES
   TARGETPQTY 00000048
   TARGETSQTY 00000048
   )
HADM0022 - 13:33:48.147 PROCESSING OF INPUT PARAMETERS ENDED SUCCESSFULLY

****************************************************************************
****** EXECUTION SUMMARY LOG FOR ALL DATASETS BEING MOVED, DATASET MOVE COUNT=00
****************************************************************************
HADM0034 - 13:33:48.258 MOVE PROCESSING STARTED
HADM0030 - 13:33:48.279 ID=0001 ASSIGNED TO DSN=SS01.DSNDBC.ADHDBASE.ADHMAPIX.I0
HADM0031 - 13:33:48.279 ID=0001 MOVE STARTED DSN=SS01.DSNDBC.ADHDBASE.ADHMAPIX.I
HADM0032 - 13:33:50.201 ID=0001 MOVE ENDED SUCCESSFULLY DSN=SS01.DSNDBC.ADHDBASE
HADM0033 - 13:33:50.201 EXECUTION COMLETE ALL DSNS SUCCESSFULLY PROCESSED

****************************************************************************
****** EXECUTION DETAIL LOG FOR ID=0001 DSN=SS01.DSNDBC.ADHDBASE.ADHMAPIX.I0001.
****************************************************************************
HADM0050 - 13:33:48.279 ID=0001 MOVE IN PROGRESS DSN=SS01.DSNDBC.ADHDBASE.ADHMAP
HADM0064 - 13:33:48.548 ID=0001 TARGETDSN=SS01.DSNDBC.ADHDBASE.ADHMAPIX.I0001.A0
HADM0060 - 13:33:48.772 ID=0001 STOP COMMAND SUCCESSFUL DB=ADHDBASE SP=ADHMAPIX
HADM0065 - 13:33:48.990 ID=0001 TARGETDSN DEFINE SUCCESSFUL TDSN=SS01.DSNDBC.ADH
HADM0062 - 13:33:49.295 ID=0001 SOURCEDSN RENAME SUCCESSFUL SDSN=SS01.DSNDBC.ADH
HADM0080 - 13:33:49.410 ID=0001 SOURCEDSN COPY STARTED
HADM0081 - 13:33:49.424 ID=0001 SOURCEDSN COPY SUCCESSFUL
HADM0063 - 13:33:49.738 ID=0001 TARGETDSN RENAME SUCCESSFUL TDSN=SS01.DSNDBC.ADH
HADM0067 - 13:33:49.879 ID=0001 SOURCEDSN DELETE SUCCESSSFUL SDSN=SS01.DSNDBC.AD
HADM0075 - 13:33:50.035 ID=0001 ALTER STOGROUP SUCCESSFUL STOGROUP=SYSDEFLT
HADM0061 - 13:33:50.049 ID=0001 START COMMAND SUCCESSFUL DB=ADHDBASE SP=ADHMAPIX
HADM0053 - 13:33:50.132 ID=0001 EXECUTION ELAPSED TIME=00:00:01.853 CPU TIME=00:
HADM0051 - 13:33:50.132 ID=0001 RCPUTIME=00:00:00.56173 WCPUTIME=00:00:00.00035
HADM0054 - 13:33:50.132 ID=0001 RECORDS READ=000000012 RECORDS WRITTEN=000000012
HADM0055 - 13:33:50.132 ID=0001 MOVE SUCCESSFULLY COMPLETED
****************************** Bottom of Data ********************************
```

Figure 246. Move results report

Press PF3 to return to Dataset Manager.

Restoring Db2 data sets in case of ABEND

If an ABEND occurs during the data set move, data sets may be left with invalid names. This topic explains how to rename the data sets.

If a job using Dataset Manager to resize Db2 objects is canceled or ABENDs, the table spaces, partitions, or index spaces may be left with invalid names for their underlying VSAM files. While resizing a Db2 VSAM data set, the actual data set names are:

- `hlq.DSNDBx.databasename.spacename.INEWx.A00y`

- `hlq.DSNDBx.databasename.spacename.IOLDx.A00y`

"NEWx" is the expanded newly allocated space, "OLDx" is the current production space, and the copy is taking place from OLDx to NEWx.

If the job is canceled or ABENDs, the data set names will remain as shown. These data sets names are not accessible by Db2. To restore accessibility to the spaces, use IDCAMS to rename:

```
hlq.DSNDBx.databasename.spacename.IOLDx.A00y
```

to

```
hlq.DSNDBx.databasename.spacename.I000x.A00y
```

After renaming the files and starting the spaces, they will be accessible to Db2.

Using Dataset Manager in batch

This section describes how to build the JCL and control cards required for batch execution without using the Dataset Manager online interface.

The number of data sets moved in a single batch job should be 450 or less. If you need to relocate more than 450 data sets, use multiple jobs.

Creating the JCL

The JCL requirements for batch data set moves is explained in this topic.

The JCL is shown in the following figure:

```
//JOBNAME JOB ,'MYNAME',CLASS=A,MSGCLASS=X
//*
//EXECMOVE EXEC PGM=DAJ$DMMN,REGION=0M,DYNAMNBR=1000
//STEPLIB  DD   DISP=SHR,DSN=DAJ.INSTALL.LOADLIB
//DB2PARMS DD   DISP=SHR,DSN=DAJ.ISPF.CONTROL.FILE
//SYSABEND DD   SYSOUT=*
//*
//HADMPARM DD   *
 < INPUT CONTROL CARDS >
/*
//
```

Figure 247. Sample JCL for Dataset Manager batch execution

Job card
You must enter a valid job card for your site.

EXEC statement
On the EXECMOVE EXEC statement, the REGION=0M and DYNAMNBR=1000 parameters must be specified.

DD statements

The following DD statements are required:

- The STEPLIB data set name must be set to the Db2 Automation Expert installation load library name.
- The DB2PARMS data set name must be set to the Db2 Automation Expert ISPF control file used for the Db2 subsystem that owns the data sets being moved.
- The SYSABEND DD should be set to an appropriate SYSOUT class for your site.
- The HADMPARM DD contains the input parameters (control cards) for the move utility. The format of the parameters is discussed in the next section.

Specifying the move utility parameters

The input control cards specify the execution parameters to be used by the move utility.

The two types of parameters to be placed in the control cards are as follows.

- *Global parameters* allow you to specify the Db2 subsystem owning the data sets, the Db2 Automation Expert plan name to be used for execution SQL processing, and other options. Global parameters are specified once and should be specified first in your input control card data set.

- *Data set-related parameters* allow you to specify the data sets to be relocated and set the new data set characteristics. Data set-related parameters can be specified repetitively for each data set you would like to move during the execution of the batch job.

Global parameters

The global parameters for the move utility must appear first in the control cards and are listed in the table.

The example in the following figure shows the global parameters:

```
//HADMPARM DD    *
  DB2SSID(DSN1)
  PLANNAME(DAJPLAN2)
```

Figure 248. Sample global parameters for batch move

The following table describes the global parameters.

Table 56. Global parameter descriptions

Parameter	Description	Required parameter?	Default
DB2SSID (*cccc*)	Specify the Db2 subsystem identifier owning the data sets to be moved.	Yes	None
PLANNAME (*cccccccc*)	Specify the plan name of the second Db2 Automation Expert plan created during the installation of Db2 Automation Expert on the Db2 subsystem owning the data sets being moved.	Yes	None
CHECKPARMS (*YES/NO*)	This parameter allows you to execute the move utility to check input parameter syntax only. After completing syntax checking, execution will terminate. Specify YES or NO.	No	NO
MAXMOVERS (*nn*)	This parameter allows you to specify the level of execution concurrency to be used when moving more than one data set in a single batch job execution. The default value used for batch execution is 5. Any value between 1 and 20 may be specified. The move utility will execute multiple move requests concurrently when executed.	No	5
STOPWAITTIME (*nnn*)	This parameter controls how long the move utility will attempt to stop an individual data set using the STOP DATABASE command before terminating the attempted move of the data set. Parameter is optional. Value is specified in seconds. Valid values are 030 to 999. If parameter is omitted a default value of 30 seconds will be used.	No	30

Move data set parameters

To specify the move of a selected data set, use the MOVEDATASET keyword for each data set to be moved, followed by additional keywords to describe the data set and its characteristics to the move utility.

The following table describes the data set parameters.

Table 57. Data set parameter descriptions

Parameter	Description	Required Parameter?
MOVEDATASET	This parameter signals the start of a move data set request for a single data set. It must be followed by a '('. Following this main keyword, define other keywords for the move request. After all keywords for the data set, specify ')' to terminate the MOVEDATASET keyword.	Yes
SOURCEDSN *dataset_name*	Specify the data set name to be moved. You must specify the CLUSTER (DSNDBC) name.	Yes
PARTITIONED *YES|NO*	Specify whether the data set being moved is a data set of a partitioned table space or partitioned indexspace. If the data set is part of a partitioned space, specify YES. If the parameter is omitted, a default value of NO will be used.	No
INDEXNAME *authid.indexname*	If the data set being moved is a data set owned by a index, you must specify the authid and index name. The value provided must be specified using the format *authid.indexname*. The *authid* value provided is the authid of the index. The *indexname* is the 1 to 18 character index name used when the indexspace was created. These values are located in SYSIBM.SYSINDEXES.	No
TARGETVCAT *vcat name*	Specify the VCAT name to be used for the data set. This keyword is optional, but either this keyword or the TARGETSTOGROUP keyword must be supplied. If the target data set being created (moved) as a result of the move request is user-defined (not using a storage group) you must use this keyword and specify the VCAT name to be used for the data set after the move is complete. You must specify this keyword and the VCAT name even if moving a VCAT data set and not changing the VCAT. The TARGETVCAT and TARGETSTOGROUP keywords are mutually exclusive.	If target is user-defined

Table 57. Data set parameter descriptions (continued)

Parameter	Description	Required Parameter?
TARGETSTOGROUP *storage group name*	Specify the storage group name to be used for the data set. This keyword is optional, but either this keyword or the TARGETVCAT keyword must be supplied. If the target data set being created as a result of the move request is storage group-defined, you must use this keyword to specify the storage group to be used for the data set. You must specify this keyword even if moving a storage group defined data set to the same storage group. The TARGETSTOGROUP and TARGETVCAT keywords are mutually exclusive.	If target is storage-group defined
TARGETQTY KILOBYTES	Specify the space quantity type. KILOBYTES is currently the only valid quantity type.	Yes
TARGETPQTY *number of kilobytes*	Specify the number of kilobytes to be used as the primary space quantity when the data set is moved. A kilobyte is 1024 bytes.	Yes
TARGETSQTY *number of kilobytes*	Specify the number of kilobytes to be used as the secondary space quantity when the data set is moved. A kilobyte is 1024 bytes. This parameter can be set to zero.	Yes
TARGETVOLUMES '*volname1 volname2 volname3 volname4 ...*'	Specify the volumes to be used for the data set when the data set is moved. This parameter may only be used if the TARGETVCAT parameter is specified. It is only applicable when the target data set to be created will be user-defined. If any TARGETSMS parameters are used for the target data set, omit this parameter. The number of volumes which can be specified is 1 to 59. The volume names supplied must be specified within single quotes. If you need to specify a large number of volumes, use multiple TARGETVOLUMES parameter lines, for example: ```TARGETVOLUMES 'VOL001 VOL002 VOL003 VOL004 VOL005' TARGETVOLUMES 'VOL006 VOL007 VOL008'```	If target is user-defined

Table 57. Data set parameter descriptions (continued)

Parameter	Description	Required Parameter?
TARGETSTORAGECLASS *SMS storage class name*	Specify the SMS storage class to be used for the data set when the data set is moved. This parameter can only be supplied if the data set being created as a result of the move is user -defined. This parameter cannot be used if TARGETVOLUMES is used. This parameter is optional. Use this parameter when moving to a user-defined VCAT and you want the new data set to be SMS-managed and allocated using the SMS storage class specified.	If target is user-defined and SMS-managed
TARGETMANAGEMENTCLASS *SMS management class*	Specify the SMS management class to be used for the data set when the data set is moved. This parameter can only be supplied if the data set being created as a result of the move is user defined. This parameter cannot be used if TARGETVOLUMES is used. This parameter is optional. Use this parameter when moving to a user-defined VCAT and you want the new data set to be SMS-managed and allocated using the SMS management class specified.	If target is user-defined and SMS-managed
TARGETDATACLASS *SMS data class*	Specify the SMS data class to be used for the data set when the data set is moved. This parameter can only be supplied if the data set being created as a result of the move is user defined. This parameter cannot be used if TARGETVOLUMES is used. This parameter is optional. Use this parameter when moving to a user-defined VCAT and you want the new data set to be SMS managed and allocated using the SMS data class specified.	If target is user-defined and SMS-managed

Multiple MOVEDATASET requests can be specified in the control cards. An example of the format is shown in the following figure:

```
MOVEDATASET (
SOURCEDSN DSN1.DSNDBC.DATABASE.TS000001.I0001.A001
   TARGETVCAT DSN1
   TARGETVOLUMES 'VOL010 '
   TARGETQTY KILOBYTES
   TARGETPQTY 00002160
   TARGETSQTY 00000240
)
MOVEDATASET (
SOURCEDSN DSN1.DSNDBC.DATABASE.TS000002.I0001.A008
   PARTITIONED YES
   TARGETVCAT NEWVCAT
   TARGETSTORCLASS DB2CLS1
   TARGETQTY KILOBYTES
   TARGETPQTY 00030000
   TARGETSQTY 00000300
   )
MOVEDATASET (
SOURCEDSN DSN1.DSNDBC.DATABASE.INDX0002.I0001.A001
   INDEXNAME MYID.INDX0002INDEX
   TARGETSTOGROUP STGRP1
   TARGETQTY KILOBYTES
   TARGETPQTY 00000900
   TARGETSQTY 00000900
)
MOVEDATASET (
SOURCEDSN DSN1.DSNDBC.DATABASE.INDX0099.I0001.A029
   PARTITIONED YES
   INDEXNAME MYID.INDX0099INDEX
   TARGETSTOGROUP STGRPX
   TARGETQTY KILOBYTES
   TARGETPQTY 00040000
   TARGETSQTY 00015000
)
```

Figure 249. Sample JCL for multiple MOVEDATASET requests

Return codes

When executing in batch, the move utility generates a return code indicating the results of execution.

Whether executing in online or batch, output message reporting always occurs to the SYSOUT class specified in your job card.

Each move request contains summary and detail reporting indicating the success or failure of the individual move request. Review the output from batch and online execution to ensure execution was what you expected. All messages produced within the output are documented in "Messages" on page 459.

When executing in batch, the return codes used for move utility step completion are defined in the following table:

Table 58. Batch execution move utility return codes

Return code	Definition
00	All data set moves were successfully completed.
04	Execution failed. Errors in the input parameter controls cards were encountered.
08	Execution failed. At least one data set incurred an error during execution.
12	Execution failed. At least one data set incurred an error during execution.

Example

This JCL example moves four data sets, two table space data sets and two index data sets.

The example in the following figure illustrates moving table space and index space data sets. It shows how to move to a storage group and user-defined VCAT names.

```
//MYJOB      JOB ,'MYNAME',CLASS=A,MSGCLASS=X
//*
//EXECMOVE EXEC PGM=DAJ$DMMN,REGION=0M,DYNAMNBR=1000
//STEPLIB      DD   DISP=SHR,DSN=DAJ.INSTALL.LOADLIB
//DB2PARMS  DD   DISP=SHR,DSN=DAJ.ISPF.CONTROL.FILE
//SYSABEND  DD   SYSOUT=*
//*
//HADMPARM DD   *
 DB2SSID(DSN1)
 PLANNAME(DAJPLAN2)
 MOVEDATASET (
    SOURCEDSN DSN1.DSNDBC.DATABASE.TS000001.I0001.A001
    TARGETVCAT DSN1
    TARGETVOLUMES 'VOL010 '
    TARGETQTY KILOBYTES
    TARGETPQTY 00002160
    TARGETSQTY 00000240
 )
 MOVEDATASET (
    SOURCEDSN DSN1.DSNDBC.DATABASE.TS000002.I0001.A008
    PARTITIONED YES
    TARGETVCAT NEWVCAT
    TARGETSTORCLASS DB2CLS1
    TARGETQTY KILOBYTES
    TARGETPQTY 00030000
    TARGETSQTY 00000300
 )
 MOVEDATASET (
    SOURCEDSN DSN1.DSNDBC.DATABASE.INDX0002.I0001.A001
    INDEXNAME MYID.INDX0002INDEX
    TARGETSTOGROUP STGRP1
    TARGETQTY KILOBYTES
    TARGETPQTY 00000900
    TARGETSQTY 00000900
 )
 MOVEDATASET (
    SOURCEDSN DSN1.DSNDBC.DATABASE.INDX0099.I0001.A029
    PARTITIONED YES
    INDEXNAME MYID.INDX0099INDEX
    TARGETSTOGROUP STGRPX
    TARGETQTY KILOBYTES
    TARGETPQTY 00040000
    TARGETSQTY 00015000
 /*
//
```

The data sets being moved exist on Db2 subsystem DSN1.

The planname used for the second planname during Db2 Automation Expert installation was DAJPLAN2.

All data set moves will be executed concurrently. MAXMOVERS default of 5 will be used.

The first MOVEDATASET source data set is a table space data set. It belongs to a simple table space. It is being moved to a user-defined VCAT and placed on a single volume that is non-SMS managed. The VCAT name is not being changed.

The second MOVEDATASET source data set is a partitioned table space data set. It is being moved to a user-defined VCAT and placed in the SMS storage class named DB2CLS1. Its VCAT name is being changed to NEWVCAT. The eighth partition of the table space is being moved.

The third MOVEDATASET source data set is an index data set that belongs to a simple index space. It is being moved to a Db2 storage group named STGRP1, which is not SMS managed.

The fourth MOVEDATASET source data set is an index data set that belongs to a partitioned index space. It is being moved to a Db2 storage group named STGRPX, an SMS-managed storage group. The 29th partition of the index is being moved.

Chapter 24. Generating Db2 High Performance Unload jobs

IBM Db2 High Performance Unload (Db2 HPU) is a high-speed Db2 utility for unloading Db2 tables from a table space or from an image copy. Db2 Automation Expertcan generate Db2 HPU unload jobs through the Stand Alone Utilities option on the Db2 Automation Expert main menu. Tables can be unloaded to one or more data sets. You can unload all data, or filter the data to be unloaded by row or by column.

The following topics provide instructions for using Db2 Automation Expert to generate Db2 HPU unload utility jobs. For information about Db2 HPU job parameters, refer to the help panels or search the Db2 High Performance Unload documentation on IBM Knowledge Center.

Software requirements
This feature requires the following software and hardware:

- IBM Db2 High Performance Unload for z/OS V5.1 or V4.3.
- The Tools Customizer customization steps for Db2 HPU support must be completed.

Unloading all rows and columns from a table space

Use these steps to build a Db2 HPU job that unloads all rows and columns from a table space.

About this task
These steps describe how to configure and build a Db2 HPU job to unload all rows and columns from a table space. The data from all tables in the table space is unloaded to the Db2 HPU-required output data set, UNLDDN DD.

Procedure

1. On the Db2 Automation Expert Main Menu, specify the Db2 subsystem in the **Db2 Subsystem ID** field.
2. Enter 11 in the **Option** field and press Enter.
3. On the **Stand Alone Utilities** panel, enter 2 in the **Option** field and press Enter.
4. On the **HPU Tablespace Selection** panel, specify table space selection criteria in the header fields and press Enter.

   A list of table spaces that meet your selection criteria is displayed.
5. Enter S next to the table space that you want to unload and press Enter.

   The **HPU Options** panel is displayed, as shown in the following figure:

```
AUTOXPRT V1R1 -------------- HPU Options -------------- 2023/10/21  20:27:55
Option  ===>
-------------------------------------------------------------------------------
 Database   Name: DSNDB06                                    User: TWUSR
 Tablespace Name: SYSDDF                         Db2 Subsystem ID: SS01
 Creator    Name: SYSIBM    >
-------------------------------------------------------------------------------
                                                           More:     +
 Build Unload Job  . . . . N (Yes/No)
 Utility ID  . . . . . . .                 (16 Characters)

 Optional Template Dataset and member name:
   Template Dataset
   Member name  . .

                          Include         Update
 Select  Table and Columns N (Yes/No)  . . N (Yes/No)
 UNLDDN  Options . . . . . N (Yes/No)  . . N (Yes/No)
 COPYDDN Options . . . . . N (Yes/No)  . . N (Yes/No)
 Options Block . . . . . . . . . . . . . . N (Yes/No)
 Db2 . . . . . . . . . . .  (blank, Y - Yes, N - No, F - Force)
 LOCK  . . . . . . . . . .  (blank, Y - Yes, N - No)
```

Figure 250. **HPU Options** *panel*

6. Optional: If you want to use an existing template for HPU instead of allowing Db2 Automation Expert to create the template, enter the template data set and member name in the **Template Dataset** and **Member name** fields. The template data set must already exist and the template members must follow Db2 syntax rules for the TEMPLATE control statement. Templates can be used for the UNLDDN, COPYDDN, OUTDDN, and LOADDDN DDs.

7. Optional: If you want to use an image copy as the source to unload the data, follow these steps.

   a) On the **HPU Options** panel, enter Y in the COPYDDN Options Include and Update fields and press Enter.

   b) On the **COPYDDN Options** or the **TEMPLATE COPYDDN Options** panel, specify the source of the image copy to be used for the unload job as follows:

      • To specify an image copy data set name, do one of the following:

         – If you are not using templates, enter D in the **COPYDDN** field, enter Y in the **Select data set name** field, and press Enter. On the **HPU Image Copy DSN Selection** panel, select the image copy data set, and press PF3.

         – If you are using templates, enter the template name in the **Template Name** field, or select a template name by entering Y in the **Select** field.

      • To use the latest image copy as the source, enter L in the **COPYDDN** field and press Enter.

      • To use an image copy older than the latest one, specify an integer of 2 or greater in the **COPYDDN** field and press Enter. For example, enter 2 to select the image copy that was taken before the latest image copy.

   c) Press PF3 until the **HPU Options** panel is displayed.

8. Specify the UNLDDN DD options. This DD receives the unloaded data. On the **HPU Options** panel, enter Y in the **UNLDDN Options Include** and **Update** fields and press Enter.

   • If you are not using templates, do the following:

      a. On the **UNLDDN Options** panel, enter a valid unit for the UNLDDN data set in the **Unit Type** field.

      b. (Optional) Specify catalog options, SMS parameters, or tape parameters.

      c. Enter Y in the **Update DSN create spec** field and press Enter.

      d. On the **UNLDDN DSN Generation** panel, enter the qualifier codes to specify the data set name for the UNLDDN data set. Press PF3 until the **HPU Options** panel is displayed.

   • If you are using templates, the **TEMPLATEDD Name Selection** panel is displayed. Select a template name to be used for the UNLDDN and press PF3.

9. Optional: On the **HPU Options** panel, specify other Db2 HPU options.
10. Generate the unload job as follows:
    a) On the **HPU Options** panel, enter Y in the **Build Unload Job** field and press Enter.
    b) On the **Build Job** window, specify the data set and member name where the generated job is to be placed, and a valid job card. Press Enter.

       The job is generated and placed in the member that you specified.

What to do next

To unload the table space, submit the generated job.

Unloading selected rows and columns from a table space

Use these steps to build a Db2 HPU job that unloads selected rows and columns from a table space.

About this task

When you select or filter data, an SQL SELECT statement is used to specify the data and to specify the output format. Each SELECT statement has its own output data set (OUTDDN).

Procedure

1. On the Db2 Automation Expert Main Menu, specify the Db2 subsystem in the **Db2 Subsystem ID** field.
2. Enter 11 in the **Option** field and press Enter.
3. On the **Stand Alone Utilities** panel, enter 2 in the **Option** field and press Enter.
4. On the **HPU Tablespace Selection** panel, specify table space selection criteria in the header fields and press Enter.

   A list of table spaces that meet your selection criteria is displayed.
5. Enter S next to the table space that you want to unload and press Enter.

   The **HPU Options** panel is displayed, as shown in the following figure:

```
AUTOXPRT V1R1 --------------- HPU Options --------------- 2023/10/21  20:27:55
Option   ===>
-------------------------------------------------------------------------------
 Database   Name: DSNDB06                                   User: TWUSR
 Tablespace Name: SYSDDF                        Db2 Subsystem ID: SS01
 Creator    Name: SYSIBM    >
-------------------------------------------------------------------------------
                                                              More:     +
 Build Unload Job  . . . . N (Yes/No)
 Utility ID  . . . . . . .                 (16 Characters)

 Optional Template Dataset and member name:
   Template Dataset
   Member name  . .

                         Include       Update
 Select  Table and Columns N (Yes/No)  . . N (Yes/No)
 UNLDDN  Options . . . . . N (Yes/No)  . . N (Yes/No)
 COPYDDN Options . . . . . N (Yes/No)  . . N (Yes/No)
 Options Block . . . . . . . . . . . . . . N (Yes/No)
 Db2 . . . . . . . . . . .  (blank, Y - Yes, N - No, F - Force)
 LOCK  . . . . . . . . . .  (blank, Y - Yes, N - No)
```

*Figure 251. **HPU Options** panel*

6. Optional: If you want to use an existing template for HPU instead of allowing Db2 Automation Expert to create the template, enter the template data set and member name in the **Template Dataset** and **Member name** fields. The template data set must already exist and the template members

must follow Db2 syntax rules for the TEMPLATE control statement. Templates can be used for the UNLDDN, COPYDDN, OUTDDN, and LOADDDN DDs.

7. Optional: If you want to use an image copy as the source to unload the data, follow these steps.

   a) On the **HPU Options** panel, enter Y in the COPYDDN Options Include and Update fields and press Enter.

   b) On the **COPYDDN Options** or the **TEMPLATE COPYDDN Options** panel, specify the source of the image copy to be used for the unload job as follows:

      - To specify an image copy data set name, do one of the following:

         – If you are not using templates, enter D in the **COPYDDN** field, enter Y in the **Select data set name** field, and press Enter. On the **HPU Image Copy DSN Selection** panel, select the image copy data set, and press PF3.

         – If you are using templates, enter the template name in the **Template Name** field, or select a template name by entering Y in the **Select** field.

      - To use the latest image copy as the source, enter L in the **COPYDDN** field and press Enter.

      - To use an image copy older than the latest one, specify an integer of 2 or greater in the **COPYDDN** field and press Enter. For example, enter 2 to select the image copy that was taken before the latest image copy.

   c) Press PF3 until the **HPU Options** panel is displayed.

8. To select the tables and columns to unload, on the **HPU Options** panel, enter Y in the **Select Table and Columns Include** and **Update** fields and press Enter.

9. On the **HPU Table Selection** panel, do the following steps for each table from which you want to select rows.

   a) Enter S next to a table and press Enter.

      The **Select Columns** panel is displayed, as shown in the following figure:

```
AUTOXPRT V1R1    ------------- Select Columns ------------ 2023/10/21  20:48:01
Option  ===>                                               Scroll ===> CSR
  Commands: EAC - Exclude all columns.
            IAC - Include all columns.
  Creator: SYSIBM              >     Name: IPLIST                >
  Where Clause(s)  A (A - And, O - Or)                  Db2 Subsystem: SS01
                                                    Row 1 of 3          >
-------------------------------------------------------------------------------

Select Column                        Column
Order  Name                          Type
1      LINKNAME                      VARCHAR
2      IPADDR                        VARCHAR
3      IBMREQD                       CHARACTER
***************************** Bottom of Data **********************************
```

*Figure 252. **Select Columns** panel*

   b) On the **Select Columns** panel, modify the column order or remove columns by using the Select Order column or the primary commands that are listed on the panel.

      By default, all columns are selected for unloading in the displayed order.

   c) To use Db2 selection criteria to include or exclude rows, scroll right (PF11) to the Where Clause column.

   d) Enter a valid WHERE clause for that column to identify when the row is to be unloaded.

      When multiple WHERE conditions exist, they are either ANDed or ORed, based on the value in the **Where Clause(s)** header field.

      Note: If you require a mixture of AND and OR conditions, you must enter them manually after the JCL is generated.

   e) When you finish selecting and ordering columns on the **Select Columns** panel, press Enter.

      The **HPU Select Format** panel is displayed, as shown in the following figure:

```
    AUTOXPRT V1R1 ----------     HPU Select Format ---------- 2023/10/21  20:48:37
    Option   ===>                                          Scroll ===> CSR
                                          Db2 Subsystem ID: SS01 User: TWUSR
     Creator: SYSIBM               >    Name: IPLIST                >
                                                                More:    +
                        Include         Update
    OUTDDN  Options . . .  Y (Yes/No)  . . N (Yes/No)
    LOADDDN Options . . .  N (Yes/No)  . . N (Yes/No)
    FORMAT . . . . . . . . T      (D - Delimited, T - dsnTiaul, E - External,
                                  I - Internal, U - User, V - Variable)
     DSNTIAUL STRICT . . .        (blank, Y - Yes, N - No)
     DELIMITED SEP . . . .        (blank, Single Character, or Hexadecimal value)
             DELIM . . .          (blank, Single Character, or Hexadecimal value)
             NULL DELIM           (blank, Y - Yes, N - No)
     Variable  . . . . . .        (blank, E - End, A - All)
     Like Table  . . . . .            >   (blank or valid table name)
     Like Creator  . . . .            >   (blank or valid table creator)
    ORIGINOBID . . . . . .        (blank or hexadecimal value)
            or . . . . . .        (blank or decimal value)
    OUTMAXROWS . . . . . .            (blank, 1 - 2147483647)
    OUTFREQROWS  . . . . .            (blank, 1 - 2147483647)
    Scheme . . . . . . . .        (blank, E - Ebcdic, A - Ascii, S - aSis,
                                  U - Unicode)
    CCSID SBCS . . . . . .        (blank or Integer)
          MIXED  . . . . .        (blank or Integer)
          DBCS . . . . . .        (blank or Integer)
    OUTEXIT exit name  . .           (blank or exitname)
                in . . .          (blank, A - Asm, C - C, O - cObol2)
```

Figure 253. **HPU Select Format** *panel*

f) On the **HPU Select Format** panel, update the options for the OUTDDN. Enter Y in the **OUTDDN Options Include** and **Update** fields and press Enter.

- If you are not using templates, do the following:

  i) On the **OUTDDN Options** panel, enter a valid unit for the OUTDDN data set in the **Unit Type** field.

  ii) (Optional) Specify catalog options, SMS parameters, or tape parameters.

  iii) Enter Y in the **Update DSN create spec** field and press Enter.

  iv) On the **OUTDDN DSN Generation** panel, enter the qualifier codes to specify the data set name for the OUTDDN data set. You must specify a unique data set name for each table to be unloaded. If a duplicate data set name is specified, an error message will be displayed after you exit this panel, prompting you to rename the data set.

  v) Press PF3 until the **HPU Table Selection** panel is displayed. When all required options are complete for the table to be unloaded, a Y is displayed in the **Sel** column next to the table.

  vi) Repeat these steps for each table that you want to select rows and columns.

- If you are using templates, the **TEMPLATEDD Name Selection** panel is displayed. Select a template name to be used for the OUTDDN and press Enter, then PF3. A message is displayed confirming the template name selection.

10. Optional: On the **HPU Select Format** panel, update other options as required.

11. Press PF3 until the **HPU Options** panel is displayed.

12. Optional: On the **HPU Options** panel, specify other Db2 HPU options.

13. Generate the unload job as follows:

    a) Enter Y in the **Build Unload Job** field.

    b) On the **Build Job** window, specify the data set and member name where the generated job is to be placed, and a valid job card.

    c) Press Enter.

    The job is generated and placed in the member you specified.

What to do next

To unload the tables, submit the generated job.

Chapter 25. Generating IBM UNLOAD utility jobs

Db2 Automation Expert can generate JCL to unload tables using the IBM UNLOAD utility. You can use the Db2 Automation Expert ISPF interface to select the columns to be unloaded, rearrange column order, change the output length of a column, specify strip characters and selectively unload columns using WHERE clauses.

Data can be unloaded from the Db2 table level only. You can choose the table you want to unload from a selection list.

Selecting a table to unload
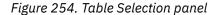
Select a table to unload using these steps.

Procedure

1. On the Db2 Automation Expert main menu, enter the appropriate subsystem in the **Db2 Subsystem ID** field.
2. Enter 11 in the **Option** field and press Enter.
3. On the **Stand Alone Utilities** panel, enter 1 in the **Option** field and press Enter.
4. On the **Table Selection** panel, specify a table creator or table name or mask in the **Creator Like** and **Tables Like** fields and press Enter.
5. A list of tables that match your selection criteria is displayed.

   The following figure shows the **Table Selection** panel:

```
AUTOXPRT V1R1      ------------ Table Selection ----------- 2023/10/21  20:50:49
Option  ===>                                               Scroll ===> CSR
-------------------------------------------------------------------------------
Line Commands: S - Select
-------------------------------------------------------------------------------
 Creator    Like  PDUSE*                 >                  Db2 Subsystem: SS01
 Tables     Like  *                      >            Row 1 of 29          +>
-------------------------------------------------------------------------------
Cmd   Table Name          Creator    Database    Tablespace OBID
      ARCHIVES_V11         PDUSER     MHTEST      ARCHIV11   00125
      LPJOBS_V11           PDUSER     MHTEST      DLCLP11    00089
      LPSPACES_V11         PDUSER     MHTEST      DLCLP11    00095
      LPSTEPS_V11          PDUSER     MHTEST      DLCLP11    00092
      UTILITY_STATS_V11    PDUSER     MHTEST      DLCUTS11   00102
      DR_IMAGE_COPY_V11    PDUSER     MHTEST      DRCOPY11   00120
      ETRIGGER             PDUSER     MHTEST      ETRIGS31   00075
      EXCEPTIONS_V11       PDUSER     MHTEST      EXCPTN11   00030
      JOBS_OPTIONS_V12     PDUSER     MHTEST      JOBS11     00105
      JOBS_V11             PDUSER     MHTEST      JOBS11     00018
      JOB_TASKDEF_V11      PDUSER     MHTEST      JOBS11     00128
      JOB_VERSIONS_V11     PDUSER     MHTEST      JOBS11     00023
      OBJECTS_V13          PDUSER     MHTEST      OBJECT13   00008
```

Figure 254. Table Selection panel

Columns of detailed information can be reviewed for each table. Scroll right to see all the columns. The following provides column descriptions for the Table Selection screen.

Creator Like
> The table creator name or mask you specified is shown here. You can change it on this panel to change or further refine the list of tables.

> **Note:** This field allows up to 128 bytes. To scroll this field, place the cursor in the field and use the PF11 key to scroll right and the PF10 key to scroll left.

Tables Like

The table name or mask you specified is shown here. You can change it on this screen to change or further refine the list of tables.

Note: This field allows up to 128 bytes. To scroll this field, place the cursor in the field and use the PF11 key to scroll right and the PF10 key to scroll left.

Db2 Subsystem

The Db2 SSID.

Row x of y

Displays the current row and the total number of rows in the profile list. Adjacent to this field is a scroll indicator: > means scroll right for more data; < > means scroll left or right for data; < means scroll left for more data. A plus sign (+) means scroll down for more data; a minus sign (-) means scroll up for more data.

Table Name

The table name.

Creator

The user ID of the table creator.

Database

The database name.

Tablespace

The table space name.

OBID

The data object identifier.

Created Timestamp

Timestamp for when the table was created.

Altered Timestamp

Timestamp for when the table was last altered.

6. To select a table, enter S in the **Cmd** field next to the table and press Enter. To cancel, press PF3 (END).

Specifying UNLOAD criteria

The Select Columns panel allows you to select the columns to be unloaded from the table, rearrange column order, change the output length of a column, specify strip characters and selectively unload columns using WHERE clauses.

Procedure

1. When you select a table to unload, the Select Columns panel appears, as shown in the following figure:

```
AUTOXPRT V1R1    ------------- Select Columns ------------ 2023/10/21  20:52:29
Option  ===>                                              Scroll ===> CSR
  Commands: EAC - Exclude all columns.
           IAC - Include all columns.
  Creator: PDUSER                >    Name: ARCHIVES_V11            >
  Where Clause(s)  A (A - And, O - Or)                    Db2 Subsystem: SS01
                                                   Row 1 of 22           +>
  -----------------------------------------------------------------------------

Select Column                         Column       Where Int Output  Strip
Order  Name                           Type         Null  Ext Length L/T/B/N
1      DB2_SSID                       CHARACTER
2      ARCHLOG_NAME                   CHARACTER
3      DR_ARCHLOG_NAME                CHARACTER
4      PRODUCT_FMID                   CHARACTER
5      COPY_IND                       CHARACTER
6      START_TIME                     CHARACTER
7      END_TIME                       CHARACTER
8      START_RBA                      CHARACTER
9      END_RBA                        CHARACTER
10     START_LRSN                     CHARACTER
11     END_LRSN                       CHARACTER
```

Figure 255. Select Columns panel

2. The select order of the table's columns defaults to the order the columns are defined in Db2. To deselect a column, remove the number in the Select Order column. To change the order of the columns, rearrange the numbers listed in the Select Order column.

3. Specify the fields as follows:

Creator
   The table creator name.

Name
   The table name.

Where Clause(s)
   Specify how multiple WHERE clauses should be treated. Enter A to use AND conditions, or enter O to use OR conditions.

Db2 Subsystem
   The Db2 SSID.

Row n of nnn
   Displays the current row and the total number of rows in the profile list. Adjacent to this field is a scroll indicator: > means scroll right for more data; < > means scroll left or right for data; < means scroll left for more data. A plus sign means scroll down for more data; a minus sign means scroll up for more data.

Select Order
   Specify the order in which you want the column unloaded. The default is the order in which the columns appear in the table. To deselect a column, remove the number from the Select Order column.

Column Name
   The name of the column.

Column Type
   The type of column.

Where Null
   This column is blank if a column is defined as NOT NULL. If the column is nullable, it will be editable. Enter Y in this column to include a WHERE column name IS NULL clause. Enter N in this column to include a WHERE column name IS NOT NULL clause. Leave this field set to '*' to exclude a WHERE clause for this column.

Int Ext
   If you want to change a column's unload format to EXTERNAL and the column is editable, enter E in the column. If the data type does not allow external format, the column is read-only.

Output Length

If you want to override the output length of the column, enter it in this field. If a length is entered on a column that has a fixed length and that length is less than the column length, the TRUNCATE keyword will automatically be generated.

Strip L/T/B/N

For columns that allow the STRIP function, indicate how the strip function is to be performed:

- L: Remove occurrences of blank or the specified strip character from the beginning of the data.

- T: Remove occurrences of blank or the specified strip character from the end of the data.

- B: Remove occurrences of blank or the specified strip character from the beginning and end of the data.

- N: Do not use the STRIP function. STRIP will not be performed on this column and any value entered in the Strip Char field will be ignored.

Strip Char

If using the STRIP function, specify a single-byte character that is to be stripped. If a single character is entered, then it will be used as the data to be stripped. If you specify a two-byte value in this field, these two bytes will be interpreted as a hexadecimal representation of the strip character to be used.

Where Clause

Specify any Db2 selection criteria to be entered against that column. When multiple WHERE conditions exist, they will either be AND or OR based on the value in the Where Clauses field.

Note: If you require a mixture of AND and OR conditions, you must enter them manually after the JCL is generated.

4. Press Enter after entering all the desired values.

Setting options for the UNLOAD

The Unload Utility Options panel allows you to specify various options for the UNLOAD utility.

Procedure

1. When you have finished selecting columns and setting other column-specific options, press Enter.

   The **Unload Utility Options** panel appears, as shown in the following figure:

```
AUTOXPRT V1R1 ------      Unload Utility Options     ------ 2023/10/21  20:54:30
Option   ===>                                              Scroll ===> CSR

Commands: Save     - Save current field values
          Default - Reset fields to system defaults

 Table Creator: PDUSER                >               User: TWUSR
 Table Name . : BMB_ARCHIV1_DB11   >        Db2 Subsystem: SS01
                                                             More:     +
 Build Unload Job . . . N  (Yes/No)
 Optional Template Dataset and member name:
   Template Dataset
   Member name  . .

 Update Sysrec Options  Y  (Yes/No)
 Include Syspunch . . . N  (Yes/No)          Update  N  (Yes/No)
 Header . . . . . . . . N  (C - CONST, N - None, O - OBID)
   CONST  . . . . . . .
 Float  . . . . . . . . S  (I - IEEE, S - S390)

 Encoding . . . . . . . N  (E - EBCDIC, A - ASCII,
                           U - UNICODE, N - None)
```

Figure 256. Unload Utility Options panel

2. Specify the fields as follows:

Table Creator
The table creator name; this field is read only.

Table Name
The table name; this field is read only.

User
The current user ID.

Build unload job
This field allows you to build the UNLOAD utility JCL. This field is initially set to Y; if the SYSREC data set options have been configured for this job, the field defaults to Y and you can build the job. When you press Enter, the Build Job window is displayed.

Optional Template Dataset and member name
If you want to use an existing template for UNLOAD instead of allowing Db2 Automation Expert to create the template, enter the template data set and member name here. The template data set must already exist and the template members must follow Db2 syntax rules for the TEMPLATE control statement. Templates can be used for the SYSREC and SYSPUNCH DDs. If you specify to use templates, you will be prompted to select a template name on the **TEMPLATEDD Name Selection** panel when you update SYSREC or SYSPUNCH data set options.

Update Sysrec Options
Type Y in this field and press Enter to set options for the SYSREC data set, into which the table is to be unloaded. This data set is required and options must be set; therefore the default is Y. Once you have set options for the SYSREC data set, set the Build unload job field to Y and press Enter to build the job.

Include Syspunch
If you want to include the SYSPUNCH DD to receive LOAD utility control statements, type Y in this field and press Enter. You must configure options for this DD; if the options have not yet been set, the Unload DSN options panel for the SYSPUNCH DD is displayed when you press Enter.

Update
To update data set options for the SYSPUNCH DD after they have been initially configured, type Y in this field and press Enter.

Header
Indicate if you want a header field at the beginning of the output records that can be used to associate an output record with the table from which it was unloaded.

- Type C to specify Constant. This option specifies that a constant string is to be used as the record header. If you choose this option, also enter a constant value in the CONST field.

- Type N (default) to specify no header.

- Type O to specify that the OBID for the table (a two-byte binary value) is to be placed in the first two bytes of the output records unloaded from the table.

CONST
If you specify C for the header field, enter the constant value here.

Float
Specify the output format of the numeric floating-point data. This option applies to the binary output format only.

- Type I to specify IEEE format (also known as the binary floating point, or BFP).

- Type S (default) to specify S/390® internal format (also known as the hexadecimal floating point, or HFP).

Encoding
Specify how the output data of character type is t be encoded.

- Type E to convert character data to EBCDIC.

- Type A to convert character data to ASCII.

- Type U to convert character data (except for bit strings) to Unicode.

- Type N to preserve the encoding scheme of the source data.

CCSID
Specify the coded character set identifier(s) (CCSIDs) that are to be used for the data of the listed character type in the output records, including data that is unloaded in the external character formats.

Nosubs
Type Y in this field to specify that CCSID code substitution is not to be performed during unload processing. The default is N.

Nopad
Type Y in this field to specify that the variable-length columns in the unloaded records are to occupy the actual data length without additional padding. The default is N.

Dec Float Round Mode
Specify the rounding mode to be used when DECFLOATs are manipulated. The following rounding modes are supported:

- C: Ceiling. Round toward positive infinity.
- D: Down. Round toward 0 (truncation).
- F: Floor. Round toward negative infinity.
- HD: Half Down. Round to the nearest number. If equidistant, round down.
- HE: Half Even. Round to the nearest number. If equidistant, round so that the final digit is even.
- HU: Half Up. Round to nearest. If equidistant, round up.
- U: Up. Round away from 0.
- N: (Default) None. The data will be rounded according to the DECFLOAT ROUNDING MODE set in DSNHDECP.

Delimited
Type Y in this field to indicate that the output data file is in a delimited format. When data is in a delimited format, all fields in the output data set are character strings or external numeric values. In addition, each column in a delimited file is separated from the next column by a column delimiter character. The default is N. If you specify Y, ensure the Column Delimiter, Character Delimiter, and Decimal Point fields are completed.

Column Delimiter
Specify the column delimiter that is used in the output file. The default is a comma (,).

Character Delimiter
Specify the character string delimiter that is used in the output file. The default is a double quotation mark (").

Decimal Point
Specify the decimal point character that is used in the output file. The default is a period (.).

Shrlevel and Isolation
Indicate whether other processes can access or update the table space or partitions while the data is being unloaded.

- Type C to specify change with isolation type CS. Indicates that the UNLOAD utility is to read rows in cursor stability mode.
- Type U to specify change with isolation type UR. Indicates that uncommitted rows, if they exist, are to be unloaded.
- Type R (default) to specify reference. Specifies that during the unload, rows of the tables can be read, but cannot be inserted, updated, or deleted by other Db2 Automation Expert 1.1 threads.

Register
Type Y in this field to register pages that are read by the UNLOAD utility in a data sharing environment with the coupling facility. This field is valid only when the Shrlevel and Isolation type field is set to UR. Leave this field blank if you do not want to generate the REGISTER keyword.

Skip Locked Data
Type Y in this field to indicate that the UNLOAD utility is to skip rows on which incompatible locks are held by other transactions. This option applies to row level or page level locks.

Sample
If you want only sampled rows of the table to be unloaded, enter the percentage of rows you want to sample. Sampling is applied to rows that are qualified by the WHEN selection conditions, if included. Valid values are integers from 0 to 100.

Limit
Specify the maximum number of rows that are to be unloaded from a table. If the number of unloaded rows reaches the specified limit, a message is issued for the table, and no more rows are unloaded.

Max Errors
Specify the number of records in error that are allowed. When the error count reaches this number, the UNLOAD utility issues a message and terminates with RC of 8.

3. Optional: If you want to save the values you have entered for future use, enter SAVE in the **Option** field.

   To reset your values to system-installed defaults, enter DEFAULT in the **Option** field.

4. When you have finished entering the appropriate values on this panel, press Enter.

Specifying SYSREC and SYSPUNCH data set options

The Unload DSN options panel allows you to specify data set options for the SYREC and SYSPUNCH data sets.

About this task

The SYSREC data set is a single data set into which the data is to be unloaded. The SYSREC data set is required. The SYSPUNCH data set is optional and contains the generated LOAD utility control cards that can be used for reloading the data, if desired. The process for specifying options for these two data sets is the same.

Procedure

1. The Unload DSN Options panel is displayed when you specify to update options for either data set, as shown in the following figure:

```
AUTOXPRT V1R1 ------------ UNLOAD DSN Options ----------- 2023/10/21  20:58:35
Option   ===>
 Table Creator: PDUSER              >               User: TWUSR
 Table Name   : ARCHIVES_V11        >       Db2 Subsystem: SS01
Update SYSREC   DSN spec . N         (Yes/No)
Unit Type . . . . . . . . .          (CART - DISK - etc.)
Catalog Options
DISP=Status . . . . . . . . M        (M - MOD, N - NEW, O - OLD, S - SHR)
       Normal Termination . . C      (C - CATLG, D - DEL,
                                       K - KEEP, U - UNCATLG)
       Abnormal Termination   C      (C - CATLG, D - DEL,
                                       K - KEEP, U - UNCATLG)
Data Class  . . . . . . . .           (8 character class)
Storage Class . . . . . . .           (8 character class)
Management Class  . . . . .           (8 character class)
Tape specific parameters Only needed if Unit Type is a Tape device:
Expiration date *or*  . . .           (YYYYDDD - YYDDD)
Retention period  . . . . .           (4 digit number)
```

Figure 257. UNLOAD DSN Options panel

2. Specify the fields on this panel as follows:

   Table Creator
   The table creator name; this field is read only.

Table Name
The table name; this field is read only.

User
The current user ID.

Update SYSREC|SYSPUNCH DSN spec
Type Y in this field and press Enter to set or change the data set specifications for the SYSREC or SYSPUNCH data set.

Unit Type
Enter a valid unit for the SYSREC or SYSPUNCH data set.

Catalog Options
This section allows you specify the disposition of the SYSREC or SYSPUNCH data set. These values will be used to build the DISP= portion of the data set DD.

DISP=Status
Specify the initial disposition or status of the data set.

Normal Termination
Specify the disposition of the data set upon normal termination of the job step.

Abnormal Termination
Specify the disposition of the data set upon abnormal termination of the job step.

Data Class
If your site uses SMS to manage data sets, type in the SMS data class.

Storage Class
If your site uses SMS to manage data sets, type in the SMS storage class.

Management Class
If your site uses SMS to manage data sets, type in the SMS management class.

Expiration date -or- Retention period
If the unit type specified in the Unit Type field is a tape device, enter either the tape expiration date in YYYYDDD format, or the tape retention period in number of days.

3. When you have finished entering the appropriate values on this panel, press PF3 (END) to return to the Unload Utility Options panel.

Building a data set name for the SYSREC or SYSPUNCH data sets

Db2 Automation Expert offers a simple way to construct a data set name for the SYSREC or SYSPUNCH data sets.

Procedure

1. Type Y in the Update SYSREC|SYSPUNCH DSN spec field.
   The panel shown in the following figure is displayed:

```
AUTOXPRT V1R1 --------- SYSREC   DSN Generation --------- 2023/10/21  21:00:15
 Option  ===>
 Table Creator: PDUSER              >                    User: TWUSR
 Table Name   : ARCHIVES_V11        >          Db2 Subsystem: SS01
   UNLOAD UTILITY
   Qualifier code     Free form literal           Show DSN N
   Current dataset name generation qualifier string:


 Valid dataset name generation codes are:
    1. Database          13. Month (MM)        27. Utility Name
    2. Space Name        14. Day (DD)          28. Job Name
    3. Partition/DSNUM   15. Julian Day (DDD)  29. Step Name
    8. Subsystem ID      16. Hours (HH)        33. Index Space Name
   10. Time (HHMMSS)     17. Minutes (MM)      34. Table Space Name
   11. Date (YYYYDDD)    18. Seconds (SS)      35. Substring Qualifier
   12. Year (YYYY)                             36. Use Freeform Literal
```

Figure 258. SYSREC|SYSPUNCH DSN Generation panel

2. Specify the fields on the SYSREC|SYSPUNCH DSN Generation panel as follows:

Qualifier code
To include a qualifier, type its number in the Qualifier code field and press Enter. The qualifier string appears in the Current dataset name generation qualifier string field. You can also type the data set name directly in the string field.

Free form literal
After selecting the Use Freeform literal qualifier, you can enter an eight-character literal in this field. If you want the literal to be in its own substring, make sure to begin the literal with a period.

Show DSN
To view the string as it will be completed, type Y in the Show DSN field.

GDG Limit
If you want to set a specific GDG limit for this data set, enter it here. If no GDG limit is set on this panel (GDG limit field left blank), the GDG limit set in the job profile on the Generation Options panel applies. Valid values are from 1 to 255.

Current dataset name generation qualifier string
This field displays the qualifier string as it was input.

Commonly used qualifiers for data set names are listed on the bottom half of the panel. The following describes the valid data set name qualifiers that you can use on the SYSREC|SYSPUNCH DSN Generation panel:

Database
The database name.

Space Name
The table space or index name.

Partition/DSNUM
The partition number or data set number. When you choose this option, the Resulting DSN using Current Symbolic String window appears to prompt you to enter a valid character for the first position in the string.

Subsystem ID
The subsystem ID.

Time (HHMMSS)
The current time in the format shown.

Date (YYYYDDD)
The current date in the format shown.

Year (YYYY)
The year in the format shown.

Month (MM)
The month in the format shown.

Day (DD)
> The day of the month in the format shown.

Julian Day (DDD)
> The Julian day.

Hours (HH)
> The current time in hours.

Minutes (MM)
> The current time in minutes.

Seconds (SS)
> The current time in seconds.

Utility Name
> The utility name.

Job Name
> The job name.

Step Name
> The job step name.

Index Space Name
> The index space name.

Table Space Name
> The index space name.

Substring Qualifier
> Select this option to specify one of the qualifiers and customize the substring. When you press Enter, the substring parameters window is displayed.

Use freeform literal
> After selecting this qualifier, you can enter an eight-character literal in the Free Form literal field. If you want the literal to be in its own substring, make sure to begin the literal with a period.

For example, if you enter 1 (Database), 2 (Space Name), then 10 (Julian Day), the data set name appears as:

```
&DB..&SN..D&JDATE.
```

3. When finished, press PF3 (END) to continue.

Using the substring function

You can use the substring qualifier function to customize a data set name.

When you choose the Substring Qualifier function to customize a qualifier substring, the window shown in the following figure is displayed:

```
        Substring Parameters

Enter the Qualifier Code ==> __
Enter Starting Position  ==> _____
Enter Substring Length   ==> _____
```

*Figure 259. **Substring Parameters** window*

You can choose to enter almost any of the qualifier codes and specify the string's starting position and length. For example, qualifier code 8 generates a string of "&SSID", a four-character subsystem name. However, if your site uses three-character SSIDs, the substring qualifier option can be used to specify the SSID and customize the string length, as shown in the following figure:

```
        Substring Parameters

 Enter the Qualifier Code ==> 8_
 Enter Starting Position  ==> 1____
 Enter Substring Length   ==> 3____
```

Figure 260. Example: specifying the SSID substring length

The results are shown in the following figure:

```
  Current dataset name generation qualifier string:
 &SSID(1,3).
```

Figure 261. Example: results of substring generation

Resulting DSN using current symbolic string

Some substrings (such as time and date) require the addition of an alphanumeric or symbol in the beginning of the string.

When you select these substrings, the window that is shown in the following figure is displayed:

```
               Resulting DSN using current symbolic string


  Enter a Literal or Symbolic to Prefix the Invalid Dataset Node

  ==>

  Invalid Dataset Name:

* SS01.DATABASE.SPACENAM.2008143                *




  --------------------------------------------------------------------------
 | DAJM250E - Invalid data set node detected. First character not alphabetic |
 | or national.                                                              |
  --------------------------------------------------------------------------
```

*Figure 262. **Resulting DSN using current symbolic string** window*

This panel allows you to insert an alphanumeric or symbol to make the data set node name valid. When finished, press Enter.

Viewing a sample string

You can view a sample string that would be generated by using your specification for a data set.

About this task

To view the string as it will be completed, enter Y in the **Show DSN** field. When you press Enter, the sample string is displayed, as shown in the following figure:

```
            Resulting DSN using current symbolic string

 Using the following sample data as input:

 &JOBNAME   = 'JOBNAME '  &STEPNAME  = 'STEPNAME'  &PART      = '00001'
 &SSID    = 'SS01'      &UTIL  = 'UTILNAME'      &SN        = 'SPACENAM'
 &DB    = 'DATABASE'
 The date/time fields are set to the current time.

 The generated dataset would be:

* DATABASE.SPACENAM.D00001.D2008155              *

 Press ENTER or PF3 to continue
```

Figure 263. Viewing a sample string

Press PF3 (END) to return to the previous panel.

Building the UNLOAD job

After you specify the UNLOAD utility settings, you must build the job.

About this task

When you build the job, Db2 Automation Expert constructs JCL for a job that executes the UNLOAD utility.

The Build Job window, shown in the following figure, is displayed when you have finished entering UNLOAD options:

```
           Build Job for PDUSER.ARCHIVES_V11

   Edit Generated Job     Y           (Yes/No)
   Schedule Job   . . . . N (Yes/No)  Update options . . N (Yes/No)

   Build job in Data set  TWUSR.DAT.TEST
             Member     UNLOAD1

   Job Cards:
 ==> //JOBCARD JOB TWUSRA,CLASS=A,NOTIFY=&SYSUID
 ==> //*
 ==> //*
 ==> //*
```

Figure 264. Build Job window

The following describes the fields in the Build Job window:

Edit Generated Job
Type Y if you want to edit the job after it has been generated. The job appears in an edit session after it has been generated.

Schedule Job
Type Y in the Schedule Job field to indicate that the resulting JCL job is to be scheduled to the Db2 administrative task scheduler. Entering Y in the Update Options field and pressing Enter displays a panel to define Db2 administrative task scheduler options.

Build job in Dataset
Enter the fully qualified data set name (without quotes) where you want to save the generated job. This data set must exist and can be sequential or a PDS. In online mode, this data set will hold the generated utility job. In batch mode, this data set will hold the batch JCL to generate the utility job.

Member
If the data set to hold the generated job is a PDS, enter a member name for the job output here. If the member does not exist, Db2 Automation Expert will create it.

Job Cards

Enter a valid job card for your site on any of the four Job Card lines. Job card information can be provided as standard JCL or another compatible control language.

Scheduling the job for the Db2 administrative task scheduler

When building a Db2 Automation Expert job profile or UNLOAD utility job, you can specify to schedule the utility job via the Db2administrative task scheduler.

The **Schedule Db2 Admin Task** panel allows you to define the options for a task to be scheduled to run via the Db2 administrative task scheduler.

The **Schedule Db2 Admin Task** panel is shown in the following figure:

```
AUTOXPRT V1R1    -------- Schedule Db2 Admin Task -------- 2023/10/21  15:54:09
Option   ===>                                         Scroll ===> CSR
--------------------------------------------------------------------------------
Commands: CANCEL - Exit without saving changes.
--------------------------------------------------------------------------------
                                                Db2 Subsystem: SS1A
Task Name  . . . . AUTOMATION EXPERT UTIL: &JOBNAME               >
Task Description                                                  >
                                                        More:      +
Begin Timestamp  . . &CURRENT                    (Db2 Timestamp)
End Timestamp  . . . 2023-10-21-16.10.22.340221 (Db2 Timestamp)
Max Invocations  . . 1            (Integer, Blank)
SSID . . . . . . . . SS1A         (Blank for any datasharing member)
Job Wait . . . . . . Y            (Y - Yes, N - No, P - Purge)
Execution Threads. . 001          (Integer)

Invocation Options:
  Interval (minutes)              (Integer, Blank)
        -Or-
  Trigger:
    Task Name . . .                                              >
    Cond  . . . . .               (GT,GE,EQ,LT,LE,NE)
    Code  . . . . .               (Integer, Blank)
        -Or-
  Point in Time . .                                              >
```

*Figure 265. **Schedule Db2 Admin Task** panel*

The following describes the fields on the **Schedule Db2 Admin Task** panel:

Task Name

(Required) Enter a unique task name to differentiate this from other Db2 administrative task scheduler tasks. The following variables are allowed to ensure unique task names when multiple jobs are created:

- &JOBNAME resolves to the actual job name for the JCL job.

- &PROFILE resolves to the job profile name.

- &SEQ resolves to a sequential number that is incremented when referenced.

- &TIMESTAMP resolves to the Db2 timestamp returned from the CURRENT TIMESTAMP when the job is added to the Db2 administrative task scheduler.

Task Description

Enter a description for the task.

Begin Timestamp

If you want the task to execute at a specific starting time, enter it in the format CCYY-MM-DD-HH.MM.SS.thmiju. If not specified, the task may be executed immediately. The variable &CURRENT can be specified to use the current timestamp when the job is added to the Db2 administrative task scheduler. &CURRENT can be combined with any valid Db2 timestamp expression to specify a future time. For example:

```
&CURRENT + 5 DAYS
&CURRENT + YEAR
```

End Timestamp

If you want the task to end at a specific time, enter it in the format CCYY-MM-DD-HH.MM.SS.thmiju. If not specified, the task may be executed as scheduled indefinitely. The variable &CURRENT can be specified to use the current timestamp when the job is added to the Db2 administrative task scheduler. &CURRENT can be combined with any valid Db2 timestamp expression to specify a future time. For example:

```
&CURRENT + 5 DAYS
&CURRENT + YEAR
```

Max Invocations

Enter the maximum number of times this task can be executed. If not specified, there is no limit to the number of executions.

SSID

Enter a particular subsystem that should execute the task. If not specified, the task may execute on any member of a data sharing group.

Job Wait

Indicate whether the job can be executed synchronously. Valid values are:

- Y: Synchronous execution
- N: Asynchronous execution
- P: Synchronous execution, after which the job status in z/OS is purged.

Execution Threads

Enter the number of parallel tasks to schedule.

Invocation Options

Select one of the following invocation options.

Interval (minutes)

Specify the time in minutes to execute a repeating task.

Trigger

These fields allow you to define the parameters that cause the task to be triggered.

Task Name

Specify another Db2 administrative task scheduler task that, when complete, triggers the execution of this task.

Cond

Specify the type of comparison to be made on the condition code of the triggered task. If not specified, the task is triggered upon completion of the trigger task without regard to its condition code.

Code

Specify the condition code to compare to determine if task gets triggered.

Point in Time

Specify a point-in-time string in UNIX cron format that indicates one or more specific times to begin task execution. The format is:

```
minute hour day_of_the_month month_of_the_year day_of_the_week
```

where:

- *minute* can be 0-59
- *hour* can be 0-23
- *day_of_the_month* can be 1-31
- *month_of_the_year* can be 1-12 or upper-, lower-, or mixed-case three-character strings, based on the English name of the month: jan, feb, mar, apr, may, jun, jul, aug, sep, oct, nov, or dec
- *day_of_the_week* can be 1-7 or upper-, lower-, or mixed-case three-character strings, based on the English name of the day: mon, tue, wed, thu, fri, sat, or sun

Each field must be separated by a blank. For more information on the unix CRON format for the Db2 administrative task scheduler, refer to the Db2 Administration Guide for your version of Db2 .

When finished, press Enter, then PF3. The Build Job window is displayed; the Schedule Job field is set to Y.

Chapter 26. Adding jobs to the Db2 administrative task scheduler

Db2 Automation Expert allows you to add batch builds and utility execution jobs to the Db2 administrative task scheduler. The interface allows you to schedule Db2 Automation Expert jobs and view their status and output.

The Db2 administrative task scheduler allows jobs to be scheduled for one or more executions based on a set of user-provided parameters. You can define a window of time in which to execute the job. Additional interval or trigger parameters may be specified to indicate when a job is executed within the defined window.

Prerequisites
The following prerequisites must be in place:

- The Db2 administrative task scheduler must be configured and active on the Db2 subsystems on which you are running Db2 Automation Expert. For information about configuring the task scheduler, refer to the Db2 Administration Guide for your version of Db2.
- RACF must be configured to allow PassTickets for the Db2 administrative task scheduler task. For information about configuring RACF PassTickets, refer to the Security Server RACF Security Administrator's Guide for your version of z/OS or consult your site's security specialist.
- You must enable Db2 administrative task scheduler support using the Setup option from the Db2 Automation Expert main menu (select option 0, then option 3 - Db2 Shared Profile Support).

Accessing the Db2 Admin Scheduler interface

To access the Db2 Admin Scheduler interface, from the Db2 Automation Expert main menu, select option 10 - Db2 Admin Scheduler.

About this task
When the **Db2 Admin Task Scheduler** panel is displayed, a message is displayed directing you to specify selection criteria. Enter selection criteria in the Task Name Like or Task Creator Like fields, or both. When you press Enter, the **Db2 Admin Task Scheduler** panel is updated with tasks meeting your selection criteria. An example is shown in following figure:

```
AUTOXPRT V1R1    -------- Db2 Admin Task Scheduler ------- 2023/10/21  21:03:41
Option  ===>                                             Scroll ===> CSR
 ------------------------------------------------------------------------------
Line Commands: C - Create  D - Delete  V - View  S - Status  U - Update
 ------------------------------------------------------------------------------
 Task Name Like    *                                 Db2 Subsystem: SS1A
 Task Creator Like  TWUSR*                           Row 1 of 8          >
 ------------------------------------------------------------------------------
    Task                                Task
Cmd Name                                Description       Last Modified
    AAA TEST2                                             2023-07-07-21.28
    AUTOMATION EXPERT UTIL: *TWUSRAA    TWUSR QUIESCE     2023-06-17-16.53
    AUTOMATION EXPERT BUILD: V11 SPE                      2023-06-15-23.06
    AUTOMATION EXPERT UTIL: *TWUSRAA    TWUSR QUIESCE     2023-06-15-23.10
    AUTOMATION EXPERT UTIL: TWUSRAA     NOT BATCH GEN QUIES 2023-06-15-23.13
    DAJ TEST TASK REORG                 ADMIN_UTL_EXECUTE 2023-06-02-22.42
    DAJ TEST TASK REORG 2               ADMIN_UTL_EXECUTE 2023-06-02-22.48
    SP TEST                                              2023-06-14-10.16
**************************** Bottom of Data ********************************
```

*Figure 266. **Db2 Admin Task Scheduler** panel*

The fields on the **Db2 Admin Task Scheduler** panel are:

Task Name Like
The task name or mask that is filtering the task list is displayed in this field. To view different tasks, change the name or mask and press Enter. Use the wildcard character (*) alone to display all tasks. Enter one or more characters and the wildcard character (*) to limit the list of tasks displayed to those containing the characters you specified.

Task Creator Like
The task creator or mask that is filtering the task list is displayed in this field. To view different tasks, change the name or mask and press Enter. Use the wildcard character (*) alone to display all tasks. Enter one or more characters and the wildcard character (*) to limit the list of tasks displayed to those containing the characters you specified.

Db2 Subsystem
Displays the current Db2 SSID.

Row x of y
Displays the current row and the total number of rows in the task list. Adjacent to this field is a scroll indicator: > means scroll right for more data; < > means scroll left or right for data; < means scroll left for more data. A plus sign (+) means scroll down for more data; a minus sign (-) means scroll up for more data.

Task Name
The task name.

Task Creator
The task creator.

Task Userid
The task user ID.

Task Description
The task description.

Last Modified
The timestamp that the task was created or last modified.

Type
The type of task (JCL for JCL job or PROC for stored procedure).

SSID
The Db2 SSID on which the task was specified to run; blank if not specified.

What to do next
You can use the following line commands on this panel:

- C - Create a new task to be scheduled.
- D - Delete a task from the scheduler.
- V - View the selected task's details without making changes.
- S - Check the status of a task's execution. This command displays a message relaying the status of the task, or displays a panel that provides additional details about the task's execution.
- U - Update (change) the selected task's details.

Creating a task

This topic describes how to create a task to be scheduled with the Db2 administrative task scheduler.

Procedure

1. On the **Db2 Admin Task Scheduler** panel, enter C in the Cmd area and press Enter.

   The **Create Db2 Admin Task** panel is displayed, as shown in the following figure:

```
AUTOXPRT V1R1 ---------- Create Db2 Admin Task  --------- 2023/10/21  21:06:17
Option   ===>                                           Scroll ===> CSR

Task Name  . . . .                                                    >
Task Description                                                      >

Begin Timestamp  . . 2023-09-04-00.22.41.000000 (Db2 Timestamp)
End Timestamp  . . . 2023-09-07-00.39.41.000000 (Db2 Timestamp)
Max Invocations  . . 2           (Integer, Blank)
SSID . . . . . . . .             (Blank for any datasharing member)

Invocation Options:
  Interval (minutes) 1           (Integer, Blank)
          -Or-
  Trigger:
    Task Name . . .                                                  >
    Cond  . . . . .               (GT,GE,EQ,LT,LE,NE)
    Code  . . . . .               (Integer, Blank)
          -Or-
  Point in Time . .                                                  >

Execution Source:
  JCL Dataset . . .
  JCL Member  . . .              (If Partitioned Dataset)
  Job Wait  . . . . P            (Y - Yes, N - No, P - Purge)
          -Or-
  Procedure Schema                                                   >
  Procedure Name                                                     >
  Procedure Input                                                    >
```

Figure 267. **Create Db2 Admin Task** *panel*

2. Complete the fields as follows:

Task Name
(Required) Enter a unique task name to differentiate this from other Db2 administrative task scheduler tasks. The following variables are allowed to ensure unique task names when multiple jobs are created:

- &SEQ resolves to a sequential number that is incremented when referenced.

- &TIMESTAMP resolves to the Db2 timestamp returned from the CURRENT TIMESTAMP when the job is added to the Db2 administrative task scheduler.

Task Description
Enter a description for the task.

Begin Timestamp
If you want the task to execute at a specific starting time, enter it in the format CCYY-MM-DD-HH.MM.SS.thmiju. If not specified, the task may be executed immediately. The variable &CURRENT can be specified to use the current timestamp when the job is added to the Db2 administrative task scheduler. &CURRENT can be combined with any valid Db2 timestamp expression to specify a future time. For example:

```
&CURRENT + 5 DAYS
&CURRENT + YEAR
```

End Timestamp
If you want the task to end at a specific time, enter it in the format CCYY-MM-DD-HH.MM.SS.thmiju. If not specified, the task may be executed as scheduled indefinitely. The variable &CURRENT can be specified to use the current timestamp when the job is added to the Db2 administrative task scheduler. &CURRENT can be combined with any valid Db2 timestamp expression to specify a future time. For example:

```
&CURRENT + 5 DAYS
&CURRENT + YEAR
```

Max Invocations

Enter the maximum number of times this task can be executed. If not specified, there is no limit to the number of executions.

SSID

Enter a particular subsystem that should execute the task. If not specified, the task may execute on any member of a data sharing group.

Invocation Options

Select one of the following invocation options.

Interval (minutes)

Specify the time in minutes to execute a repeating task.

Trigger

These fields allow you to define the parameters that cause the task to be triggered.

Task Name

Specify another Db2 administrative task scheduler task that, when complete, triggers the execution of this task.

Cond

Specify the type of comparison to be made on the condition code of the triggered task. If not specified, the task is triggered upon completion of the trigger task without regard to its condition code.

Code

Specify the condition code to compare to determine if task gets triggered.

Point in Time

Specify a point-in-time string in UNIX cron format that indicates one or more specific times to begin task execution. The format is:

```
minute hour day_of_the_month month_of_the_year day_of_the_week
```

where:

- *minute* can be 0-59
- *hour* can be 0-23
- *day_of_the_month* can be 1-31
- *month_of_the_year* can be 1-12 or upper-, lower-, or mixed-case three-character strings, based on the English name of the month: jan, feb, mar, apr, may, jun, jul, aug, sep, oct, nov, or dec
- *day_of_the_week* can be 1-7 or upper-, lower-, or mixed-case three-character strings, based on the English name of the day: mon, tue, wed, thu, fri, sat, or sun

Each field must be separated by a blank. For more information on the unix CRON format for the Db2 administrative task scheduler, refer to the Db2 Administration Guide for your version of Db2.

Execution Source

These fields allow you to specify the location of the task execution JCL or stored procedure.

JCL Dataset
JCL Member

Enter the fully qualified data set and member name containing the execution JCL.

Job Wait

Indicate whether the job can be executed synchronously. Valid values are:

- Y: Synchronous execution
- N: Asynchronous execution
- P: Synchronous execution, after which the job status in z/OS is purged.

Procedure schema
Procedure name
　　Enter the stored procedure name and schema (qualifier or creator name).
Procedure Input
　　Enter the input parameters for the Db2 stored procedure. This parameter must be specified as
　　a Db2 SELECT statement.
3. When you have completed the required fields, press Enter, then PF3.
　　The **Db2 Admin Task Scheduler** panel is displayed. The task you created is listed on this panel.

What to do next
You can check the status of the task, delete the scheduled task, or view the scheduled task settings.

Checking the status of a task

Once a task has been created and scheduled, you can check the status of the task execution using line
commands.

Procedure

- On the **Db2 Admin Task Scheduler** panel, enter S in the Cmd area next to a task and press Enter.

  – If the task has not yet been executed, message DAJM722I is displayed.

  – If the task has been executed, the following panel is displayed:

```
AUTOXPRT V1R1    --------- Db2 Admin Task Status --------- 2023/10/21  21:08:57
Option  ===>                                           Scroll ===>
--------------------------------------------------------------------------------
Line Commands: S - Status Detail  O - View Output
--------------------------------------------------------------------------------
 Task Name    TEST EXECUTION JCL
 Task Creator TWUSR                              Db2 Subsystem: SS1A
 Max History  0010                               Row 1 of 2
--------------------------------------------------------------------------------
Cmd Userid  SSID  Status     Start Timestamp        End Timestamp
    TWUSR   D91A  COMPLETED  2023-09-04-10.23.42.000000  2023-09-04-10.23.50
    TWUSR   D91A  COMPLETED  2023-09-04-10.22.42.000000  2023-09-04-10.22.48
***************************** Bottom of Data *********************************
```

Figure 268. **Db2 Admin Task Status** *panel*

This panel lists each instance of the task that was run via the Db2 administrative task scheduler.
Using this panel, you can see the result of each task execution. The following fields and columns
appear on this panel:

Task Name
　　The task name.
Task Creator
　　The task creator.
Db2 Subsystem
　　The Db2 subsystem ID.
Max History
　　The maximum number of task executions retained. This value is set in the Shared Profile
　　Parameters.
Userid
　　The user ID under which the task was executed.
SSID
　　The Db2 SSID on which the task was run.

Status
One of the following:

- RUNNING: The task is currently running.

- COMPLETED: The task has finished running.

- NOTRUN: The task was not run at the schedule invocation time.

- UNKNOWN: The scheduler shut down while the task was running.

Start Timestamp
The timestamp that the task was initiated.

End Timestamp
The timestamp that the task completed or ended.

What to do next

Use the following line commands to view the details or output of the task execution:

- S - View details of the task execution
- O - View job/stored procedure output. If the task is a JCL job, then SDSF output will be displayed. If the task is a stored procedure, then output parameters will be displayed.

Task status detail windows

The **Db2 Admin Task Status Detail** window shows details of the instance of the task that was selected on the prior panel. The **Db2 Admin Task Status Detail** window is different for JCL task and stored procedures; these windows are described in this topic.

Task status detail for JCL jobs

The following figure shows the **Db2 Admin Task Status Detail** window for a JCL job:

```
                 Db2  Admin Task Status Detail

Task Creator . . . TWUSR                                      >
Task Name  . . . . DB2 AUTOMATION EXPERT BUILD: DAJ V11 SPEC  >
Task Description                                              >

Task Userid  . . . TWUSR                                      >
Begin Timestamp  . 2023-06-15-23.06.41.000000
End Timestamp  . . 2023-06-15-23.06.45.000000
SSID . . . . . . . SS1A

Status   . . . . . COMPLETED
Message. . . . . .                                            >
Job ID . . . . . . J0714431
Max RC . . . . . . 000008
System Abend . . . N/A
User Abend . . . . N/A
Completion Type    Job ended normally                         >
```

Figure 269. **Db2 Admin Task Status Detail** *window for JCL jobs*

The fields on this window display information about the task, as follows:

Task Name
The task name.

Task Creator
The task creator.

Task Description
The task description (if provided).

Task Userid
The user ID under which the task was executed.

Begin Timestamp
　　The timestamp that the task was initiated.

SSID
　　The Db2 SSID on which the task was run.

Status
　　One of the following:

- RUNNING: The task is currently running.
- COMPLETED: The task has finished running.
- NOTRUN: The task was not run at the scheduled invocation time.
- UNKNOWN: The scheduler shut down while the task was running.

Message
　　The error or warning message from the last time the task was run.

Job ID
　　The job ID that is assigned to the job submitted by the administrative scheduler.

Max RC
　　The highest return code from the job.

System Abend
　　If the job failed, the system abend code returned from the job.

User Abend
　　If the job failed, the user abend code returned from the job.

Completion Type
　　The completion type; one of the following:

- No completion information
- Job ended normally
- Job ended by completion code
- Job had a JCL error
- Job was canceled
- Job abended
- Converter abended while processing the job
- Job failed security checks
- Job failed in end-of-memory
- blank if the STATUS field does not contain COMPLETED or if the JCL job is run with JES3 in a z/OS 1.7 or earlier system

Task status detail for stored procedures
The following figure shows the **Db2 Admin Task Status Detail** window for stored procedures:

```
                    Db2 Admin Task Status Detail
Task Creator . . . PDUSRAA                                          >
Task Name  . . . . AUTOSTATS TEST MONITOR #3                        >
Task Description   MONITOR DLCDB DATABASE                           >

Task Userid  . . . PDUSRAA                                          >
Begin Timestamp  . 2023-08-05-14.41.45.000000
End Timestamp  . . 2023-08-05-14.42.03.000000
SSID . . . . . . . SS1A

Status   . . . . . COMPLETED
Message. . . . . .   DSNT400I SQLCODE = 000,  SUCCESSFUL EXECUTION  >
SQLCode. . . . . . 000000
SQLState . . . . . 00000
SQLErrp  . . . . . DSN
SQLErrMC . . . . .                                                  >
```

*Figure 270. **Db2 Admin Task Status Detail** window for stored procedures*

The fields on this window display information about the task, as follows:

Task Name
   The task name.

Task Creator
   The task creator.

Task Description
   The task description (if provided).

Task Userid
   The user ID under which the task was executed.

Begin Timestamp
   The timestamp that the task was initiated.

SSID
   The Db2 SSID on which the task was run.

Status
   One of the following:

   • RUNNING: The task is currently running.

   • COMPLETED: The task has finished running.

   • NOTRUN: The task was not run at the scheduled invocation time.

   • UNKNOWN: The scheduler shut down while the task was running.

Message
   The error or warning message from the last time the task was run.

SQLCode
   The SQLCODE set by Db2 when the stored procedure was called by the Db2 administrative task
   scheduler.

SQLState
   The SQLSTATE set by Db2 when the stored procedure was called by the Db2 administrative task
   scheduler.

SQLErrp
   The SQLERRP set by Db2 when the stored procedure was called by the Db2 administrative task
   scheduler.

SQLErrMC
   The SQLERRMC set by Db2 when the stored procedure was called by the Db2 administrative task
   scheduler.

Task output panels

The Db2 Admin Task SYSOUT panel shows the output from the task execution. If the task was a JCL job, the output display shows the contents of the job's SYSOUT data set if the data set is still available in SDSF. If the data set is not available, the panel displays the message "No rows to display." If the task was a stored procedure, the panel displays the output parameters and results sets from the stored procedure.

SYSOUT panel for JCL jobs

The following figure shows the **Db2 Admin Task Status Detail** window for a JCL job:

```
AUTOXPRT V1R1   --------- Db2 Admin Task SYSOUT --------- 2023/10/21  21:08:57
 Option  ===>                                             Scroll ===> CSR
 -------------------------------------------------------------------------------
 Task Name    TEST EXECUTION JCL
 Task Creator TWUSR                        Db2 Subsystem: SS1A
 JobID        J0211132                     Row 1 of 58          +>
 -------------------------------------------------------------------------------
                   J E S 2   J O B   L O G  --  S Y S T E M   R S 2 2  --  N O D

 13.11.43 J0211132 ---- MONDAY,    05 SEP 2023 ----
 13.11.43 J0211132  IRR010I  USERID TWUSR    IS ASSIGNED TO THIS JOB.
 13.11.45 J0211132  ICH70001I TWUSR    LAST ACCESS AT 13:10:45 ON MONDAY, SEPTEM
 13.11.45 J0211132  $HASP373 TWUSRAPF STARTED - INIT 7    - CLASS A - SYS RS25
 13.11.45 J0211132  IEF403I TWUSRAPF - STARTED - TIME=13.11.45
 13.11.45 J0211132  RKTSW01I                                            ----------
 13.11.45 J0211132  RKTSW01I   JOBNAME  STEPNAME PROCSTEP STEP   RC  CPU (Total
 13.11.45 J0211132  RKTSW01I   TWUSRAPF CSVAPF00             1   00  00:00:00.0
 13.11.45 J0211132  IEF404I TWUSRAPF - ENDED - TIME=13.11.45
 13.11.45 J0211132  RKTSW01I   TWUSRAPF JOB TOTALS:                  00:00:00.0
 13.11.45 J0211132  $HASP395 TWUSRAPF ENDED
 ------ JES2 JOB STATISTICS ------
   05 SEP 2023 JOB EXECUTION DATE
            5 CARDS READ
           58 SYSOUT PRINT RECORDS
            0 SYSOUT PUNCH RECORDS
            4 SYSOUT SPOOL KBYTES
         0.00 MINUTES EXECUTION TIME
        1 //TWUSRAPF JOB ,'TWUSR',CLASS=A,MSGCLASS=X,
          //           NOTIFY=&SYSUID,REGION=6M
          /*JOBPARM SYSAFF=RS25
          IEFC653I SUBSTITUTION JCL - ,'TWUSR',CLASS=A,MSGCLASS=X,NOTIFY=TWUSR,R
        2 //CSVAPF00 EXEC PGM=CSVAPF00
        3 //APFLIB DD DISP=SHR,DSN=DAJ.WRK0410.LOADLIB
 ICH70001I TWUSR    LAST ACCESS AT 13:10:45 ON MONDAY, SEPTEMBER 5, 2023
 IEF236I ALLOC. FOR TWUSRAPF CSVAPF00
 IGD103I SMS ALLOCATED TO DDNAME APFLIB
 IEF142I TWUSRAPF CSVAPF00 - STEP WAS EXECUTED - COND CODE 0000
 IGD104I DAJ.WRK0410.LOADLIB                         RETAINED,  DDNAME=APFLIB
 RKTSW01I-----------------------------------------------------------------------
         - Step Termination Statistics
         -
         - Program Name      CSVAPF00                        HH:MM:SS.hh
         - Step Name         CSVAPF00           Elapsed Time   00:00:00.00
         - Procedure Step
         - Step Number              1           TCB CPU Time   00:00:00.00
         - Substep Number           0           SRB CPU Time   00:00:00.00
         - Return Code              00           Other CPU Time 00:00:00.01
         - Tape Mounts               0           Total CPU Time 00:00:00.01
         - Total I/O                 0           Connect Time/ms    0
         -
         - Region Size         6144K
         -
         - --------Below 16Meg--------        --------Above 16Meg-------
         - Private Area        9192K           Private Area      1368064K
         - Max Allocated          4K           Max Allocated           8K
         - LSQA And SWA         240K           LSQA And SWA        10464K
         -
         -----------------------------------------------------------------------
 IEF373I STEP/CSVAPF00/START 2023248.1311
 IEF032I STEP/CSVAPF00/STOP  2023248.1311
       CPU:     0 HR  00 MIN  00.00 SEC   SRB:     0 HR  00 MIN  00.00 SEC
       VIRT:    4K SYS:   240K EXT:       8K  SYS:    10464K
 IEF375I  JOB/TWUSRAPF/START 2023248.1311
 IEF033I  JOB/TWUSRAPF/STOP  2023248.1311
       CPU:     0 HR  00 MIN  00.00 SEC   SRB:     0 HR  00 MIN  00.00 SEC
 **************************** Bottom of Data ********************************
```

Figure 271. **Db2 Admin Task Status Detail** *window for JCL jobs*

The fields on this window display information about the task, as follows:

Task Name
> The task name.

Task Creator
> The task creator.

Db2 Subsystem
The Db2 SSID on which the task was run.

JobID
The job ID that was assigned to the job submitted by the administrative scheduler.

The remainder of the panel contains the contents of the job's SYSOUT data set.

SYSOUT panel for stored procedures

Note: The output command is not available for stored procedures on subsystems running Db2 versions prior to Db2 V9 NFM. If you attempt to use the O line command on such a task, message DAJM763 is displayed.

The following figure shows the **Db2 Admin Task SYSOUT** panel for stored procedures:

```
AUTOXPRT V1R1   --------- Db2 Admin Task SYSOUT --------- 2023/10/21  21:08:57
Option  ===>                                           Scroll ===> CSR
-------------------------------------------------------------------------
 Task Name    AUTOSTATS TEST RUNSTATS #2
 Task Creator PDUSRAA                          Db2 Subsystem: SS1A
 JobID                                         Row 1 of 3             >
-------------------------------------------------------------------------
Parm    Type     Value
000002 INTEGER  283
000003 INTEGER  0
000004 VARCHAR
**************************** Bottom of Data *********************************
```

*Figure 272. **Db2 Admin Task SYSOUT** panel for stored procedures*

The fields on this window display information about the task, as follows:

Task Name
The task name.

Task Creator
The task creator.

Db2 Subsystem
The Db2 SSID on which the task was run.

JobID
The job ID that was assigned to the job submitted by the administrative scheduler.

Parm, Type, Value
These columns display the output parameters, their types, and results (if any) from the stored procedure.

Updating, viewing, or deleting a task

You can use line commands to view, update, or delete an already defined task.

Procedure

- To update a task, on the **Db2 Admin Task Scheduler** panel enter U in the Cmd area next to the task and press Enter.

  The **Update Db2 Admin Task** panel is displayed, as shown in the following figure:

```
AUTOXPRT V1R1 ---------- Update Db2 Admin Task  --------- 2023/10/21  21:15:05
Option   ===>                                            Scroll ===> CSR

Task Name  . . . . TEST EXECUTION JCL                                      >
Task Description                                                           >

Begin Timestamp  . . 2023-09-05-13.29.41.000000 (Db2 Timestamp)
End Timestamp   . . . 2023-09-05-13.32.41.000000 (Db2 Timestamp)
Max Invocations  . . 2          (Integer, Blank)
SSID . . . . . . . .            (Blank for any datasharing member)

Invocation Options:
  Interval (minutes) 1          (Integer, Blank)
        -Or-
  Trigger:
    Task Name . . .                                                        >
     Cond  . . . . .             (GT,GE,EQ,LT,LE,NE)
     Code  . . . . .             (Integer, Blank)
        -Or-
  Point in Time . .                                                        >

Execution Source:
  JCL Dataset . . . TWUSR.JCLLIB
  JCL Member  . . . APFAUTH2    (If Partitioned Dataset)
  Job Wait  . . . . Y           (Y - Yes, N - No, P - Purge)
        -Or-
  Procedure Schema                                                         >
  Procedure Name                                                           >
  Procedure Input                                                          >
```

Figure 273. Update Db2Admin Task panel

This panel is the same as the panel used to create tasks, but you cannot change the task name or the execution source. For more information on this panel, refer to "Creating a task" on page 448.

- To view a task without changing it, on the **Db2 Admin Task Scheduler** panel enter V in the Cmd area next to the task and press Enter.

  The **View Db2 Admin Task** panel is displayed. You can review the task's execution settings, but cannot make any changes.

- To delete a task, on the **Db2 Admin Task Scheduler** panel enter D in the Cmd area next to the task and press Enter.

  The **Confirm deletion** window is displayed, as shown in the following figure:

```
                 Confirm deletion

Confirm delete of task: TEST EXECUTION JCL

      Delete  N  (Yes/No)
```

Figure 274. Confirm deletion window

Enter Y in the Delete field and press Enter. The task is deleted.

Chapter 27. Troubleshooting

Use these topics to diagnose and correct problems that you experience with Db2 Automation Expert.

Messages

Use the information in these messages to help you diagnose and solve Db2 Automation Expertproblems.

Message format

Db2 Automation Expert messages adhere to the following format:

```
ABCnnnx
```

Where:

ABC
Indicates that the message was issued by Db2 Automation Expert

nnn
Indicates the message identification number

x
Indicates the severity of the message:

E
Indicates that an error occurred, which might or might not require operator intervention.

I
Indicates that the message is informational only.

W
Indicates that the message is a warning to alert you to a possible error condition.

Each message also includes the following information:

Explanation:
The Explanation section explains what the message text means, why it occurred, and what its variables represent.

User response:
The User response section describes whether a response is necessary, what the appropriate response is, and how the response will affect the system or program.

Tools Customizer messages

Use the information in these messages to help you diagnose and solve Tools Customizer problems.

CCQB000I   The product parameter data was saved in the data store.

Explanation:
Changes that were made to the product parameters were saved in the data store.

System action:
None.

User response:
No action is required.

CCQB001I   The DB2 parameter data was saved in the data store.

Explanation:
Changes that were made to the Db2 parameters were saved in the data store.

System action:
None.

User response:
No action is required.

CCQB002I   The LPAR parameter data was saved in the data store.

Explanation:
Changes that were made to the LPAR parameters were saved in the data store.

System action:
None.

User response:
No action is required.

CCQB003E   **At least one step must be selected in a selected task. The selected task is *task_description*.**

Explanation:
When a task is selected, at least one step must be selected. A selected step is missing from the specified task.

System action:
Processing stops.

User response:
Select a step in the specified task or deselect the task.

CCQB004I   **The required information to run the Discover EXEC was saved in the data store.**

Explanation:
The data store contains all the information that is required to run the Discover EXEC.

System action:
None.

User response:
No action is required.

CCQB005E   **The conflicting values for the *parameter_name* parameter must be resolved before the information can be saved.**

Explanation:
Two values for one parameter conflict with each other, and they must be resolved to save the information.

System action:
Processing stops.

User response:
Resolve the conflicting values for the parameter.

CCQB006E   **One row must be selected.**

Explanation:
One row in the table must be selected.

System action:
Processing stops.

User response:
Select one row.

CCQB007E   **Only one row can be selected.**

Explanation:
Multiple rows in the table are selected, but only one row is allowed to be selected.

System action:

Processing stops.

User response:
Select only one row.

CCQC000I   **The jobs have been customized on the selected DB2 entries.**

Explanation:
The jobs were customized on the Db2 entries that were selected.

System action:
None.

User response:
Press Enter to clear the message.

CCQC001W   **The jobs were not generated on one or more of the selected DB2 entries. Press PF3 to check the Db2 entries that were not customized.**

Explanation:
The product was not customized on one or more of the Db2 entries that were selected.

System action:
None.

User response:
Press PF3 to see the Db2 entries on which the product was not customized. The status of these Db2 entries is Errors in Customization.

CCQC002I   **The edit session was started automatically because values for required parameters are missing or must be verified.**

Explanation:
If product, LPAR parameters, or Db2 parameters are not defined or if parameter definitions must be verified, an editing session for the undefined or unverified parameters starts automatically.

System action:
None.

User response:
Define values for all required product, LPAR parameters, or Db2 parameters.

CCQC003W   **The *template_name* template in the *library_name* metadata library does not contain any parameters.**

Explanation:
The specified template does not have parameters.

System action:
None.

User response:
No action is required.

CCQC004S	**The value of the "type" attribute for the *template_name* template in the *library_name* metadata library does not match the value that was previously specified. The value is *value_name*, and the previously specified value is *value_name*.**

Explanation:
The value of the "type" attribute must match the value that was previously specified.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQC005S	**The *template_name* template exceeds the number of allowed templates for a customization sequence. The template is in the *library_name* metadata library.**

Explanation:
The customization sequence can process only *number* templates. The specified template cannot be processed because the customization sequence already contains the maximum number of templates.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQC006E	**The jobs could not be generated for the *group_attach_name* Db2 group attach name.**

Explanation:
The customization jobs could not be generated for the specified Db2 group attach name.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQC007E	**The jobs could not be generated for the *subsystem_ID* Db2 subsystem.**

Explanation:
The customization jobs could not be generated for the specified Db2 subsystem.

System action:
Processing stops.

User response:

See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQC008E	**The jobs could not be generated for the *member_name* Db2 member.**

Explanation:
The customization jobs could not be generated for the specified Db2 member.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQC009S	**The jobs were not generated for the DB2 entries.**

Explanation:
One or more errors occurred while customization jobs were being generated for the selected Db2 entries.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQC010S	**The *template_name* template could not be accessed in the *library_name* metadata library.**

Explanation:
The specified template could not be accessed because the user does not have RACF access to the data set, the data set has incorrect data characteristics, or the data set is not cataloged.

System action:
Processing stops.

User response:
Ensure that you have RACF access to the data set, that the characteristics are correct according to the specifications of the product that you are customizing, and that the data set is cataloged. If the problem persists, contact IBM Software Support.

CCQC011S	**The *template_name* template could not be written to the *library_name* customization library.**

Explanation:
The specified template could not be accessed because the user does not have RACF access to the data set, the data set has incorrect data characteristics, or the data set is not cataloged.

System action:
Processing stops.

User response:
Ensure that you have RACF access to the data set, that the characteristics are correct according to the specifications of the product that you are customizing, and that the data set is cataloged. If the problem persists, contact IBM Software Support.

CCQC012W   **The job card was generated with default values because the JOB keyword was missing.**

Explanation:
Default values were used to generate the job card because the JOB keyword was not specified in the first line of the job card.

System action:
The job card was generated with default values.

User response:
No action is required. To generate the job card with your own values, add the JOB keyword in the first line of the job card.

CCQC013W   **The job card was generated with the default value for the programmer name because the specified programmer name exceeded 20 characters.**

Explanation:
Default values were used to generate the job card because the specified programmer name contained too many characters.

System action:
The job card was generated with default values.

User response:
No action is required. To generate the job card with your own values, add a valid programmer name in the job card. A valid programmer name is 1 - 20 characters.

CCQC014W   **The job card was generated with default values because the JOB keyword was not followed by a space.**

Explanation:
Default values were used to generate the job card because a space did not follow the JOB keyword.

System action:
The job card was generated with default values.

User response:
No action is required. To generate the job card with your own values, add a space after the JOB keyword in the job card.

CCQC015S   **The *template_name* template in the *library_name* metadata library contains the following**

file-tailoring control statement: *statement_name*. **This control statement is not valid in a *template_type* template.**

Explanation:
The *template_type* template cannot contain the specified type of file-tailoring control statement.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQC016S   **The)DOT file-tailoring control statement exceeded the number of allowed occurrences for the *template_name* template in the *library_name* metadata library.**

Explanation:
The)DOT file-tailoring control statement can occur only a limited number of times in the specified template.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQC017S   **The nested)DOT file-tailoring control statements exceeded the number of allowed occurrences in the *template_name* template in the *library_name* metadata library.**

Explanation:
Nested)DOT file-tailoring control statements can occur only *number* times.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQC018S   **The *template_name* template in the *library_name* metadata library is not valid because it does not contain any data.**

Explanation:
The specified template is missing required data.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQC019S   **The *template_name* template in the *library_name* metadata library is not valid because an)ENDDOT file-tailoring control statement is missing.**

Explanation:
A)ENDDOT file-tailoring control statement is required in the specified template.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQC021S   **The *template_name* template in the *library_name* metadata library is not valid because the template must start with the *parameter_name* job card parameter.**

Explanation:
The specified template must start with the specified job card parameter.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQC022S   **The parameters used in a)DOT file-tailoring control statement exceeded the number of allowed parameters in the *template_name* template. The template is in the *library_name* metadata library. The error occurs in)DOT section *section_number*.**

Explanation:
A)DOT file-tailoring control statement can contain only a limited number of parameters.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQC023S   **The)DOT file-tailoring control statement must include the *table-name* table name in the *template_name* template. The template is in the *library_name* metadata library. The error occurs in)DOT section *section_number*.**

Explanation:

The)DOT file-tailoring control statement is missing a required table name.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQC024S   **ISPF file tailoring failed for the *template_name* template in the *library_name* metadata library.**

Explanation:
An error occurred during ISPF file tailoring for the specified template.

System action:
Processing stops.

User response
Review the Tools Customizer-generated trace data set and the ISPF file tailoring trace data set. To create an ISPF file tailoring trace data set, complete the following steps:

1. Run Tools Customizer until the error is about to occur.

2. Specify the ISPFTTRC command, and press Enter.

3. Issue the Tools Customizer command that issues the error.

4. Specify the ISPFTTRC command, and press Enter. The ISPF file tailoring trace data set is created. It adheres the following naming convention: *TSO_ID*.ISPFT.TRACE, where *TSO_ID* is the TSO user ID that is being used.

If the problem persists, gather the following information and contact IBM Software Support.

- A screen capture of the Tools Customizer error. Ensure that the complete error message is displayed by pressing PF1.

- The Tools Customizer trace data set. It adheres to the following naming convention: *TSO_ID*.CCQ.TRACE, where *TSO_ID* is the TSO user ID that is running Tools Customizer.

- The ISPF file tailoring trace data set.

CCQC025I   **Customized jobs do not exist because they have not been generated.**

Explanation:
The list of customized jobs cannot be displayed because the product has not been customized for any Db2 entries.

System action:
None.

User response:
Complete the steps to customize a product.
Customized jobs are generated when all required
product, LPAR parameters, and Db2 parameters are
defined and at least one Db2 entry on which to
customize the product has been selected.

CCQC026S	The value of the "customized" attribute for the *parameter_name* parameter in the *library_name* metadata library template does not match the value that was previously specified. The value is *value_name*, and the previously specified value is *value_name*.

Explanation:
The value for the "customized" attribute for a
parameter must match the value that was previously
specified.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

CCQC027S	The *job_name* customization job was not found in the *library_name* customization library.

Explanation:
The selected customization job does not exist in the
customization library.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

CCQC028S	The *library_name* customization library was not found.

Explanation:
The customization library does not exist.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

CCQC029I	The customization jobs were generated for *Product_name*.

Explanation:
The customization jobs were generated for the specific
product.

System action:
None.

User response:
No action is required.

CCQC030S	The customization jobs cannot be generated because at least one DB2 entry must be associated with this product.

Explanation:
The product that you are customizing requires at
least one Db2 entry to be associated with it before
customization jobs can be generated.

System action:
None.

User response:
Associate a Db2 entry with the product that you are
customizing, and regenerate the jobs.

CCQC031I	The jobs were generated for the associated DB2 entries.

Explanation:
The customization jobs were generated for the Db2
entries that are associated with the product.

System action:
None.

User response:
No action is required.

CCQC032S	The customization jobs were not generated for *Product_name*.

Explanation:
A severe error occurred while the jobs were being
generated for the specified product.

System action:
None.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

CCQC033S	The *customization_library_name* has no customized jobs.

Explanation:
The specified customization library cannot be browsed
or edited because it is empty.

System action:
None.

User response:
Generate customization jobs for the specified library,
and browse or edit the library again.

CCQC034S	The specified operation is not allowed.

Explanation:
Issuing commands against customization jobs from
the customization library from an ISPF browse or

edit session that was started on the **Finish Product Customization** panel is restricted.

System action:
None.

User response:
To make changes to customization jobs, follow the steps for recustomization.

CCQC035E	**Before you generate customization jobs, edit the product parameters to select one or more tasks or steps, and then issue the G line command or the GENERATEALL command again.**

Explanation:
One or more tasks or steps must be selected before customization jobs can be generated.

System action:
None.

User response:
Edit the product parameters to select one or more tasks or steps. Then, issue the G line command or the GENERATEALL command again.

CCQC036E	**Before you exit the Product Parameters panel, you must select one or more tasks or steps to generate customization jobs or issue the CANCEL command.**

Explanation:
One or more tasks or steps must be selected to generate customization jobs or the CANCEL command must be issued before you can exit the **Product Parameters** panel.

System action:
None.

User response:
Select one or more tasks or steps, or issue the CANCEL command.

CCQC037W	**The customization information was not found.**

Explanation:
To use the JOBLIST command, the customization jobs must be regenerated by using the GENERATEALL command or the G line command.

System action:
None.

User response:
Issue the GENERATEALL command or the G line command to generate the customization jobs.

CCQC038W	**The customization information cannot be accessed because**

the *customization_member* customization member is being used.

Explanation:
The customization member that was specified on NNN is currently being used.

System action:
None.

User response:
Determine why the customization member is in use, release it, and redo the work.

CCQC039I	**The VERIFY/VERIFYOFF command is not active in Generate mode.**

Explanation:
The VERIFY/VERIFYOFF command is not active in Generate mode because all values saved in Generate mode must already have been verified.

System action:
None.

User response:
No action is required.

CCQD000W	**The *member_name* environment index member is not valid. The PL/I XML parser issued the following exception warning code: *code_number*.**

Explanation:
While determining if the specified environment index member is valid, the PL/I XML parser issued an exception warning code.

System action:
Processing continues.

User response:
See the *Enterprise PL/I for z/OS Programming Guide* for more information about the warning.

CCQD001S	**The *member_name* environment index member is not valid. The PL/I XML parser issued the following exception error code: *code_number*.**

Explanation:
While determining if the specified environment index member is valid, the PL/I XML parser issued an exception error code.

System action:
Processing continues.

User response:
See the *Enterprise PL/I for z/OS Programming Guide* for more information about the error.

CCQD002S   **The XML structure of the**
_member_name_ environment index
member is not valid. The
_element_name_ element is
unknown.

Explanation:
The specified environment index member contains an unknown element.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQD003S   **The XML structure of the**
_member_name_ environment index
member is not valid. Content is
not allowed for the _element_name_
element, but content was found.

Explanation:
Content was found in an element that cannot contain content.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQD004S   **The XML structure of the**
_member_name_ environment index
member is not valid. Content is
required for the _element_name_
element, but content was not
found.

Explanation:
The specified element does not contain required content.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQD005S   **The XML structure of the**
_member_name_ environment index
member is not valid. The
content length for the
_element_name_ element exceeds
_maximum_number_ characters.

Explanation:
The specified element contains too many characters.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQD006S   **The XML structure of**
the _member_name_ environment
index member is not valid.
The _element_name_ element
cannot occur more than
_maximum_number_ times.

Explanation:
The specified element occurs too many times in the environment index member.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQD007S   **The XML structure of the**
_member_name_ environment index
member is not valid. The
_element_name_ element must occur
at least _minimum_number_ times.

Explanation:
The specified element does not occur enough times in the environment index member.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQD008S   **The XML structure of the**
_member_name_ environment index
member is not valid. The
_attribute_name_ attribute in
the _element_name_ element
cannot occur more than
_maximum_number_ times.

Explanation:
The specified attribute occurs too many times in the environment index member.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQD009S   **The XML structure of the**
_member_name_ environment index
member is not valid. The
_attribute_name_ attribute in the
_element_name_ element must occur
at least _minimum_number_ times.

Explanation:
The specified attribute does not occur enough times in the environment index member.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQD010S	The XML structure of the *member_name* environment index member is not valid. Content is not allowed for the *attribute_name* attribute in the *element_name* element, but content was found.

Explanation:
Content was found in an attribute that cannot contain content. The name of the attribute and the name of the element that contains it are indicated in the message text.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQD011S	The XML structure of the *member_name* environment index member is not valid. Content is required for the *attribute_name* attribute in the *element_name* element, but content was not found.

Explanation:
An attribute does not contain required content. The name of the attribute and the name of the element that contains it are indicated in the message text.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQD012S	The XML structure of the *member_name* environment index member is not valid. The content length for the *element_name* element exceeds *maximum_number* characters.

Explanation:
An element contains too many characters. The name of the element and the maximum number of allowed characters are indicated in the message text.

System action:

Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQD013S	The XML structure of the *member_name* environment index member is not valid. The *attribute_name* attribute in the *element_name* element is unknown.

Explanation:
The environment index member contains an unknown attribute. The name of the unknown attribute and the name of the element that contains it are indicated in the message text.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQD050S	The following LPAR serial number is duplicated in the environment index member: *serial_number*.

Explanation:
The environment index member contains duplicate LPAR serial numbers. The duplicate serial number is indicated in the message text.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQD051S	The following DB2 serial number is duplicated in the environment index member: *serial_number*.

Explanation:
The environment index member contains duplicate Db2 serial numbers. The duplicate serial number is indicated in the message text.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQD052S	The following Db2 group attach name is duplicated in the environment index member: *group_attach_name*.

Explanation:

The environment index member contains duplicate group attach names.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

| CCQD053S | The reference to the following DB2 subsystem for a Db2 group attach name is duplicated in the environment index member: *subsystem_ID*. |

Explanation:
The environment index member contains duplicate references to a Db2 subsystem for a Db2 group attach name.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

| CCQD054S | The reference to the following DB2 subsystem for the *LPAR_name* LPAR is duplicated in the environment index member: *subsystem_ID*. |

Explanation:
The environment index member contains duplicate references to a Db2 subsystem for an LPAR. The duplicate subsystem ID is indicated in the message text.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

| CCQD055S | The following Db2 group attach name was not found in the environment index member: *group_attach_name*. |

Explanation:
A group attach name that is referenced by a Db2 member does not exist in the environment index member.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

| CCQD056S | The following LPAR was not found in the environment index member: *LPAR_name*. |

Explanation:
The LPAR does not exist in the environment index member.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

| CCQD057S | The following LPAR is duplicated in the environment index member: *LPAR_name*. |

Explanation:
The environment index member contains duplicate LPARs. The name of the duplicate LPAR name is indicated in the message text.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

| CCQD100W | The *member_name* product index member is not valid. The PL/I XML parser issued the following exception warning code: *code_number*. |

Explanation:
While determining if the product index member is valid, the PL/I XML parser issued the specified exception warning code.

System action:
Processing continues.

User response:
See the *Enterprise PL/I for z/OS Programming Guide* for more information about the specified exception warning code.

| CCQD101S | The *member_name* product index member is not valid. The PL/I XML parser issued the following exception error code: *code_number*. |

Explanation:
While determining if the product index member is valid, the PL/I XML parser issued the specified exception error code.

System action:
Processing stops.

User response:

See the *Enterprise PL/I for z/OS Programming Guide* for more information about the specified exception error code. Ensure that the Tools Customizer data store data set DCB is the same as the sample SCCQSAMP(CCQCDATS) data set DCB.

CCQD102S	**The XML structure of the *member_name* product index member is not valid. The *element_name* element is unknown.**

Explanation:
The specified product index member contains an unknown element.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQD103S	**The XML structure of the *member_name* product index member is not valid. Content is not allowed for the *element_name* element, but content was found.**

Explanation:
Content was found for an element that cannot contain content.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQD104S	**The XML structure of the *member_name* product index member is not valid. Content is required for the *element_name* element, but content was not found.**

Explanation:
The specified element does not contain required content.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQD105S	**The XML structure of the *member_name* product index member is not valid. The content length for the *element_name* element exceeds *maximum_number* characters.**

Explanation:
The specified element contains too many characters.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQD106S	**The XML structure of the *member_name* product index member is not valid. The *element_name* element cannot occur more than *maximum_number* times.**

Explanation:
The specified element occurs too many times in the product index member.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQD107S	**The XML structure of the *member_name* product index member is not valid. The *element_name* element must occur at least *minimum_number* times.**

Explanation:
The specified element does not occur enough times in the product index member.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQD108S	**The XML structure of the *member_name* product index member is not valid. The *attribute_name* attribute in the *element name* element cannot occur more than *maximum_number* times.**

Explanation:
An attribute occurs too many times. The name of the attribute and the element that contains it are indicated in the message text.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQD109S **The XML structure of the**
member_name **product index
member is not valid. The**
attribute_name **attribute in the**
element_name **element must occur
at least** *minimum_number* **times.**

Explanation:
The specified attribute does not occur enough times in
the product index member.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

CCQD110S **The XML structure of the**
member_name **product index
member is not valid. Content is
not allowed for the** *attribute_name*
attribute in the *element_name*
element, but content was found.

Explanation:
An attribute cannot contain content. The name of the
attribute and the element that contains it are indicated
in the message text.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

CCQD111S **The XML structure of the**
member_name **product index
member is not valid. Content is
required for the** *attribute_name*
attribute in the *element_name*
**element, but content was not
found.**

Explanation:
An attribute requires content. The name of the
attribute and the name of the element that contains
it are indicated in the message text.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

CCQD112S **The XML structure of the**
member_name **product index
member is not valid. The
content length for the**
element_name **element exceeds**
maximum_number **characters.**

Explanation:
The specified element contains too many characters.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

CCQD113S **The XML structure of the**
member_name **product index
member is not valid.
The** *attribute_name* **attribute in
the** *element_name* **element is
unknown.**

Explanation:
The specified attribute in the product index member is
unknown.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

CCQD118S **The content of the** *member_name*
**product index member is not valid.
The** *configuration_ID* **configuration
ID for the** *configuration-name*
configuration name is not unique.

Explanation:

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

CCQD120S **The content of the** *member_name*
**product index member is not
valid. The pack ID** *pack_ID* **that
is referenced by product prefix**
product_prefix **in the metadata
library** *library_name* **could not be
found.**

Explanation:
The specified pack ID could not be found in the
metadata library.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

CCQD121I **The specified pack contains
the** *component_name,* **which was**

previously specified as a stand-alone product.

Explanation:
The specified component of the pack was previously specified as a stand-alone product.

System action:
None.

User response:
No action is required.

| CCQD122I | The specified component metadata library was previously specified as part of the *pack_name*. |

Explanation:
The specified metadata library for the component was previously specified as part of a pack.

System action:
None.

User response:
No action is required.

| CCQD123E | The customization library name *library_name* is being used by another product or component. Specify another customization library qualifier on the Tools Customizer Settings panel. |

Explanation:
A different product or component is using the specified customization library.

System action:
None.

User response:
Specify another customization library qualifier on the **Tools Customizer Settings** panel.

| CCQD124E | The customization library *library_name* is in use by another metadata library. |

Explanation:
A different product or component is using the specified customization library. Specify another metadata library in the **Workplace** panel.

System action:
None.

User response:
Specify another customization library qualifier in the **Tools Customizer Settings** panel.

| CCQD300W | The *member_name* product environment member is not valid. The PL/I XML parser issued the |

following exception warning code: *code_number*.

Explanation:
While determining if the product environment member is valid, the PL/I XML parser issued the specified exception warning code.

System action:
Processing continues.

User response:
See the *Enterprise PL/I for z/OS Programming Guide* for more information about the specified exception warning code.

| CCQD301S | The *member_name* product environment member is not valid. The PL/I XML parser issued the following exception error code: *code_number*. |

Explanation:
While determining if the product environment member is valid, the PL/I XML parser issued the specified exception error code.

System action:
Processing stops.

User response:
See the *Enterprise PL/I for z/OS Programming Guide* for more information about the specified exception error code.

| CCQD302S | The XML structure of the *member_name* product environment member is not valid. The *element_name* element is unknown. |

Explanation:
The specified product environment member contains an unknown element.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

| CCQD303S | The XML structure of the *member_name* product environment member is not valid. Content is not allowed for the *element_name* element, but content was found. |

Explanation:
Content was found for an element that cannot contain content.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQD304S	The XML structure of the *member_name* product environment member is not valid. Content is required for the *element_name* element, but content was not found.

Explanation:
The specified element does not contain required content.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQD305S	The XML structure of the *member_name* product environment member is not valid. The content length for the *element_name* element exceeds *maximum_number* characters.

Explanation:
The specified element contains too many characters.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQD306S	The XML structure of the *member_name* product environment member is not valid. The *element_name* element cannot occur more than *maximum_number* times.

Explanation:
The specified element occurs too many times in the product environment member.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQD307S	The XML structure of the *member_name* product environment member is not valid. The *element_name* element must occur at least *minimum_number* times.

Explanation:

The specified element does not occur enough times in the product environment member.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQD308S	The XML structure of the *member_name* product environment member is not valid. The *attribute_name* attribute in the *element name* element cannot occur more than *maximum_number* times.

Explanation:
The specified attribute occurs too many times. The name of the attribute and the element that contains it are indicated in the message text.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQD309S	The XML structure of the *member_name* product environment member is not valid. The *attribute_name* attribute in the *element_name* element must occur at least *minimum_number* times.

Explanation:
The specified attribute does not occur enough times in the product environment member.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQD310S	The XML structure of the *member_name* product environment member is not valid. Content is not allowed for the *attribute_name* attribute in the *element_name* element, but content was found.

Explanation:
The specified attribute cannot contain content. The name of the attribute and the element that contains it are indicated in the message text.

System action:
Processing stops.

User response:

See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQD311S	**The XML structure of the *member_name* product environment member is not valid. Content is required for the *attribute_name* attribute in the *element_name* element, but content was not found.**

Explanation:
The specified attribute requires content. The name of the attribute and the name of the element that contains it are indicated in the message text.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQD312S	**The XML structure of the *member_name* product environment member is not valid. The content length for the *element_name* element exceeds *maximum_number* characters.**

Explanation:
The specified element contains too many characters.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQD313S	**The XML structure of the *member_name* product environment member is not valid. The *attribute_name* attribute in the *element_name* element is unknown.**

Explanation:
The specified attribute in the product environment member is unknown.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQD350I	**The *subsystem_ID* Db2 subsystem is associated with this product.**

Explanation:
The specified Db2 subsystem was added and saved in the Tools Customizer data store for the product to be customized.

System action:
Processing continues.

User response:
No action is required.

CCQD351I	**The *member_name* Db2 member for the *group_attach_name* Db2 group attach name is associated with this product.**

Explanation:
The specified Db2 member for the group attach name was added and saved in the Tools Customizer data store for the product to be customized.

System action:
Processing continues.

User response:
No action is required.

CCQD352I	**The *group_attach_name* Db2 group attach name is associated with this product.**

Explanation:
The specified Db2 group attach name was added and saved in the Tools Customizer data store for the product to be customized.

System action:
Processing continues.

User response:
No action is required.

CCQD353E	**The *subsystem_ID* Db2 subsystem is already associated with this product.**

Explanation:
The specified Db2 subsystem cannot be added for the product to be customized because it already exists in the product environment in the data store.

System action:
None.

User response:
Ensure that the Db2 subsystem is specified correctly. If the problem persists, contact IBM Software Support.

CCQD354E	**The *member_name* Db2 member for the *group_attach_name* Db2 group attach name is already associated with this product.**

Explanation:
The specified Db2 member for the group attach name cannot be added for the product to be customized because it already exists in the product environment in the data store.

System action:
None.

User response:
Ensure that the Db2 group attach name is specified correctly. If the problem persists, contact IBM Software Support.

CCQD355E   **The *group_attach_name* Db2 group attach name is already associated with this product.**

Explanation:
The specified Db2 group attach name cannot be added for the product to be customized because it already exists in the product environment in the data store.

System action:
Processing stops.

User response:
Ensure that the Db2 group attach name is specified correctly. If the problem persists, contact IBM Software Support.

CCQD356S   **The *library_name* metadata library is already associated with the maximum number of allowed Db2 entries for this product.**

Explanation:
The specified metadata library cannot be associated with more Db2 entries because it is already associated with the number of Db2 entries that are allowed.

System action:
Processing stops.

User response:
Delete an associated Db2 entry, and associate the specified library with another Db2 entry again.

CCQD357I   **The *subsystem_ID* Db2 subsystem is unassociated with this product.**

Explanation:
The specified Db2 SSID was unassociated with the product that you are customizing.

System action:
Processing continues.

User response:
No action is required.

CCQD358I   **The *member_name* Db2 member for the *group_attach_name* Db2 group attach name is unassociated with this product.**

Explanation:
The specified Db2 member for the Db2 group attach name was unassociated with the product that you are customizing.

System action:
Processing continues.

User response:

No action is required.

CCQD359I   **The *group_attach_name* Db2 group attach name is unassociated with this product.**

Explanation:
The specified Db2 group attach name was unassociated with the product that you are customizing.

System action:
Processing continues.

User response:
No action is required.

CCQD360S   **The *library_name* metadata library is not associated with the specified Db2 subsystem *subsystem_ID*.**

Explanation:
The specified Db2 subsystem and metadata library are not associated with each other.

System action:
None.

User response:
Ensure that the Db2 subsystem and the metadata library are associated. If the problem persists, contact IBM Software Support.

CCQD361S   **The *library_name* metadata library is not associated with the specified DB2 data sharing group member *member_name* for the *group_attach_name* Db2 group attach name.**

Explanation:
The specified Db2 data sharing group member for the group attach name and metadata library are not associated with each other.

System action:
None.

User response:
Ensure that the Db2 data sharing group member for the group attach name and the metadata library are associated. If the problem persists, contact IBM Software Support.

CCQD362S   **The *library_name* metadata library is not associated with the specified *group_attach_name* Db2 group attach name.**

Explanation:
The specified Db2 group attach name and metadata library are not associated with each other.

System action:

None.

User response:
Ensure that the Db2 group attach name and the metadata library are associated. If the problem persists, contact IBM Software Support.

CCQD400W	The customization parser issued the *code_number* warning code while it parsed the product customization member *member_name*. See the PL/I programming guide for more information about this XML parser continuable exception code.

Explanation:
While determining if the specified member is valid, the PL/I XML parser issued an exception warning code.

System action:
Processing stops.

User response:
See the *Enterprise PL/I for z/OS Programming Guide* for more information about the warning.

CCQD401S	The customization parser issued the *code_number* error code while it parsed the product customization member *member_name*. See the PL/I programming guide for more information about this XML parser terminating exception code.

Explanation:
While determining if the specified member is valid, the PL/I XML parser issued an exception error code.

System action:
Processing stops.

User response:
See the *Enterprise PL/I for z/OS Programming Guide* for more information about the error.

CCQD500W	The *data_set_name* data store data set was not found.

Explanation:
Tools Customizer could not find the specified data store data set.

System action:
None.

User response:
No action is required.

CCQD501W	The *data_set_name* data store data set was not found, so it was created.

Explanation:

Tools Customizer created the specified data set because it could not be found.

System action:
None.

User response:
No action is required.

CCQD502E	The *data_set_name* data store data set is not writable.

Explanation:
Tools Customizer cannot write to the specified data set.

System action:
None.

User response:
Ensure that the data set is writable.

CCQD503E	The *data_set_name* data store data set could not be opened with the *disposition_type* disposition.

Explanation:
Tools Customizer could not open the data set with the specified disposition.

System action:
Processing stops.

User response:
Ensure that you have WRITE authority access to this data set.

CCQD504E	The *data_set_name* data store data set could not be opened with the *option_name* option.

Explanation:
Tools Customizer could not open the data set with the specified option.

System action:
Processing stops.

User response:
Ensure that you have WRITE authority access to this data set.

CCQD505E	The data store data set *data_set_name* already exists in a different volume.

Explanation:
Tools Customizer could not create the specified data set because the specified data set already exists in a different volume. Data store data set names must be unique.

System action:
Processing stops.

User response:
Specify a different data store data set name.

CCQD510I   **The DB2 SSID and Db2 group attach name were created.**

Explanation:
The Db2 SSID and Db2 group attach name were created and saved in the data store.

System action:
None.

User response:
No action is required.

CCQD511E   **The DB2 entry already exists in the list of Db2 entries to be associated.**

Explanation:
The Db2 entry cannot be added because it already exists in the list of Db2 entries to be associated.

System action:
None.

User response:
Specify a different Db2 entry.

CCQD512S   **An error occurred while a DB2 entry was being created.**

Explanation:
A severe error occurred while a Db2 entry was being created.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQD513E   **The specified DB2 entry already exists and is associated with the current product on the Customizer Workplace panel.**

Explanation:
The Db2 entry cannot be added because it already exists, and it is already associated with the product to be customized.

System action:
None.

User response:
Press F3 to go to the **Customizer Workplace** panel to see the Db2 entry, or specify a different Db2 entry.

CCQD514E   **A value is required for a DB2 subsystem, a Db2 group attach name, or both before they can be created.**

Explanation:
Required information is missing. A Db2 subsystem, a Db2 group attach name, or both must be specified.

System action:
None.

User response:
Specify a Db2 subsystem, a Db2 group attach name, or both.

CCQD515E   **The specified DB2 entry already exists in the list of Db2 entries and is already associated with the current product.**

Explanation:
The Db2 entry has already been created and associated with the product that you want to customize.

System action:
None.

User response:
Specify a different Db2 entry.

CCQD516E   **The specified DB2 entry already exists in the list of Db2 entries on the Associate DB2 Entry with Product panel but is not associated with the current product.**

Explanation:
The Db2 entry exists, but it must be associated with the product to be customized.

System action:
None.

User response:
On the **Customizer Workplace** panel, issue the ASSOCIATE command to associate the Db2 entry with the product.

CCQD517S   **An error occurred while a DB2 entry was being copied.**

Explanation:
A severe error occurred while a Db2 entry was being copied

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQD518E   **A value is required for a DB2 subsystem, a Db2 group attach name, or both before they can be copied.**

Explanation:
Required information is missing. A Db2 subsystem, a Db2 group attach name, or both must be specified.

System action:

None.

User response:
Specify a Db2 subsystem, a Db2 group attach name, or both.

CCQD519I   **The DB2 entry was copied.**

Explanation:
The Db2 entry was copied and saved in the Tools Customizer data store.

System action:
None.

User response:
No action is required.

CCQD520S   **The DB2 entry was copied to the list of Db2 entries but was not associated because the product is already associated with the allowed number of Db2 entries.**

Explanation:
The Db2 entry was not completely copied because a product can be associated with only 1200 Db2 entries.

System action:
Processing stops.

User response:
Remove a Db2 entry from the list, and copy the specified Db2 entry again.

CCQD521E   *Line_command* **is not a valid line command.**

Explanation:
The specified line command is not valid. Valid line commands are on the panel.

System action:
Processing stops.

User response:
Specify a valid line command.

CCQD522E   **The** *subsystem_ID* **Db2 subsystem ID occurs more than once in the list. Each row must be unique.**

Explanation:
The specified Db2 subsystem ID can be used only once.

System action:
Processing stops.

User response:
Specify a different Db2 subsystem ID.

CCQD523E   **The** *group_attach_name* **Db2 group attach name occurs more than once in the list. Each row must be unique.**

Explanation:
The specified Db2 group attach name can be used only once.

System action:
Processing stops.

User response:
Specify a different Db2 group attach name.

CCQD524E   **The** *member_name* **Db2 member for the Db2 group attach name occurs more than once in the list. Each row must be unique.**

Explanation:
The specified Db2 member for the Db2 group attach name can be used only once.

System action:
Processing stops.

User response:
Specify a different Db2 member for the Db2 group attach name.

CCQD525I   **The DB2 entries were created.**

User response:
No action is required.

CCQD526E   **The** *subsystem_ID* **Db2 subsystem ID occurs more than once in the list. Each Db2 subsystem ID must be unique.**

Explanation:
The specified Db2 subsystem ID can be used only once.

System action:
Processing stops.

User response:
Specify a different Db2 subsystem ID.

CCQD527I   **DB2 group attach names cannot be created during the copy process.**

Explanation:
The ability to create Db2 group attach names is not available during the copy process.

System action:
None.

User response:
Create Db2 group attach names by issuing the CREATE command on the **Customizer Workplace** panel.

CCQD528E   **The** *metadata_library* **metadata library is already associated with** *number* **Db2 entries. The maximum number of associated Db2 entries for this metadata library is 256.**

Explanation:
A metadata library can be associated with a maximum of 256 Db2 entries. The specified metadata library is already associated with 256.

System action:
Processing stops.

User response:
Remove an existing association between the specified metadata library and a Db2 entry, and associate the specified the metadata library with another entry.

CCQD529I	At least one row is required.

CCQD560E	The *subsystem_ID* Db2 subsystem already exists and is associated with the current product on the Customizer Workplace panel.

Explanation:
The specified Db2 subsystem exists and is associated with the product that you are customizing.

System action:
None.

User response:
Specify another Db2 subsystem.

CCQD561E	The *member_name* Db2 member for the *group_attach_name* Db2 group attach name already exists and is associated with the current product on the Customizer Workplace panel.

Explanation:
The specified Db2 data sharing group for the Db2 group attach namer exists and is associated with the product that you are customizing.

System action:
None.

User response:
Specify another Db2 subsystem.

CCQD562E	The *group_attach_name* Db2 group attach name already exists and is associated with the current product on the Customizer Workplace panel.

Explanation:
The specified Db2 group attach name exists and is associated with the product that you are customizing. The subsystem is in the table on the **Customizer Workplace** panel.

System action:
None.

User response:
Specify another Db2 group attach name.

CCQD563E	A value is required for a DB2 subsystem, a Db2 group attach name, or both before they can be created.

Explanation:
A Db2 subsystem, a Db2 group attach name, or both are not specified so one or both of them cannot be created.

System action:
None.

User response:
Specify a value for the Db2 subsystem, the Db2 group attach name, or both.

CCQD565E	The *subsystem_ID* Db2 subsystem already exists in the list of Db2 entries and is already associated with the current product.

Explanation:
The specified subsystem is already associated.

System action:
None.

User response:
Specify a different Db2 subsystem.

CCQD566E	The *member_name* Db2 member for the *group_attach_name* Db2 group attach name already exists in the list of Db2 entries and is already associated with the current product.

Explanation:
The specified Db2member is already associated.

System action:
None.

User response:
Specify a different Db2 member.

CCQD567E	The *group_attach_name* Db2 group attach name already exists in the list of Db2 entries and is already associated with the current product.

Explanation:
The specified Db2 group attach name is already associated.

System action:
None.

User response:
Specify another Db2 group attach name.

CCQD568I	*product_name* is not associated with a DB2 entry.

Explanation:
The product that you are trying to customize is not associated with a Db2 entry. Before a product can be customized, it must be associated with at least one Db2 entry.

System action:
None.

User response:
Associate one or more Db2 entries with the product.

CCQD569I	The *product_name* product configuration is not associated with a DB2 entry.

Explanation:
The configuration for the specified product is not associated with a Db2 entry.

System action:
None.

User response:
Associate one or more Db2 entries with the configuration.

CCQD577W	The *mode_name* Db2 mode of the *subsystem_ID* Db2 subsystem is not supported by the product.

Explanation:
The product does not support the specified Db2 mode.

System action:
None.

User response:
Specify a supported Db2 mode.

CCQD578W	The *mode_name* Db2 mode of the *member_name* Db2 member for the Db2 group is not supported by the product.

Explanation:
The product does not support the specified Db2 mode.

System action:
None.

User response:
Specify a supported Db2 mode.

CCQD579W	The *mode_name* Db2 mode of the *group_name* Db2 group attach name is not supported by the product.

Explanation:
The product does not support the specified Db2 mode.

System action:
None.

User response:
Specify a supported Db2 mode.

CCQD580S	The *subsystem_ID* Db2 subsystem was copied to the list of Db2 entries but was not associated because the product is already associated with the allowed number of Db2 entries.

Explanation:
The copied Db2 subsystem was not associated with the product because the product is associated with the maximum number of Db2 entries.

System action:
None.

User response:
Remove an associated Db2 entry and associate the product with the copied Db2 subsystem.

CCQD581S	The *member_name* Db2 member for the *group_attach_name* Db2 group attach name was copied to the list of Db2 entries but was not associated because the product is already associated with the allowed number of Db2 entries.

Explanation:
The copied Db2 member for the Db2 group attach name was not associated with the product because the product is associated with the maximum number of Db2 entries.

System action:
None.

User response:
Remove an associated Db2 entry and associate the product with the copied Db2 member.

CCQD582S	The *group_attach_name* Db2 group attach name was copied to the list of Db2 entries but was not associated because the product is already associated with the allowed number of Db2 entries.

Explanation:
The copied Db2 group attach name was not associated with the product because the product is associated with the maximum number of Db2 entries.

System action:
None.

User response:
Remove an associated Db2 entry and associate the product with the copied Db2 group attach name.

CCQD583I	The *from_DB2* Db2 subsystem was copied to the *to_DB2* subsystem.

System action:
None.

User response:
No action is required.

CCQD584I	The *member_name* DB2 member for the *group_attach_name* DB2 group attach name is copied to the *subsystem_ID* DB2 subsystem.

Explanation:
The specified Db2 member was copied.

System action:
None.

User response:
No action is required.

CCQD585I	The *group_attach_name* Db2 group attach name cannot be copied because a Db2 member is required.

Explanation:
The specified Db2 group attach name was not copied because a Db2 member was missing.

System action:
None.

User response:
No action is required.

CCQD586S	The current LPAR is *LPAR_name*, but the data store contains information about the *LPAR_name* LPAR. You must use the *LPAR_name* LPAR to customize the product.

Explanation:
The LPAR that is stored in the data store data set must be used to customize the product.

System action:
Processing stops.

User response:
Use the LPAR that is stored in the data store data set.

CCQD587W	The *level_number* Db2 level of the *subsystem_name* Db2 subsystem is not supported by the product.

Explanation:
The product does not support the specified Db2 level.

System action:
Processing continues.

User response:
Specify a supported level of Db2.

CCQD588W	The *level_number* Db2 level of the *member_name* Db2 member of the *group_name* Db2 group is not supported by the product.

Explanation:
The product does not support the specified Db2 level.

System action:
Processing continues.

User response:
Specify a supported level of Db2.

CCQD589W	The *level_number* Db2 level of the *group_name* Db2 group attach name is not supported by the product.

Explanation:
The product does not support the specified Db2 level.

System action:
Processing continues.

User response:
Specify a supported level of Db2.

CCQD593I	The *subsystem_ID* Db2 subsystem was deleted.

User response:
No action is required.

CCQD594I	The *member_name* Db2 for the *group_attach_name* Db2 group attach name was deleted.

User response:
No action is required.

CCQD595I	The *group_attach_name* Db2 group attach name was deleted.

User response:
No action is required.

CCQD596E	The *subsystem_ID* Db2 subsystem was not deleted.

Explanation:
An internal error occurred while the specified Db2 subsystem was being deleted.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQD597E	The *member_name* Db2 member for the *group_attach_name* Db2 group attach name was not deleted.

Explanation:
An internal error occurred while the specified Db2 member was being deleted.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

CCQD598E   **The *group_attach_name* Db2 group attach name was not deleted.**

Explanation:
An internal error occurred while the specified Db2 group attach name was being deleted.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

CCQD600W   **The *member_name* product customization member is not valid. The PL/I XML parser issued the following exception warning code: *code_number*.**

Explanation:
While determining if the XML structure of the product customization member is valid, the PL/I XML parser issued an exception warning code.

System action:
Processing continues.

User response:
See the *Enterprise PL/I for z/OS Programming Guide* for more information about the exception warning code.

CCQD601S   **The *member_name* product customization member is not valid. The PL/I XML parser issued the following exception error code: *code_number*.**

Explanation:
While determining if the XML structure of the product customization member is valid, the PL/I XML parser issued an exception error code.

System action:
Processing stops.

User response:
See the *Enterprise PL/I for z/OS Programming Guide* for more information about the exception error code.

CCQD602S   **The XML structure of the *member_name* product customization member is not valid. The *element_name* element is unknown.**

Explanation:
The data store member contains an unknown element.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

CCQD603S   **The XML structure of the *member_name* product customization member is not valid. Content is not allowed for the *element_name* element, but content was found.**

Explanation:
The specified element cannot contain content.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

CCQD604S   **The XML structure of the *member_name* product customization member is not valid. Content is required for the *element_name* element, but content was not found.**

Explanation:
The specified element is missing required content.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

CCQD605S   **The XML structure of the *member_name* product customization member is not valid. The content length for the *element_name* element exceeds *maximum_number* characters.**

Explanation:
The specified element contains too many characters.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

CCQD606S   **The XML structure of the *member_name* product customization member is not valid. The *element_name* element cannot occur more than *maximum_number* times.**

Explanation:
The specified element occurs too many times.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQD607S	The XML structure of the *member_name* product customization member is not valid. The *element_name* element must occur at least *minimum_number* times.

Explanation:
The specified element does not occur enough times.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQD608S	The XML structure of the *member_name* product customization member is not valid. The *attribute_name* attribute in the *element_name* element cannot occur more than *maximum_number* times.

Explanation:
The specified attribute occurs too many times.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQD609S	The XML structure of the *member_name* product customization member is not valid. The *attribute_name* attribute in the *element_name* element must occur at least *minimum_number* times.

Explanation:
The specified attribute does not occur enough times.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQD610S	The XML structure of the *member_name* product customization member is not valid. Content is not allowed for the *attribute_name* attribute in

the *element_name* element, but content was found.

Explanation:
The specified attribute cannot contain content.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQD611S	The XML structure of the *member_name* product customization member is not valid. Content is required for the *attribute_name* attribute in the *element_name* element, but content was not found.

Explanation:
The specified attribute does not contain required content.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQD612S	The XML structure of the *member_name* product customization member is not valid. The content length for the *element_name* element exceeds *maximum_number* characters.

Explanation:
The specified element contains too many characters.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQD613S	The XML structure of the *member_name* product customization member is not valid. The *attribute_name* attribute in the *element_name* element is unknown.

Explanation:
The specified attribute in the data store member is unknown.

System action:
Processing stops.

User response:

See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

| CCQD614S | The content of the *member_name* product customization member is not valid. The value of the *element_name* element is not valid. The value is *value_name*. |

Explanation:
The specified value is not valid.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

| CCQD700W | The *member_name* Db2 data member is not valid. The PL/I XML parser issued the following exception warning code: *code_number*. |

Explanation:
While determining if the XML structure of the Db2 data member is valid, the PL/I XML parser issued an exception warning code.

System action:
Processing continues.

User response:
See the *Enterprise PL/I for z/OS Programming Guide* for more information about the exception warning code.

| CCQD701S | The *member_name* Db2 data member is not valid. The PL/I XML parser issued the following exception error code: *code_number*. |

Explanation:
While determining if the XML structure of the Db2 data member is valid, the PL/I XML parser issued an exception error code.

System action:
Processing continues.

User response:
See the *Enterprise PL/I for z/OS Programming Guide* for more information about the exception error code.

| CCQD750W | The *value_number* value in the Db2 parameter *parameter_name* was skipped because only *maximum_number* values are allowed. |

Explanation:
The specified value was skipped because it exceeds the number of allowed values in the Db2 parameter.

System action:
Processing continues.

User response:
No action is required. To stop this message from being issued, remove the extra values from the Db2 parameter.

| CCQD800W | The *member_name* LPAR data member is not valid. The PL/I XML parser issued the following exception warning code: *code_number*. |

Explanation:
While determining if the XML structure of the LPAR data member is valid, the PL/I XML parser issued an exception warning code.

System action:
Processing continues.

User response:
See the *Enterprise PL/I for z/OS Programming Guide* for more information about the exception warning code.

| CCQD801S | The *member_name* LPAR data member is not valid. The PL/I XML parser issued the following exception error code: *code_number*. |

Explanation:
While determining if the XML structure of the LPAR data member is valid, the PL/I XML parser issued an exception error code.

System action:
Processing continues.

User response:
See the *Enterprise PL/I for z/OS Programming Guide* for more information about the exception error code.

| CCQD850W | The *value_number* value in the LPAR parameter *parameter_name* was skipped because only *maximum_number* values are allowed. |

Explanation:
The specified value was skipped because it exceeds the number of allowed values in the LPAR parameter.

System action:
Processing continues.

User response:
No action is required. To stop this message from being issued, remove the extra values from the LPAR parameter.

| CCQD851I | The *subsystem_ID* Db2 subsystem is copied to the *member_name* Db2 member for the |

group_attach_name Db2 group attach name.

User response:
No action is required.

| CCQD852I | The *member_name* Db2 member for the *group_attach_name* Db2 group attach name is copied to the *member_name* Db2 member for the *group_attach_name* Db2 group attach name. |

User response:
No action is required.

| CCQD854I | The *member_name* Db2 member for the *group_attach_name* Db2 group 'attach name is copied to multiple Db2 entries. |

User response:
No action is required.

| CCQD900W | The *member_name* product data member is not valid. The PL/I XML parser issued the following exception warning code: *code_number*. |

Explanation:
While determining if the XML structure of the product data member is valid, the PL/I XML parser issued an exception warning code.

System action:
Processing continues.

User response:
See the *Enterprise PL/I for z/OS Programming Guide* for more information about the exception warning code.

| CCQD901S | The *member_name* product data member is not valid. The PL/I XML parser issued the following exception error code: *code_number*. |

Explanation:
While determining if the XML structure of the product data member is valid, the PL/I XML parser issued an exception error code.

System action:
Processing continues.

User response:
See the *Enterprise PL/I for z/OS Programming Guide* for more information about the exception warning code.

| CCQD950W | The *value_number* value in the product parameter *parameter_name* was skipped because only *maximum_number* values are allowed. |

Explanation:
The specified value was skipped because it exceeds the number of allowed values in the product parameter.

System action:
Processing continues.

User response:
No action is required. To stop this message from being issued, remove the extra values from the product parameter.

| CCQD960I | The *subsystem_ID* Db2 subsystem was changed to the *member_name* Db2 member for the *group_attach_name* Db2 group attach name. |

User response:
No action is required.

| CCQD961I | The *member_name* Db2 member for the *group_attach_name* Db2 group attach name was changed to the *subsystem_ID* Db2 subsystem. |

User response:
No action is required.

| CCQD962I | The *member_name* Db2 member for the *group_attach_name* Db2 group attach name was changed to the *member_name* Db2 member for the *group_attach_name* Db2 group attach name. |

User response:
No action is required.

| CCQD963E | The DB2 group attach name cannot be blank when the Db2 subsystem ID is blank. |

Explanation:
A Db2 group attach name, Db2 subsystem ID, or both must be specified.

System action:
Processing stops.

User response:
Specify a Db2 group attach name, Db2 subsystem ID, or both.

| CCQE000S | The specified message field name or message *message_ID* was not found. |

Explanation:
An error occurred while displaying a message field name or the specified message.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQE001E   **An incorrect trace level was specified. Valid trace levels are 0 - 4.**

Explanation:
A wrong trace level was specified. Valid trace levels are 0 - 4.

System action:
Processing stops.

User response:
Specify a valid trace level 0 - 4.

CCQF028E   **An asterisk was improperly specified in a filter argument.**

Explanation:
An asterisk, which is treated as data, is embedded in the filter arguments. A generic filter argument is specified by placing the asterisk in the last nonblank position of the argument. No rows match the filter arguments, so all rows will be shown.

System action:
Processing stops.

User response:
Specify a valid filter argument.

CCQF029I   **More Db2 entries are associated with the specified product. All Db2 entries are listed.**

System action:
None.

User response:
No action is required.

CCQF080I   **The customized jobs for the product that you are customizing are stored in this data set.**

System action:
None.

User response:
No action is required.

CCQF081I   **The JCL must be browsed or edited.**

Explanation:
You can either browse or edit the JCL.

System action:
None.

User response:
No action is required.

CCQF082E   **The *sort-command* command has an invalid sort field or order. The valid fields are *list-of-column-names*. The valid sort orders are A (for ascending) or D (for descending).**

Explanation:
An invalid sort field or order was specified.

System action:
Processing stops.

User response:
Specify a valid sort field or order.

CCQF083E   **The *sort-command* command is missing a sort field.**

Explanation:
A sort field must be specified.

System action:
Processing stops.

User response:
Specify a valid sort field.

CCQF084E   **The *sort-command* command has more than two sort fields specified.**

Explanation:
The specified sort command included more than two sort fields. The sort command can have up to two fields specified.

System action:
Processing stops.

User response:
Specify only one or two sort fields.

CCQF085E   **A sort order was specified incorrectly in the *sort-command* command. A sort order can be specified only after a field name.**

Explanation:
Valid orders are A (for ascending) or D (for descending).

System action:
Processing stops.

User response:
Specify a valid sort order after a field name.

CCQF086E   **The *sort-command* command has an invalid sort field. The valid fields are *list-of-the-table-column-names*.**

Explanation:
An invalid sort field was specified.

System action:
Processing stops.

User response:
Specify a valid sort field.

CCQF087E   **The *sort-command* command has an invalid sort order. The valid orders are A (for ascending) or D (for descending).**

Explanation:
An invalid sort order was specified.

System action:
Processing stops.

User response:
Specify a valid sort order.

CCQF088E   **No row match the specified filter argument. All rows are shown.**

Explanation:
No rows match the selected values.

System action:
Processing stops.

User response:
Specify a matched value for filtering.

CCQF089I   **Type the search arguments to filter objects. A generic filter argument is a search argument of the form AA*.**

Explanation:
In a generic filter argument, only the characters up to the asterisk (*) are compared. The * must be placed in the last nonblank position of the argument. Asterisks embedded in the argument are treated as data.

System action:
None.

User response:
No action is required.

CCQF110I   **To show the panel instructions section, specify a slash (/). To hide the panel instructions section, remove the slash.**

System action:
None.

User response:
No is action required.

CCQF111I   **To show the Products to Customize section, specify a slash (/). To hide the Products to Customize section, remove the slash. The Product to Customize section can be shown**

or hidden only on the Customizer Workplace panel.

System action:
None.

User response:
No is action required.

CCQF112I   **To show the Usage Notes section, specify a slash (/). To hide the Usage Notes section, remove the slash. The Usage Notes section can be shown only on the Product Parameters, LPAR Parameters, and DB2 Parameters panels.**

System action:
None.

User response:
No action is required.

CCQF113I   **The specified values have been saved.**

System action:
None.

User response:
No action is required.

CCQF114I   **Displays the Panel Display Options panel. Use this panel to select which information to display on panels .**

System action:
None.

User response:
No action is required.

CCQF116I   **The fully qualified name of the data set into which you want to copy the current user profile. If the data set name exceeds 42 characters, enclose the name in quotation marks. ALTER or UPDATE authorization to this data set is required.**

System action:
None.

User response:
No action is required.

CCQF117I   **The volume name in which the data set will reside. If left blank, the volume name will be decided by the system.**

System action:
None.

User response:
No action is required.

CCQF110I   **To show the panel instructions section, specify a slash (/). To hide the panel instructions section, remove the slash.**

System action:
None.

User response:
No is action required.

CCQH001W   **The specified option** *option_name* **is not valid.**

Explanation:
The option that was specified is not a valid option on the panel.

System action:
Tools Customizer stops.

User response:
Specify a valid option on the panel.

CCQH006W   **Before you customize a product, verify your user settings.**

Explanation:
The user settings must be verified before a product can be customized.

System action:
Tools Customizer stops.

User response:
Verify the user settings.

CCQH007E   **Check the user settings. One or more current values are not valid.**

Explanation:
One or more of the values in the user settings is not valid.

System action:
Tools Customizer stops.

User response:
Ensure that the specified values for the user settings are valid.

CCQH008W   **Before you use Tools Customizer, you must select option 0 to verify your user settings.**

Explanation:
The user settings must be changed before a product can be customized.

System action:
Tools Customizer stops.

User response:
Change the user settings.

CCQH009E   **You must select option 0 to change your user settings.**

Explanation:
User settings must be changed before a product can be customized.

System action:
Tools Customizer stops.

User response:
Change the user settings.

CCQI000W   **The XML structure of the** *member_name* **Db2 parameter metadata member is not valid. The PL/I XML parser issued the following exception warning code:** *code_number***.**

Explanation:
While determining if the Db2 parameter metadata member is valid, the PL/I XML parser issued an exception warning code.

System action:
Processing continues.

User response:
See the *Enterprise PL/I for z/OS Programming Guide* for more information about the exception warning code.

CCQI001S   **The XML structure of the** *member_name* **Db2 parameter metadata member is not valid. The PL/I XML parser issued the following exception error code:** *code_number***.**

Explanation:
While determining if the Db2 parameter metadata member is valid, the PL/I XML parser issued an exception error code.

System action:
Processing stops.

User response:
See the *Enterprise PL/I for z/OS Programming Guide* for more information about the exception warning code.

CCQI002S   **The XML structure of the** *member_name* **Db2 parameter metadata member is not valid. The** *element name* **element is unknown.**

Explanation:
The specified element in the Db2 parameter metadata member is unknown.

System action:
Processing stops.

User response:

See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI003S   **The XML structure of the *member_name* Db2 parameter metadata member is not valid. Content is not allowed for the *element_name* element, but content was found.**

Explanation:
The specified element cannot contain content.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI004S   **The XML structure of the *member_name* Db2 parameter metadata member is not valid. Content is required for the *element_name* element, but content was not found.**

Explanation:
The specified element requires content.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI005S   **The XML structure of the *member_name* Db2 parameter metadata member is not valid. The content length for the *element_name* element cannot exceed *maximum_number* characters.**

Explanation:
The specified element contains too many characters.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI006S   **The XML structure of the *member_name* Db2 parameter metadata member is not valid. The content length for the *element_name* element must be at least *minimum_number* characters.**

Explanation:

The specified element does not contain enough characters.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI007S   **The XML structure of the *member_name* Db2 parameter metadata member is not valid. The *element_name* element must occur at least *minimum_number* times.**

Explanation:
The specified element does not occur enough times.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI008S   **The XML structure of the *member_name* Db2 parameter metadata member is not valid. The *attribute_name* attribute in the *element_name* element cannot occur more than *maximum_number* times.**

Explanation:
The specified attribute occurs too many times.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI009S   **The XML structure of the *member_name* Db2 parameter metadata member is not valid. The *attribute_name* attribute in the *element_name* element must occur at least *minimum_number* times.**

Explanation:
The specified attribute did not occur enough times.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI010S   **The XML structure of the *member_name* Db2 parameter metadata member is not valid.**

Content is not allowed for the *attribute_name* attribute in the *element_name* element, but content was found.

Explanation:
The specified attribute cannot have content.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI011S	**The XML structure of the *member_name* Db2 parameter metadata member is not valid. Content is required for the *attribute_name* attribute in the *element_name* element, but content was not found.**

Explanation:
The specified attribute is missing required content.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI012S	**The XML structure of the *member_name* Db2 parameter metadata member is not valid. The content length for the *element_name* element cannot exceed *maximum_number* characters.**

Explanation:
The specified element contains too many characters.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI013S	**The XML structure of the *member_name* Db2 parameter metadata member is not valid. The *attribute_name* attribute in the *element_name* element is unknown.**

Explanation:
The specified attribute in the Db2 parameter metadata member is unknown.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI014S	**The content of the *member_name* Db2 parameter metadata member is not valid because the value of the *element_name* element is incorrect. The value is *value_name*.**

Explanation:
The specified value of the element is not a valid value.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI015S	**The content of the DB2 parameter metadata member is not valid because the value of the *attribute_name* attribute in the *element_name* element is incorrect. The value of the attribute is *value_name*.**

Explanation:
The specified value of the attribute is not a valid value.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI016S	**The content of the DB2 parameter metadata member is not valid because the data type of the *element_name* element is incorrect. The value is *value_name*.**

Explanation:
The specified data type is not a valid data type.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI017S	**The content of the DB2 parameter metadata member is not valid because the data type of the *attribute_name* attribute in the *element_name* element is incorrect. The value of the attribute is *value_name*.**

Explanation:

The specified data type is not a valid data type.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI050S **The** *member_name* **Db2 parameter metadata member was not found in the** *data_set_name* **data set.**

Explanation:
Tools Customizer could not find the specified Db2 parameter metadata member.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI051S **The** *parameter_name* **LPAR parameter in the** *template_name* **template does not have associated metadata in the** *member_name* **LPAR parameter metadata member.**

Explanation:
The specified template does not contain metadata for an LPAR parameter. The name of the LPAR parameter metadata member, the name of the LPAR parameter, and the name of the template are indicated in the message text.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI052S **The** *parameter_name* **product parameter in the** *template_name* **template does not have associated metadata in the** *member_name* **product parameter metadata member.**

Explanation:
The specified template does not contain metadata for a product parameter. The name of the product parameter metadata member, the name of the product parameter, and the name of the template are indicated in the message text.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI053E **The following metadata data set was not found:** *data_set_name.*

Explanation:
Tools Customizer could not find the specified metadata data set.

System action:
Processing stops.

User response:
Ensure that the metadata data set is specified correctly. If the problem persists, contact IBM Software Support.

CCQI054E **The following metadata data set could not be opened:** *data_set_name.*

Explanation:
Tools Customizer could not open the specified LPAR metadata data set.

System action:
Processing stops.

User response:
Ensure the metadata data set was specified correctly.

CCQI055S **The CCQ$$DB2 Db2 parameter metadata member was not found in the** *data_set_name* **Tools Customizer metadata data set.**

Explanation:
Tools Customizer could not find the Db2 parameter metadata member in the specified Tools Customizer metadata data set.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI056S **The CCQ$$LPR LPAR parameter metadata member was not found in the** *data_set_name* **data set.**

Explanation:
Tools Customizer could not find the specified LPAR parameter metadata member.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI057S **The** *member_name* **product parameter metadata member was not found in the** *data_set_name* **data set.**

Explanation:
The product parameter metadata member was not found in the specified data set.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI058I	*Product_name* does not have any Db2 parameters.

Explanation:
Db2 parameters are not required to customize the specified product.

System action:
Processing continues.

User response:
No action is required.

CCQI059I	*Product_name* does not have any LPAR parameters.

Explanation:
LPAR parameters are not required to customize the specified product.

System action:
Processing continues.

User response:
No action is required.

CCQI060S	The *parameter_name* Db2 parameter in the *task_description* task condition does not have associated metadata in the *member_name* Db2 parameter metadata member.

Explanation:
Associated metadata is missing for the specified Db2 parameter in a task.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI061S	The *parameter_name* LPAR parameter in the *task_description* task condition does not have associated metadata in the *member_name* LPAR parameter metadata member.

Explanation:
Associated metadata is missing for the specified LPAR parameter in a task.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI062S	The *parameter_name* product parameter in the *task_description* task condition does not have associated metadata in the *member_name* product parameter metadata member.

Explanation:
Associated metadata is missing for the specified product parameter in a task.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI063S	The *parameter_name* Db2 parameter in the *task_description* task and the *step_description* step does not have associated metadata in the *member_name* Db2 parameter metadata member.

Explanation:
Associated metadata is missing for the specified Db2 parameter in a task and step.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI064S	The *parameter_name* LPAR parameter in the *task_description* task and the *step_description* step does not have associated metadata in the *member_name* LPAR parameter metadata member.

Explanation:
Associated metadata is missing for the specified LPAR parameter in a task and step.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI065S	The *parameter_name* product parameter in the *task_description* task and the *step_description*

step does not have associated metadata in the *member_name* parameter metadata member.

Explanation:
Associated metadata is missing for the specified parameter in a task and step.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI066S	**The *parameter_name* Db2 parameter in the *task_description* task, *step_description* step, and *template_name* template condition does not have associated metadata in the *member_name* Db2 parameter metadata member.**

Explanation:
Associated metadata is missing for the specified Db2 parameter in a task, step, and template.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI067S	**The *parameter_name* LPAR parameter in the *task_description* task, *step_description* step, and *template_name* template condition does not have associated metadata in the *member_name* LPAR parameter metadata member.**

Explanation:
Associated metadata is missing for the specified LPAR parameter in a task, step, and template.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI068S	**The *parameter_name* product parameter in the *task_description* task, *step_description* step, and *template_name* template condition does not have associated metadata in the *member_name* product parameter metadata member.**

Explanation:

Associated metadata is missing for the specified product parameter in a task, step, and template.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI069S	**Product metadata does not support multiple configurations, but the *template_name* product template contains the *parameter_name* parameter. Enable multiple configurations support for this product, and try again.**

Explanation:
The specified template contains a parameter for multiple configurations, but the product is not enabled to support multiple configurations.

System action:
Processing stops.

User response:
Enable multiple configurations support, and try again.

CCQI070E	**The *parameter_name* Db2 parameter metadata member is not valid. The default length for the *parameter-element_name* parameter element exceeds the length of the parameter. The default length is *default_length*, and the specified length is *specified_length*. The default length will be truncated accordingly.**

Explanation:
The specified length cannot be shorter than the default length.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI071E	**The *parameter_name* LPAR parameter metadata member is not valid. The default length for the *parameter-element_name* parameter element exceeds the length of the parameter. The default length is *default_length*, and the specified length is *specified_length*. The default**

length will be truncated accordingly.

Explanation:
The specified length cannot be shorter than the default length.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI072E	The *parameter_name* product parameter metadata member is not valid. The default length for the *parameter-element_name* parameter element exceeds the length of the parameter. The default length is *default_length*, and the specified length is *specified_length*. The default length will be truncated accordingly.

Explanation:
The specified length cannot be shorter than the default length.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI073S	The XML structure of the *member_name* Db2 parameter metadata member is not valid. The following value of the *attribute_name* attribute in the *element_name* element already exists: *value_name*.

Explanation:
The specified value already exists for an attribute.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI074S	The XML structure of the *member_name* LPAR parameter metadata member is not valid. The following value of the *attribute_name* attribute in the *element_name* element already exists: *value_name*.

Explanation:

The specified value already exists for an attribute.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI075S	The XML structure of the *member_name* product parameter metadata member is not valid. The following value of the *attribute_name* attribute in the *element_name* element already exists: *value_name*.

Explanation:
The specified value already exists for an attribute.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI076S	The XML structure of the *member_name* Db2 parameter metadata member is not valid. The *parameter_name* parameter refers to the *section-name* section. This section was not found in the Db2 parameter metadata member.

Explanation:
The specified value already exists for an attribute.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI077S	The XML structure of the *member_name* LPAR parameter metadata member is not valid. The *parameter_name* parameter refers to the *section-name* section. This section was not found in the LPAR parameter metadata member.

Explanation:
The specified parameter refers to a section that is not in the LPAR parameter metadata member.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI078S   **The XML structure of the** *member_name* **product parameter metadata member is not valid. The** *parameter_name* **parameter refers to the** *section-name* **section. This section was not found in the product parameter metadata member.**

Explanation:
The specified parameter refers to a section that is not in the product parameter metadata member.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI080S   **The content of the** *member_name* **Db2 parameter metadata member is not valid because the value of the** *attribute_name* **attribute in the** *element_name* **element is incorrect. The value of the attribute is** *value_name*.

Explanation:
The specified value for an attribute in the Db2 parameter metadata member is not valid.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI081S   **The content of the** *member_name* **LPAR parameter metadata member is not valid because the value of the** *attribute_name* **attribute in the** *element_name* **element is incorrect. The value of the attribute is** *value_name*.

Explanation:
The specified value for an attribute in the LPAR parameter metadata member is not valid.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI082S   **The content of the** *member_name* **product parameter metadata member is not valid because the value of the** *attribute_name* **attribute in the** *element_name*

element is incorrect. The value of the attribute is *value_name*.

Explanation:
The specified value for an attribute in the product parameter metadata member is not valid.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI088I   **The** *command* **command is not active in BROWSE mode.**

Explanation:
The specified command can be entered only in Edit mode.

System action:
Processing continues.

User response:
Put the panel in Edit mode and reissue the command.

CCQI089I   **The** *command* **command is already active.**

System action:
Processing continues.

User response:
No action required.

CCQI090S   **The product-defined Db2 parameter** *parameter_name* **in the** *member_name* **parameter metadata member references the** *section_ID* **section ID, but this ID does not exist in either the parameter metadata member or the Db2 parameter metadata member.**

Explanation:
A section that does not exist in the parameter metadata member or the Db2 parameter metadata member is referenced by the specified Db2 parameter.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI091S   **The product-defined LPAR parameter in the** *member_name* **parameter metadata member references the** *section_ID* **section ID, but this ID does not exist in either the parameter metadata**

member or the LPAR parameter metadata member.

Explanation:
A section that does not exist in the parameter metadata member or the LPAR parameter metadata member is being referenced by the specified LPAR parameter.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI092S **The overridden DB2 parameter** *parameter_name* **in the** *member_name* **parameter metadata member does not exist in the Db2 parameter metadata member.**

Explanation:
The specified parameter does not exist.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI093S **The overridden LPAR parameter** *parameter_name* **in the** *member_name* **parameter metadata member does not exist in the LPAR parameter metadata member.**

Explanation:
The specified parameter does not exist.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI094S **The CCQ$$PRD product customization parameter metadata member was not found in the** *data_set_name* **data set.**

Explanation:
The specified data set must contain the CCQ$$PRD product customization parameter metadata member

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI100W **The XML structure of the** *member_name* **LPAR parameter metadata member is not valid. The PL/I XML parser issued the following exception warning code:** *code_number*.

Explanation:
While determining if the LPAR parameter metadata member is valid, the PL/I XML parser issued an exception warning code.

System action:
Processing continues.

User response:
See the *Enterprise PL/I for z/OS Programming Guide* for more information about the exception warning code.

CCQI101S **The XML structure of the** *member_name* **LPAR parameter metadata member is not valid. The PL/I XML parser issued the following exception error code:** *code_number*.

Explanation:
While determining if the LPAR parameter metadata member is valid, the PL/I XML parser issued an exception error code.

System action:
Processing stops.

User response:
See the *Enterprise PL/I for z/OS Programming Guide* for more information about the exception warning code.

CCQI102S **The XML structure of the** *member_name* **LPAR parameter metadata member is not valid. The** *element_name* **element is unknown.**

Explanation:
The specified element in the LPAR parameter metadata member is unknown.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI103S **The XML structure of the** *member_name* **LPAR parameter metadata member is not valid. Content is not allowed for the** *element_name* **element, but content was found.**

Explanation:
The specified element cannot contain content.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI104S	The XML structure of the *member_name* LPAR parameter metadata member is not valid. Content is required for the *element_name* element, but content was not found.

Explanation:
The specified element requires content.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI105S	The XML structure of the *member_name* LPAR parameter metadata member is not valid. The content length for the *element_name* element cannot exceed *maximum_number* characters.

Explanation:
The specified element contains too many characters.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI106S	The XML structure of the *member_name* LPAR parameter metadata member is not valid. The content length for the *element_name* element must be at least *minimum_number* characters.

Explanation:
The specified element does not contain enough characters.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI107S	The XML structure of the *member_name* LPAR parameter metadata member is not valid. The

element_name element must occur at least *minimum_number* times.

Explanation:
The specified element does not occur enough times.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI108S	The XML structure of the *member_name* LPAR parameter metadata member is not valid. The *attribute_name* attribute in the *element_name* element cannot occur more than *maximum_number* times.

Explanation:
The specified attribute occurs too many times.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI109S	The XML structure of the *member_name* LPAR parameter metadata member is not valid. The *attribute_name* attribute in the *element_name* element must occur at least *minimum_number* times.

Explanation:
The specified attribute did not occur enough times.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI110S	The XML structure of the *member_name* LPAR parameter metadata member is not valid. Content is not allowed for the *attribute_name* attribute in the *element_name* element, but content was found.

Explanation:
The specified attribute cannot have content.

System action:
Processing stops.

User response:

See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

| CCQI111S | The XML structure of the *member_name* LPAR parameter metadata member is not valid. Content is required for the *attribute_name* attribute in the *element_name* element, but content was not found. |

Explanation:
The specified attribute is missing required content.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

| CCQI112S | The XML structure of the *member_name* LPAR parameter metadata member is not valid. The content length for the *element_name* element cannot exceed *maximum_number* characters. |

Explanation:
The specified element contains too many characters.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

| CCQI113S | The XML structure of the *member_name* LPAR parameter metadata member is not valid. The *attribute_name* attribute in the *element_name* element is unknown. |

Explanation:
The specified attribute in the LPAR parameter metadata member is unknown.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

| CCQI114S | The content of the *member_name* LPAR parameter metadata member is not valid because the value of the *element_name* element is incorrect. The value is *value_name*. |

Explanation:

The specified value for an element in the LPAR parameter metadata member is not valid.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

| CCQI115S | The content of the *member_name* LPAR parameter metadata member is not valid because the value of the *attribute_name* attribute in the *element_name* element is incorrect. The value of the attribute is *value_name*. |

Explanation:
The specified value for an attribute in the LPAR parameter metadata member is not valid.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

| CCQI116S | The content of the *member_name* LPAR parameter metadata member is not valid because the data type of the *element_name* element is incorrect. The value is *value_name*. |

Explanation:
The specified data type value for an element in the LPAR parameter metadata member is not valid.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

| CCQI117S | The content of the *member_name* LPAR parameter metadata member is not valid because the data type of the *attribute_name* attribute in the *element_name* element is incorrect. The value is *value_name*. |

Explanation:
The specified data type value for an attribute in the LPAR parameter metadata member is not valid.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI120S   **The XML structure of the**
_member_name_ Db2 parameter
metadata member is not valid.
The _element_name_ element in
the _parameter_name_ parameter
contains duplicate values for
the _element_name_ element. The
duplicate value is _value_name_.

Explanation:
An element contains the specified duplicate value.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

CCQI121S   **The XML structure of the**
_member_name_ LPAR parameter
metadata member is not valid.
The _element_name_ element in
the _parameter_name_ parameter
contains duplicate values for
the _element_name_ element. The
duplicate value is _value_name_.

Explanation:
An element contains the specified duplicate value.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

CCQI122S   **The XML structure of**
the _member_name_ parameter
metadata member is not valid.
The _element_name_ element in
the _parameter_name_ parameter
contains duplicate values for
the _element_name_ element. The
duplicate value is _value_name_.

Explanation:
An element contains the specified duplicate value.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

CCQI123S   **The XML structure of the**
_member_name_ discover metadata
member is not valid. The
_element_name_ element in
the _parameter_name_ parameter
contains duplicate values for

the _element_name_ element. The
duplicate value is _value_name_.

Explanation:
An element contains the specified duplicate value.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

CCQI124S   **The XML structure of**
the _member_name_ product
customization parameter
metadata member is not valid.
The _element_name_ element in
the _parameter_name_ parameter
contains duplicate values for
the _element_name_ element. The
duplicate value is _value_name_.

Explanation:
An element contains the specified duplicate value.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

CCQI200W   **The XML structure of**
the _member_name_ information
metadata member is not valid.
The PL/I XML parser issued the
following exception warning code:
_code_number_.

Explanation:
While determining if the information metadata
member is valid, the PL/I XML parser issued an
exception warning code.

System action:
Processing continues.

User response:
See the _Enterprise PL/I for z/OS Programming Guide_ for
more information about the exception warning code.

CCQI201S   **The XML structure of**
the _member_name_ information
metadata member is not valid.
The PL/I XML parser issued the
following exception error code:
_code_number_.

Explanation:
While determining if the information metadata
member is valid, the PL/I XML parser issued an
exception error code.

System action:

Processing stops.

User response:
See the *Enterprise PL/I for z/OS Programming Guide* for more information about the exception warning code.

CCQI202S   **The XML structure of the *member_name* information metadata member is not valid. The *element name* element is unknown.**

Explanation:
The specified element in the information metadata member is unknown.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI203S   **The XML structure of the *member_name* information metadata member is not valid. Content is not allowed for the *element_name* element, but content was found.**

Explanation:
The specified element cannot contain content.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI204S   **The XML structure of the *member_name* information metadata member is not valid. Content is required for the *element_name* element, but content was not found.**

Explanation:
The specified element requires content.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI205S   **The XML structure of the *member_name* information metadata member is not valid. The content length for the *element_name* element cannot exceed *maximum_number* characters.**

Explanation:
The specified element contains too many characters.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI206S   **The XML structure of the *member_name* information metadata member is not valid. The content length for the *element_name* element must be at least *minimum_number* characters.**

Explanation:
The specified element does not contain enough characters.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI207S   **The XML structure of the *member_name* information metadata member is not valid. The *element_name* element must occur at least *minimum_number* times.**

Explanation:
The specified element does not occur enough times.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI208S   **The XML structure of the *member_name* information metadata member is not valid. The *attribute_name* attribute in the *element_name* element cannot occur more than *maximum_number* times.**

Explanation:
The specified attribute occurs too many times.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI209S   **The XML structure of the *member_name* information**

metadata member is not valid. The *attribute_name* attribute in the *element_name* element must occur at least *minimum_number* times.

Explanation:
The specified attribute did not occur enough times.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI210S   The XML structure of the *member_name* information metadata member is not valid. Content is not allowed for the *attribute_name* attribute in the *element_name* element, but content was found.

Explanation:
The specified attribute cannot have content.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI211S   The XML structure of the *member_name* information metadata member is not valid. Content is required for the *attribute_name* attribute in the *element_name* element, but content was not found.

Explanation:
The specified attribute is missing required content.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI212S   The XML structure of the *member_name* information metadata member is not valid. The content length for the *element_name* element cannot exceed *maximum_number* characters.

Explanation:
The specified element contains too many characters.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI213S   The XML structure of the *member_name* information metadata member is not valid. The *attribute_name* attribute in the *element_name* element is unknown.

Explanation:
The specified attribute in the information metadata member is unknown.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI214S   The content of the *member_name* information metadata member is not valid because the value of the *element_name* element is incorrect. The value is *value_name*.

Explanation:
The specified value for an element in the information metadata member is not valid.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI215S   The content of the *member_name* information metadata member is not valid because the value of the *attribute_name* attribute in the *element_name* element is incorrect. The value is *value_name*.

Explanation:
The specified value for an attribute in the information metadata member is not valid.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI216S   The content of the *member_name* information metadata member is not valid because the data type of the *element_name* element

is incorrect. The value is
value_name.

Explanation:
The specified data type value for an element in the information metadata member is not valid.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI217S	The content of the *member_name* information metadata member is not valid because the data type of the *attribute_name* attribute in the *element_name* element is incorrect. The value is *value_name.*

Explanation:
The specified data type value for an attribute in the information metadata member is not valid.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI218S	The content of the *member_name* information metadata member is not valid. The length of the *value_name* value that of the *attribute_name* attribute is longer than the *value_name* value of the *attribute_name* attribute.

Explanation:
The first specified value cannot be longer than the second specified value.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI219S	The content of the *member_name* information metadata member is not valid. The *value_name* value of the *attribute_name* attribute contains the *value_name* value.

Explanation:
The first specified value cannot be longer than the second specified value.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI220S	The XML structure of the *member_name* information metadata member is not valid. Content for the *attribute_name* attribute in the *element_name* element exceed *maximum_number* characters.

Explanation:
The specified attribute contains too many characters.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI223S	The XML structure of the *member_name* information metadata member is not valid. The value that is specified for the Db2 Level already exists. The value is *value_name.*

Explanation:
The specified value already exists.

System action:
Processing stops.

User response:
Specify a different Db2 level. If the problem persists, contact IBM Software Support.

CCQI224S	The XML structure of the *member_name* information metadata member is not valid. The value that is specified for the Db2 Mode already exists. The value is *value_name.*

Explanation:
The specified value already exists.

System action:
Processing stops.

User response:
Specify a different Db2 mode. If the problem persists, contact IBM Software Support.

CCQI250S	The information metadata member was not found in the *data_set_name* data set.

Explanation:
Tools Customizer could not find the information metadata member in the specified data set.

System action:

Processing stops.

User response

If this message was issued on the **Specify the Metadata Library** (CCQPHLQ) panel, specify the product metadata library. The name of this library is *hlq*.SDAJDENU.

Do not specify the Tools Customizer metadata library, which is *hlq*.SCCQDENU.

If the problem persists, identify the name of the Tools Customizer trace data set and contact IBM Software Support.

CCQI251E **The *member_name* member was not accessible in the *data_set_name* data set.**

Explanation:
The specified member could not be accessed in the data set.

System action:
Processing stops.

User response:
Specify the correct metadata library.

CCQI252S **The information metadata member was not found in the *library_name* component metadata library that is part of the *library_name* pack metadata library. The name of the pack is *pack_name*.**

Explanation:
The specified component metadata library does not contain the information metadata member.

System action:
Processing stops.

User response:
Specify the correct metadata library.

CCQI253E **The *library_name* Tools Customizer metadata library is not current. Update the metadata library on the Tools Customizer Settings panel.**

Explanation:
The specified metadata library is not current.

System action:
Processing stops.

User response:
Specify a current metadata library on the **Tools Customizer Settings** panel.

CCQI300W **The XML structure of the *member_name* sequence metadata member is not valid. The PL/I XML parser issued the following exception warning code: *code_number*.**

Explanation:
While determining if the sequence metadata member is valid, the PL/I XML parser issued an exception warning code.

System action:
Processing continues.

User response:
See the *Enterprise PL/I for z/OS Programming Guide* for more information about the exception warning code.

CCQI301S **The XML structure of the *member_name* sequence metadata member is not valid. The PL/I XML parser issued the following exception error code: *code_number*.**

Explanation:
While determining if the sequence metadata member is valid, the PL/I XML parser issued an exception error code.

System action:
Processing stops.

User response:
See the *Enterprise PL/I for z/OS Programming Guide* for more information about the exception error code, and contact IBM Software Support.

CCQI302S **The XML structure of the *member_name* sequence metadata member is not valid. The *element_name* element is unknown.**

Explanation:
The specified element in the sequence metadata member is unknown.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI303S **The XML structure of the *member_name* sequence metadata member is not valid. Content is not allowed for the *element_name* element, but content was found.**

Explanation:
The specified element cannot contain content.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI304S   **The XML structure of the *member_name* sequence metadata member is not valid. Content is required for the *element_name* element, but content was not found.**

Explanation:
The specified element is missing required content.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI305S   **The XML structure of the *member_name* sequence metadata member is not valid. Content length for the *element_name* element cannot exceed *maximum_number* characters.**

Explanation:
The specified element contains too many characters.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI306S   **The XML structure of the *member_name* sequence metadata member is not valid. The *element_name* element cannot occur more than *maximum_number* times.**

Explanation:
The specified element occurs too many times.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI307S   **The XML structure of the *member_name* sequence metadata member is not valid. The *element_name* element must occur at least *minimum_number* times.**

Explanation:
The specified element does not occur enough times.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI308S   **The XML structure of the *member_name* sequence metadata member is not valid. The *attribute_name* attribute in the *element_name* element cannot occur more than *maximum_number* times.**

Explanation:
The specified attribute occurs too many times.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI309S   **The XML structure of the *member_name* sequence metadata member is not valid. The *attribute_name* attribute in the *element_name* element must occur at least *minimum_number* times.**

Explanation:
The specified attribute does not occur enough times.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI310S   **The XML structure of the *member_name* sequence metadata member is not valid. Content is not allowed for the *attribute_name* attribute in the *element_name* element, but content was found.**

Explanation:
The specified attribute cannot contain content.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI311S   **The XML structure of the *member_name* sequence metadata member is not valid. Content is**

required for the *attribute_name* attribute in the *element_name* element, but content was not found.

Explanation:
The specified attribute is missing required content.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI312S	**The XML structure of the *member_name* sequence metadata member is not valid. The content length for the *element_name* element cannot exceed *maximum_number* characters.**

Explanation:
The specified element contains too many characters.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI313S	**The XML structure of the *member_name* sequence metadata member is not valid. The *attribute_name* attribute in the *element_name* element is unknown.**

Explanation:
The specified attribute in the sequence metadata member is unknown.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI314S	**The content of the *member_name* sequence metadata member is not valid because the value of the *element_name* element is incorrect. The value is *value_name*.**

Explanation:
The specified value for an element in the sequence metadata member is not valid.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI315S	**The content of the *member_name* sequence metadata member is not valid because the value of the *attribute_name* attribute in the *element_name* element is incorrect. The value is *value_name*.**

Explanation:
The specified value for an attribute in the sequence metadata member is not valid.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI316S	**The content of the *member_name* sequence metadata member is not valid because the data type of the *element_name* element is incorrect. The value is *value_name*.**

Explanation:
The specified data type value for an element in the sequence metadata member is not valid.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI317S	**The content of the *member_name* sequence metadata member is not valid because the data type of the *attribute_name* attribute in the *element_name* element is incorrect. The value is *value_name*.**

Explanation:
The specified data type value for an attribute in the sequence metadata member is not valid.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI350S	**The XML structure of the *member_name* sequence metadata member is not valid because the value of the *attribute_name***

**attribute in the *element_name*
element is incorrect. The value is
value_name.**

Explanation:
A specified value for an attribute in the sequence
metadata member is not valid.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

| CCQI351S | **The *member_name* sequence
metadata member was not found
in the *data_set_name* metadata
data set.** |
|---|---|

Explanation:
Tools Customizer could not find the specified
sequence metadata member in the metadata data set.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

| CCQI352S | **The *template_name* product
template was not found in the
data_set_name metadata data set.** |
|---|---|

Explanation:
Tools Customizer could not find the specified product
template in the data set.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

| CCQI353S | **The sequence metadata member
was not found in the
data_set_name component data
set that is part of the
data_set_name pack.** |
|---|---|

Explanation:
Tools Customizer could not find the sequence
metadata member.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

| CCQI360S | **The XML structure of the
member_name sequence metadata
member is not valid. The value of** |
|---|---|

**the *attribute_name* attribute in the
element_name element already
exists.**

Explanation:
The specified attribute contains a value that already
exists.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

| CCQI361S | **The XML structure of the
member_name sequence metadata
member is not valid. The condition
element on the *level_type* level
already contains a relational
operator.** |
|---|---|

Explanation:
A relational operator already exists for the condition
element on the specified level.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

| CCQI362S | **The XML structure of the
member_name sequence metadata
member is not valid. The condition
element on the *level_type* level
must contain only one content
string or content number element.** |
|---|---|

Explanation:
Only one content string element or content number
element can be contained in the condition element on
the specified level.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

| CCQI363S | **The XML structure of the
member_name sequence metadata
member is not valid. The condition
element in the *element_name*
element with the *attribute_name*
attribute must contain either the
content string element or the
content number element.** |
|---|---|

Explanation:
Either the content string element or the content
number element must be in the condition element.

System action:
Processing stops.

User response:
Contact IBM Software Support.

CCQI400W	The XML structure of the *member_name* parameter metadata member is not valid. The PL/I XML parser issued the following exception warning code: *code_number*.

Explanation:
While determining the parameter metadata member is valid, the PL/I XML parser issued an exception warning code.

System action:
Processing continues.

User response:
See the *Enterprise PL/I for z/OS Programming Guide* for more information about the exception warning code.

CCQI401S	The XML structure of the *member_name* parameter metadata member is not valid. The PL/I XML parser issued the following exception error code: *code_number*.

Explanation:
While determining if the parameter metadata member is valid, the PL/I XML parser issued an exception error code.

System action:
Processing stops.

User response:
See the *Enterprise PL/I for z/OS Programming Guide* for more information about the exception warning code.

CCQI402S	The XML structure of the *member_name* parameter metadata member is not valid. The *element name* element is unknown.

Explanation:
The specified element in the parameter metadata member is unknown.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI403S	The XML structure of the *member_name* parameter metadata member is not valid. Content is not allowed for

the *element_name* element, but content was found.

Explanation:
The specified element cannot contain content.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI404S	The XML structure of the *member_name* parameter metadata member is not valid. Content is required for the *element_name* element, but content was not found.

Explanation:
The specified element requires content.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI405S	The XML structure of the *member_name* parameter metadata member is not valid. The content length for the *element_name* element cannot exceed *maximum_number* characters.

Explanation:
The specified element contains too many characters.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI406S	The XML structure of the *member_name* parameter metadata member is not valid. The content length for the *element_name* element must be at least *minimum_number* characters.

Explanation:
The specified element does not contain enough characters.

System action:
Processing stops.

User response:

See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI407S   **The XML structure of the *member_name* parameter metadata member is not valid. The *element_name* element must occur at least *minimum_number* times.**

Explanation:
The specified element does not occur enough times.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI408S   **The XML structure of the *member_name* parameter metadata member is not valid. The *attribute_name* attribute in the *element_name* element cannot occur more than *maximum_number* times.**

Explanation:
The specified attribute occurs too many times.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI409S   **The XML structure of the *member_name* parameter metadata member is not valid. The *attribute_name* attribute in the *element_name* element must occur at least *minimum_number* times.**

Explanation:
The specified attribute does not occur enough times.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI410S   **The XML structure of the *member_name* parameter metadata member is not valid. Content is not allowed for the *attribute_name* attribute in the *element_name* element, but content was found.**

Explanation:
The specified attribute cannot have content.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI411S   **The XML structure of the *member_name* parameter metadata member is not valid. Content is required for the *attribute_name* attribute in the *element_name* element, but content was not found.**

Explanation:
The specified attribute is missing required content.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI412S   **The XML structure of the *member_name* parameter metadata member is not valid. The content length for the *element_name* element cannot exceed *maximum_number* characters.**

Explanation:
The specified element contains too many characters.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI413S   **The XML structure of the *member_name* parameter metadata member is not valid. The *attribute_name* attribute in the *element_name* element is unknown.**

Explanation:
The specified attribute in the parameter metadata member is unknown.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI414S   **The content of the *member_name* parameter metadata member is not valid because the value of the *element_name* element**

is incorrect. The value is
value_name.

Explanation:
The specified value for an element in the parameter metadata member is not valid.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI415S   **The content of the *member_name* parameter metadata member is not valid because the value of the *attribute_name* attribute in the *element_name* element is incorrect. The value is *value_name.***

Explanation:
The specified value for an attribute in the parameter metadata member is not valid.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI416S   **The content of the *member_name* parameter metadata member is not valid because the data type of the *element_name* element is incorrect. The value is *value_name.***

Explanation:
The specified data type value for an element in the parameter metadata member is not valid.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI417S   **The content of the *member_name* parameter metadata member is not valid because the data type of the *attribute_name* attribute in the *element_name* element is incorrect. The value is *value_name.***

Explanation:
The specified data type value for an attribute in the parameter metadata member is not valid.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI420S   **The XML structure of the *member_name* parameter metadata member is not valid. The *element_name* element is unknown for the overridden Db2 parameter.**

Explanation:

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI421S   **The XML structure of the *member_name* parameter metadata member is not valid. The *element_name* element is unknown for the overridden LPAR parameter.**

Explanation:

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI422S   **The XML structure of the *member_name* parameter metadata member is not valid. The *attribute_name* attribute in the *element_name* element is unknown for the overridden Db2 parameter.**

Explanation:

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI423S   **The XML structure of the *member_name* parameter metadata member is not valid. The *attribute_name* attribute in the *element_name* element is unknown for the overridden LPAR parameter.**

Explanation:

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

CCQI450S   **The *member_name* product parameter metadata member was not found in the *data_set_name* data set.**

Explanation:
Tools Customizer could not find the specified product parameter metadata member.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

CCQI510W   **The *data_set_name* data store data set does not exist.**

Explanation:
The specified data store data set does not exist.

System action:
Processing continues.

User response:
Ensure that the data store data set exists.

CCQI511S   **The *data_set_name* data store data set cannot be opened by using the *disposition_type* disposition.**

Explanation:
The specified data store data set could not be opened with the specified disposition.

System action:
Processing continues.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

CCQI512S   **The *data_set_name* data store data set cannot be opened by using the *option-type* option.**

Explanation:
The specified data store data set was unable to be opened with the specified option.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

CCQI600W   **The XML structure of the *member_name* product customization parameter**

metadata member is not valid. The PL/I XML parser issued the following exception warning code: *code_number*.

Explanation:
While determining if the product customization parameter metadata member is valid, the PL/I XML parser issued an exception warning code.

System action:
Processing continues.

User response:
See the *Enterprise PL/I for z/OS Programming Guide* for more information about the warning.

CCQI601S   **The XML structure of the *member_name* product customization parameter metadata member is not valid. The PL/I XML parser issued the following exception error code: *code_number*.**

Explanation:
While determining if the product customization parameter metadata member is valid, the PL/I XML parser issued an exception error code.

System action:
Processing continues.

User response:
See the *Enterprise PL/I for z/OS Programming Guide* for more information about the warning.

CCQI602S   **The XML structure of the *member_name* product customization parameter metadata member is not valid. The *element_name* element is unknown.**

Explanation:
The specified product customization parameter metadata member contains an unknown element.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

CCQI603S   **The XML structure of the *member_name* product customization parameter metadata member is not valid. Content is not allowed for the *element_name* element, but content was found.**

Explanation:

Content was found in an element that cannot contain content.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI604S	The XML structure of the *member_name* product customization parameter metadata member is not valid. Content is required for the *element_name* element, but content was not found.

Explanation:
The specified element does not contain required content.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI605S	The XML structure of the *member_name* product customization parameter metadata member is not valid. The content length for the *element_name* element 'cannot exceed *maximum_number* characters.

Explanation:
The specified element contains too many characters.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI606S	The XML structure of the *member_name* product customization parameter metadata member is not valid. The *element_name* element cannot occur more than *maximum_number* times.

Explanation:
The specified element occurs too many times in the product customization parameter metadata member.

System action:
Processing stops.

User response:

See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI607S	The XML structure of the *member_name* product customization parameter metadata member is not valid. The *element_name* element must occur at least *minimum_number* times.

Explanation:
The specified element does not occur enough times in the product customization parameter metadata member.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI608S	The XML structure of the *member_name* product customization parameter metadata member is not valid. The *attribute_name* attribute in the *element_name* element cannot occur more than *maximum_number* times.

Explanation:
The specified attribute occurs too many times in the product customization parameter metadata member.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI609S	The XML structure of the *member_name* product customization parameter metadata member is not valid. The *attribute_name* attribute in the *element_name* element must occur at least *minimum_number* times.

Explanation:
The specified attribute does not occur enough times in the product customization parameter metadata member.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI610S	The XML structure of the *member_name* product

**customization parameter
metadata member is not valid.
Content is not allowed for
the *attribute_name* attribute in
the *element_name* element, but
content was found.**

Explanation:
Content was found in an element that cannot contain
content.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

| CCQI611S | **The XML structure of
the *member_name* product
customization parameter
metadata member is not valid.
Content is required for the
attribute_name attribute 'in the
element_name element, but
content was not found.** |
|---|---|

Explanation:
The specified attribute does not contain required
content.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

| CCQI612S | **The XML structure of
the *member_name* product
customization parameter
metadata member is not
valid. The content length for
the *attribute_name* attribute
in the *element_name* element
cannot exceed *maximum_number*
characters.** |
|---|---|

Explanation:
The specified attribute contains too many characters.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

| CCQI613S | **The XML structure of
the *member_name* product
customization parameter
metadata member is not valid.
The *attribute_name* attribute in** |
|---|---|

**the *element_name* element is
unknown.**

Explanation:
The specified product customization parameter
metadata member contains an unknown attribute.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

| CCQI614S | **The XML structure of
the *member_name* product
customization parameter
metadata member is not valid.
The value of the *element_name*
element is not valid. The value
value_name.** |
|---|---|

Explanation:
The specified value of the element is not a valid value.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

| CCQI615S | **The XML structure of
the *member_name* product
customization parameter
metadata member is not valid.
The value of the *attribute_name*
attribute for the *element_name*
element is not valid. The value is
value_name.** |
|---|---|

Explanation:
The specified value of the attribute is not a valid value.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

| CCQI616S | **The XML structure of
the *member_name* product
customization parameter
metadata member is not valid. The
data type of the *element_name*
element is 'not valid. The value of
the element is *value_name*.** |
|---|---|

Explanation:
The specified data type is not a valid data type.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

CCQI617S	The XML structure of the *member_name* product customization parameter metadata member is not valid. The data type of the *attribute_name* attribute for the *element_name* element is not valid. The value of the attribute is *value_name.*.

Explanation:
The specified data type is not a valid data type.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

CCQI650S	The XML structure of the *member_name* product customization parameter metadata member is not valid. The following value of the *attribute_name* attribute in the *element_name* element already exists: *value_name*.

Explanation:
The specified value for an attribute already exists.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

CCQI651S	The XML structure of the *member_name* product customization parameter metadata member is not valid. The *parameter_name* parameter refers to the following section, which was not found in the *member_name* product customization parameter metadata member: *section-name*.

Explanation:
The specified section is not in the product customization parameter metadata member.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

CCQI652S	The *member_name* product customization metadata member not valid. The default length for the *element_name* parameter element exceeds the length of the parameter. The default length is *default_length*, and the specified length is *specified_length*. The default length will be truncated accordingly.

Explanation:
The specified length cannot be shorter than the default length.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

CCQI653S	The content of the *member_name* product customization parameter metadata member is not valid. The value of the *attribute_name* attribute in the *element_name* element is not valid. The value of the attribute is *value_name*.

Explanation:
The specified value of the attribute is not a valid value.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

CCQI700W	The XML structure of the *member_name* solution pack metadata member is not valid. The PL/I XML parser issued the following exception warning code: *code_number*.

Explanation:
While determining if the specified solution pack metadata member is valid, the PL/I XML parser issued an exception warning code.

System action:
Processing continues.

User response:
See the *Enterprise PL/I for z/OS Programming Guide* for more information about the warning.

CCQI701S	The XML structure of the *member_name* solution pack metadata member is not valid. The PL/I XML parser issued the

following exception error code: *code_number***.**

Explanation:
While determining if the specified solution pack metadata member is valid, the PL/I XML parser issued an exception error code.

System action:
Processing stops.

User response:
See the *Enterprise PL/I for z/OS Programming Guide* for more information about the error.

CCQI702S	**The XML structure of the** *member_name* **solution pack metadata member is not valid. The** *element_name* **element is unknown.**

Explanation:
The specified solution pack metadata member contains an unknown element.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI703S	**The XML structure of the** *member_name* **solution pack metadata member is not valid. Content is not allowed for the** *element_name* **element, but content was found**

Explanation:
Content was found in an element that cannot contain content.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI704S	**The XML structure of the** *member_name* **solution pack metadata member is not valid. Content is required for the** *element_name* **element, but content was not found.**

Explanation:
The specified element does not contain required content.

System action:
Processing stops.

User response:

See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI705S	**The XML structure of the** *member_name* **solution pack metadata member is not valid. The content length for the** *element_name* **element cannot exceed** *maximum_number* **characters.**

Explanation:
The specified element contains too many characters.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI706S	**The XML structure of the** *member_name* **solution pack metadata member is not valid. The** *element_name* **element cannot occur more than** *maximum_number* **times.**

Explanation:
The specified element occurs too many times.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI707S	**The XML structure of the** *member_name* **solution pack metadata member is not valid. The** *element_name* **element must occur at least** *minimum_number* **times.**

Explanation:
The specified element does not occur enough times.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQI708S	**The XML structure of the** *member_name* **solution pack metadata member is not valid. The** *attribute_name* **attribute in the** *element_name* **element cannot occur more than** *maximum_number* **times.**

Explanation:
The specified attribute occurs too many times.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

CCQI709S   **The XML structure of the**
_member_name_ solution pack
metadata member is not valid.
The _attribute_name_ attribute in the
_element_name_ element must occur
at least _minimum_number_ times.

Explanation:
The specified attribute does not occur enough times.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

CCQI710S   **The XML structure of the**
_member_name_ solution pack
metadata member is not valid.
Content is not allowed for
the _attribute_name_ attribute in
the _element_name_ element, but
content was found.

Explanation:
The specified attribute cannot have content.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

CCQI711S   **The XML structure of the**
_member_name_ solution pack
metadata member is not valid.
Content is required for the
_attribute_name_ attribute in the
_element_name_ element, but
content was not found.

Explanation:
The specified attribute is missing content.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

CCQI712S   **The XML structure of the**
_member_name_ solution pack
metadata member is not
valid. The content length for
the _attribute_name_ attribute

in the _element_name_ element
cannot exceed _maximum_number_
characters.

Explanation:
The specified attribute contains too many characters.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

CCQI713S   **The XML structure of the**
_member_name_ solution pack
metadata member is not valid.
The _attribute_name_ attribute in
the _element_name_ element is
unknown.

Explanation:
The specified attribute in the solution pack metadata
member is unknown.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

CCQI714S   **The XML structure of the**
_member_name_ solution pack
metadata member is not
valid because the value of
the _element_name_ element
is incorrect. The value is
_value_name_.

Explanation:
The specified value of the element is not a valid value.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

CCQI715S   **The XML structure of the**
_member_name_ solution pack
metadata member is not
valid because the value of
the _attribute_name_ attribute in
the _element_name_ element is
incorrect. The value of the
attribute is _value_name_.

Explanation:
The specified value of the attribute is not a valid value.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

CCQI716S	The XML structure of the *member_name* solution pack metadata member is not valid because the data type of the *element_name* element is incorrect. The value is *value_name*.

Explanation:
The specified data type is not a valid data type.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

CCQI717S	The XML structure of the *member_name* solution pack metadata member is not valid because the data type of the *attribute_name* attribute in the *element_name* element is incorrect. The value of the attribute is *value_name*.

Explanation:
The specified data type is not a valid data type.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

CCQI720S	The XML structure of the *member_name* solution pack metadata member is not valid. The msg element is required for the *component_name* component that is not customizable.

Explanation:
The msg element is required for the specified component, which cannot be customized by using Tools Customizer.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

CCQI750S	The solution pack metadata member was not found in the *library_name* metadata library.

Explanation:

Tools Customizer could not find the solution pack metadata member in the specified library.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

CCQI751S	The version in the *library_name* solution pack metadata library is different than the version in the *library_name* component metadata library. The name of the pack is *pack_name*, and the name of the component is *component_name*.

Explanation:
The version in the solution pack metadata library does not match the version in the component metadata library.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

CCQI752S	The release in the *library_name* solution pack metadata library is different than the release in the *library_name* component metadata library. The name of the pack is *pack_name*, and the name of the component is *component_name*.

Explanation:
The release in the solution pack metadata library does not match the release in the component metadata library.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

CCQI753S	The modification level in the *library_name* solution pack metadata library is different than the modification level in the *library_name* component metadata library. The name of the pack is *pack_name*, and the name of the component is *component_name*.

Explanation:
The modification level in the solution pack metadata library does not match the modification level in the component metadata library.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

CCQI755S   **The XML structure of the *member_name* parameter metadata member is not valid. When a default value is not specified in the metadata member, the "required" attribute with a value of "true" cannot be specified.**

System action:
Processing stops.

User response:
Contact IBM Software Support.

CCQM002E   **The *command_name* line command is not valid: .**

Explanation:
The specified line command is not valid.

System action:
Processing continues.

User response:
Specify a valid line command on the panel.

CCQO000W   **The XML structure of the *member_name* discover parameter metadata member is not valid. The PL/I XML parser issued the following exception warning code: *code_number*.**

Explanation:
While determining if the discover parameter metadata member is valid, the PL/I XML parser issued an exception warning code.

System action:
Processing continues.

User response:
See the *Enterprise PL/I for z/OS Programming Guide* for more information about the exception warning code.

CCQO001S   **The XML structure of the *member_name* discover parameter metadata member is not valid. The PL/I XML parser issued the following exception error code: *code_number*.**

Explanation:
While determining if the Discover metadata member is valid, the PL/I XML parser issued an exception error code.

System action:
Processing stops.

User response:
See the *Enterprise PL/I for z/OS Programming Guide* for more information about the exception warning code. Contact IBM Software Support.

CCQO002S   **The XML structure of the *member_name* discover parameter metadata member is not valid. The *element_name* element is unknown.**

Explanation:
The specified element in the discover parameter metadata member is unknown.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

CCQO003S   **The XML structure of the *member_name* discover parameter metadata member is not valid. Content is not allowed for the *element_name* element, but content was found.**

Explanation:
The specified element cannot contain content.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

CCQO004S   **The XML structure of the *member_name* discover parameter metadata member is not valid. Content is required for the *element name* element, but content was not found.**

Explanation:
The specified element is missing required content.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

CCQO005S   **The XML structure of the *member_name* discover parameter metadata member is not valid. The content length for the *element_name* element**

---

cannot exceed *maximum_number* characters.

Explanation:
The specified element contains too many characters.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQO006S **The XML structure of the *member_name* discover parameter metadata member is not valid. The *element_name* element cannot occur more than *maximum_number* times.**

Explanation:
The specified element occurs too many times.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQO007S **The XML structure of the *member_name* discover parameter metadata member is not valid. The *element_name* element must occur at least *minimum_number* times.**

Explanation:
The specified element does not occur enough times.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQO008S **The XML structure of the *member_name* discover parameter metadata member is not valid. The *attribute_name* attribute in the *element_name* element cannot occur more than *maximum_number* times.**

Explanation:
The specified attribute occurs too many times.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQO009S **The XML structure of the *member_name* discover parameter**
metadata member is not valid. The *attribute_name* attribute in the *element_name* element must occur at least *minimum_number* times.

Explanation:
The specified attribute does not occur enough times.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQO010S **The XML structure of the *member_name* discover parameter metadata member is not valid. Content is not allowed for the *attribute_name* attribute in the *element_name* element, but content was found.**

Explanation:
The specified attribute cannot contain content.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQO011S **The XML structure of the *member_name* discover parameter metadata member is not valid. Content is required for the *attribute_name* attribute in the *element_name* element, but content was not found.**

Explanation:
The specified attribute requires content.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQO012S **The XML structure of the *member_name* discover parameter metadata member is not valid. The content length for the *attribute_name* attribute in the *element_name* element in the cannot exceed *maximum_number* characters.**

Explanation:
The specified attribute contains too many characters.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

CCQO013S	The XML structure of the *member_name* discover parameter metadata member is not valid. The *attribute_name* attribute in the *element_name* element is unknown.

Explanation:
The specified attribute is unknown.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

CCQO014S	The content of the *member_name* discover parameter metadata member is not valid because the value of the *element_name* element is incorrect. The value is *value_name*.

Explanation:
A The specified value for an element in the discover parameter metadata member is not valid.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

CCQO015S	The content of the *member_name* discover parameter metadata member is not valid because the value of the *attribute_name* attribute in the *element_name* element is incorrect. The value is *value_name*.

Explanation:
The specified value for an attribute in the discover parameter metadata member is not valid.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

CCQO016S	The content of the *member_name* discover parameter metadata member is not valid because the data type of the *element_name* element is incorrect. The value is *value_name*.

Explanation:
The specified data type value for an element in the discover parameter metadata member is not valid.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

CCQO017S	The content of the *member_name* product parameter metadata member is not valid because the data type of the *attribute_name* attribute in the *element_name* element is incorrect. The value is *value_name*.

Explanation:
The specified data type value for an attribute in the product parameter metadata member is not valid.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727.
Contact IBM Software Support.

CCQO050S	The *data_set_name* Discover REXX EXEC data set could not be initialized or was not found.

Explanation:
Tools Customizer could not find or could not initialize the specified Discover REXX EXEC data set.

System action:
Processing stops.

User response:
Ensure that the Discover REXX EXEC is specified correctly.

CCQO051W	The *data_sharing_group_ID* data sharing group ID cannot contain more than four characters.

Explanation:
The specified data sharing group ID contains too many characters.

System action:
Processing continues.

User response:
Ensure that the specified data sharing group ID does not exceed four characters.

CCQO052S	The *REXX_EXEC_name* Discover REXX EXEC was not found in the *data_set_name* Discover data set.

Explanation:

Tools Customizer could not find the Discover REXX EXEC in the specified data set.

System action:
Processing stops.

User response:
Ensure that the Discover data set was specified correctly.

CCQO053W	The *LPAR_name* LPAR name cannot contain more than eight characters.

Explanation:
The specified LPAR name contains too many characters.

System action:
Processing continues.

User response:
Ensure that the specified LPAR name does not exceed eight characters.

CCQO054W	The *subsystem_ID* Db2 SSID cannot contain more than four characters. The record was not processed.

Explanation:
The specified Db2 SSID contains too many characters.

System action:
Processing continues.

User response:
Ensure that the specified Db2 SSID does not exceed four characters.

CCQO055W	The *parameter_name* Db2 group attach name parameter is in the *record_name* Discover record, but a Db2 group attach name was not specified. The record was not processed.

Explanation:
The Discover record contains a data sharing group parameter, but a Db2 group attach name was not specified.

System action:
Processing continues.

User response:
Ensure that information is specified correctly on the **Discover Customized Product Information** panel.

CCQO056W	The *parameter_name* Db2 parameter in the *record_name* Discover record did not have a Db2 group attach name or a Db2 SSID. The record was not processed.

Explanation:

The Discover record did not have a Db2 group attach name or a Db2 subsystem ID in the Db2 parameter.

System action:
Processing continues.

User response:
Ensure that information is specified correctly on the **Discover Customized Product Information** panel.

CCQO057W	The Discover EXEC could not find the *parameter_name* parameter in the metadata for the product to be customized. The record was not processed.

Explanation:
The specified parameter could not be found in the metadata for the product to be customized.

System action:
Processing continues.

User response:
Ensure that information is specified correctly on the **Discover Customized Product Information** panel.

CCQO058W	The *parameter_name* product parameter name in the *record_type* Discover record does not start with CCQ_LPR_, CCQ_DB2_, or CCQ_PRD_. The record was not processed.

Explanation:
The parameter in the record does not start with CCQ_DB2_, CCQ_LPAR_, or CCQ_PRD_.

System action:
Processing continues.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQO059W	The *parameter_name* product parameter cannot contain more than 72 characters. The record was not processed.

Explanation:
The specified product parameter contains too many characters.

System action:
Processing continues.

User response:
Ensure that the specified product parameter does not exceed 72 characters.

CCQO060W	The *record_name* Discover record from the REXX EXEC output must start with the following record

type: *record_type*. **The record was not processed.**

Explanation:
A Discover record from the REXX EXEC output must start with the specified Db2 record type.

System action:
Processing continues.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQO061I	If you do not have a previously customized version of the product, do not run the Discover EXEC. Press END to go to the Customizer Workplace panel.

Explanation:
This message is issued when you customize a product for a first time. It prompts you to use the Discover EXEC to discover data from a previous customization of the specified product.

System action:
Processing continues.

User response

Tip: Using the Discover EXEC saves time and reduces errors that can error when parameters are specified manually. If you want to use the Discover EXEC, specify the required information on the **Discover Customized Product Information** panel. Otherwise, press End to continue without discovering data from a previous customization of the product.

CCQO062W	The Discover EXEC could not find the following *parameter_name* parameter in the Db2 metadata. The record was not processed.

Explanation:
The specified parameter is missing in the Db2 metadata.

System action:
Processing continues.

User response:
If this parameter is required, contact IBM Software Support.

CCQO064W	The *Discover-record* Discover record did not have a parameter name. The record was not processed.

Explanation:
A parameter name was missing in the Discover record.

System action:

Processing continues.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQO065W	The value for the *parameter_name* parameter is ignored because it has more than *maximum_number* characters, which is the maximum length that is defined in the metadata. The value is *parameter_value*.

Explanation:
The specified value exceeded the maximum allowed length, which was defined in the metadata. Tools Customizer truncated the extra characters.

System action:
Processing continues.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQO066W	The *record_name* Discover record from the Discover REXX EXEC output does not have a parameter value. The record was not processed.

Explanation:
The Discover record was missing a parameter value from the Discover EXEC output.

System action:
Processing continues.

User response:
Ensure that information was specified correctly on the **Discover Customized Product Information** panel.

CCQO067W	The *parameter_name* parameter is defined in the metadata to support one value, but more than one value was found. The last value was used.

Explanation:
The definition of the parameter in the metadata supports one value, but more than one value was specified. Only the last value was used.

System action:
Processing continues.

User response:
Ensure that information was specified correctly on the **Discover Customized Product Information** panel.

CCQO068W	The value of the *parameter_name* parameter is ignored because the parameter is defined as

internal=true. The value is
*value_name***.**

Explanation:
The specified value of the parameter is ignored because it is defined as internal=true.

System action:
Processing continues.

User response:
Ensure that information was specified correctly on the **Discover Customized Product Information** panel.

CCQO069W   **The Discover EXEC did not find the** *parameter_name* **parameter in the LPAR metadata. The record was not processed.**

Explanation:
The specified parameter is missing from the LPAR metadata.

System action:
Processing continues.

User response:
Ensure that information was specified correctly on the **Discover Customized Product Information** panel.

CCQO070W   **The** *record_type* **Discover record contains an incorrect delimiter between the Environment section and the Data section. The record was not processed.**

Explanation:
Tools Customizer found an incorrect delimiter between the Environment section and the Data section.

System action:
None.

User response:
No action is required.

CCQO071W   **The** *member_name* **member could not be found in the** *data_set_name* **Discover data set.**

Explanation:
Tools Customizer could not find the specified Discover data set.

System action:
None.

User response:
No action is required.

CCQO072S   **The** *member_name* **discover metadata member was not found in the** *data_set_name* **metadata data set.**

Explanation:

Tools Customizer could not find the specified metadata member in the data set.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQO073E   **The** *member_name* **discover metadata member is not valid because the default length for the** *element_name* **parameter element exceeds the length of the parameter. The default length is** *default_length***, and the specified length is** *specified_length***. The default length will be truncated accordingly.**

Explanation:
The default length for the specified parameter element is longer than the parameter.

System action:
Processing continues.

User response:
No action is required.

CCQO074S   **The content of the** *member_name* **discover metadata member is not valid. The value of the** *attribute_name* **attribute in the** *element_name* **element is not valid. The value of the attribute is** *value_name***.**

Explanation:
The specified value is not valid.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQO075W   **The** *configuration_ID* **configuration ID in the** *record_name* **Discover record is incorrect. The record was not processed.**

Explanation:
The specified configuration ID is not correct.

System action:
Processing continues.

User response:
No action is required.

CCQO076W   **The** *configuration_ID* **configuration ID cannot contain more than**

maximum_number **characters. The record was not processed.**

Explanation:
The specified configuration ID contains too many characters.

System action:
Processing continues.

User response:
No action is required.

CCQO077S **The discover metadata member was not found in the** *data_set_name* **component data set that is part of the** *data_set_name* **pack.**

Explanation:
The discover metadata member was not found in the specified component data set.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQO078I **Additional configurations were discovered and saved in the data store. All Db2 entries associated with this configuration are listed.**

System action:
None.

User response:
No action is required.

CCQO080I *Product_name* **does not support the Discover process.**

Explanation:
The specified product does not support the Discover process.

System action:
None.

User response:
No action is required.

CCQP000E **The value of the** *mode_name* **Db2 mode is not valid for the** *level_name* **Db2 level.**

Explanation:
The specified Db2 mode is not valid for the Db2 level.

System action:
Processing stops.

User response:
Specify a valid Db2 mode for the Db2 level.

CCQP001E **The value of the** *mode_name* **Db2 mode is missing.**

Explanation:
The specified Db2 mode is not defined.

System action:
Processing stops.

User response:
Specify a value for the Db2 mode.

CCQP002E **The value of the** *mode_name* **Db2 level is missing.**

Explanation:
The specified Db2 level is not defined.

System action:
Processing stops.

User response:
Specify a value for the Db2 level.

CCQP003E **The value of the** *level_name* **Db2 level is not valid.**

Explanation:
The specified Db2 level does not have a valid name.

System action:
Processing stops.

User response:
Specify a valid value for the Db2 level.

CCQP004S **The** *parameter_name* **parameter does not exist in the CCQ$$DB2 Db2 parameter metadata member.**

Explanation:
The CCQ$$DB2 Db2 parameter metadata member does not contain the specified parameter.

System action:
Processing stops.

User response:
See "Gathering diagnostic information" on page 727. Contact IBM Software Support.

CCQP005E **The value of the** *subsystem_ID* **Db2 SSID is missing.**

Explanation:
The specified Db2 SSID is not defined.

System action:
Processing stops.

User response:
Specify a valid value for the Db2 SSID.

CCQP006E **The value of the** *group_attach_name* **Db2 group attach name is missing.**

Explanation:

The specified Db2 group attach name is not defined.

System action:
Processing stops.

User response:
Specify a valid Db2 group attach name.

| CCQQ000E | **Specify a valid metadata library. Each qualifier of the library must start with an alphabetic character and must be 1-8 alphanumeric characters. The library name must be 1-44 characters.** |

Explanation:
The metadata library was not specified in the correct format. The high-level qualifier must contain alphanumeric characters, and the first character cannot be numeric. The name cannot contain wildcard characters, such as asterisks (*) and percent signs (%).

System action:
Tools Customizer prompts for the correct library name.

User response

Specify a library in the correct format. If the message was issued on the **Specify the Metadata Library** (CCQPHLQ) panel, specify the product metadata library. The name of this library is *hlq*.SDAJDENU.

Do not specify the Tools Customizer metadata library, which is *hlq*.SCCQDENU.

| CCQQ001E | **The *data_set_name* data set name that was specified for the metadata library was not found.** |

Explanation:
The data set does not exist, or the data set name was written in the incorrect format. The high-level qualifier must contain alphanumeric characters, and the first character cannot be numeric. The name cannot contain wildcard characters, such as asterisks (*) and percent signs (%).

System action:
Tools Customizer prompts for the correct data set name.

User response:
Specify a data set name in the correct format.

| CCQQ002E | **The data set name that was specified for the *library_name* metadata library cannot be opened.** |

Explanation:
Tools Customizer could not open the data set.

System action:
Tools Customizer prompts for an available data set.

User response:
Ensure that the specified data set is available for Tools Customizer to open it.

| CCQQ003E | **The *data_set_name* data set name that was specified for the metadata sample library is not valid. The data set must be in the following format: HLQ.S*xxx*SAMP.** |

Explanation:
The specified data set name was not specified in the correct format.

System action:
None.

User response:
Specify the data set name in the following format: HLQ.S*xxx*SAMP, where *xxx* is the three-character prefix for the product.

| CCQQ004E | **The *data_set_name* data set is being used by another user. Try again when the data set is not being used.** |

Explanation:
Another user is using the specified data set.

System action:
None.

User response:
Ensure that the specified data set is not being used.

| CCQQ009E | **The *data_set_name* data set name that was specified for the metadata library is not valid because the data set is empty.** |

Explanation:
The specified data set is empty.

System action:
Tools Customizer prompts for an available data set.

User response:
Ensure that the specified data set is available for Tools Customizer to open it.

| CCQQ011E | **The *library_name* metadata library for the component that is part of the *library_name* pack was not found in the catalog. The name of the pack is *pack_name*, and the name of the component is *component_name*.** |

Explanation:
The specified metadata library is not in the catalog.

System action:
None.

User response:

Specify another metadata library.

CCQQ012E   **The *library_name* metadata library for the component that is part of the *library_name* pack cannot be opened.**

Explanation:
The specified metadata library cannot be opened.

System action:
None.

User response:
Ensure that the name of the library is specified correctly.

CCQS000I   **Tools Customizer is being invoked for the first time or the previous ISPF session ended before Tools Customizer was exited. In both cases, the fields on this panel are populated with default values. Review these default values or specify new values to be used to customize products or packs.**

Explanation:
When you customize a stand-alone product or a solution pack for the first time, or when an ISPF session unexpectedly ends before the ISPF profile is saved, you must specify or review your Tools Customizer user settings.

System action:
Processing stops.

User response:
Review and accept the default settings, or specify new settings.

CCQS001E   **The following command is not valid: *command_name.***

Explanation:
The specified command is not a valid command on the panel.

System action:
Processing stops.

User response:
Specify a valid command.

CCQS002W   **The *data_set_name* Discover data set could not be found.**

Explanation:
Tools Customizer could not find the specified data set.

System action:
The data set will be allocated, and processing continues.

User response:

Ensure that the data set name is specified correctly because the data set will be allocated with this name after the values are saved.

CCQS003W   **The *data_set_name* Discover data set was not found so it was created.**

Explanation:
Tools Customizer could not find the specified data set.

System action:
Processing continues.

User response:
Ensure that the data set name is specified correctly.

CCQS004I   **The settings were saved.**

Explanation:
The settings that you changed were saved.

System action:
Processing continues.

User response:
No action is required.

CCQS006W   **The length of a qualifier for the *data_set_name* customization library data set exceeds 26 characters.**

Explanation:
The qualifier for the customization library data set is too long. The qualifier cannot exceed 26 characters.

System action:
Processing continues.

User response:
Specify a qualifier that is 26 characters or less.

CCQS007E   **The discover data set *data_set_name* could not be opened with the *option-type* option.**

Explanation:
The specified option could not open the Discover data set.

System action:
None.

User response:
Specify a data set to which you have WRITE access.

CCQS008E   **The Discover data set *data_set_name* exists on a different volume.**

Explanation:
The specified Discover data set must exist on the same volume as where it was created.

System action:

Processing continues.

User response:
Specify a different Discover data set name.

CCQS010E   **The customization library qualifier is not valid.**

Explanation:
The customization library qualifier that was specified is not valid.

System action:
None.

User response:
Specify a valid qualifier for the customization library.

CCQS011E   **The group attach option is not valid.**

Explanation:
The group attach option that was specified is not valid.

System action:
None.

User response:
Specify a valid option for the group attach option.

CCQS012E   **The Tools Customizer metadata library is not valid.**

Explanation:
The metadata library that was specified is not a valid data set.

System action:
None.

User response:
Specify a valid data set for the metadata library.

CCQS013E   **The Discover data set is not valid.**

Explanation:
The Discover data set that was specified is not a valid data set.

System action:
None.

User response:
Specify a valid Discover data set.

CCQS014E   **The data store data set is not valid.**

Explanation:
The data set that was specified is not a valid data set.

System action:
None.

User response:
Specify a valid data store data set.

CCQS015E   **Tools Customizer is already running.**

Explanation:
A session of Tools Customizer is already running in your environment. Only one Tools Customizer session is allowed.

System action:
None.

User response:
The trace data set is being used. Free the trace data set, and start Tools Customizer again.

CCQS018E   **Information on the first line of the job card exceeds 57 characters.**

Explanation:
The first line of the job card can contain only 57 characters. This character limit includes a continuation character.

System action:
Tools Customizer clears the first line of the job card.

User response:
Specify information that does not exceed 57 characters on the first line of the job card.

CCQS019E   **The required trace data set, *data_set_name*, is currently not accessible.**

Explanation:
The trace data set must be accessible.

System action:
Processing stops.

User response:
Ensure that the trace data set is accessible.

CCQS020E   **An error occurred while the customization library data set was being created. ALTER authority on the high-level qualifier for the customization library data set is required.**

Explanation:
To create the customization library data set, ALTER authority on the specified high-level qualifier must be granted.

System action:
None.

User response:
Ensure that ALTER authority for the specified customization library data set is granted.

CCQS021E   **The value *value_name* in the field that contains the cursor position is not valid.**

Explanation:
The specified value is not valid.

System action:
None.

User response:
Specify a valid value.

CCQS022E   **An error occurred while the customization library data set was being opened. UPDATE authority on the high-level qualifier for the customization library data set is required.**

Explanation:
To open the customization library data set, UPDATE authority on the specified high-level qualifier must be granted.

System action:
None.

User response:
Ensure that UPDATE authority for the specified customization library data set is granted.

CCQS023E   **An error occurred while the customization library data set was being opened. UPDATE authority on the high-level qualifier for the customization library data set is required.**

Explanation:
To open the customization library data set, UPDATE authority on the specified high-level qualifier must be granted.

System action:
None.

User response:
Ensure that UPDATE authority for the specified customization library data set is granted, or specify a different high-level qualifier for the customization library data set on the **Tools Customizer Settings** panel.

CCQS024E   **An error occurred while the customization library data set was being created. ALTER authority on the high-level qualifier for the customization library data set is required.**

Explanation:
To create the customization library data set, ALTER authority on the specified high-level qualifier must be granted.

System action:
None.

User response:

Ensure that ALTER authority for the specified customization library data set is granted, or specify a different high-level qualifier for the customization library data set on the **Tools Customizer Settings** panel.

CCQS025I   **The display options were saved.**

System action:
None.

User response:
No action is required.

CCQS026E   **The customization library data set *data_set_name* could not be opened because the requester does not have UPDATE authority on this data set.**

Explanation:
Users must have UPDATE authority to open the customization library data set.Users must have UPDATE authority to open the customization library data set.

System action:
None.

User response:
Ensure that UPDATE authority for the specified customization library data set is granted or specify a different high-level qualifier for the customization library data set on the **Tools Customizer Settings** panel.

CCQS027E   **The customization library data set *data_set_name* could not be created because the requester does not have ALTER authority on this data set.**

Explanation:
To create the customization library data set, ALTER authority on the data set must be granted.

System action:
Processing stops.

User response:
Ensure that ALTER authority for the specific customization library data set is granted, or specify a different high-level qualifier for the customization library data set on the **Tools Customizer Settings** panel.

CCQS029E   **The customization library data set is not valid. Enter a valid data set name or use the Tools Customizer default: *data_set_name*.**

Explanation:
The specified data set is invalid.

System action:

Processing stops.

User response:
Specify a valid data set name.

CCQS030E   **The following command is not a valid CREATE statement: *command_statement*.**

Explanation:
The specified CREATE command statement is invalid because it contains blanks or alphabetic characters.

System action:
Processing stops.

User response:
Specify a valid CREATE command statement. The correct syntax is CREATE *nn*, where *nn* is 1 - 99.

CCQS031E   **The following command is not a valid CREATE statement: *command_statement*. The number that can be specified with the CREATE command is 1 - 99.**

Explanation:
The specified CREATE command statement is invalid because it contains either 0 or a number greater than 99.

System action:
Processing stops.

User response:
Specify a valid CREATE command statement. The correct syntax is CREATE *nn*, where *nn* is 1 - 99.

CCQS033E   **A user profile cannot be copied into the same user profile**

Explanation:
The specified data set cannot be copied into user's own user profile.

System action:
Processing stops.

User response:
Enter a different data set name.

CCQS034E   **The shared user profile data set *data_set_name* could not be created because the requester does not have UPDATE authority on this data set or because the data set already exists in another volume serial.**

Explanation:
To create a shared user profile data set, the requester must have update authority on the data set, and the specified data set name must be unique.

System action:
Processing stops.

User response:
Ensure that the requester has UPDATE authority on the data set and ensure that the data set name is unique.

CCQS035E   **The specified data set already has a user profile. Specify a different data set, or press Enter again to replace the existing user profile.**

Explanation:
Pressing Enter overwrites the previous user profile for the specified data set with user's own user profile.

System action:
Processing stops.

User response:
Specify a different data set name.

CCQS036E   **The customization library *data_set_name* already exists in *volume* and cannot be created in a different volume. Enter a different customization library name.**

Explanation:
The same data set name cannot exist in a different volume.

System action:
Processing stops.

User response:
Specify a different data set name.

CCQS037E   **The data set name was either not specified or invalid.**

Explanation:
The data set name specified does not follow the IBM data set name convention.

System action:
Processing stops.

User response:
Specify a valid data set name.

CCQS038E   **The specified data set cannot be used.**

Explanation:
The specified data sets contain information that supports Tools Customizer, but this data set cannot be used.

System action:
Processing stops.

User response:
Specify a different data set.

CCQS039E   **The specified data set has an invalid record format.**

Explanation:

The specified data set should be saved as a different record format. For example, the record format should be FB (Formated Block) but it is set to VB (Variable Block).

System action:
Processing stops.

User response:
Specify a valid record format.

CCQT000I	The product configuration ID *copied_configuration_ID* was successfully copied from *configuration_ID*.

Explanation:
The specified configuration ID was copied.

System action:
None.

User response:
No action is required.

CCQT001E	The *command_name* line command was specified more than once, which is not allowed.

Explanation:
The specified line command cannot be specified more than one time.

System action:
Processing stops.

User response:
Specify the line command only once.

CCQT002E	The *configuration_ID* configuration ID already exists. Specify a different configuration ID.

Explanation:
The specified configuration ID exists.

System action:
Processing stops.

User response:
Ensure that the specified configuration ID is unique.

CCQT003I	The product configuration ID *configuration_ID* was created.

Explanation:
The specified configuration ID was created.

System action:
None.

User response:
No action is required.

CCQT004I	The product configuration ID *configuration_ID* was removed.

Explanation:

The specified configuration ID was removed.

System action:
None.

User response:
No action is required.

CCQT005E	The product configuration ID *configuration_ID* is not valid. The product configuration ID cannot contain a colon (:).

Explanation:
The specified configuration ID contains a colon (:), but a colon is not valid.

System action:
Processing stops.

User response:
Specify a configuration ID that does not contain a colon.

CCQT006E	The *configuration_ID* configuration ID exists. Specify a different configuration ID.

Explanation:
The specified configuration ID exists.

System action:
Processing stops.

User response:
Specify another configuration ID.

CCQT007E	The *configuration_ID* configuration ID exists but was removed from the list of configurations. To use this configuration ID, you must restore it.

Explanation:
The specified configuration ID exists but was removed from the list of available configuration.

System action:
Processing stops.

User response:
Specify another configuration ID. To restore the specified configuration ID, issue the CREATE command, and specify the same configuration ID again.

CCQT008E	The *configuration_ID* configuration ID exceeds *maximum_number* characters.

Explanation:
The specified configuration ID contains too many characters.

System action:
Processing stops.

User response:
Specify another configuration ID that does not exceed the maximum number of characters that was set by Db2 Automation Expert.

CCQT010I	Create request for *configuration_ID* configuration was cancelled by user.

Explanation:
The request to create the specified configuration was canceled.

System action:
Processing stops.

User response:
No action is required.

CCQT011I	The *configuration_ID* configuration was not copied.

Explanation:
The specified configuration was not copied.

System action:
Processing stops.

User response:
No action is required.

CCQT012I	The *configuration_ID* configuration was not removed.

Explanation:
The specified configuration was not removed.

System action:
Processing stops.

User response:
No action is required.

CCQT013I	None of the configurations were copied or removed. All of the previously selected configurations are deselected.

Explanation:
The selected configurations were not copied or removed, and they are deselected.

System action:
Processing stops.

User response:
No action is required.

CCQT014E	Specify Y or N and press Enter to continue, or press End to cancel.

Explanation:
A function requires input.

System action:
Processing stops.

User response:

To continue, specify Y or N and press Enter. Otherwise, press End to cancel.

CCQT015E	The *command_name* command is not allowed during the process of "Select" configuration line command.

Explanation:
The specified command is not allowed while the line command for selecting configurations is processing.

System action:
Processing stops.

User response:
Remove the specified line command.

CCQT016I	The *configuration_ID* configuration was not created

Explanation:
The specified configuration was not created.

System action:
Processing stops.

User response:
No action is required.

CCQT017I	The *configuration_ID* configuration was not copied.

Explanation:
The specified configuration was not copied.

System action:
Processing stops.

User response:
No action is required.

CCQT018E	Specify Y or N, and press Enter.

Explanation:
A function requires input.

System action:
Processing stops.

User response:
To continue, specify Y or N, and press Enter.

CCQT019I	The select *configuration_ID* configuration process ended.

Explanation:
The select process for the specified configuration is finished.

System action:
Processing stops.

User response:
No action is required.

CCQT020E   **The *configuration_ID* configuration was not created because the data store was not accessible.**

Explanation:
The specified configuration was not created because the data store could not be accessed.

System action:
Processing stops.

User response:
Ensure that the data store is accessible and create the configuration again.

CCQT021E   **The *configuration_ID* configuration was not copied because the data store was not accessible.**

Explanation:
The specified configuration was not copied because the data store could not be accessed.

System action:
Processing stops.

User response:
Ensure that the data store is accessible and copy the configuration again.

CCQT025I   **The *configuration_ID* configuration was not updated.**

Explanation:
The specified configuration was not updated because the edit process was canceled.

System action:
Processing stops.

User response:
No action is required.

CCQT027I   **The product configuration ID has been updated from *edit_from_id* to *edit_to_id*.**

System action:
Processing continues.

User response:
No action is required.

CCQT028I   **The product configuration ID has been updated from *edit_from_id* to *edit_to_id*, and the description has been updated from *edit_from_des* to *edit_to_des*.**

System action:
Processing continues.

User response:
No action is required.

CCQT029I   **The product configuration description has been updated from *edit_from_des* to *edit_to_des*.**

System action:
Processing continues.

User response:
No action is required.

CCQX001S   ***Product_name* has already been customized by using values from *data_set_name* data store data set. Switch to the specified data store data set to continue customizing this product.**

Explanation:
The specified product was customized by using values from the specified data store data set.

System action:
Processing stops.

User response:
Use the specified data store data set to continue customizing the product.

CCQX002S   ***component_name* has already been customized by using values from *data_set_name* data store data set. Switch to the specified data store data set to continue customizing this component.**

Explanation:
The specified component was customized by using values from the specified data store data set.

System action:
Processing stops.

User response:
Use the specified data store data set to continue customizing the component.

CCQX011I   ***Product_name* was not found.**

Explanation:
The specified product was not found.

System action:
Processing stops.

User response:
Specify another product.

ISPF interface messages

The following messages may appear when using the ISPF interface for Db2 Automation Expert.

FECA900E   Invalid Column Function value.
                 Valid values: 1, 2, 3, 4

Explanation:
An invalid character was entered in the Column
Function field.

User response:
Specify a valid character (1, 2, 3, or 4).

FECA901E   Invalid Permanent View value.
                 Valid values: Y, N

Explanation:
An invalid value was entered in the Permanent View
field.

User response:
Correct the value or cancel. Valid values are Y and N.

FECA902E   Invalid Reset View value. Valid
                 values are Y, N

Explanation:
An invalid character was entered in the Reset View
field. Valid characters are Y and N.

User response
Specify a valid value or cancel. Valid values are:

- Y - resets all customizations.

- N - customizations are not reset.

FECA903E   Invalid Stop Sorting value. Valid
                 values: Y, N

Explanation
The specified stop sorting value is not valid. Valid
values are:

- Y - Indicates that sorting will be stopped.

- N - Indicates that sorting will continue.

User response:
Specify a valid value or cancel.

FECA904E   Invalid command in FORM display

Explanation:
The command you issued when viewing the FORM
display was not valid.

User response:
Valid commands for FORM display include NROW and
PROW.

FECA905E   FORM command not supported
                 from CSETUP function

Explanation:
The FORM command was issued from a CSETUP
function. FORM is not supported while in a CSETUP
function (CSETUP functions include CFIX, CORDER,
CSIZE and CS).

User response:
No action is required.

FECA906E   Invalid parameter for NROW. Must
                 be numeric.

Explanation:
The parameter you specified was not numeric and is
therefore invalid.

User response:
Specify a numeric value corresponding to the number
of rows to advance. The default value for NROW is 1.

FECA907E   Invalid parameter for PROW. Must
                 be numeric.

Explanation:
The parameter you specified was not numeric and is
therefore invalid.

User response:
Specify a numeric value corresponding to the number
of rows to scroll back. The default value for PROW is 1.

FECA908E   Invalid parameter for NROW. Too
                 many digits.

Explanation:
An invalid parameter for the NROW keyword was
specified. More than eight digits were specified.
Parsing stops at eight digits.

User response:
A parameter of NROW must be between 1 and the
number of rows in the current report display. If no
parameter is specified, 1 is assumed.

FECA909E   Invalid parameter for PROW. Too
                 many digits.

Explanation:
Invalid parameter to PROW specified. More than eight
digits were specified. Parsing stops at eight digits.

User response:
A parameter of PROW must be between 1 and the
number of rows in the current report display. If no
parameter is specified, 1 is assumed.

FECA910E   CSETUP command not supported
                 from FORM function

Explanation:
CSETUP functions are not supported while in the
FORM display. CSETUP functions include CFIX,
CORDER, CSIZE, CSORT, and CSETUP (CSET).

User response:
Exit the current FORM function before issuing a
CSETUP function.

FECA911E   Invalid ICR command. Use RIGHT
                 command.

Explanation:

ICR is only valid with columns that are not their maximum size. You can see the column's current and maximum sizes by issuing CSIZE.

User response:
RIGHT and LEFT commands can be used to see all parts of this column.

FECA912E	Invalid ICL command. Use LEFT command.

Explanation:
ICL is only allowed with columns that are not their maximum size. You can see the column's current and maximum sizes by issuing CSIZE.

User response:
RIGHT and LEFT commands can be used to see all parts of this column.

FECA913E	Format mix data element not updated.

Explanation:
Format MIX data cannot be updated when only part of the data is displayed.

User response:
No action is required.

FECA914E	FORM command not supported from FORM function

Explanation:
FORM was issued from within a FORM display. This is not supported.

User response:
No action is required.

FECA915E	FORM PF keys set; NROW = nrow PROW = prow

Explanation
The NROW (next row) and PROW (previous row) commands are used to move the FORM display window to another row. The UP, DOWN, LEFT, and RIGHT commands move the FORM display window within the current row.

Row, as mentioned above, refers to the row from the original report display, not any reformatted FORM display row.

By default, NROW advances the FORM display to the next row. If NROW n is issued, the FORM display will advance n rows.

Similarly, PROW moves the FORM display window to the immediately prior row PROW n moves the current FORM display window to the nth prior row.

User response:
No action is required.

FECA916E	Invalid CNUM parm. Valid parms are ON, OFF, or blank.

Explanation:
CNUM was issued with an invalid parameter. Issuing CNUM with no parameter acts as an ON/OFF toggle. ON and OFF are the only parameters accepted. ON turns the CNUM display on. OFF turns the CNUM display off.

User response:
Use a valid CNUM parameter (ON, OFF, or blank)

FECA917E	Report width for print too large.

Explanation:
The report width exceeds the maximum print width.

User response:
The maximum report width that is currently supported is 32,760.

FECA918E	*string* not found. Press PF5 to continue from top.

Explanation:
The indicated character string was not found.

User response:
To continue searching for the character string from the top of the dialog, press PF5.

FECA920I	Chars *chars* found *n* times

Explanation:
Indicates the number of times the specified character was found.

User response:
No action is required.

FECA921I	Chars *chars* not found on any lines

Explanation:
Indicates that the specified characters were not found on any of the lines.

User response:
No action is required.

FECA922I	Search for CHARS *chars* was successful.

Explanation:
Indicates the search for the indicated characters produced matches.

User response:
No action is required.

FECA923E	Check for misspelled keywords or embedded blanks in search string.

Explanation:
Indicates there may be invalid keywords or blanks embedded within the search string.

User response:
Verify and correct the search string to remove embedded blanks or to correct keywords.

FECA924E	*string* and *string* cannot both be specified for FIND command.

Explanation:
You specified two strings for the FIND command.

User response:
You must specify one FIND string at a time.

FECA925E	Put quotes (" ") around the string of characters to be displayed.

Explanation:
The string of characters is not enclosed in quotes.

User response:
Place the string of characters in side quotes.

FECA926E	Maximum parameter length is 80

Explanation:
The parameter you specified is too long.

User response:
Specify a parameter that is 80 characters or less.

FECA927E	Invalid COLS parm. Valid parms are ON, OFF, or blank

Explanation:
COLS was issued with an invalid parameter. Issuing COLS with no parameters acts as an ON/OFF toggle. ON and OFF are the only parameters accepted.

User response:
Enter COLS ON or COLS OFF. COLS ON turns the COLS display on; COLS OFF turns the COLS display off.

FECA930I	No columns eligible for resizing.

Explanation:
You cannot resize any columns.

User response:
No action is required.

FECA931I	No columns eligible for sorting

Explanation:
You cannot sort any columns.

User response:
No action is required.

FECA932I	TBMOD failed. RC=*rc*

Explanation:
An unexpected return code occurred during TBMOD.

User response
Suggested diagnostics:

- See z/OS ISPF Services Guide under TBMOD.

- Review ISPTLIB allocation.
- Review security-controlled access to ISPTLIB data sets.

FECA933E	Invalid column name: missing quote

Explanation:
SORT or CSORT was issued with a parameter that had an initial quotation character, but not a second closing quotation character.

User response:
Either clear the command line and select the desired sort column(s) from the displayed selection list or correct the command on the command line.

FECA934E	More than 9 columns specified

Explanation:
SORT or CSORT was issued with too many columns specified as sort columns. A maximum of 9 sort columns can be specified.

User response:
Either clear the command line and select the desired sort column(s) from the displayed selection list or correct the command on the command line.

FECA935E	Invalid column name

Explanation:
SORT or CSORT was issued with a column parameter that does not match any column name. A list of the correct column names is seen in the SORT selection panel.

User response:
Either clear the command line and select the desired sort column(s) from the displayed selection list or correct the command on the command line.

FECA936E	Invalid row selection character

Explanation:
An invalid selection character was entered in the SSID selection list. The only valid selection character is S. Alternatively, place the cursor on the desired line and press ENTER (without a line selection character).

User response:
Clear the invalid character.

FECA937E	Only one row selection allowed

Explanation:
More than one SSID was selected from the SSID selection list. A maximum of one SSID can be selected.

User response:
Clear all, or all but one row selection character.

FECA938E	Invalid command

Explanation:

An invalid command was entered on the SSID selection list panel.

User response:
Clear the command.

FECA939E	Read of control file failed

Explanation:
Reading the control data set failed.

User response:
Check the product setup (accessed from the main menu) to view the control data set currently in use. Verify that the data set name is correct.

FECA940E	Invalid DB2 Control data set

Explanation:
Allocation of the control data set failed.

User response:
Check the product setup (accessed from the main menu) to view the control data set currently in use. Verify that the data set name is correct.

FECA942E	IFCARC1=*return code*
	IFCARC2=*reason code*

Explanation:
The Db2 command issued failed. The return code and reason code received from Db2 are in the error message. If there is any command output, it is displayed.

User response:
Check the command for possible mistyping, invalid syntax, or other errors. Refer to IBM Db2 for z/OS documentation for information about the messages and codes for your version of Db2.

FECA943E	Invalid command

Explanation:
An invalid command was issued. It is not supported on the current panel.

User response:
Check the command for typographical error. Clear or correct the command.

FECA944I	Empty History

Explanation:
This is an informational message. The history database is empty. If commands were previously entered, then either HCLEAR was issued or the size of the history database was set to 0. If ISPTABL and ISPTLIB are not allocated, history is not remembered across sessions, and each new session has an empty history database.

User response:
No action is required. To verify allocation of ISPTLIB and ISPTABL, ISRDDN and ISPLIBD can be useful. Refer to https://www.ibm.com/docs/en/zos to access the ISPF services guide for your version of z/OS.

FECA945E	Invalid history size limit

Explanation:
An invalid character was found in the History Size Limit field. Only numeric values from 0-999 are valid.

User response:
Enter a valid value in the History Size Limit field.

FECA946I	No DB2 command history output library allocated

Explanation:
This is an informational message. ISPTABL is not allocated. The history database cannot be saved across sessions when ISPTABL is not allocated.

User response:
No action is required. If saving history across sessions is desired, see product installation instructions for allocating ISPTABL (and ISPTLIB).

FECA947I	No DB2 command history input library allocated

Explanation:
This is an informational message. ISPTLIB is not allocated. If a history database is saved across sessions (using ISPTABL DD), the ISPTLIB DD is used to initialize a new Db2 Command Processor session. If ISPTLIB is not allocated, this cannot occur and the history starts out empty.

User response:
No action is required. If saving history across sessions is desired, see product installation instructions for allocating ISPTLIB (and ISPTABL).

FECA948E	TBOPEN failed. RC=*return code*

Explanation:
TBOPEN for the history table failed. *return code* is the return code from the TBOPEN service.

User response:
Check ISPTLIB allocation. Verify the data sets in ISPTLIB. Verify it is a valid PDS. See ISPF manuals for ISPTLIB requirements.

FECA949E	Invalid command

Explanation:
An invalid command was entered.

User response:
Check for typographical error. Clear or correct the command. Issue **HELP** for the Db2 Command Processor tutorial to see what commands are valid. **KEYS** might also be a useful command, since some PF keys are set to valid Db2 Command Processor commands.

FECA950E	No SSIDs in control file

Explanation:

There are no valid SSIDs found in the Db2 control file specified.

User response:
A control file with no SSIDs is not useful. It is probably not the control file desired. See product installation instructions for information about creating and building a control file.

FECA951I	History cleared

Explanation:
History was cleared either by issuing the HCLEAR command or by setting the History Size Limit to 0.

User response:
No action is required.

FECA952E	Unable to list data sharing members. Display failed

Explanation:
Command failed attempting to get a list of data sharing members. The reason code and return code are listed in the message.

User response:
Refer to IBM Db2 for z/OS documentation for information about the messages and codes for your version of Db2.

FECA953I	Zero data sharing members found

Explanation:
Zero data sharing members found. The current SSID is not a member of a data sharing group.

User response:
The Datasharing Member field should be left blank.

FECA954E	Invalid command

Explanation:
An invalid command was issued from the datasharing members list/selection panel.

User response:
Clear the command.

FECA955I	No member selected

Explanation:
You exited the datasharing member selection panel without selecting a datasharing member.

User response:
No action is required.

FECA956E	Invalid row selection character

Explanation
An invalid selection character was entered in the History output display. A command listed in the History display can be selected for execution either by selecting it with an "S" selection character, or

by placing the cursor anywhere on a line within the command and pressing Enter.

When selecting by cursor placement, the cursor can be on the line selection input line, which also has a command number, or on a line with some command text.

User response:
Clear the invalid character.

FECA957E	Only one row selection allowed

Explanation:
More than one command was selected from the History display. Only one History command can be selected.

User response:
Clear all, or all but one row selection character.

FECA958E	Invalid row selection character

Explanation:
An invalid selection character was entered in the displayed list of datasharing members. A datasharing member in this display can be selected by selecting it with an S selection character, or by placing the cursor anywhere on the desired row and pressing Enter.

User response:
Clear the invalid character.

FECA959E	Only one row selection allowed

Explanation:
More than one datasharing member was selected from the list of displayed datasharing members.

User response:
Clear all, or all but one row selection character.

FECA960E	Cannot list commands without SSID

Explanation:
A command was issued to select a command syntax diagram, but no SSID has been selected. Syntax diagrams cannot be displayed until an SSID has been selected.

User response:
Select an SSID. You can generate a list of SSIDs by clearing the SSID field, or entering a ? (question mark).

FECA961E	Invalid row selection character

Explanation:
An invalid selection character was entered in the displayed list of Db2 commands. A Db2 command in this display can be selected by selecting it with an S selection character, or by placing the cursor anywhere on the desired row and pressing Enter.

User response:
Clear the invalid character.

FECA962E   Only one row selection allowed

Explanation:
More than one Db2 command was selected from the list of displayed Db2 commands.

User response:
Clear all, or all but one row selection character.

FECA963E   Invalid command

Explanation:
An invalid command was issued from the Db2 command list/selection panel.

User response:
Clear the command.

FEC801E   Pgm: *program name* Stmt: *statement* Type: *type*

Explanation:
This message is used to convert SQL return code information into a text message. The data from the SQLCA is called using DSNTIAR and formatted into this message.

User response:
Refer to https://www.ibm.com/docs/en/db2-for-zos for information about Db2 SQL for your version of Db2.

FEC802E   An invalid return code of *code* was encountered on *function* function. The error message text follows: *text*

Explanation:
An invalid return code was encountered for the specified function. The supporting diagnostic data are returned in the error message.

User response:
Refer to IBM Db2 for z/OS documentation for information about the messages and codes for your version of Db2.

FEC803E   The first character of the command is not a dash. Correct the syntax of the DB2 command and resubmit.

Explanation:
The first character of the command is not a dash. Correct syntax for a Db2 command dictates that the command be preceded by a dash.

User response:
Precede the command with a dash ('-') and reenter.

FEC804E   *message_text*

Explanation:
An error occurred during call attach initialization.

User response:

Refer to the message text for details. If a reason code accompanies the message, use the reason code to help you determine the appropriate corrective action. If you need assistance, contact IBM Software Support.

FEC901E   The default load library could not be located.

Explanation:
The data set name entered for Db2 Tools Load Library was not found.

User response:
Enter a valid loadlib data set name and continue.

FEC902E   A DB2 subsystem ID has to be entered for processing.

Explanation:
There was no valid value entered for Db2 subsystem ID.

User response:
Enter a valid Db2 subsystem name.

FEC903E   The default GDG base data set name could not be located.

Explanation:
The data set name entered for GDG Base model was not found.

User response:
Enter a valid model data set name and continue.

FEC904E   The specified data set could not be opened for I/O.

Explanation:
A VSAM open error occurred while attempting to open the data set specified for the Db2 Control File.

User response:
Verify that the VSAM data set is accessible.

FEC905E   An unexpected return code from VSAM was encountered while doing a read of the control file. RC1=*rc* RC2=*rc*

Explanation:
A VSAM READ error occurred while attempting to access the data set specified for the Db2 Control File. The VSAM return code is provided for diagnostic purposes.

User response:
Refer to IBM Db2 for z/OS documentation for information about the messages and codes for your version of Db2.

FEC906I   The control file record for DB2 subsystem *ssid* has been successfully updated.

Explanation:

The Db2 Control File record has been successfully updated based on the definitions for the specified Db2 subsystem.

User response:
No action is required.

FEC907E	An unexpected return code from VSAM was encountered while doing an update operation of the control file. RC1=*rc* RC2=*rc*

Explanation:
A VSAM update error occurred while attempting to update the data set specified for the Db2 Control File. The RC1 and RC2 (VSAM return cards) are provided for diagnostic purposes.

User response:
Refer to IBM Db2 for z/OS documentation for information about the messages and codes for your version of Db2.

FEC908I	The control file record for DB2 subsystem *sys* has been successfully added.

Explanation:
The Db2 Control File record has been successfully updated based on the definitions for the specified Db2 subsystem.

User response:
No action is required.

FEC909E	Invalid value. Valid options are 1 and 2.

Explanation:
The value you specified is not valid. valid values are 1 and 2.

User response:
Enter a valid value.

FEC910E	An unexpected return code from VSAM was encountered while doing an add operation to the control file. RC1=*rc* RC2=*rc*

Explanation:
A VSAM error occurred while attempting to perform an add operation to the specified Db2 Control File. The RC1 and RC2 (VSAM return codes) are provided for diagnostic purposes.

User response:
Refer to IBM Db2 for z/OS documentation for information about the messages and codes for your version of Db2.

FEC911E	The (F)IND command was entered but no parameters were specified.

Explanation:

No parameters were specified with the (F)IND command. No match can be made unless you specify a string to find.

User response:
Enter a FIND parameter.

FEC912I	The requested find string was not found.

Explanation:
No matches were found for the string you specified with the FIND command.

User response:
No action is required.

FEC913I	The control file record has been successfully updated.

Explanation:
The control file was updated successfully.

User response:
No action is required.

FEC914E	An unknown column was specified using the SORT command.

Explanation:
The column you specified with the SORT command is not known.

User response:
Verify that you correctly typed the name of the column or select another column.

FEC915E	SORT is not supported for the specified column.

Explanation:
The column you attempted to SORT is not supported as a column on which to sort.

User response:
Refer to the sort columns listed on the Define Sort Columns panel for a list of valid columns on which the sort can be based and redefine the sort.

FEC916E	Sort column not entered. Column name or number must be specified.

Explanation:
A column was not specified with the SORT. A column name or number must be specified for the SORT command.

User response:
Ensure that if the column name is used, that all spaces in the name are replaced with an underscore.

FEC917E	Put an ending quote at the end of the string.

Explanation:
You must place a quote at the end of the string.

User response:
Place a quote at the end of the string.

FEC918	CHARS *string* not found. Press PF5 to continue from top.

Explanation:
The indicated character string was not found.

User response:
To continue searching for the character string from the top of the dialog, press PF5.

FEC919	*chars foundstr* not found. Press PF5 to continue from bottom.

Explanation:
The indicated character string was not found.

User response:
To continue searching for the character string from the bottom of the dialog, press PF5.

FEC920E	File tailoring open returned a file tailoring already in progress condition

Explanation:
An attempt to perform file tailoring for utility customization failed. There was a file tailoring session already in progress. File tailoring sessions cannot be performed concurrently.

User response:
No action is required.

FEC921E	File tailoring open returned the output file already in use condition -- ENQ failed

Explanation:
An attempt to open the Db2 Control File failed with an ENQ error. The data set is already open for output.

User response:
Verify that you are the only user attempting to access this file.

FEC922E	File tailoring open returned the skeletal file or output file not allocated condition

Explanation:
An attempt to perform file tailoring failed because either the tailoring skeleton file or output file is not allocated.

User response:
Verify that all required files are allocated prior to performing file tailoring.

FEC923E	File tailoring open returned a severe error condition

Explanation:

An attempt to perform file tailoring failed because a severe error condition was encountered on open.

User response:
Verify that all required files are allocated and accessible prior to performing file tailoring.

FEC924E	File tailoring open returned an unknown code -- severe error

Explanation:
An attempt to perform file tailoring failed because a severe error condition was encountered on open.

User response:
Verify that all required files are allocated and accessible prior to performing file tailoring.

FEC925E	File tailoring close returned a file not open condition -- severe error

Explanation:
An attempt to perform file tailoring failed because a File-Not-Open condition was encountered on close.

User response:
Verify that all required files are allocated and accessible and that there are no other tailoring sessions running concurrently with your session.

FEC926E	File tailoring close returned an output file in use condition

Explanation:
An attempt to perform file tailoring failed because an Output-File-In-Use condition was encountered on close.

User response:
Verify that all required files are allocated and accessible and that there are no other tailoring sessions running concurrently with your session.

FEC927E	File tailoring close returned a skeletal file or output file not allocated condition

Explanation:
An attempt to close file tailoring failed because either a tailoring skeleton file or output file was not allocated.

User response:
Verify that all required files are allocated and accessible and that there are no other tailoring sessions running concurrently with your session.

FEC928E	File tailoring close returned a severe error

Explanation:
An attempt to perform file tailoring failed because a severe error condition was encountered on close.

User response:
Verify that all required files are allocated and accessible prior to performing file tailoring.

FEC929E   **File tailoring close returned an unknown code -- severe error**

Explanation:
An attempt to perform file tailoring failed because a severe error condition was encountered on close.

User response:
Verify that all required files are allocated and accessible prior to performing file tailoring.

FEC930E   **File tailoring close returned an output member exists in the output library and NOREPL was specified**

Explanation:
An attempt to perform file tailoring failed because the close process could not replace the pre-existing tailored member in the output file.

User response:
Change the output member name to a new name or ensure that the output library allows for member replacement.

FEC931E   **File tailoring include returned a skeleton does not exist condition**

Explanation:
An attempt to perform file tailoring failed because the tailoring process could not locate a required tailoring skeleton.

User response:
Assure that all required files are allocated to perform file tailoring.

FEC932E   **File tailoring include returned a skeleton in use -- ENQ failed condition**

Explanation:
An attempt to access a tailoring skeleton failed with an ENQ error (member-in-use).

User response:
Verify that all required tailoring files are allocated and that there are no other tailoring sessions running concurrently.

FEC933E   **File tailoring include returned a data truncation or skeleton library or output file not allocated condition**

Explanation:
An attempt to perform file tailoring failed because either the tailoring skeleton file or output file is not allocated.

User response:
Verify that all required files are allocated prior to performing file tailoring.

FEC934E   **File tailoring include returned a severe error condition**

Explanation:
An attempt to perform file tailoring failed because a severe error condition was encountered on an include operation.

User response:
Verify that all required files are allocated and accessible prior to performing file tailoring.

FEC935E   **File tailoring include returned an unknown condition -- severe error**

Explanation:
An attempt to perform file tailoring failed because a severe error condition was encountered on an include operation.

User response:
Verify that all required files are allocated and accessible prior to performing file tailoring.

FEC936E   **Allocation error - The ISPFILE DD is already allocated and cannot be deallocated - Process not completed**

Explanation:
The ISPFILE DD allocation failed. The DD is already allocated and cannot be deallocated for this TSO session. The process did not complete successfully.

User response:
No action is required.

FEC937E   **Allocation Error - An error was encountered allocating the ISPWRK1 or ISPWRK2 DD - Process not completed**

Explanation:
The ISPWRK1 or ISPWRK2 DD allocation failed.

User response:
Verify TSO session parameters are set correctly for your site prior to allocation of these DD statements. The process did not complete successfully.

FEC938E   **Field Required - The data set entered is a partitioned data set and the member name is required**

Explanation:
A required field was not specified. The data set entered is a PDS (partitioned data set) and a member in this PDS must be referenced.

User response:
Enter a valid member name for PDS access.

FEC939E   **The only valid values are "T" for tracks and "C" for cylinders**

Explanation:
You specified an invalid value. The only valid values are "T" for tracks and "C" for cylinders

User response:
Specify a valid value.

FEC940E   **The specified data set could not be found in the MVS catalog.**

Explanation:
The specified data set could not be found in the MVS catalog.

User response:
Ensure that the data set name is correct.

FEC941E   **The RFIND key works only after a FIND character string is entered.**

Explanation:
A repeat FIND (RFIND) was issued before a FIND command was issued. You must issue FIND before RFIND will work.

User response:
Issue FIND prior to attempting to issue RFIND.

FEC942E   **Invalid Sort number. Enter a valid digit.**

Explanation:
An invalid character was entered in the Srt column. Valid characters are the digits 1, 2, 3,... up to 9, or the number of sortable columns, whichever is less.

User response:
Specify a valid sort number.

FEC943E   **Same Sort number entered twice**

Explanation:
The same sort number was entered for more than one column. The screen is positioned to the second instance. Sort sequence numbers must be unique.

User response:
Specify a valid sort number.

FEC944E   **Sort sequence skips a number.**

Explanation:
The selected sorting sequence skips a number. This is not allowed. The screen is positioned to a selection whose number is lacking an immediate predecessor. The sort sequence is completely rebuilt from the Cmd (and Dir) information. Any previously existing sort sequence is entirely replaced. It is not added to or extended by the new entries.

User response:
Please specify a valid sort sequence that does not skip a number.

FEC945E   **Invalid Dir entered. Must be A or D (ascending/descending).**

Explanation:
The selected sorting direction is invalid. Only A (ascending) or D (descending) can be specified. A blank indicates ascending (default).

User response:
Specify a valid sorting direction.

FEC946E   **Dir not valid without Ord.**

Explanation:
A sorting direction was selected for a column that was not selected to be sorted. Sorting direction is only a valid choice for selected columns.

User response:
Select a sorting direction and order.

FEC947E   **Max Sort Columns exceeded. Sorting first 10 columns.**

Explanation:
More columns were selected for sorting than are supported. Nine columns can be selected. Under certain circumstances the limit is less than nine, due to internal constraints. For example, sorting a date field can be implemented by three sorts of partial column fields. In that case, the column would count as three toward the maximum of nine, not one.

User response:
Specify the appropriate allowable maximum number of sort columns.

FEC948E   **Fix Columns cannot exceed screen size.**

Explanation:
More columns were selected to be fixed than will fit on the screen.

User response:
Remove the (F) selection character from one or more columns.

FEC950E   **Invalid selection character. "F" and "U" are valid.**

Explanation:
An invalid Cmd character was entered. Valid characters are F (fix) and U (unfix). Fix causes the column to move to the fixed area on the left side of the screen. Fixed columns do not scroll horizontally when LEFT or RIGHT scrolling commands are issued. Unfix moves the column out of the fixed area, and allows it to scroll horizontally when LEFT and RIGHT scroll commands are issued.

User response:
Either remove the invalid character or enter a valid one.

FEC951E   **Invalid entry. Must be numeric.**

Explanation:

An invalid Cmd value was entered. Cmd values must be numeric. If the column is fixed, the number must be in the fixed range. If the column is not fixed, the number must be in the unfixed range.

User response:
Either remove the invalid number or enter a valid one.

FEC952E	Invalid entry for fixed column.

Explanation:
An invalid Cmd value was entered for a fixed column. Valid selections for fixed column are up to the number of fixed columns.

User response:
Either remove the invalid number or enter a valid one.

FEC953E	Invalid entry for unfixed column.

Explanation:
An invalid Cmd value was entered for an unfixed column. The number must be less than the number of columns, and greater than the number of fixed columns.

User response:
Either remove the invalid number or enter a valid one.

FEC954E	Invalid value entered for column size: non-numeric data.

Explanation:
An invalid Cmd value was entered. This must be a number between the values in the MIN and MAX fields.

User response:
Either remove the invalid number or enter a valid one.

FEC955E	Invalid value entered for column size: out of range.

Explanation:
An invalid Cmd value was entered. This must be a number between the values in the MIN and MAX fields. MIN is the smallest acceptable value. MAX is the largest acceptable value.

User response:
Either remove the invalid number or enter a valid one.

FEC956E	Total fixed column sizes cannot exceed screen size.

Explanation:
The Cmd values entered would result in the sum of the fixed column sizes to exceed the screen size. This is not allowed. The fixed columns are those with an or in the Fix column. Fixed columns are always displayed, and so must fit on the screen.

User response:
Either change the fixed column sizes so that the total is less than the screen size or cancel to return to the previous panel.

FEC957E	New configuration makes this column size invalid.

Explanation:
The requested column sizes make at least one unfixed column unable to be displayed. The cursor is positioned on the value where the problem was detected. The unfixed area on the screen would be too small to show the column where the cursor is placed.

User response
Do one of the following:

- Make the column where the cursor is smaller so that it can fit in the available unfixed area.
- Set it to its maximum size (width).
- Make the fixed area smaller.
- Cancel to return to the previous panel.

FEC958E	Column does not fit in unfixed area in new configuration.

Explanation:
The requested column sizes would make the unfixed column where the cursor is positioned undisplayable. The unfixed area on the screen would be too small to show this column.

User response:
Shrink the fixed area by either unfixing columns or making fixed columns smaller. The column where the cursor is cannot be partially displayed (min-max) so its size cannot be changed.

FEC959E	New configuration makes this column size invalid.

Explanation:
Fixing the requested columns would shrink the available area for unfixed columns unacceptably. One or more unfixed columns would not fit in the remaining unfixed area of the screen. The cursor is placed on a row that represents one such column. Therefore, the requested configuration is not allowed.

User response:
To change column sizes, cancel out of the CFIX function and invoke the CSIZE function. Either cancel to exit CFIX with no change or blank out one or more FIX selections until an allowable fixed size is reached.

FEC960E	Invalid fixed selections. Would not leave enough space for this column.

Explanation:
Fixing the columns requested would make at least one unfixed column undisplayable. The cursor is positioned on the row that represents one such unfixed column, whose minimum displayable size would not fit in the available screen area.

User response

Shrink the requested fixed area by either:

- Requesting fewer fixed columns.
- Unfixing one or more fixed columns.
- Cancel out of CFIX and invoke CSIZE in order to shrink one or more fixed columns enough so that all unfixed columns have the space they require.

FEC962E   **Duplicate Cmd values entered.**

Explanation:
Duplicate Cmd numbers were entered. The cursor points to the second instance of a Cmd value.

User response:
Either change this value, clear it, or exit the CORDER function.

FEC963E   **Cursor not on data element.**

Explanation:
CEXPAND was issued and the cursor was not located on a valid (expandable) area. CEXPAND requires the cursor to be positioned on a data element (non-heading area) in the dynamic area of the display. Or CEXPAND can be issued specifying the row and column of the data element to expand.

User response:
Ensure the cursor is located on a valid (expandable) area prior to issuing the CEXPAND command.

FEC964E   **Invalid scroll amount for CRIGHT. Must be numeric.**

Explanation:
Invalid (non-numeric) parameter to CRIGHT specified. CRIGHT accepts one numeric parameter: the number of columns to scroll right. If no parameter is entered a value of 1 is assumed.

User response:
Specify a numeric parameter to the CRIGHT command.

FEC965E   **Invalid scroll amount for CLEFT. Must be numeric.**

Explanation:
Invalid (non-numeric) parameter to CLEFT specified. CLEFT accepts one numeric parameter: the number of columns to scroll left. If no parameter is entered, a value of 1 is assumed.

User response:
Specify a numeric parameter to the CLEFT command.

FEC966E   **Invalid parameter to ICRIGHT; must be numeric.**

Explanation:
A parameter to ICRIGHT is not numeric. ICRIGHT (inner column scroll right) accepts either zero, one, or two numeric parameters. ICRIGHT can be abbreviated as ICR.

User response:
Specify a valid, numeric parameter for ICRIGHT.

FEC967E   **Parameter to ICRIGHT too long. Invalid.**

Explanation:
A parameter to ICRIGHT is too long. ICRIGHT does not process more than eight digits in a parameter, which is more than double any reasonable value.

User response:
Specify a valid parameter for ICRIGHT.

FEC968E   **Parameter to ICRIGHT is zero. Invalid.**

Explanation:
A parameter to ICRIGHT has the value zero. This is not supported.

User response:
Specify non-zero parameters to ICRIGHT.

FEC969E   **ICRIGHT: unspecified column.**

Explanation:
ICRIGHT was invoked with no parameters and the cursor is not positioned in the dynamic panel area.

User response:
Either put the cursor in the column that should be scrolled or specify the column by number. Column numbers can refer to visible columns (in the current display window) only. Number starts at 1, on the left side.

FEC971E   **ICRIGHT: Column number specified is too big.**

Explanation:
A column number parameter to ICRIGHT must be between 1 and the number of columns currently on the display screen.

User response:
To refer to a column by number you must first position the display window so that the desired column is visible.

FEC972E   **Invalid parameter to ICLEFT; must be numeric.**

Explanation:
A parameter to ICLEFT is not numeric. ICLEFT (inner column scroll left) accepts either zero, one, or two numeric parameters. ICLEFT can be abbreviated as ICL.

User response:
Specify a valid parameter for ICLEFT.

FEC973E   **Parameter to ICLEFT too long.**
               Invalid.

Explanation:
A parameter to ICLEFT is too long. ICLEFT does not
process more than eight digits in a parameter which is
more than double reasonable value.

User response:
Specify a parameter less than or equal to eight digits
for ICLEFT.

FEC974E   **Parameter to ICLEFT is zero.**
               Invalid.

Explanation:
A parameter to ICLEFT has the value zero. This is not
supported.

User response:
Specify a non-zero number for ICLEFT.

FEC975E   **ICLEFT: unspecified column.**

Explanation:
ICLEFT was invoked with no parameters and the
cursor is not positioned in the dynamic panel area.

User response:
Either put the cursor in the column that should be
scrolled or specify the column by number. Column
numbers can refer to visible columns (in the current
display window) only. Numbering starts at 1 on the left
side.

FEC976E   **Column selected not sortable. Sort**
               selection list presented.

Explanation:
You cannot perform a SORT on the column you
selected. Valid sort columns are displayed in the sort
selection list.

User response:
Sort on one of the valid columns displayed in the
selection list.

FEC977E   **ICLEFT: Column number specified**
               is too big.

Explanation:
A column number parameter to ICLEFT must be
between 1 and the number of columns currently on
the display screen.

User response:
To refer to a column by number, you must first position
the display window so that the desired column is
visible.

FEC978E   **Invalid column number specified**
               for SORT (not numeric).

Explanation:

Invalid column number parameter to CSORT specified
(non-numeric).

User response:
Specify a column number parameter to CSORT that is
between 1 and the number of columns currently on
the display screen. This can be followed by a direction
value A or D (ascending/descending).

FEC979E   **Invalid column number specified.**
               Too many digits.

Explanation:
Invalid parameter to CSORT specified. More than eight
digits were specified. Parsing stops at eight digits.

User response:
Specify a column number parameter between 1 and
the number of columns currently on the display
screen. This can be followed by a direction value A or D
(ascending/descending).

FEC980E   **Invalid column number specified:**
               zero.

Explanation:
Invalid parameter to CSORT was specified (zero).

User response:
Specify a column number parameter to CSORT that is
between 1 and the number of columns currently on
the display screen. This can be followed by a direction
value A or D (ascending/descending).

FEC981E   **Invalid column number specified:**
               out of range.

Explanation:
Invalid parameter to CSORT was specified (zero).

User response:
Specify a column number parameter to CSORT that is
between 1 and the number of columns currently on
the display screen. This can be followed by a direction
value A or D (ascending/descending)

FEC982E   **Invalid view. View adjusted.**

Explanation:
The current view was adjusted but not deleted. The
saved view did not match the report requirements.
This could be caused by the report changing or the
view file getting corrupted.

User response:
The adjusted view will be used. You can issue CSET to
modify the view.

FEC983E   **Invalid view. View deleted.**

Explanation:
Invalid data was found in a view for this report. The
view was deleted and contents ignored. This could be
caused by the report changing or the view file getting
corrupted.

User response:
You can issue CSET to create a view that will match current report.

FEC984E   **Unexpected return code from TBSTATS:** *rc*

Explanation:
An unexpected failure issuing TBSTATS was received.

User response:
Refer to https://www.ibm.com/docs/en/zos to access the ISPF services guide for your version of z/OS.

FEC985E   **View Library not allocated.**

Explanation:
A view input library has not been allocated. In order for a user to save and use report customizations that are created via the CSET command, ISPTABL and ISPTLIB must be allocated.

User response:
Refer to https://www.ibm.com/docs/en/zos to access the ISPF services guide for your version of z/OS.

FEC986E   **TBCREATE failed. RC=***rc*

Explanation:
TBCREATE was issued to create a view. It failed with a (hex) return cod as indicated in the message.

User response:
Review ISPTLIB allocation and data set characteristics. Refer to IBM z/OS documentation for information about ISPF messages and codes for your version of z/OS.

FEC987E   **TBOPEN failed. RC=***rc*

Explanation:
TBOPEN was issued to open a view. It failed with a (hex) return code as indicated in the message.

User response:
Review ISPTLIB allocation and data set characteristics. Refer to IBM z/OS documentation for information about ISPF messages and codes for your version of z/OS.

FEC988E   **TBGET failed. RC=***rc*

Explanation:
A TBGET produced a return code (as indicated in the message).

User response:
Review ISPTLIB allocation and data set characteristics. Refer to IBM z/OS documentation for information about ISPF messages and codes for your version of z/OS.

FEC989E   **TBMOD failed. RC=***rc*

Explanation:

A TBMOD produced an error and return code (as indicated in the message).

User response:
Review ISPTLIB allocation and data set characteristics. Refer to IBM z/OS documentation for information about ISPF messages and codes for your version of z/OS.

FEC990E   **TBCLOSE failed. RC=***rc*

Explanation:
TBCLOSE failed with a (hex) return code as indicated in the message.

User response:
Review ISPTLIB allocation and data set characteristics. Refer to IBM z/OS documentation for information about ISPF messages and codes for your version of z/OS.

FEC991E   **TBDELETE failed. RC=***rc*

Explanation:
TBDELETE failed with a (hex) return code as indicated in the message.

User response:
Review ISPTLIB allocation and data set characteristics. Refer to IBM z/OS documentation for information about ISPF messages and codes for your version of z/OS.

FEC992E   **Invalid selection.**

Explanation:
A command that is not supported on this panel was selected.

User response:
Issue a valid command for the panel.

FEC993I   **Permanent view not supported.**

Explanation:
Db2 Automation Expert detected something that prevents views from being saved. The permanent view flag cannot be set to Y. The most likely cause of this is that either ISPTLIB or ISPTABL (or both) have not been properly allocated.

User response:
Review ISPTLIB allocation and data set characteristics. Refer to IBM z/OS documentation for information about ISPF messages and codes for your version of z/OS.

FEC994E   **Invalid row number.**

Explanation:
CEXPAND was issued with an invalid parameter of zero. CEXPAND can be issued with no parameters and the cursor on a data field, or with two parameters. The two parameters are the row number, followed by the column number of the data element to be

expanded. The row number is counted down from the top, starting with the first scrollable row (heading not counted) The column number is counted from left to right, starting with the left column in the current display window.

User response:
Specify a valid parameter count for use with CEXPAND.

FEC995E   **Invalid column number.**

Explanation:
CEXPAND was issued with an invalid parameter of zero. CEXPAND can be issued with no parameters and the cursor on a data field, or with two parameters. The two parameters are the row number, followed by the column number of the data element to be expanded. The row number is counted down from the top, starting with the first scrollable row (heading not counted) The column number is counted from left to right, starting with the left column in the current display window.

User response:
Specify a valid parameter count for use with CEXPAND.

FEC996E   **Invalid digits.**

Explanation:
CEXPAND was issued with an invalid parameter of zero. CEXPAND can be issued with no parameters and the cursor on a data field, or with two parameters. The two parameters are the row number, followed by the column number of the data element to be expanded. The row number is counted down from the top, starting with the first scrollable row (heading not counted) The column number is counted from left to right, starting with the left column in the current display window.

User response:
Specify a valid parameter count for use with CEXPAND.

FEC997E   **Too many digits.**

Explanation:
CEXPAND was issued with an invalid parameter of zero. CEXPAND can be issued with no parameters and the cursor on a data field, or with two parameters. The two parameters are the row number, followed by the column number of the data element to be expanded. The row number is counted down from the top, starting with the first scrollable row (heading not counted) The column number is counted from left to right, starting with the left column in the current display window.

User response:
Specify a valid parameter count for use with CEXPAND.

FEC998E   **Zero parameter invalid.**

Explanation:

CEXPAND was issued with an invalid parameter of zero. CEXPAND can be issued with no parameters and the cursor on a data field, or with two parameters. The two parameters are the row number, followed by the column number of the data element to be expanded. The row number is counted down from the top, starting with the first scrollable row (heading not counted) The column number is counted from left to right, starting with the left column in the current display window.

User response:
Specify a non-zero parameter.

FEC999E   **Invalid parameter count: must be either two or zero parms.**

Explanation:
CEXPAND was issued with an invalid number of parameters. CEXPAND can be issued with no parameters and the cursor on a data field, or with two parameters. The two parameters are the row number, followed by the column number of the data element to be expanded. The row number is counted down from the top, starting with the first scrollable row (heading not counted) The column number is counted from left to right, starting with the left column in the current display window.

User response:
Specify a valid parameter count for use with CEXPAND.

DAJP001E   **Invalid record type found**

Explanation:
An invalid record type was encountered during a profile load.

User response:
Contact IBM Customer Support.

DAJ001E   **Invalid value entered - Please enter a valid value from the list displayed**

Explanation

You have entered an invalid selection in the Option line.

User response

Enter a valid value.

DAJ002E   **A valid Db2 subsystem ID is a required field. Please enter a valid subsystem ID**

Explanation:
You have entered an invalid Db2 subsystem ID.

User response:
Enter a valid Db2 subsystem ID.

DAJ004E   **Inactive | Invalid subsystem ID entered**

Explanation:
This message indicates that an inactive or invalid subsystem ID was entered.

User response:
Change the SSID to a valid or active subsystem ID.

DAJ006E   **Invalid line command entered**

Explanation:
A invalid line command has been entered.

User response:
Enter a valid line command.

DAJ010   **IBM* Rocket** PID 5698-DAE Copyright IBM Corp. 2023,** *copyright_year* **Copyright Rocket Software, Inc. 2023,** *copyright_year* ***Trademark of International Business Machines **Trademark of Rocket Software, Inc.**

Explanation:
This message appears upon starting the Db2 Automation Expert ISPF screens.

User response:
No action is required..

DAJ023E   **Subsystem unavailable**

Explanation:
Db2 Automation Expert cannot connect to the specified subsystem. The call attach facility has failed.

User response:
Confirm that the Db2 subsystem is active. Contact your systems administrator.

DAJ035I   **Single quotes will be changed to double quotes for Header Constant**

Explanation:
Single quotes in the Header Constant field will cause errors at job run time. Single quotes will be replaced by double quotes.

User response:
No action is required..

DAJ036E   **The range of a datatype of INTEGER is -2147483648 thru 2147483647**

Explanation:
An integer value was entered that is outside the specified valid range.

User response:
Enter a valid integer value.

DAJ037E   **The range of a datatype of SMALLINT is -32768 thru 32767**

Explanation:
A small integer value was entered that is outside the specified valid range.

User response:
Enter a valid small integer value.

DAJ044W   **No profiles were found that match your selection criteria. Press enter to create a new profile or change the selection criteria**

Explanation:
No profiles match your selection criteria.

User response:
Press Enter to create a new profile, or change your selection criteria to get a different list.

DAJ045E   **Command is not supported on this screen. Please enter a valid command or clear the primary command line**

Explanation:
An invalid command was entered in the Option line.

User response:
Correct the command or clear the Option line.

DAJ046E   **You are not authorized to update or delete this profile. Enter a "V" if you would like to view this profile**

Explanation:
A profile was selected for update or deletion that was created with the View only option.

User response:
Type V next to the profile to view the profile contents.

DAJ047E   **The Profile Creator is a required field. Please enter a valid creator**

Explanation:
When creating a new profile, the Profile Creator field was left blank.

User response:
Enter a profile creator in the Profile Creator field.

DAJ048E   **The Profile Name is a required field. Please enter a unique name**

Explanation:
When creating a new profile, the Profile Name field was left blank.

User response:
Enter a unique profile name in the Profile Name field.

DAJ049E   **Invalid Value - Enter a "U" to allow other users to Update your**

profile, a "V" to allow other users to just View your profile or "N" to disallow other users from viewing or updating your profile

Explanation:
When creating a new profile, an invalid value was entered the Update Option field.

User response:
Correct the value as described in the message text.

| DAJ050E | Profile "*profile_creator.profile_name*" already exists in Db2 SSID *subsystem_ID*. Please enter a unique profile name and press Enter |

Explanation:
When creating a new profile, a profile name was used that duplicates another profile name created by the same user ID.

User response:
Enter a unique profile name and press Enter.

| DAJ051E | Invalid Value - Please enter a "Y" if you would like to delete profile "*profile_creator.profile_name*" or an "N" if you do not want to delete it |

Explanation:
An invalid value was entered in the Delete field.

User response:
Enter a valid value as described in the message text.

| DAJ060E | Invalid line command entered |

Explanation:
An invalid value was entered in the line command area.

User response:
Enter one of the valid line commands listed at the bottom of the screen.

| DAJ062E | The online options can only be modified when the "Online Reorg" setting is set to "Y" |

Explanation:
The online REORG options were selected to be updated, but the online REORG has not been specified for inclusion in the utility profile.

User response:
Type Y in the Include field next to the online REORG option, then type Y in the Update field for online REORG to update the options.

| DAJ063E | The valid values are "C"hange, "R"eference, and "N"one |

Explanation:
An invalid value was entered in the Sharelevel field.

User response:
Enter a valid value as specified in the message text.

| DAJ064E | The options can not be altered if they are not first selected |

Explanation:
You specified to update utility options, but the utility has not yet been selected for inclusion in the profile.

User response:
Type Y in the Include field next to the utility, then type Y in the Update field for the utility to update the options.

| DAJ065E | This field cannot be left blank |

Explanation:
A field has been left blank that must be completed.

User response:
The cursor is positioned at the field that must be completed. Fill in the field and press Enter.

| DAJ066E | The valid values for MaxRO are "DEFER" or a number |

Explanation:
An invalid value was entered for the Maxro field.

User response:
Enter a valid value as specified in the message text.

| DAJ067E | The valid values for Drain are "W"riters, "A"ll, or "N"o |

Explanation:
An invalid value was entered for the Drain field.

User response:
Enter a valid value as specified in the message text.

| DAJ068E | The valid values for Long Log are "C"ontinue, "T"erm, and "D"rain |

Explanation:
An invalid value was entered for the Longlog field.

User response:
Enter a valid value as specified in the message text.

| DAJ069E | This field must contain a number |

Explanation:
A non-numeric value was entered in a field that requires a number.

User response:
Enter a valid numeric value.

| DAJ070E | The only valid values for Timeout are "A", "T", or "N" |

Explanation:
An invalid value was entered for the Timeout field.

User response:
Enter a valid value as specified in the message text.

DAJ071E	**Unknown command**

Explanation:
An invalid command was entered in the Option line.

User response:
Correct the command or clear the Option line.

DAJ072E	**Invalid value - Please enter an "S" to select a column, a "D" to deselect and delete exception data, an "R" to repeat an exception condition, an "A" to select a column as an "A"nd condition, or an "O" to select a column as an "O"r condition**

Explanation:
An invalid line command was entered on the Update Exceptions Profile Display.

User response:
Enter a valid value as specified in the message text.

DAJ073E	**Invalid Condition - Valid values are "<" "LT" "<=" "LE" "=" "EQ" ">" "GT" ">=" "GE" "¬=" "NE" "<>"**

Explanation:
An invalid condition was entered for a column on the Update Exceptions Profile Display.

User response:
Enter a valid value as specified in the message text.

DAJ074E	**Invalid Value - Please enter an "O" to generate the job online via your ISPF session or "B" to build the job in Batch**

Explanation:
An invalid value was entered in the Build Online or Batch field.

User response:
Enter a valid value as specified in the message text.

DAJ075E	**Invalid Value - Please enter a "Y" if you would like to edit the generated JCL after the job has been built**

Explanation:
An invalid value was entered in the Edit Generated Job field.

User response:
Enter a valid value as specified in the message text.

DAJ076E	**Enter Required Field - A fully qualified dataset name is required to save the generated JCL**

Explanation:
The data set name is missing from the Build Job in Dataset field.

User response:
Enter a fully qualified data set name in the Build Job in Dataset field to hold the generated JCL.

DAJ077E	**Dataset not found - Dataset *dataset name* was not found in the MVS catalog. Please enter a valid dataset that is cataloged**

Explanation:
The data set name entered in the Build Job in Dataset field does not exist.

User response:
Enter an existing cataloged data set name in the Build Job in Dataset field.

DAJ079W	**Please enter a condition and an exception value. To deselect an item, enter a "D" in the "S" field.**

Explanation:
A table was selected on the Update Exceptions Profile Display, but you must also enter conditions and exceptions for the table.

User response:
Enter a condition and exception value for the selected table. Consult the bottom of the screen for valid condition values. Scroll right to see information about exception values.

DAJ080E	**A condition or exception value was specified without the other. Both a condition and an exception value must be specified.**

Explanation:
You specified either a condition without an exception value, or an exception value without a corresponding condition.

User response:
Enter both a condition and an exception value for the selected column. Consult the bottom of the screen for valid condition values. Scroll right to see information about exception values.

DAJ081E	**A floating point number in the form of "3.17E+05" or "317000" must be entered. The syntax of a floating point number is [+|-][n][.]n[E+|-n]**

Explanation:
The exception value was entered incorrectly.

User response:
Enter the exception value as a floating point decimal as described in the message text.

DAJ082E The only valid values for the Deadline parameter are "N"one, "T"imestamp, and "L"abeled duration expression

Explanation:
An invalid value was entered for the Deadline parameter.

User response:
Enter a valid value as specified in the message text.

DAJ083E If the deadline value is "None," the timestamp and labeled duration fields must be blank

Explanation:
The Deadline field contains N for None. Timestamp and Labeled Duration Expression fields are invalid if no deadline is specified.

User response:
Remove the values from the specified fields.

DAJ084E The valid values for the Unload field are "C"ontinue, "P"ause, "O"nly, and "E"xternal

Explanation:
An invalid value was entered in the Unload field.

User response:
Enter a valid value as specified in the message text.

DAJ085I Option is currently unavailable

Explanation:
The selected Db2 Automation Expert option is currently not available.

User response:
No action is required..

DAJ086E The specified qualifier code is not a supported value

Explanation:
An invalid qualifier code was entered for the image copy data set name.

User response:
Change the qualifier code to one of the available codes listed on the screen.

DAJ087E Invalid hexadecimal value. Valid values are 0123456789ABCDEF

Explanation:
An invalid hexadecimal value was entered for the exception value.

User response:
Enter a valid hexadecimal value using the hex characters listed in the message.

DAJ088W Truncation has occurred in building the data set qualifier

Explanation:
The data set name for the image copy is too long as constructed.

User response:
Shorten the data set name by using less or shorter qualifiers.

DAJ089W The symbolic data set name generation field is full

Explanation:
The symbolic input area is out of space. The maximum number of characters allowed is 159.

User response:
Reduce the number or type of symbolics in the generated data set name.

DAJ090I Profile "*profile_creator.profile_name*" saved

Explanation:
The profile named in the message was successfully saved.

User response:
No action is required..

DAJ091E Invalid Value - Please enter an "A" to AND conditions or an "O" to OR conditions together when doing exception processing

Explanation:
An invalid value was entered in the Conditions To Be field.

User response:
Enter a valid value as specified in the message text.

DAJ092E Invalid Value - Please enter an "R" to use statistics from the Automation Expert "R"epository, a "C" to use statistics from the Db2 "C"atalog, or an "S" to use statistics from a Db2 "S"hadow Catalog

Explanation:
An invalid value was entered in the Use Stats From field.

User response:
Enter a valid value as specified in the message text.

DAJ093W All of the image copy options (for the LP, LB, RP, and RB image copies) have been set to "N". Because of this, the Merge Copy

field on the main utility screen has been set to a "N"

Explanation:
The image copy type has not been selected for the MERGECOPY. The Local Primary, Local Backup, Recovery Site Primary, and Recovery Site Backup fields are all set to N on the **Merge Copy Image Copy options** panel.

User response:
You must select one or more image copy types and set their associated options using the **Merge Copy Image Copy options** panel.

DAJ094E	The valid values for Update are "A"ll, a"C"cesspath, "S"pace, and "N"one

Explanation:
An invalid value was entered in the Update Catalog Tables or Update History Tables field.

User response:
Enter a valid value as specified in the message text.

DAJ095I	DEBUG command processed

Explanation:
This message appears after issuing a DEBUG ON|OFF command. Some screens allow this command, but the DEBUG mode should only be used under the direction of IBM Customer Support.

User response:
No action is required..

DAJ096E	Cannot repeat this column

Explanation:
An R (repeat) line command was entered next to a column that cannot appear in the exception profile more than once.

User response:
Use an S to select multiple columns for this table.

DAJ098E	The entered device type is not recognized by z/OS as a valid device type

Explanation:
An invalid device type was entered in the Unit Type field.

User response:
Enter a valid device type or CART for tape devices.

DAJ099E	When using disk type devices, expiration date and retention period are not valid

Explanation:
A value was entered in the Expiration date or Retention period fields, when a disk type device was specified for the image copy. These fields are mutually exclusive.

User response:
Clear the Expiration date and Retention period fields, or change the Unit Type field to CART.

DAJ100W	If a Tape device is selected, either retention period or expiration date must be specified

Explanation:
A tape device was specified but no value was entered for the tape expiration date or retention period.

User response:
Enter a valid value in the Expiration date or Retention period fields, or change the Unit Type field to a disk type device.

DAJ101E	Invalid value - Sortcluster Yes is only valid with Rebalance Yes.

Explanation:
An invalid value was entered. Sortcluster Yes is only valid with Rebalance Yes.

User response:
Change the value of either Sortcluster or Rebalance.

DAJ102E	The day in the expiration date must be in the range of 1 to 366

Explanation:
The day entered for the tape expiration date is incorrect.

User response:
Enter a valid value as specified in the message text.

DAJ103E	The only valid values are "+" for a positive offset, and "-" for a negative offset

Explanation:
An invalid value was entered in the +/- field for the labeled duration expression.

User response:
Enter a valid value as specified in the message text.

DAJ104E	Both components of an LDE modifier are required

Explanation:
You must specify both the value and a value modifier (+ or -) for the labeled duration expression.

User response:
Enter the missing value or value modifier.

DAJ105E	The only valid values are Current "D"ate, and Current "T"imestamp

Explanation:
An invalid value was entered in the Base on Current Date/Timestamp field.

User response:
Enter a valid value as specified in the message text.

DAJ106E **If the value of the deadline is "Timestamp," the labeled duration fields must be blank**

Explanation:
A timestamp deadline was specified, values appear in the Labeled Duration Expression fields.

User response:
Clear the Labeled Duration Expression fields, or change the deadline type.

DAJ107E **If the value of the deadline is "Timestamp," the Timestamp value must be entered**

Explanation:
A timestamp deadline was specified, but a timestamp value has not been entered.

User response:
Enter a valid timestamp in the Timestamp value field.

DAJ108E **The entered timestamp has invalid syntax or an invalid value**

Explanation:
An invalid value for the Timestamp value field was entered.

User response:
Enter a valid timestamp in the Timestamp value field. The format is YYYY-MM-DD-HH.MM.SS.ssssss.

DAJ109E **If the deadline value is "Labeled Duration Expression", the timestamp value is not allowed**

Explanation:
A labeled duration expression deadline was specified, but a timestamp value appears in the Timestamp value field.

User response:
Clear the Timestamp value field, or change the deadline type.

DAJ110E **The only valid values are "A"ll, a"C"cesspath, "S"pace, or "N"one**

Explanation:
An invalid value was entered for the Update or History fields.

User response:
Enter a valid value as specified in the message text.

DAJ112E **The Change Limit fields cannot be included when taking a full image copy**

Explanation:
A value was specified in the Change Limit: First Percent Value or Change Limit: Second Percent Value

fields, but these values are not valid when a full image copy is to be taken.

User response:
Clear the Change Limit fields, or change the Full Image Copy field to N.

DAJ113E **Using Report Only requires that at least one Change Limit field be entered**

Explanation:
A report only was specified for the image copy, but no value was entered for one or both of the Change Limit fields.

User response:
Enter a valid percentage in the Change Limit fields, or change the Report Only field to N.

DAJ114E **The second Change Limit field can be entered only if the first Change Limit field is entered**

Explanation:
A value was specified for the Change Limit: Second Percent Value, but no value was entered for the Change Limit:First Percent Value field.

User response:
Enter a valid percentage in the Change Limit:First Percent Value field.

DAJ115W **The specified table does not exist in the Db2 catalog**

Explanation:
A mapping table creator and name were specified on the **Change options** screen, but the specified table does not exist.

User response:
Either create the mapping table outside of Db2 Automation Expert, or leave the **Mapping Table Creator** and **Mapping Table Name** fields blank to allow Db2 Automation Expert to dynamically create a mapping table. The table will be dropped upon successful completion of the REORG.

DAJ116E **Log Yes is not valid when Sharelevel is set to Change**

Explanation:
Log Y was specified on the Reorg Utility profile options screen, but a REORG with SHRLEVEL CHANGE has been specified. This combination is not allowed.

User response:
Either change the Log field to N, or change the sharelevel type for the REORG.

DAJ117E **This profile's Tablespace Reorg options have the Sharelevel set to "*sharelevel*". When this is the case, at least one image copy must be**

selected in the Tablespace Reorg options as well

Explanation:
When either REORG SHRLEVEL CHANGE or REFERENCE have been specified, you must select an image copy type in the Tablespace REORG options as well.

User response:
Select the Copy options fields on the Reorg Utility profile options screen and select an image copy type.

DAJ118W	The mapping table information will only be recognized with Sharelevel set to Change

Explanation:
When SHRLEVEL REFERENCE or NONE have been specified, the mapping table name and creator fields are invalid.

User response:
Clear the Mapping Table Creator and Mapping Table Name fields, or change the REORG sharelevel type.

DAJ119E	Mapping Table Creator and Mapping Table Name are required if Create Dynamic Mapping Table is set to No.

Explanation:
If you want to include your own mapping table by setting the **Create Dynamic Mapping Table** field to No, values for the **Mapping Table Creator** and **Mapping Table Name** fields must be included.

User response:
Enter a value for both the mapping table creator and name, or change the value of the **Create Dynamic Mapping Table** field to Yes or Ignore.

DAJ120E	When Parallel is set to Yes, the Number Of Objects field must be specified

Explanation:
Parallel processing for the image copy was specified, but the number of objects to process in parallel has not been specified.

User response:
Enter a value of 0 to 99 for the number of objects to process in parallel. If you enter 0, COPY will determine the optimal number of objects.

DAJ121E	When Parallel is set to No, the Number Of Objects field must be blank

Explanation:
Parallel processing for the image copy was not specified, but the number of objects to process in parallel contains a value.

User response:
Set the Parallel field to Y, or clear the value in the Number of objects field.

DAJ122E	When Nosysrec is set to Yes, Sort Data must also be set to Yes

Explanation:
You set the Nosysrec field to Y without setting the Sortdata field to Y. The Nosysrec option is only valid with the Sortdata option.

User response:
Set the Sortdata field to Y or set the Nosysrec field to N.

DAJ123E	The Concurrent and Full parameters cannot be set to Yes at the same time

Explanation:
On the Image Copy options screen, a full Db2 image copy was specified along with a Db2 COPY with the CONCURRENT option using DFSMS. These options are mutually exclusive.

User response:
Set either the Full Image Copy or the Concurrent field to Y, and set the other field to N.

DAJ124E	When the Filter DD option is used, Concurrent must be Yes

Explanation:
On the Image Copy options screen, a DD name was specified in the Filter DDname field, but the concurrent copy option was not specified.

User response:
Set the Concurrent field to Y or clear the Filter DDname field.

DAJ125E	More than 1 decimal point was found in the percent value

Explanation:
Too many decimal points were entered in a percentage field.

User response:
Remove the extraneous decimal point(s).

DAJ126E	No more than 1 digit after the decimal point is allowed

Explanation:
Two or more integers were entered after a decimal point in a percentage field.

User response:
Correct the value to one decimal place.

DAJ127E	The value of a percentage field cannot exceed 100

Explanation:

An invalid percentage value was entered.

User response:
Correct the percentage value to 100 or less.

DAJ128E	A decimal point was entered, but no digits followed

Explanation:
An invalid percentage value was entered.

User response:
Correct the percentage value to add an integer after the decimal or remove the decimal.

DAJ130E	The only valid values are "C"ontinue, "P"ause, and "O"nly

Explanation:
An invalid value was entered in the Unload field.

User response:
Enter a valid value as specified in the message text.

DAJ131E	When this type of processing is selected on this utility profile, required fields on subsequent panels must also be entered. Enter a "Y" and press Enter to proceed

Explanation:
You selected a utility that requires some option settings.

User response:
Type Y in the Update Utility options field and press Enter to complete the options.

DAJ132E	Cannot ignore dependency check unless checking LOB dependencies

Explanation:
A Y was entered in the Ignore dependency check for DEFINE NO objects field, but the Perform LOB Dependency checks field was set to N. The Ignore selection is only available when the dependency check option is selected.

User response:
Set the Ignore dependency check for DEFINE NO field to N, or set the Perform LOB Dependency checks field to Y.

DAJ134E	The member name is not allowed on a non-partitioned data set

Explanation:
A member name was included for the specified data set, but the data set is sequential, not a PDS.

User response:
Remove the member name or use a PDS.

DAJ135E	The member name selected for the generated job cannot be the

same as the member name used for the generation job (which was specified in the dataset shown at the text at the beginning of this window)

Explanation:
The same member name was specified for the batch job to generate the JCL as for the generated JCL. These two members cannot be the same.

User response:
Change one of the member names.

DAJ136E	Invalid date. Enter a valid date in the form of MM/DD/YYYY. Valid ranges are 01/01/1901 to 12/31/2041

Explanation:
An invalid date was entered.

User response:
Enter a valid date as specified in the message text.

DAJ137E	Invalid Time. Enter a valid time in the form of HH:MM:SS. Valid delimiters are ":" and ".". Valid Ranges are 00:00:00 to 23:59:59

Explanation:
An invalid time was entered.

User response:
Enter a valid time as described in the message text.

DAJ139E	Either the date or age field must be specified

Explanation:
You must specify either the Date or Age fields for the modify utility.

User response:
Specify a value in one of the fields.

DAJ140E	The date and age fields cannot be specified together

Explanation:
The Date and Age fields cannot both be specified.

User response:
Specify a value in either the Date or Age fields.

DAJ141E	Invalid Date. Enter a valid date in the form of YYYYMMDD

Explanation:
An invalid date was entered.

User response:
Enter a valid date as specified in the message text.

DAJ142E	The age field has a valid range of 1-32767

Explanation:
An invalid value was entered in the Age field.

User response:
Enter a valid value as specified in the message text.

DAJ144E	This field can be blank or a number in the range of 0 to 100

Explanation:
An invalid value was entered in the field.

User response:
Enter a valid value as specified in the message text.

DAJ145I	Since the copy options was set to "Y" and none of the copies are selected, this screen is being displayed

Explanation:
This message appears when an image copy is specified for a REORG and image copy options have not been set. The Image Copy Options screen appears so you can set the options.

User response:
Set the image copy type and other options required for the image copy.

DAJ146E	When Sharelevel Change is specified, the options for Sharelevel Change need to be included

Explanation:
Image copy with SHRLEVEL CHANGE was selected. This copy type requires some additional option settings.

User response:
To set the required options, type Y in the Shrlevel Change Options Include and Update fields and press Enter.

DAJ147E	This percentage field has a valid range of *range*

Explanation:
An invalid value was entered in a percentage field.

User response:
Enter a valid value as specified in the message text.

DAJ148I	Priority Override changes saved	cancelled.

Explanation:
The priority override changes for the action or actions have been either saved or cancelled.

User response:
No action is required.

DAJ149E	The valid range of the number of extents field is from 1 to 255

Explanation:
An invalid value was entered in the Extents in space greater than field.

User response:
Enter a valid value as specified in the message text.

DAJ150E	Invalid Combination - You have asked for a reallocation of primary space with Allocated Space plus *percentage* percent and reallocate by Used plus *percentage* percent. Only one of these fields can be entered

Explanation:
Only one of the fields can be specified.

User response:
Use either the primary allocated amount or the primary used amount of space.

DAJ151E	When Update is set to "N"one, the Report option must be set to a "Y"es

Explanation:
This message appears when editing the RUNSTATS utility options panel. If the catalog or history tables will not be updated when RUNSTATS is run, the Report field must be set to Yes.

User response:
Type Y in the Report field to specify REPORT YES.

DAJ154I	DAJ Runstat Statistics maintenance is complete. *number* rows deleted

Explanation:
The statistics maintenance function has successfully completed. Rows older than the specified number of days have been deleted.

User response:
No action is required..

DAJ161E	This profile's data has been corrupted in the DAJ tables. It must be re-created

Explanation:
The profile you selected has been damaged and is not usable.

User response:
Recreate the profile.

DAJ162E	Valid ICTYPE values are "A" ALTER (V6+), "B" REBUILD INDEX (V6+), "D" CHECK DATA LOG(NO) (V6+), "F" COPY FULL YES, "I" COPY FULL NO (Incremental IC), "Q" QUIESCE,' "P" Partial RECOVERY, "R" LOAD REPLACE LOG(YES),

"S" LOAD REPLACE LOG(NO), "W" REORG LOG(NO), "X" REORG LOG(YES), "Y" LOAD LOG(NO), "Z" LOAD LOG(YES)

Explanation:
An invalid image copy type was entered.

User response:
Enter a valid value as specified in the message text.

DAJ163E	This column must have a positive value

Explanation:
A negative value was entered for an exception value for a statistic that does not allow negative values.

User response:
Enter a valid positive value.

DAJ164E	ICTYPE conditions must all be EQ| = when repeated lines are present

Explanation:
When specifying repeated conditions with the ICTYPE column, the comparator must be EQ or =.

User response:
Correct the comparator value.

DAJ166E	Conditions for this column type must be either EQ|= or NE|¬=|<>

Explanation:
An invalid value was entered for the comparator.

User response:
Correct the comparator.

DAJ167E	ICTYPE must be selected when DAYS is selected

Explanation:
When specifying the number of days in which an image copy has been run as an exception, you must also specify an image copy type in the ICTYPE field.

User response:
Enter a valid comparator and value for the ICTYPE field.

DAJ168E	Cannot have a NE|¬=|<> condition when repeated lines are present

Explanation:
When specifying repeated conditions, the comparator cannot be NE or ¬= or <>.

User response:
Enter a valid comparator.

DAJ170E	Invalid Date. Enter a valid date in the form of YYYY/MM/DD. Valid delimiters are "/", "-", or ".". Valid Range is 2000/01/01 to 2100/12/31

Explanation:
An invalid date was entered.

User response:
Enter a valid date as described in the message text.

DAJ171E	If the Save Stats in DAT Repository is equal to a "Y", then the Report option must also be a "Y"

Explanation:
If you want to update the Db2 Automation Expert repository with statistics, the report option must be selected.

User response:
Type Y in the Report field.

DAJ172E	The import file does not contain an object profile

Explanation:
The source data set you are importing from does not contain an object profile.

User response:
Check the data set name from which you are importing. Check the contents of the data set. Before importing, re-export the desired object profile if necessary.

DAJ174E	The import file does not contain a utility profile

Explanation:
The source data set you are importing from does not contain a utility profile.

User response:
Check the data set name from which you are importing. Check the contents of the data set. Before importing, re-export the desired utility profile if necessary.

DAJ175E	The import file does not contain an exception profile

Explanation:
The source data set you are importing from does not contain a exception profile.

User response:
Check the data set name from which you are importing. Check the contents of the data set. Before importing, re-export the desired exception profile if necessary.

DAJ177E	Invalid Nbr of Jobs parameter - Please enter a valid nbr between 1 and 999 of the nbr of jobs you would like Automation Expert to generate for this profile

Explanation:

An invalid value was entered in the Maximum nbr of jobs field.

User response:
Enter a valid value as specified in the message text.

DAJ179E	Invalid Load Balance Jobs parameter. Please enter a "T" if you would like to balance multiple jobs by previous run times, a "D" if you would like to balance by DASD tracks or "N" for No Load Balancing necessary

Explanation:
An invalid value was entered in the Load Balance by jobs field.

User response:
Enter a valid value as specified in the message text.

DAJ187E	You are not authorized to enter any line commands for this profile. The creator of the profile is restricting all activity

Explanation:
The creator of the selected profile specified that no other user is to view, update, or export the selected profile.

User response:
Choose a different profile to work with.

DAJ188E	Invalid value - Please enter an "R" to use statistics from the Automation Expert "R"epository, a "C" to use statistics from the Db2 "C"atalog, an "S" to use statistics from a Db2 "S"hadow Catalog, a "U" to execute Runstats to collect current statistics, or an "H" to use statistics from the Db2 "H"istory tables

Explanation:
An invalid value was entered in the Use Stats From field.

User response:
Enter a valid value as specified in the message text.

DAJ189E	There was an error allocating the Db2 Parms control file *control_file*. Db2 Automation Expert cannot run without allocating a valid control file. Please verify that the control file in your execution CLIST is correct

Explanation:
An error occurred when allocating the DB2PARMS control file.

User response:
Refer to "Task: Create the control file" on page 28 in the topic Chapter 2, "Preparing to customize Db2 Automation Expert," on page 7 for information about the control file.

DAJ192E	The volume count field can be blank or in the range of 1 - 255

Explanation:
An invalid value was entered for the maximum number of tape volumes.

User response:
Enter a valid value as specified in the message text.

DAJ202W	All of the image copy options (for the LP, LB, RP, and RB image copies) have been set to "N". Because of this, the Copy Options field on the Reorg options screen has been set to a "N"

Explanation:
An image copy was specified to be included in the REORG, but the image copy type has not been selected.

User response:
If you want to include an image copy, select one or more image copy types and set their associated options on the Image Copy Options screen.

DAJ203W	All of the Image copy options (for the LP, LB, RP, and RB image copies) have been set to "N". Because of this, the Image Copy field on the main utility screen has been set to a "N"

Explanation:
An image copy was specified to be included in the profile, but the image copy type has not been selected. The Image Copy option Include field was set to N.

User response:
If you want to include an image copy in the profile, select one or more image copy types and set their associated options on the Image Copy Options screen.

DAJ204W	All of the Image copy options (for the LP, LB, RP, and RB image copies) have been set to "N". Because of this, the Copy to Copy field on the main utility screen has been set to a "N"

Explanation:
The image copy type has not been selected for the COPYTOCOPY. The Copy to Copy Include field was set to N.

User response:

You must select one or more image copy types and set their associated options using the Copy to Copy options screens.

DAJ205E   **A Recovery Site Primary image copy cannot be selected unless the Local site primary is selected also**

Explanation:
You cannot specify a Recovery Site Primary image copy without specifying a Local Site Primary copy as well.

User response:
Type Y in the Local Primary - Take Image Copy field to select the local primary backup.

DAJ206W   **All of the Recovery Expert Image Copy Options (for the LP, LB, RP, and RB image copies) have been set to "N" and the Recovery Expert Image Copy field on the main utility screen has been set to a "N"**

Explanation:
A Recovery Expert image copy was specified to be included in the profile, but the Recovery Expert image copy type has not been selected. The Recovery Expert Image Copy option Include field was set to No.

User response:
If you want to include a Recovery Expert image copy, select one or more Recovery Expert image copy types and set their associated options on the Recovery Expert Image Copy Options screen.

DAJ207E   **Invalid Value - A valid range for Day is from 1 to 7**

Explanation:
If the field Month or Week was defined as W to indicate the time window is available on a weekly basis, the field Day must be 1 through 7 to indicate the day of the week. To indicate you want to execute the profile on a Sunday, Day would be set to 1.

User response:
Enter a valid Day from 1 to 7.

DAJ208I   **Specify selection criteria and press <Enter>**

Explanation:
To display a list of alerts from the SYSIBM.SYSAUTOALERTS table, enter criteria in the Target Qualifier and Target Object fields and press Enter.

User response:
No action is required..

DAJ209E   **Invalid Value - Days entered for a non-leap year cannot exceed 28**

Explanation:

The year for the specified Month-Day is not a leap year, so the day must not exceed 28 for the month of February.

User response:
Correct the Day value to be 28 or less.

DAJ210I   **The move data set queue is currently empty**

Explanation:
There are no data sets in the move queue.

User response:
To add data sets, type Q next to the database, space, or data set you want to move and press Enter. You may then enter the QEDIT command to view the list of selected data sets.

DAJ211I   **The move data set queue has been cleared**

Explanation:
All data sets have been cleared from the move queue.

User response:
No action is required..

DAJ212I   **Entry added to move queue, type QEDIT on option line to process**

Explanation:
All data sets for the selected item(s) were successfully added to the data set move queue. Any data sets that already existed within the move queue are retained and are not duplicated during the add request.

User response:
No action is required..

DAJ213E   **Update COLUMN name is invalid**

Explanation:
The column name entered in the Update Column field is invalid.

User response:
Enter one of the following valid column names: Vcat, Stogroup, Pqty_KB, Sqty_KB.

DAJ214E   **Update FROM value is invalid**

Explanation:
The value entered in the Update From field is invalid.

User response:
Enter the existing value of the column in this field.

DAJ215E   **Update TO value is invalid**

Explanation:
The value entered in the Update To field is invalid.

User response:
Enter a valid value for the specified column in this field.

DAJ216E	Update WHERE SP= requires DB= to be specified

Explanation:
A space name was entered in the Where SP= field, but no database name was specified.

User response:
Enter the associated database in the DB= field.

DAJ217E	Update WHERE SP= requires DB= to be specified

Explanation:
A DSN was entered in the Where DSN= field, but no database and space name have been entered.

User response:
Enter the associated database and space name in the corresponding Where DB= and SP= fields.

DAJ218E	Change PQTY/SQTY value is invalid

Explanation:
The change quantity value is invalid.

User response

Supply a valid numeric quantity value or a change quantity by % value. The minimum value is 12 and maximum value is 67108864 if a non-percentage value is supplied. Valid change quantity by % values are:

- n%-nnnn% -- Change primary or secondary quantity to n% of current primary or secondary quantity allocation values
- n%-nnnn%A-- Change primary or secondary quantity to n% of current data set allocated size value.
- n%-nnnn%U -- Change primary or secondary quantity to n% of current data set used size value.

The change percentage value (n-nnnn) must be between 1 and 9999.

If a change % value results in a computed quantity less than 12 or greater than 67108864, it is ignored.

DAJ219I	Target data set allocation type set to USER defined

Explanation:
You specified a target VCAT for an originally Db2-managed data set. The data set will be reallocated as user-managed.

User response:
No action is required..

DAJ220I	Target data set allocation type set to STOGROUP defined

Explanation:

You specified a target stogroup for an originally user-managed data set. The data set will be reallocated as Db2-managed using the specified stogroup.

User response:
No action is required..

DAJ221E	SMS Class names invalid for STOGROUP defined Target DSN

Explanation:
You entered an SMS storage, management, or data class for a Db2-managed target data set. These fields are invalid when specified for Db2-managed data sets.

User response:
Clear the invalid field.

DAJ222E	SMS Class names and Volume are mutually exclusive

Explanation:
Both a volume ID in the First Volume field and an SMS class were entered in one of the SMS class fields. These fields are mutually exclusive.

User response:
Select the appropriate field to allocate the data set.

DAJ223E	Volume update not allowed, press PF1 for additional information

Explanation:
You specified to update the volume name for a target data set that will be Db2 managed.

User response

This ability is available and is controlled by the Allow STG Vols to be specified option on the DSM Move Dataset Queue display.

Providing volume name(s) is not required when the target data set is stogroup defined. If you want to explicitly specify the target data set stogroup volumes to be used when the data set is moved, the preceding option must be set to Y.

DAJ226E	The Maximum Number of Concurrent Index Builds parameter must not be blank and must be in the range of 0-99

Explanation:
An invalid value was specified in the Max Concurrent Index Builds field.

User response:
Enter a valid value as specified in the message text.

DAJ227E	Either the "Primary Allocated plus x percent" or the "Primary Used plus x percent" fields must be specified

Explanation:
When reallocating space, you must specify the amount of space to be allocated, either as a percentage of the primary allocated space or the primary used space.

User response:
Enter a valid value as specified in the message text.

DAJ228E	Both the "Primary Allocated plus x percent" and the "Primary Used plus x percent" fields have been specified. Only one can be specified in the profile

Explanation:
When reallocating space, you must specify the amount of space to be allocated, either as a percentage of the primary allocated space or the primary used space. Both cannot be specified.

User response:
Remove the value from one of the fields.

DAJ229E	One of the two "Reallocate When" parameters must be specified

Explanation:
When reallocating space, you must specify when space is to be reallocated: when extents are greater than a specified number, or when the percentage of space used is greater than the specified percentage. If you specify both, space will be reallocated if either condition is met.

User response:
Enter values in one or both of the Reallocate When fields.

DAJ239E	No data sets in queue have been modified for move, request ignored

Explanation:
You have requested to execute a move request for all data sets within the move queue. The request was ignored because none of the data sets in the move queue have been modified with new data set attributes to be used when the data sets are moved.

User response:
If you want to move a data set, change its attributes in the move queue.

DAJ244E	Quantity Percent value invalid

Explanation:
The change quantity contained a invalid change by % value.

User response
Valid change quantity by % values allowed are:

- n%-nnnn% -- Change primary or secondary quantity to n% of current primary or secondary quantity allocation values.
- n%-nnnn%A -- Change primary or secondary quantity to n% of current data set allocated size value.
- n%-nnnn%U -- Change primary or secondary quantity to n% of current data set used size value.

The change percentage value (n-nnnn) must be between 1 and 9999. If a change % request results in a computed quantity less than 12 or greater than 4194304, it is ignored.

DAJ245E	A valid hour must be entered. Two numeric digits must be specified and they must be less than or equal to 12

Explanation:
An invalid value was entered for an exception value that uses the time of day.

User response:
Enter a valid value as specified in the message text.

DAJ246E	A valid minute must be entered. Two numeric digits must be specified and they must be less than or equal to 59

Explanation:
An invalid value was entered for an exception value that uses the time of day.

User response:
Enter a valid value as specified in the message text.

DAJ247E	You must enter either an "A" for AM or a "P" for PM

Explanation:
An invalid value was entered for an exception value that uses the time of day.

User response:
Enter a valid value as specified in the message text.

DAJ248E	TIME_TO must be selected if TIME_FROM is selected

Explanation:
A time was entered in the TIME_FROM field but the TIME_TO field was not completed.

User response:
Enter a valid time in the TIME_TO field.

DAJ249E	TIME_FROM must be selected if TIME_TO is selected

Explanation:
A time was entered in the TIME_TO field, but the TIME_FROM field was not completed.

User response:
Enter a valid time in the TIME_FROM field.

DAJ258E   **Invalid member name; only A-Z, 0-9, @, #, and $ are valid; first character must be A-Z, @, #, or $**

Explanation:
An invalid value was entered for the User_Exit Load_Module or CLIST_REXX_EXEC exception types.

User response:
Enter a valid value as specified in the message text.

DAJ263E   **Invalid starting position entered. Enter a numeric value for the starting position in the symbolic to substring**

Explanation:
An invalid value was entered in the Enter Starting Position field.

User response:
Enter a valid numeric as specified in the message text.

DAJ264E   **Invalid substring length entered. Enter a numeric value greater than 1 to substring the symbolic**

Explanation:
An invalid value was entered in the Enter Substring Length field.

User response:
Enter a valid numeric as specified in the message text.

DAJ267E   **Invalid value - Update Searchtime Options Y is not valid when Populate compression dictionary data set is not set to Y.**

Explanation:
Searchtime options cannot be set when the **Populate compression dictionary data set** field is set to N.

User response:
Change the value of either the **Update Searchtime Options** field or the **Populate compression dictionary data set** field.

DAJ268E   **If the value of the Searchtime | Deadline | Switchtime field is "None" or "Timestamp", the Time Zone value must be "N" for No.**

Explanation:
If the value of the field that is listed in the message is set to None or Timestamp, the **Time Zone** field must be set to N.

User response:
Either set the **Time Zone** field to N or change the value of the field that is listed in the message.

DAJ269E   **If the value of the Time Zone field is "Y", the Base on Current Date/ Timestamp field should be set to "T" for current timestamp.**

Explanation:
The **Time Zone** field is set to Y, which is valid only if the **Base on Current Date/Timestamp** field is set to T.

User response:
Either change the **Time Zone** field to N or change the value of the **Base on Current Date/Timestamp** field to T.

DAJ270I   **Ability to specify STOGROUP target volumes ENABLED**

Explanation
The ability to provide specific volumes for stogroup defined target data sets is enabled. This option controls whether you can specify specific stogroup volumes when using the Move Data Set Queue and subordinate displays.

When enabled, you are allowed to set specific stogroup volumes to be used. When disabled, setting stogroup volumes is not allowed.

You are not required to provide specific volumes when moving a data set that is stogroup defined. Dataset Manager move processing will move the data set to an available volume within the stogroup. This option is provided for instances where you want to control which volumes are used.

User response:
No action is required..

DAJ271I   **Ability to specify STOGROUP target volumes DISABLED**

Explanation
The ability to provide specific volumes for stogroup defined target data sets has been disabled. This option controls whether you can specify specific stogroup volumes when using the Move Dataset Queue and subordinate displays.

When enabled, you are allowed to set specific stogroup volumes to be used. When disabled, setting stogroup volumes is not allowed.

You are not required to provide specific volumes when moving a data set that is stogroup defined. Dataset Manager move processing will move the data set to an available volume within the stogroup. This option is provided for instances where you want to control which volumes are used.

User response:
No action is required..

DAJ272E	Target STOGROUP specified does not exist on Db2 SSID=*ssid*

Explanation:
The target data set stogroup name provided is not a valid stogroup name. The stogroup name does not exist in Db2 subsystem *ssid*.

User response:
Enter a valid stogroup name and press Enter to continue.

DAJ273E	Target FIRST VOLUME name is invalid, volume does not exist

Explanation:
The target data set First Volume name provided is invalid. The volume name does not exist on this host system.

User response:
Supply a valid volume name and press Enter to continue.

DAJ274E	Duplicate volume located

Explanation:
A duplicate volume name was located within the volume list. The cursor is located on the duplicate volume name.

User response:
To remove the duplicate volume, set the volume name to blanks or nulls and press Enter.

DAJ275E	Volume name is invalid, volume does not exist

Explanation:
The target data set volume name provided is invalid. The volume name does not exist on this host system.

User response:
Supply a valid volume name and press Enter to continue.

DAJ276E	Target Vcat name is invalid, Vcat name does not exist

Explanation:
The target data set Vcat name provided is not a valid Vcat name. The Vcat name does not exist on this host system.

User response:
Supply a valid Vcat name and press Enter to continue.

DAJ278I	Volume update(s) bypassed for SMS managed stogroup(s)

Explanation
While processing the UPDATE FIRST VOLUME request, some stogroup defined target data sets were located with target stogroups that are SMS managed.

Specifying volume information is not allowed for stogroup defined data sets when the stogroup is SMS managed.

First volume update processing was bypassed for all applicable data sets.

User response:
No action is required..

DAJ279E	Volume update not allowed for SMS managed stogroup

Explanation
You have attempted to update the first volume or the volume list for a target data set that is stogroup defined.

The target stogroup assigned to the target data set is SMS managed.

The ability to specify stogroup volumes is NOT ALLOWED if the target stogroup is SMS managed.

User response:
No action is required..

DAJ280I	Delete from move queue complete, press PF4 to view the move queue

Explanation:
All data sets for the selected item(s) were successfully deleted from the data set move queue.

User response:
Press PF4 to view the move queue.

DAJ281I	No matching data sets exist in move queue, delete req ignored

Explanation:
No data sets exist in the move queue for the items selected. The delete request was ignored.

User response:
No action is required..

DAJ282I	Stogroup is not currently in use

Explanation:
No pagesets are currently assigned to the stogroup name selected. The View Stogroup Database request can only be requested for stogroups which have one or more database pagesets using the stogroup.

User response:
No action is required..

DAJ283I	Data sets deleted from move queue

Explanation:
The requested data sets were deleted from the move queue.

User response:

No action is required..

DAJ284I   **FIRST entry being viewed**

Explanation:
The NEXT, PREV, or FIRST command has positioned
the display on the first display entry.

User response:
No action is required..

DAJ285I   **LAST entry being viewed**

Explanation:
The NEXT, PREV, or LAST command has positioned the
display on the last display entry.

User response:
No action is required..

DAJ286I   **Single entry exists, request
ignored**

Explanation:
The PREV, NEXT, FIRST, or LAST command was invalid.
There is only a single entry for the entity being viewed.

User response:
No action is required..

DAJ287I   **Indexspace *or* Indexname can
be specified**

Explanation:
You are not allowed to specify both index space name
and index name.

User response:
Remove the value from one of the fields.

DAJ288E   **When the Update Catalog option
is set to ACCESSPATH, the
Update History option must be
ACCESSPATH or NONE**

Explanation:
The Update History setting is dependent on the
Update Catalog setting. An invalid value was entered
in the Update History field.

User response:
Enter a valid value as specified in the message text.

DAJ289E   **When the Update Catalog option is
set to SPACE, the Update History
option must be SPACE or NONE**

Explanation:
The Update History setting is dependent on the
Update Catalog setting. An invalid value was entered
in the Update History field.

User response:
Enter a valid value as specified in the message text.

DAJ290E   **When the Update Catalog option is
set to NONE, the Update History
option must be NONE**

Explanation:
The Update History setting is dependent on the
Update Catalog setting. An invalid value was entered
in the Update History field.

User response:
Enter a valid value as specified in the message text.

DAJ291E   **The only valid values are "S" for
the Set command, "D" for the DBD
command, and "L" for the LevelID
command**

Explanation:
An invalid value was entered in the Process field.

User response:
Enter a valid value as specified in the message text.

DAJ292E   **The only valid values are "N" for
no DBD control statement extra
options, "D" for the Drop control
card, "T" for the Test control card,
"I" for the Diagnose control card,
and "R" for the Rebuild control
card**

Explanation:
An invalid value was entered in the **Db2 Process
Option** field.

User response:
Enter a valid value as specified in the message text.

DAJ293E   **If the DBD option is selected, the
DBD sub-option selection can not
be set to "N"o**

Explanation:
You selected the DBD option for repair (D in the
Process field), but an N still appears in the DBD
Process Option field.

User response:
Specify one of the DBD Process Options of Drop, Test,
Diagnose, or Rebuild.

DAJ294E   **If the process mode is not DBD,
the DBD sub-option field must be
set to "N"o**

Explanation:
A value other than N in the DBD Process Option field is
only valid if you specify the DBD process for repair (D
in the Process field).

User response:
Change the value in the DBD Process Option field to N,
or change the Process field to D.

DAJ295E   **If the process mode is not DBD, the output DDNAME for the DBD processing mode cannot be specified**

Explanation:
You entered a DD name in the Output DDname field for the DBD options, but DBD processing has not been specified.

User response:
Clear the Output DDName field, or change the Process field to D to select DBD processing.

DAJ296E   **"Work File Unit Device" must be specified on the Option 3 Setup panel for this Db2 subsystem. Enter an "S" in the Option field of this panel, then "3" in the Command field of the following panel. Specify the appropriate value**

Explanation:
The work file device type must be set in the product setup screen.

User response:
Follow the instructions in the message text.

DAJ297E   **Invalid recovery point. Specify "C" for current, "F'" for the last full image copy, "I" for the last incremental image copy, "L" for the last image copy (full or incremental), "S" for a specified end point, "Q" for the last quiesce point, or "T" for using TOCOPY**

Explanation:
An invalid value was specified in the Recover To field.

User response:
Enter a valid value as specified in the message text.

DAJ298E   **To use the specified "Use Stats From" value, *package_set* PackageList must be specified on the Option 3 Setup panel for this Db2 subsystem. To access the Setup panel, enter an "S" in the Option field of the Main Menu, then "3" in the Command field of the following panel. Specify the appropriate value**

Explanation:
You selected a Use Stats From setting that requires a corresponding package list name be entered in the product setup screen.

User response:

Follow the instructions in the message text to set the appropriate package list name.

DAJ299E   **If Tologpoint processing is specified, a corresponding log point must also be specified**

Explanation:
Recovery to a log point was selected, but the log point to recover to has not been specified.

User response:
Enter the six-byte hexadecimal RBA or LRSN as the point to which to recover.

DAJ300E   **When a processing type other than to a specified point is selected, the Tologpoint field must be blank**

Explanation:
A recovery point other than Tologpoint was selected, but a value was entered in the Specified point field. This combination is not allowed.

User response:
Remove the value from the Specified point field.

DAJ301E   **Specify "L" for local site processing, or "R" for recovery site processing**

Explanation:
An invalid value was entered in the Site field.

User response:
Enter a valid value as described in the message text.

DAJ302E   **If recover Tocopy processing is selected, at least the Tocopy data set name must be specified**

Explanation:
Recovery to a particular image copy was selected, but the image copy data set name to recover to has not been specified.

User response:
Provide the image copy data set name in the TOCOPY Dataset Name field.

DAJ303E   **If a processing mode other than Tocopy is specified, the Tocopy information fields must be blank**

Explanation:
A recovery point other than to a particular image copy was selected, and there are values in the TOCOPY Dataset Name, TOCOPY VOLUME, and/or TOCOPY TOSEQNO fields.

User response:
Remove the values from all the TOCOPY fields.

DAJ304E   **If a "To Sequence Number" is specified, the "To Volume Serial" must also be specified**

Explanation:
A value was specified for the file sequence number, but the volume serial has not been provided.

User response:
Specify the volser in the TOCOPY TOVOLUME field.

DAJ306E   **If standard Db2 utility processing is selected, the EMC hardware specific options can not be viewed or altered**

Explanation:
A Y was entered in the Alter EMC Symm/IBM ESS Optns options field.

User response:
Select the ESS or Symmetrix Image Copy Utility mode, or remove the Y from the Alter EMC Symm/IBM ESS Optns options field.

DAJ307E   **The only valid values are "D" for snap data set processing, "V" for snap volume processing, "B" for BCV split processing**

Explanation:
An invalid value was entered in the EMC Processing mode field.

User response:
Enter a valid value as described in the message text.

DAJ308E   **If the EMC mode is "V"olume, the data set mode fields may not be entered**

Explanation:
The EMC Processing Mode was set to V for volume, and one or more of the data set option fields is filled in. This combination is not allowed.

User response:
Remove the value from the data set option fields.

DAJ310E   **Invalid Value - The value must be numeric and be >= 1 and <= 5**

Explanation:
An invalid value was entered for an exception value.

User response:
Correct the exception value as listed in the message text.

DAJ311E   **Invalid Day of the Month - The value must be numeric and be >= 1 and <= 31**

Explanation:
An invalid value was entered for a Day of the Month exception value.

User response:
Enter a valid value as described in the message text.

DAJ312E   **Invalid Month - The value must be numeric and be >= 1 and <= 12**

Explanation:
An invalid value was entered for a month value.

User response:
Enter a valid value as described in the message text.

DAJ313E   **The Db2 Free Pages field has a valid range of 0 to 255**

Explanation:
An invalid value was entered for the **Db2 Free Pages** field.

User response:
Enter a valid value as described in the message text.

DAJ314E   **Invalid Condition/Nth xxxDay of the Month combination The Nth Day value must be >= 2 with a LT Condition and be <= 4 with a GT Condition**

Explanation:
An invalid exception value was specified for the Day of Month exception condition. The comparators and values entered are incompatible.

User response:
Enter a valid value as described in the message text.

DAJ315E   **Cannot use the "O"r line command on this Column. Use the "A" or "S" command. Press Help for more information**

Explanation:
And/Or line commands cannot be used to change the condition type of the day/time exceptions.

User response:
Press PF1 for a detailed explanation of how the day/time conditions are evaluated.

DAJ316E   **Cannot use the "O"r line command on this column. When an "S" line command is used, an "O" is substituted for the "S". Use the "A" command. Press Help for more information**

Explanation:
You attempted to change the SYSCOPY DAYS exception condition to be ANDed with the SYSCOPY image copy type field. This combination is not allowed.

User response:
Press PF1 for a detailed explanation of how the SYSCOPY conditions are evaluated.

DAJ317E   **At least one repair type function must be selected when repair is used**

Explanation:
If the Process field is set to S, one of the repair functions must be selected. This option resets the pending statuses of the objects.

User response:
Select one of the repair functions (No Copy Pending, No Recover Pending, No Check Pending, No Auxiliary Warning, No Auxiliary Check Pending, or No Rebuild Pending).

DAJ318E	Cannot use the "A"nd line command on a Repeated line. When an "S" line command is used, the "Conditions To Be" field value is substituted for the "S." Press Help for more information

Explanation:
You cannot use an AND condition for a repeated line.

User response:
Press PF1 for a detailed explanation of how the repeated conditions are evaluated.

DAJ319E	When the DB2_DISPLAY_STATUS.TRIGGER_IF_1_MATCH Exception is selected and multiple Db2 DISPLAY exceptions are Selected, they must all be Selected as "A"nd Conditions. Press Help for more information

Explanation:
You must use an AND condition for a repeated line.

User response:
Press PF1 for a detailed explanation of how DB2_DISPLAY_STATUS conditions are evaluated.

DAJ320E	This percentage field has a valid range of 0 to 99

Explanation:
You entered a Db2 percent free per page greater than 99. This value is not allowed.

User response:
Enter a valid value as specified in the message text.

DAJ321W	Because an invalid combination of options existed in the Reallocate Options screen, the Reallocate option has been set to "N"o

Explanation:
The reallocate utility option has been deselected.

User response:
No action is required..

DAJ322E	The only valid values for the Source fields are "C" for the last image copy (Full or Incremental),

"F" for the last Full image copy, and "I" for the last Incremental image copy

Explanation:
An invalid value was entered for the Copy to Copy source field.

User response:
Enter a valid value as described in the message text.

DAJ323W	Because an invalid combination of options existed in the Repair Options screen, the Repair option has been set to "N"o

Explanation:
The repair utility option has been deselected.

User response:
No action is required..

DAJ324E	All 4 copy types can not be selected at the same time

Explanation:
COPYTOCOPY can only make up to three copies at a time.

User response:
Select up to three appropriate copy types.

DAJ325I	Option not allowed - This option is only valid with IBM Recovery Expert Tool installed

Explanation:
In order to select EMC or ESS type copies, you must have a license for IBM Db2 Recovery Expert.

User response:
No action is required..

DAJ326E	The buffer pool name entered is not recognized by Db2

Explanation:
An invalid buffer pool was entered for the dynamic mapping table.

User response:
Enter a valid buffer pool that Db2 Automation Expert can use when creating a dynamic mapping table.

DAJ327E	The statistics options can only be modified when the "Statistics Options" setting is set to "Y"

Explanation:
You specified to update statistics options, but statistics options has not yet been selected for inclusion in the profile.

User response:
Type Y in the Include field next to Statistics Options, then type Y in the Update field to update the options.

DAJ328E   **The storage group name entered is not recognized by Db2**

Explanation:
An invalid storage group name was entered for the dynamic mapping table.

User response:
Enter a valid storage group that Db2 Automation Expert can use when creating a dynamic mapping table.

DAJ329E   **The maximum value for the OFFPOSLIMIT field is 65535**

Explanation:
An invalid value was entered in the Offposlimit field.

User response:
Enter a valid value as listed in the message text.

DAJ330E   **The maximum value for the INDREFLIMIT field is 65535**

Explanation:
An invalid value was entered in the Indreflimit field.

User response:
Enter a valid value as listed in the message text.

DAJ331E   **When the Sharelevel is set to Change or Reference, at least one image copy must be specified**

Explanation:
When specifying an online REORG, the SHRLEVEL was set to Change or Reference, but no image copy has been specified. Db2 requires an image copy to be taken when performing those methods of online REORG.

User response:
The cursor is positioned in the Copy options field. Type Y in the Copy options field to specify an image copy. If image copy options have not yet been set in this profile, the Image Copy Options screen and related screens will appear after you specify online REORG options.

DAJ333E   **The valid values for this field are "D" to use standard Db2 utility processing, "E" for EMC based fast copy, or "S" for Shark based fast copy**

Explanation:
An invalid value was entered in the **Image Copy Utility mode** field.

User response:
Enter a valid value as listed in the message text.

DAJ334E   **A Local site backup image copy can not be selected unless the Local site primary is selected also**

Explanation:
You cannot specify a local site backup image copy without specifying a local site primary copy as well.

User response:
Type Y in the Local Primary - Take Image Copy field to select the local primary backup.

DAJ335E   **A Recovery site backup image copy can not be selected unless the Recovery site primary is selected also**

Explanation:
You cannot specify a recovery site backup image copy without specifying a recovery site primary copy as well.

User response:
Type Y in the Recovery Site Primary - Take Image Copy field to select the recovery site backup.

DAJ337W   **"Max Primary Space Allocation" must be specified on the Option 3 Setup panel for this Db2 Subsystem. Enter an "S" in the Option field of the Automation Tool Main Menu, then "3" in the Command field of the following panel. Specify the appropriate value. A default value of 999999 Tracks will be used for this session**

Explanation:
You must set the maximum primary space allocation allowed on the Setup screen.

User response:
Access the Setup screens and enter the appropriate value as described in the message text.

DAJ338E   **Invalid object value -Specify an "E" to exclude the objects or an "O" to process only these object types**

Explanation:
An invalid value was entered when specifying to include or exclude an object type in the exception profile.

User response:
Enter a valid value as described in the message text.

DAJ339E   **The only valid values are "W" for wait or "S" for stop**

Explanation:
An invalid value was entered in the Wait for volume avail or Stop field.

User response:
Enter a valid value as listed in the message text.

DAJ340E   **The only valid values are "C" for continue or "S" for stop**

Explanation:
An invalid value was entered in the Continue or Stop on Errors field.

User response:
Enter a valid value as listed in the message text.

DAJ341E   **The new VCAT name must be specified**

Explanation:
The New High Level VCAT is blank. This field is required.

User response:
Enter a new high level qualifier to be assigned to the copied data sets in the New High Level VCAT field.

DAJ342E   **When snap volume processing is specified, at least one volume destination field must be specified**

Explanation:
You specified Snap Volume, but did not list any destination volumes in the Volume List field.

User response:
Enter a volume or volumes in the Volume list fields.

DAJ343E   **The volume serial number does not exist or the volume serial pattern does not match any existing volume serial**

Explanation:
An invalid value was entered in one of the Volume list fields.

User response:
Enter a valid existing volume serial name or pattern.

DAJ344E   **The valid range of parallel subtasks is from 1 to 99**

Explanation:
An invalid value was entered in the Number of Parallel Subtasks field.

User response:
Enter a valid value as listed in the message text.

DAJ345E   **The only valid values are "D" for data set and "V" for volume level**

Explanation:
An invalid value was entered in the Backup Spaces at This Level field.

User response:
Enter a valid value as listed in the message text.

DAJ346E   **The only valid values are "D" for DFSMSDSS processing, or "F" for FDR processing**

Explanation:
An invalid value was entered in the Volume Backup Vendor field.

User response:
Enter a valid value as listed in the message text.

DAJ347E   **The maximum value for the drain wait is 1800 seconds**

Explanation:
An invalid value was entered in the Drain Wait field.

User response:
Enter a valid value that is less than or equal to the maximum of 1800 seconds.

DAJ348E   **The maximum value for the number of retries is 255**

Explanation:
An invalid value was entered in the Retry field.

User response:
Enter a valid value that is less than or equal to the maximum of 255.

DAJ349E   **The valid range for this field is between 1-1800 seconds**

Explanation:
An invalid value was entered in the Retry Delay field.

User response:
Enter a valid value that is the range of 1 to 1800 seconds.

DAJ350E   **When snap data set is selected, the user catalog data set name can not be specified**

Explanation:
A user catalog volume serial was entered, but the EMC processing mode was not snap data set. This is not allowed.

User response:
Change the processing mode to snap data set, or clear the User Catalog Volume Serial field.

DAJ351E   **The user catalog data set name must be specified when the user catalog volume serial is specified**

Explanation:
A user catalog name was entered, but the EMC processing mode was not snap data set. This is not allowed.

User response:
Change the processing mode to snap data set, or clear the User Catalog field.

DAJ352E	The only valid values are "A" for All, "C" for Accesspath, and "S" for Space

Explanation:
An invalid value was entered in the Delete field.

User response:
Enter a valid value as listed in the message text.

DAJ353E	If the ESS mode is "V"olume, the data set mode fields may not be entered

Explanation:
The ESS backup method selected was volume, but a value was entered in one or more of the Flash Dataset Options fields. This is not allowed.

User response:
Clear the Flash Dataset Options fields.

DAJ354E	When parallel is set to no, the number of tape units field must be blank

Explanation:
Parallel processing was not specified (N was entered in the Parallel field), but a number was entered in the Number of tape units field. This is not allowed.

User response:
Clear the Number of tape units field or specify Y in the Parallel field.

DAJ355E	The only valid values are "D" for flash data set processing, and "V" for flash volume processing

Explanation:
An invalid value was entered in the ESS Backup Method field.

User response:
Enter a valid value as listed in the message text.

DAJ357E	When flash volume processing is specified, at least one volume destination field must be specified

Explanation:
Flash volume processing was specified (V was entered in the ESS Backup Method field), but volumes were not specified in the Volume list fields.

User response:
Enter a volume or volumes in the Volume list field.

DAJ358E	Invalid combination. If Freqval Count is blank, Freqval Occurrence must also be blank.

Explanation:
If Freqval Count is blank, Freqval Occurrence must also be blank.

User response:
Either enter an integer value in the Freqval Count field, or remove the value from the Freqval Occurrence field.

DAJ359E	Invalid combination. If Freqval Count has a number, Freqval Occurrence must not be blank.

Explanation:
When the **Freqval Count** field contains a number, the **Freqval Occurrence** field must not be blank.

User response:
Either remove the value from the **Freqval Count** field, or enter a value in the **Freqval Occurrence** field.

DAJ360E	Either one or more of the load libraries allocated for Automation Expert is not APF authorized, or the FEC$TSOC program has not been added to the AUTHPGM and AUTHTSF sections of SYS1.PARMLIB(IKJTSOxx).

Explanation:
This message is displayed if one or more of the load libraries for Db2 Automation Expert is not APF authorized. APF authorization is required for the Db2 Automation Expert and FEC load libraries. Alternatively, this message is displayed if the FEC$TSOC program has not been added to the AUTHPGM and AUTHTSF sections of SYS1.PARMLIB(IKJTSOxx).

User response:
Ensure that the load libraries are APF authorized. Refer to "APF authorizing load libraries" on page 21 for more information. Also, verify that the FEC$TSOC program has been added to the AUTHPGM and AUTHTSF sections of SYS1.PARMLIB(IKJTSOxx). If additional assistance is needed, contact IBM Software Support.

DAJ361E	Db2 Subsystem *subsystem_ID* could not be found on this MVS operating system

Explanation:
The Db2 subsystem ID entered on the Db2 Automation Expert main menu has not been defined to MVS.

User response:
Enter a valid subsystem ID, or consult your Db2 administrator.

DAJ362E	A critical error has occurred attempting to resolve the subsystem RC=*return_code*

Explanation:
A critical error was encountered trying to access a Db2 subsystem. This message is most often the result of improperly setting up or configuring Db2 Automation Expert and its common components.

Either the libraries were not APF authorized correctly or the authorization not enacted via an IPL.

User response:
Ensure that you have completed all product customization steps. If you still receive this message, consider an IPL of the system, or note the return code and contact IBM Software Support.

DAJ363E	Db2 subsystem *subsystem_ID* is currently not active. Starting Db2 is required to continue

Explanation:
The Db2 subsystem entered exists, but is inactive.

User response:
Start the Db2 subsystem.

DAJ364E	Invalid data set name. This field, if entered, must conform to MVS naming rules

Explanation:
An invalid data set name was entered in the DSN field. This data set is used to hold the copies of the records discarded from the REORG.

User response:
Rename the data set name using proper data set naming conventions.

DAJ365E	If entering Threshold values, both the Threshold Quantity and the Threshold Quantity Type fields must be entered

Explanation:
In the Use Threshold Unit if allocated space exceeds x Meg/Gig/Trk/Cyl field, only one of the two required fields was entered. If you want to use a threshold, you must enter both the quantity and its unit.

User response:
Enter the missing value.

DAJ366E	The valid values for Threshold Quantity Type are "M" for megabytes, "G" for Gigabytes, "C" for cylinders, and "T" for tracks

Explanation:
An invalid value was entered in the Use Threshold Unit if allocated space exceeds x Meg/Gig/Trk/Cyl field.

User response:
Enter a valid value as described in the message text.

DAJ367E	The only valid values to the Exception Rule are "A"ccepted, "R"ejected, and "B"oth

Explanation:
An invalid value was entered in the Exception Rule field. This field determines when the utility is run

on the objects accepted or rejected as a result of exception processing.

User response:
Type A in this field to run the utility on objects accepted (included) as a result of exception processing. Type R to run the utility on objects that are rejected (excluded) as a result of exception processing. Type B to run this utility on all objects regardless of exception processing results.

DAJ369E	If using the non-threshold data set name is desired, the data set information on the threshold screen must remain blank

Explanation:
A data set name qualifier string was entered for the image copy threshold data set, but the Use Standard DSN in Threshold Proc field is set to Y. The two are mutually exclusive.

User response:
Either clear the data set name qualifier string, or change the Use Standard DSN qualifier string field to N.

DAJ370I	There are additional options on the Image Copy Options screen. Press <PF8> to scroll down and view them

Explanation:
This informational message appears upon accessing a scrollable screen as a reminder to scroll down to view all fields.

User response:
Press PF8 to scroll down and view the rest of the fields. Press PF7 to scroll up.

DAJ371E	The threshold values cannot be entered if the profile is set to use a utility other than Db2 image copy

Explanation:
You attempted to enter threshold values, but the image copy type selected for this profile is not a Db2 image copy type. Threshold values may only be specified for Db2 image copies.

User response:
Clear the values from the threshold fields.

DAJ374E	The Sample parameter must be blank when not using Table All

Explanation:
When specifying to collect statistics for all columns of all tables in a table space, you can specify a percentage of rows to sample using the Sample field. However, if not collecting stats for all columns of all tables, you cannot use sampling.

User response:
Either change the Table All field to Y or remove the value from the Sample field.

DAJ375E   **If the Keycard parameter is specified, then the Index All parameter must be "Y".**

Explanation:
Collection of distinct column values is allowed only when you are collecting statistics for columns of indexes on a table space. This parameter is valid with RUNSTATS INDEX(ALL) and RUNSTATS INDEX (*ix-name*).

User response:
Either change the **Index All** field to Y, or change the **Keycard** field to N.

DAJ376E   **If Discard processing is selected, a Discard data set name must also be entered**

Explanation:
You entered Y in the Discard field to specify discard processing, but did not enter a discard data set name.

User response:
Specify a discard data set in the DSN field.

DAJ377E   **With Unload set to Pause | Only, the Nosysrec option cannot be specified.**

Explanation:
An invalid combination of parameters was entered. Nosysrec Y cannot be specified with Unload Pause or Unload Only.

User response:
Change one or more of the parameters.

DAJ378E   **The only valid values for Unload Data are "O"nly, "P"ause, "C"ontinue, and "E"xternal**

Explanation:
An invalid value was entered in the Unload Data field.

User response:
Enter a valid value as listed in the message text.

DAJ380E   **This field, if entered, can not have a value of zero**

Explanation:
If you specify a space allocation threshold, you must specify a quantity greater than 0.

User response:
Enter a valid threshold quantity or remove the value from the field.

DAJ381E   **The retention period and expiration date fields cannot be entered at the same time**

Explanation:
You entered a value in both the Expiration date and Retention period fields. This combination is not valid.

User response:
Clear the value from either the Expiration date or the Retention period field.

DAJ382E   **The allocation multiplier for unloading compressed objects must be a number in the range of 1-99**

Explanation:
The allocation multiplier entered is incorrect.

User response:
Enter a valid value as listed in the message text.

DAJ383W   **The altered Threshold values entered here are reflected in the other image copy types**

Explanation:
Each image copy type does not have its own distinct threshold quantity and type. Therefore, when the value is changed on one image copy type screen, the same values will appear on the other screens.

User response:
No action is required..

DAJ384E   **Unload Data can not be set to External or Only when the Discard option is in use**

Explanation:
When the Discard data function is activated in the utility profile, the only valid values for the Unload Data parameter are "C"ontinue and "P"ause.

User response:
Enter one of the valid values or set Discard to N.

DAJ389E   **When Sharelevel "R"eference is specified, REGISTER must be blank.**

Explanation:
The Register field is set to Y or N. This is allowed only when the Sharelevel field is set to C (change).

User response:
Either set the Register field to blank, or set the Sharelevel field to C.

DAJ415E   **Invalid Value. Valid options are -1 or numeric value greater than 0 for Db2 V8 New Function Mode and later**

Explanation:
A zero or non-numeric value was entered in a field. -1 is valid for Db2 Version 8 New Function Mode.

User response:

Enter a valid value as described in the message text.

DAJ418E **Invalid Condition - Please Enter "EQ" or "=" if you would Objects selected if they meet this Exception Condition or Enter "NE", "<>" or "¬=" if you would like Objects selected if they do NOT meet this Exception Condition. Press Help for more information**

Explanation

The condition type must be either EQUAL or NOTEQUAL. An EQUAL condition tells exception processing to select objects whose Db2 Display Status matches the selected status type. A NOTEQUAL condition tells exception processing to select objects whose Db2 Display Status is something other than the selected status type, i.e., whose status does NOT match the selected status type. For example, if you want to select objects that are NOT in COPY PENDING status, enter NOTEQUAL for the CHECK_PEND condition:

```
  O  DB2 DISPLAY STATUS    CHECK_PEND    NE
```

User response:
Enter a valid value as described in the message text.

DAJ419W **Please enter a Condition. To Deselect an item, enter a "D" in the "S" field**

Explanation:
A table was selected on the Update Exceptions Profile Display, but you must also enter conditions for the table.

User response:
Enter a condition for the selected table. Consult the bottom of the screen for valid condition values. Scroll right to see information about the exception condition.

DAJ420E **Updating of the Runstats options is allowed only when the "Use Stats From" value is set to rUnstats**

Explanation:
You attempted to update RUNSTATS options by entering Y in the Update Runstats Options field. However, the value in the Use Stats From field is set to something other than U for RUNSTATs. This is not allowed.

User response:
Change the Use Stats From field to U before typing Y in the Update Runstats Options field.

DAJ422E **When one Db2 Display Status Exception is selected as a**

NOTEQUAL Condition, all Db2 Display Status Exceptions must be selected as AND Conditions. Press Help for more information

Explanation

When one Db2 Display Status Exception is selected as a NOTEQUAL Condition, then all Db2 Display Status Exceptions must be selected as AND Conditions. Exception processing will trigger an object only when the Db2 Display Status of an object is something other than the selected statuses. For example, trigger an object if it is not in Check Pending, Copy Pending, or Stop status:

```
A  DB2  DISPLAY STATUS    CHECK_PEND    NE
A  DB2  DISPLAY STATUS    COPY_PEND     NE
A  DB2  DISPLAY STATUS    STOPPED       NE
```

User response:
Change the incorrect condition.

DAJ424E **In order to enter a skeletal to be used in Pause processing, the Unload Data field must be set to "P"ause**

Explanation:
A skeletal member name was entered in the Pause Skeletal field, but the Unload Data field is set to N.

User response:
If you want to use a Pause Skeletal, you must set the Unload Data field to P(ause).

DAJ425E **The Concurrent and Parallel parameters can not be set to Yes at the same time**

Explanation:
A Y was entered in both the Parallel and Concurrent fields. The Parallel option is only allowed for non-concurrent image copies.

User response:
Set one of the fields to N.

DAJ427E **The Concurrent and Check Page parameters can not be set to Yes at the same time**

Explanation:
A Y was entered in both the Check Page and Concurrent fields. The Check Page option is only allowed for non-concurrent image copies.

User response:
Set one of the fields to N.

DAJ428E **The Number Of Columns field must be greater than 0**

Explanation:

You entered 0 in the Numcols field. The Numcols value, if specified, must be greater than 0.

User response:
Either clear the Numcols field or set it to a value greater than 0.

DAJ429E	The subsystem ID entered could not be verified against the Control File

Explanation:
Db2 Automation Expert is unable to verify that the selected Db2 subsystem is defined in the DB2PARMS VSAM control file. Your user ID must have sufficient RACF authority to read this data set.

User response:
Verify that your user ID has read authority to the Db2 Automation Expert control file.

DAJ430E	The GDG base for the entered discard data set does not exist

Explanation:
The discard data set name you entered is a GDG base, but the GDG base does not exist. The GDG base must already be defined.

User response:
Create the GDG base before continuing.

DAJ431E	The entered discard data set does not exist. Please ensure that it is defined with an LRECL and BLOCKSIZE consistent with the data being discarded

Explanation:
The discard data set name you entered does not exist. The discard data set must already be defined and must have the appropriate LRECL and block size for the records that you wish to discard.

User response:
Enter an existing data set to continue.

DAJ432E	There are additional options on the Reorg Tablespace Options screen. Press <PF8> to scroll down and view them

Explanation:
This is a scrollable screen. Press PF8 or enter the DOWN command to view additional options.

User response:
No action is required..

DAJ433E	Invalid DD name. If this field is specified, it must be a valid DD name

Explanation:

A valid DD name is 1-8 characters where the first character is A-Z, @, #, or $. The remaining characters can be A-Z, 0-9, @, #, or $.

User response:
Correct the DD name.

DAJ434E	Invalid Value. Select F for Full Backup or D for data only

Explanation:
An invalid value was entered in the Backup System Full/Data Only field.

User response:
Enter F to build JCL for a full system backup (data and logs). Enter D to build JCL for a data only system backup.

DAJ435E	Invalid Value. Select Y for Yes to select the log only option or N for No

Explanation:
An invalid value was entered in the Log Only field.

User response:
Type N to build syntax to recover the Db2 subsystem volume data and apply log changes. Type Y to build syntax to apply log changes only; only use this option when the database volumes have already been restored outside of Db2.

DAJ437E	Invalid Entry - Only one recovery point can be selected from the list for the Restore System Utility. Please select only one line or select none and enter a recovery point RBA/LRSN

Explanation:
Multiple restore points were selected from the list. Only one restore point can be selected at a time.

User response:
Choose one restore point or use the Recover RBA/LRSN field.

DAJ438E	Invalid Value - Select S to choose this option

Explanation:
An invalid value was entered in the Cmd field.

User response:
Enter a valid value as listed in the message text.

DAJ440I	There were no Backup System history records found in any Boot Strap Datasets (if datasharing). System Restore utility is not allowed without running a Backup System utility prior.

Explanation:

The Restore System option was selected from the Standalone Utilities menu. However, no system backups have been made for the specified Db2 subsystem or data sharing group.

User response:
No action is required.

DAJ441E   **Invalid Entry - The Recover RBA/LRSN field is not a valid hexadecimal string. Please enter a valid RBA / LRSN to recover to.**

Explanation:
An invalid RBA or LRSN was entered in the named field.

User response:
Enter a valid value as listed in the message text.

DAJ442E   **Invalid Entry - The Date entered is invalid**

Explanation:
An invalid date was entered.

User response:
Correct the invalid month, date or year.

DAJ442E   **Invalid Entry - The Date entered is invalid**

Explanation:
An invalid date was entered.

User response:
Correct the invalid month, date or year.

DAJ443E   **Invalid Entry - Enter Cancel or End to return to System Restore**

Explanation:
A value was entered in the Option line. This is not allowed.

User response:
Clear the Option line. Press PF3 (END) or enter the Cancel command to return to the Restore System utility screen.

DAJ444E   **Invalid Entry - Enter a "Y" if you would like to enter a date/time and have it converted to an LRSN for you**

Explanation:
An invalid value was entered in the View LRSN Utility field.

User response:
Enter Y to use the timestamp to LRSN conversion utility. Enter N to enter an RBA/LRSN manually or to select a row from the list of available system backups.

DAJ445E   **Invalid Value - Enter a "G" if the time you are entering is machine time (GMT) or enter an "L" if you are entering a Local Time**

Explanation:
An invalid value was entered in the Timestamp is in GMT or Local Time field.

User response:
Enter a valid value as listed in the message text.

DAJ446I   **There are additional options on the Reorg Index Options screen. Press <PF8> to scroll down and view them**

Explanation:
This informational message appears upon accessing a scrollable screen as a reminder to scroll down to view all fields.

User response:
Press PF8 to scroll down and view the rest of the fields. Press PF7 to scroll up.

DAJ447E   **Invalid Entry - Valid options are Y, N, or D**

Explanation:
An invalid value was entered in the Dump field.

User response:
Type Y to create a fast copy on disk, then dump it to tape. Type D to create a dump on tape of an existing fast copy. Type N to bypass dumps.

DAJ449I   **Data Page Verification Reporting was selected for this utility profile in a previous release of Db2 Automation Expert, but is no longer available for Db2 Automation Expert V4.3 and above.**

Explanation:
Data Page Verification Reporting was deprecated in Db2 Automation ExpertV4.2 and removed in V4.3. This utility profile was created prior to V4.3 and included Data Page Verification Reporting. This option will now be removed.

User response:
No action is required.

DAJ450E   **This option is only valid when using a Db2 Version 9.1 or later Db2 subsystem**

Explanation:
You set an option to a setting that requires Db2 Version 9.1 or later.

User response:
Change the option setting to a blank for your version of Db2.

DAJ451E   **The number of days field must be specified when RETAIN LAST (n) or RETAIN GDGLIMIT LAST (n) is selected**

Explanation:
You specified to retain a specific number of recovery records with RETAIN LAST (n) or RETAIN GDGLIMIT LAST (n). However, the number of records is blank.

User response:
Enter the number of records to be retained in SYSIBM.SYSCOPY.

DAJ452E   **The number of days field has a valid range of 1-99999999**

Explanation:
An invalid value was entered in a numeric field.

User response:
Enter a valid numeric value.

DAJ453E   **Force and Dumponly are mutually exclusive**

Explanation:
You cannot specify both Force and Dumponly.

User response:
Change the values and retry.

DAJ454E   **Copy token is only valid with Dumponly**

Explanation:
You entered a Copy token, but the Dumponly option was not set.

User response:
Change the Dump field to D or remove the value from the Copy token field.

DAJ455E   **Logonly and Fromdump are mutually exclusive**

Explanation:
You specified a log only restore but also specified Y in the From Dump field. This combination is not valid.

User response:
Change either the Log Only field or the From Dump field to N.

DAJ456E   **Logonly and Tapeunits are mutually exclusive**

Explanation:
You specified a log only restore but also specified Y in the Tape Units field. This combination is not valid.

User response:
Change either the Log Only field or the Tape Units field to N.

DAJ457E   **Dumpclass is only valid with Fromdump**

Explanation:
You specified a Dump Class without specifying Y in the From Dump field. This combination is not valid.

User response:
Change the From Dump field to Y, or remove the value from the Dump Class field.

DAJ458E   **Valid options are Yes, No, 0-999**

Explanation:
An invalid value was entered in the Tape Units field.

User response:
Enter a valid value as listed in the message text.

DAJ459E   **When Shrlevel is set to Reference, the Unload Data field must be set to Continue.**

Explanation:
When a REORG with SHRLEVEL REFERENCE has been specified, the Unload Data field must be set to Continue.

User response:
Change the Unload Data field to Continue.

DAJ460I   **No indexspaces found**

Explanation:
No indexspaces were found using the current selection criteria. Selection criteria is redisplayed.

User response:
Either change the selection criteria or PRESS PF3 (END) to exit the selection input panel.

DAJ461E   **When the Sharelevel and Isolation field is set to "C" or "R," the Register field must be blank.**

Explanation:
The Register field is set to Y or N. This is allowed only when the Sharelevel and Isolation type field is set to U.

User response:
Either set the Register field to blank, or set Sharelevel and Isolation to U.

DAJ470I   **SLB not selected. Prior value restored**

Explanation:
An SLB was not selected as a source for the image copy. The Use System Level Backup field was reset to its prior value.

User response:
No action is required..

DAJ471E   **Invalid value. Valid values are S, R, or B**

Explanation:

An invalid value was entered in the Use System Level Backup (SLB) field.

User response:

Enter a valid value as described in the message text.

DAJ472E	Invalid value. Specify decimal number from 0-99

Explanation:

An invalid value was entered in the Number of Tasks field.

User response:

Enter a valid value as described in the message text.

DAJ473I	No System Level Backups found

Explanation:

An attempt was made to select a specific SLB, but no system level backups were found.

User response:

Ensure a system backup is available from Db2 Recovery Expert if you want to use this option.

DAJ474E	At least one work volume required

Explanation:

At least one work volume must be entered in the Work Volumes field.

User response:

Correct the issue and retry.

DAJ475E	Volume not found

Explanation:

The work volume entered in the Work Volumes field was not found.

User response:

Correct the issue and retry.

DAJ476E	Data set not found

Explanation:

The data set entered in the Control File field was not found.

User response:

Ensure the data set entered is correct and the data set exists.

DAJ477E	At least one load library required

Explanation:

The load libraries for Db2 Recovery Expert were not entered. The load libraries for Db2 Recovery Expert must be supplied to use it with Db2 Automation Expert.

User response:

Correct the problem and retry.

DAJ478E	The work volumes cannot be a mixture of SMS-managed and non-SMS-managed volumes

Explanation:

The supplied work volumes are a mixture of SMS and non-SMS managed storage groups. This combination is not allowed.

User response:

Correct the problem and retry.

DAJ479E	If the work volume(s) are SMS-managed an SMS storage class must also be specified

Explanation:

The supplied work volumes are SMS-managed. You must supply an SMS storage class in the Work Storage Class field.

User response:

Correct the problem and retry.

DAJ480E	A storage class must not be specified if the work volume(s) are not SMS-managed.

Explanation:

The supplied work volumes are not SMS-managed, but an SMS storage group was provided in the Work Storage Class field.

User response:

Correct the problem and retry.

DAJ481E	A duplicate volume was entered.

Explanation:

A duplicate volume was entered in the Work Volumes field.

User response:

Remove the duplicate volume and retry.

DAJ482E	Invalid value. Specify decimal number from 1-99

Explanation:

An invalid value was entered in the Number of Tasks field.

User response:

Correct the problem and retry.

DAJ483E	Invalid value. Specify decimal number from 1-256

Explanation:

An invalid value was entered in the Maximum Tapes field.

User response:

Correct the problem and retry.

DAJ484E   **Invalid value. Specify AUTO, or a decimal number between 0.01 - 100.00 with a maximum precision of 2| Invalid value. Specify AUTO, or a decimal number between 0.01 - 100.00 with a maximum precision of 2, or NONE.**

Explanation:
An invalid value was entered in the Tablesample field.

User response:
For Db2 V11 and earlier, enter "Auto" or a value in range .01 - 100.00. For Db2 V12 function level 505 and later, enter "Auto" or a value in range .01 - 100.00, or None.

DAJ485I   **There are no Sample Specifications to view**

Explanation:
An attempt to view Sample specifications was performed, but no Sample specifications exist.

User response:
No action is required..

DAJ486E   **Sample and Table Sample are mutually exclusive**

Explanation:
You may not specify both Sample and Table Sample.

User response:
Please specify Sample or Table Sample, not both.

DAJ487E   **Repeatable is only valid when Table Sample is specified**

Explanation:
Repeatable can only be specified if Table Sample is specified.

User response:
Either specify a Table Sample value or remove the Repeatable value.

DAJ489E   **Inconsistency Thresholds may only be specified when Statistics Scope is Profile Consistency**

Explanation:
A Y was specified in the Update Inconsistency Thresholds field, but the Statistics Scope field was set to Basic or Profile. Inconsistency thresholds can only be set when the Statistics Scope field is set to Profile Consistency.

User response:
Either change the Statistics Scope field or change the Update Inconsistency field to N.

DAJ490E   **Statistics Scope must be B - Basic, P - Profile, or C - Profile Consistency**

Explanation:
An invalid value was entered in the Statistics Scope field.

User response:
Enter a valid value as described in the message text.

DAJ491I   **HPU DSNAME has been set for COPYDDN.**

Explanation:
The selected DSNAME has been set as the HPU COPYDDN image copy data set name.

User response:
No action is required.

DAJ492E   **Only one DSNAME can be selected. Choose one DSNAME and resubmit.**

Explanation:
Only one data set name can be selected.

User response:
Choose one data set name and resubmit.

DAJ493E   **The IC value has changed so a new data set name is required.**

Explanation:
The value in the **IC** field changed. A new data set name is required.

User response:
Set the **Select data set name** field to Y and re-select an image copy data set.

DAJ494E   **No IC information exists in SYSCOPY for this table space with the specified IC value.**

Explanation:
No image copy information exists in SYSCOPY for this table space.

User response:
Enter a new value in the **IC** field and retry, or cancel.

DAJ500E   **Invalid Entry - Valid options are A or P**

Explanation:
An invalid value was entered in the Scope field.

User response:
Enter A for Scope All or P for Scope Pending.

DAJ501E   **The only valid values are "N" for No, '"L" for Last, "O" for lOglimit, '"G" for Gdglimit, "T" for gdglimit lasT, or "M" for gdglimit logliMit**

Explanation:
An invalid value was entered in the Retain field.

User response:

Enter a valid value as listed in message text.

DAJ503E   **The number of days field must be specified when RETAIN LAST (n) or RETAIN GDGLIMIT LAST (n) is selected**

Explanation:
You specified to retain a specific number of recovery records with RETAIN LAST (n) or RETAIN GDGLIMIT LAST (n). However, the number of records is blank.

User response:
Enter the number of records to be retained in SYSIBM.SYSCOPY in the Number of Records field.

DAJ504E   **The number of days field has a valid range of 1-99999999**

Explanation:
An invalid value was entered in a numeric field.

User response:
Enter a valid numeric value as listed in the message text.

DAJ505E   **When either Histogram NUMCOLS or NUMQUANTILES is specified, then both values must be specified**

Explanation:
You entered a value in only one of the Histogram fields. Both fields are required.

User response:
Specify a value for both of the Histogram fields.

DAJ506E   **REBALANCE is not allowed with Sharelevel CHANGE**

Explanation:
You can specify REBALANCE with SHRLEVEL REFERENCE or SHRLEVEL NONE. REBALANCE cannot be specified with SHRLEVEL CHANGE.

User response:
Either change the SHRLEVEL or set the Rebalance field to N.

DAJ507E   **REBALANCE is not allowed with Scope Pending**

Explanation:
You can specify REBALANCE with Scope All. REBALANCE cannot be specified with Scope Pending.

User response:
Either change the Scope field to A(ll), or set the Rebalance field to N.

DAJ508E   **Inline Copy is required with REBALANCE**

Explanation:
When you specify REBALANCE, you must create an Inline Copy.

User response:
To specify an inline copy, type Y in the Include Copy options field. To set options for the inline copy, type Y in the Copy options Update field.

DAJ509E   **FASTSWITCH is not valid when using a Db2 Version 9.1 or later Db2 subsystem**

Explanation:
You set an option to a setting that is not valid with Db2 Version 9.1 or later.

User response:
Change the option to a valid setting for your version of Db2.

DAJ511W   **An exception condition is specified for a column that is not included in the _HIST tables**

Explanation:
You set an option to a setting that requires Db2 V8 or higher.

User response:
The option will be set to an appropriate setting for your version of Db2.

DAJ512W   **Note that specifying a job profile name and/or creator may cause information for objects not included in a job profile to be deleted since the delete process is no longer object-oriented.**

Explanation:
You specified a value in the **Job Profile Like** or **Job Creator Like** fields for the Modify utility. If you specify criteria in these fields, objects that are not included in the current job profile may be deleted from the Db2 Automation Expert repository tables. This is possible because this type of processing is profile driven, not object driven. Objects that are included in the current job may not be affected by this type of repository cleanup.

User response:
No action is required.

DAJ516E   **Invalid Value - The only valid values are "Y", "N", and "I"**

Explanation:
An invalid value was entered in field that only accepts Y, N, or I.

User response:
Enter a valid value as described in the message text.

DAJ517E   **A fraction is not allowed in the Exponent of a floating point number. The syntax of a floating point number is [+|-][n][.]n[E+|-n]**

Explanation:
The exception value was entered incorrectly.

User response:
Enter the exception value as a floating point decimal as described in the message text.

DAJ518E	Invalid Condition/Nth Day of the Month combination - The Nth Day value must be >= 2 with a LT condition and be <= 30 with a GT condition

Explanation:
An invalid combination was entered for the Nth_DAY exception. Nth_DAY greater than 31 is not a valid exception.

User response:
Enter a valid value as described in the message text.

DAJ519E	The range of a BIGINT datatype is -9223372036854775808 to +9223372036854775807

Explanation:
A BIGINT number was entered that is outside the specified range.

User response:
Enter a valid BIGINT value.

DAJ520E	Invalid Group Partitions By value. Enter "J" to have partitioned objects grouped into the same Job, "S" to have partitioned objects grouped into the same Step, or "N" if grouping is not required

Explanation:
The value you specified is not valid. Valid values are J (Job), S (Step), and N (None).

User response:
Enter a valid value as described in the message text.

DAJ521E	This percentage field has a valid range of 0 to 100

Explanation:
An invalid value was entered in the percentage field.

User response:
Enter a valid value as specified in the message text.

DAJ523E	The range of the integer value must be between 1 and 131,072 when the unit value is G

Explanation:
A value was entered that is outside the specified range.

User response:
Enter a valid value as specified in the message text.

DAJ530E	Invalid Combination - You have asked for a reallocation of Hash Space with HASHSPACE plus *percentage* percent and reallocate by DATASIZE plus *percentage* percent. Only one of these fields can be entered

Explanation:
When reallocating hash space, you must specify the amount of space to be allocated, either as a percentage of the current HASHSPACE or the actual DATASIZE (used) space. Both cannot be specified.

User response:
Remove the value from one of the fields.

DAJ531E	Either the "HASHSPACE plus x percent" or the "DATASIZE plus x percent" fields must be specified

Explanation:
You must specify one of the hash space values.

User response:
Enter either a HASHSPACE amount or a DATASIZE amount of space.

DAJ536E	Threshold unit type invalid without threshold value

Explanation:
A threshold unit type was specified but without specifying a threshold value.

User response:
Either clear the unit type or supply a threshold value.

DAJ538E	Invalid Combination - You have asked to DROP Pending Changes. However, you have also specified to Use Dataset Manager. Db2 must be used to DROP Pending Changes. One of these fields must be set to No

Explanation:
The Use Dataset Manager to Reallocate field was set to Y and the DROP Pending Changes field was set to Y or O.

User response:
Db2 must be used to drop pending changes. If you want to drop pending changes for your selected objects, you must set Use Dataset Manager to Reallocate to No. Otherwise, a warning message will be issued when you attempt to build the job.

DAJ539E	Invalid Db2 Name; Only A-Z, 0-9, @, #, $, "." and "_" are valid. The name can be qualified or unqualified, such as "ABC.DEF"

or "DEF". First character of each name must be A-Z, @, #, or $.

Explanation:
An invalid Db2 member name was entered.

User response:
Enter a valid member name as specified in the message text.

DAJ540E	**Invalid Db2 Name; Only A-Z, 0-9, @, #, $ and "_" are valid. First character of name must be A-Z, @, #, or $.**

Explanation:
An invalid Db2 member name was entered.

User response:
Enter a valid member name as specified in the message text.

DAJ541E	**Invalid Partition Number - The value must be numeric. Valid range is 0 through 4096**

Explanation:
An invalid value was entered for the Partition exception value field.

User response:
Enter a valid value as specified in the message text.

DAJ542E	**Invalid Process NPIs value - Enter Y to always collect statistics for non-partitioning indexes (NPIs); Enter N to not collect statistics for NPIs; Enter A to have exception processing determine whether or not to collect statistics for NPIs**

Explanation:
An invalid value was entered in the Process NPIs field.

User response
Type A in this field if you want exception processing to determine whether or not to collect statistics for non-partitioning indexes (NPIs) based on the following criteria:

- Statistics will be collected when all partitions for an object are included in the objects profiles.
- Statistics will not be collected when only some of the partitions (a subset) are included in the object profiles, such as when there are missing parts for an object. This can occur when:
  - Objects are at the PART level and only a subset of all the partitions are selected in the objects profiles. For example: only parts 2, 5, and 9 are included in the objects profiles.

  - Individual partitions are specifically excluded by using the EXClude indicator in the objects profiles.

Type Y in this field if you want to collect statistics for NPIs regardless of the above criteria. Type N to not collect statistics for NPIs.

DAJ543E	**Invalid Lock Mode value. Press PF1 for extended Help to display a list and description of valid values.**

Explanation:
An invalid value was entered in the Lock Mode field. Press the Help key to display a detailed description of the valid values for this field.

User response

Enter a valid value in this field.

DAJ550E	**This option is only valid when using a version 10 or higher Db2 subsystem**

Explanation:
An invalid value was entered. Db2 Version 10 or later is required with the use of this keyword.

User response:
Remove the value.

DAJ551E	**The AUX keyword is only valid with SHARELEVEL REFERENCE or CHANGE**

Explanation:
AUX Y can only be specified if the Sharelevel field is R(eference) or C(hange).

User response:
Either change the AUX value to N or change the Sharelevel field to R or C.

DAJ552I	**No Indexes available for this utility.**

Explanation:
No indexes were found for this utility.

User response:
No action is required..

DAJ553I	**No Tables available for this utility.**

Explanation:
No tables were found for this utility.

User response:
No action is required..

DAJ554E	**Frequency occurrence must be blank, M, L, or B.**

Explanation:
An invalid value was entered in the Freqval Occurrence field.

User response:
Enter a valid value as described in the message text.

DAJ555E   **Numcols must be non-zero and not greater than number of index columns**

Explanation:
The value entered in the Numcols field must non-zero and less than or equal to the number of columns in the index.

User response:
Correct the invalid value.

DAJ556E   **C is the only command allowed on create line.**

Explanation:
An invalid value was entered in the line command area. The only value allowed is C to create a statistic definition.

User response:
Correct the invalid value.

DAJ557E   **Histogram statistic definition already exists. Change definition.**

Explanation:
A histogram stats definition was already created for the entered number of columns.

User response:
Change the number of columns, or enter the CANCEL command in the command line.

DAJ558E   **Value must be numeric, 1 - 100.**

Explanation:
An invalid value was entered.

User response:
Enter a numeric value between 1 and 100, inclusive.

DAJ559E   **Freqval Numcol definition already exists. Change definition.**

Explanation:
A FREQVAL NUMCOL stats definition was already created for the entered number of columns.

User response:
Change the number of columns, or enter the CANCEL command in the command line.

DAJ560E   **Invalid option. Enter C to create column list or G to create column group.**

Explanation:
An invalid value was entered in the **Column Statistic Type** field.

User response:
Enter a valid value as described in the message text.

DAJ561E   **Column list is already defined for this table.**

Explanation:
A column list was already defined for this table.

User response:
Change the value in the **Column Statistic Type** field to G to define a column group, or press PF3 to cancel.

DAJ562E   **Invalid value. Please enter the sequence of this column in the colgroup. This field must be numeric, non-zero, and unique.**

Explanation:
A invalid value was entered in the Seq column.

User response:
Enter a unique, non-zero numeric value.

DAJ563E   **Sequence number cannot be greater than the number of columns.**

Explanation:
A invalid value was entered in the Seq column. The value entered is greater than the number of columns in the table.

User response:
Enter a valid numeric value.

DAJ564E   **Duplicate sequence numbers. Please enter a unique sequence number.**

Explanation:
A duplicate sequence number was entered in the Seq column.

User response:
Remove the duplicate and enter a valid numeric value.

DAJ566E   **Invalid value. Enter A for all, R for Readers or N for None**

Explanation:
An invalid value was entered in the Force field.

User response:
Either a valid value as listed in the message text.

DAJ567E   **The only valid values for Profile are Blank, U, I, D, P, S, and E**

Explanation:
An invalid value was entered in the Profile field.

User response:
Enter a valid value as described in the message text.

DAJ568E   **Sample cannot be specified with Delete, Set, or Update Profile**

Explanation:

The Profile field was set to D, P, or S and a value was specified in the Sample field. This combination is invalid.

User response:
Change the Profile field or the Sample field value.

DAJ569E	Index All cannot be specified with USE, DELETE, or SET FROM EXISTING STATS profile options

Explanation:
The Profile field was set to U, D, or E and Index All was set to Y. This combination is invalid.

User response:
Change the Profile field or the Index All field value.

DAJ570W	All of the Image Copy Options (for the FlashCopy, LP, LB, RP, and RB image copies) have been set to "N". Because of this, the Copy Options field on the Reorg options screen has been set to a "N"

Explanation:
An image copy was specified to be included in the REORG, but the image copy type has not been selected.

User response:
If you want to include an image copy, select one or more image copy types and set their associated options on the Image Copy Options screen.

DAJ571W	All of the Image Copy Options (for the FlashCopy, LP, LB, RP, and RB image copies) have been set to "N". Because of this, the Image Copy field on the main utility screen has been set to a "N"

Explanation:
An image copy was specified to be included in the profile, but the image copy type has not been selected. The Image Copy option Include field was set to No.

User response:
If you want to include an image copy, select one or more image copy types and set their associated options on the Image Copy Options screen.

DAJ572E	At least one column must have a sequence number

Explanation:
For a column group to be defined, at least one column must be selected with a sequence number.

User response:
Enter a numeric value in the Seq column, or enter the CANCEL command to quit.

DAJ573E	At least one column must be selected

Explanation:
For a column list, at least one column must be selected.

User response:
Enter S next to column to select it, or enter the CANCEL command to quit.

DAJ574E	Freqval statistics are not allowed for LOB or XML objects

Explanation:
The object selected was a LOB or XML space. Freqval statistics are not supported for LOB or XML objects.

User response:
Set Define FREQVAL Statistics to N.

DAJ575E	Histogram statistics are not allowed prior to Db2 Version 9

Explanation:
Runstats histogram statistics are not supported prior to Db2 V9.

User response:
Set Define Histogram Statistics to N.

DAJ576E	FlashCopy not available for non-Db2 Image Copy Utility Mode

Explanation:
The FlashCopy option is a Db2 mode option. It is only valid when Image Copy Utility Mode is set to D (Db2). Image Copy Utility Mode is set on the prior Image Copy Options panel.

User response:
Change this option to N or issue the CANCEL command to eliminate this message.

DAJ577E	Runstats Table Column Statistics are not allowed for indexes

Explanation:
Runstats Table Column statistics cannot be selected for indexes.

User response:
Set Runstats Table Column Statistics to N.

DAJ584I	Statistic Monitor profile has not been executed

Explanation:
The selected statistics monitor profile has not been run.

User response:
Press Enter to continue.

DAJ586E	Sortnpsi must be A - Auto, Y - Yes, N - No, or blank.

Explanation:
An invalid value was entered in the Sortnpsi field.

User response

Enter one of the following valid values:

- A (Auto): If sorting all keys of the non-partitioned secondary indexes improves the elapsed time and CPU performance, all keys are sorted.
- Y (Yes): If sorting all keys of the non-partitioned secondary indexes improves the elapsed time, all keys are sorted.
- N (No): Only keys of the non-partitioned secondary indexes that are in the scope of the REORG are sorted.
- blank: Use the subsystem parameter REORG_PART_SORT_NPSI.

DAJ587E **Invalid value - Value must be between 1 and 4096, or blank.**

Explanation:
An invalid value was entered in the List Partitions field.

User response:
Enter a value between 1 and 4096, or leave this field blank to generate all partitions in a single REORG.

DAJ589E **Source must be S - AutoStats or T - AuTomation Expert**

Explanation:
An invalid value was entered in the Source field.

User response:
Enter S to view actions for Db2 autonomic statistics or enter T to view actions for Db2 Automation Expert.

DAJ590I **No time windows were found. Press enter to create a time window**

Explanation:
There are no time windows in which the statistics monitor profile may execute the RUNSTATS utility.

User response:
Press Enter to define a maintenance window. After the window is defined, the statistics monitor profile will then be able to schedule a RUNSTATS utility to run within that maintenance window.

DAJ591E **Invalid Value - Enter M for Month or W for Week**

Explanation:
An invalid value was entered in the Month or Week field. This value determines how the value in the Day column is interpreted.

User response:
Enter M for Month or W for Week.

DAJ592E **Invalid Value - A valid range for Month is from 1 to 12**

Explanation:

An invalid value was entered in the Month field.

User response:
Enter a valid value. Valid values are from 1 through 12, where 1 corresponds to January and 12 corresponds to December.

DAJ593E **Invalid Value - A valid range for Day is from 1 to 31**

Explanation:
An invalid value was entered in the Day field.

User response:
Enter a valid value. Valid values are from 1 through 31.

DAJ594E **Invalid Value - If Month is *month* the day must be 1 to *day***

Explanation:
The day listed in the Day field is not valid for the month listed in the Month field.

User response:
Correct the day so that it is valid for the month listed in the message.

DAJ595E **Invalid Value - If Month/Week field is Week this field must be blank**

Explanation:
An invalid combination of fields was entered. If the Month/Week field is Week, this field must be blank.

User response:
Clear the invalid value from the field.

DAJ596E **Invalid Value - Enter Y to delete the SYSAUTOTIMEWINDOWS entry or N to cancel**

Explanation:
An invalid value was entered in the Delete field.

User response:
Enter a Y to delete this entry or N to cancel deletion.

DAJ597I **The following entry has been successfully *updated | deleted* (Window ID *window_id*)**

Explanation:
The window ID listed in the message was successfully updated or deleted.

User response:
No action is required..

DAJ598E **Invalid combination. If Time *type* is blank, Time *type2* must also be blank**

Explanation:
If Time From or To is blank, no limitation on time exists so Time To or From must also be blank.

User response:
Specify values in both Time fields or leave both fields blank.

DAJ600E   **Scope must be "P" - Pending , "X" - AUXOnly, "A" - All, '"R" - RefOnly, or "S" - XMLSchemaOnly**

Explanation:
An invalid value was entered in the Scope field.

User response:
Enter a valid value as listed in the message text.

DAJ601E   *field_name* **must be "I" - Invalidate, or "R" - Report**

Explanation:
An invalid value was entered in a field that only accepts I for Invalidate or R for Report.

User response:
Enter a valid value in the field as listed in the message text.

DAJ602E   **The values for AUXerror, LOBerror, and XMLerror must be the same**

Explanation:
The values for the AUXerror, LOBerror, and XMLerror fields either must all be I for Invalidate or they must all be R for Report.

User response:
Change the field values so they are all the same value.

DAJ603E   **SCOPE XMLSCHEMAONLY is only valid on Db2 V10 NFM and above**

Explanation:
A SCOPE of XMLSCHEMAONLY is only valid for Db2 10 NFM and above.

User response:
Enter a value other than XMLSCHEMAONLY.

DAJ604E   **Exception table creator and Exception table suffix cannot both be blank**

Explanation:
To ensure a unique exception table name, you must specify exception table creator or exception table suffix or both.

User response:
Specify an exception table creator or exception table suffix, or both.

DAJ605E   **Option is only valid for Db2 Version 10 NFM and above.**

Explanation:
The option that was selected is only valid for Db2 Version 10 NFM and later.

User response:

Either clear the entry from the Option field, or enter a valid Db2 Version 10 NFM or later subsystem ID in the **Db2 Subsystem ID** field.

DAJ611W   **RESET ACCESSPATH will reset the access path statistics for all tables in included table spaces and indexes. RESET ACCESSPATH cannot be executed on LOB table spaces. Further, no statistics collection is done.**

Explanation:
This message is displayed when Y is entered in the Reset Accesspath field. This message is a warning that after execution of RESET ACCESSPATH, statistics cannot be rolled back to previous values. If there is no statistics history, there will be no record of the old statistics and no way to restore them, even if HISTORY ACCESSPATH is specified. RUNSTATS will not collect any statistics for objects when RESET ACCESSPATH is selected.

User response:
No action is required.

DAJ612E   **HISTORY ACCESSPATH can only be Y when RESET ACCESSPATH is Y.**

Explanation:
This message is displayed when N is entered in the Reset Accesspath field and Y is entered in the History Accesspath field. This combination is not allowed.

User response:
Either change the Reset Accesspath field to Y, or change the History Accesspath field to N.

DAJ613E   **Valid values for RBA/LRSN Conversion are blank, '"B"asic, "E"xtended, and "N"o.**

Explanation:
An invalid value was entered for the RBA/LRSN Conversion field.

User response

Enter one of the following valid values:

- Leave this field blank to use the UTILITY_OBJECT_CONVERSION ZPARM value.
- Enter B to convert objects in EXTENDED (10-byte format) to BASIC (6-byte) format.
- Enter E to convert objects in BASIC format to EXTENDED format.
- Enter N when no conversion is required.

DAJ614E   **The valid values for Newmaxro are blank or a number.**

Explanation:

An invalid value was entered in the Newmaxro field.

User response
Enter one of the following valid values:

- Leave this field blank to specify NEWMAXRO NONE at job build time.
- Type an integer to specify the maximum amount of time (in seconds) for the last log iteration after SWITCHTIME is met. If you specify an integer, you must also specify a Switchtime value.

DAJ615E	If the value for Newmaxro is specified, Switchtime must be Timestamp or Lde.

Explanation:
A valid value was entered in the Newmaxro field, but the Switchtime field is set to N or is blank. The Switchtime field must be set to Timestamp or LDE.

User response:
In the Switchtime field, enter T for timestamp or L for labeled duration expression.

DAJ617E	View LRSN Utility not valid for non-data sharing.

Explanation:
A Y was entered in the **View LRSN Utility** field, but the subsystem selected on the Db2 Automation Expert main menu is not a member of a data sharing group. The View LRSN utility option is only valid for a data sharing group environment.

User response:
Change the value in the **View LRSN Utility** field to N.

DAJ618E	VIEW must be "B" - Boolean logic or "S" - Selected exceptions

Explanation:
An invalid parameter was entered for the VIEW command.

User response:
Enter a valid parameter as described in the message text.

DAJ620E	Sharelevel not set to Change.

Explanation:
Y was entered in the Update Shrlevel Change Options field, but the Sharelevel field is not set to Change.

User response:
Either enter C in the Sharelevel field or change the Update Shrlevel Change Options field to N.

DAJ621E	Mapping Database only valid with Create Dynamic Mapping Table = I.

Explanation:

A mapping database was entered in the Mapping Database field. However, this field is only valid when the Create Dynamic Mapping Table field is set to I for Ignore.

User response:
Either set Create Dynamic Mapping Table to I (Ignore), or clear the value from the Mapping Database field.

DAJ623E	Invalid database; DSNDB01, DSNDB06, and DSNDB07 not allowed.

Explanation:
A database name of DSNDB01, DSNDB06, or DSNDB07 was specified in the Mapping Database field. These databases cannot be specified for the mapping table.

User response:
Either change the Mapping Database name to a different database, or clear the value from the field and allow Db2 to choose the database.

DAJ624E	Invalid database: Implicit database not allowed.

Explanation:
The database name specified in the Mapping Database field is an implicitly defined database. An implicitly defined database cannot be used for the mapping table.

User response:
Either change the Mapping Database name to a different database, or clear the value from the field and allow Db2 to choose the database.

DAJ625E	Invalid database. Workfile or TEMP database not allowed.

Explanation:
The database name specified in the Mapping Database field is either a temporary or a work file database; these cannot be used for the mapping table.

User response:
Either change the Mapping Database name to a different database, or clear the value from the field and allow Db2 to choose the database.

DAJ626E	Database not found.

Explanation:
The database name specified in the Mapping Database field database name specified does not exist in this subsystem.

User response:
Either change the Mapping Database name to a different database, or clear the value from the field and allow Db2 to choose the database.

DAJ628E	Invalid value. Value must be between 0 and 32,767.

Explanation:

A value was specified for Parallel subtasks that is too large. The largest supported value is 32,767.

User response:

Specify an integer between 0 and 32767.

DAJ630I   **No actions found for this execution.**

Explanation:

No actions were generated as the result of the maintenance window build or the maintenance window execution.

User response:

No action is required.

DAJ631I   **No symptoms were found for this action**

Explanation:

An exception profile was not included in the job profile. Therefore, no symptoms are associated with the maintenance window build or maintenance window execution.

User response:

No action is required.

DAJ632E   **One of the fields must be > 0.**

Explanation:

All entered priorities are 0. At least one of the entered priorities must be greater than 0.

User response:

Enter a whole number between 1 and 100 for at least one of the priorities.

DAJ633I   **The SYMPTOM_REGISTRY has been updated.**

Explanation:

The SYMPTOM_REGISTRY was successfully updated.

User response:

No action is required.

DAJ634I   **The ACTION_REGISTRY has been updated.**

Explanation:

The ACTION_REGISTRY was successfully updated.

User response:

No action is required.

DAJ635E   **The value entered must be a whole number between 1 and 100.**

Explanation:

An invalid or negative number was entered in a column that requires a valid positive whole number between 1 and 100.

User response:

Enter a valid value as described in the message text.

DAJ636E   **This column must be "I"gnore, "L"ow, "M"edium, "H"igh, or "C"ritical.**

Explanation:

An invalid value was entered in a column that requires one of the following values: I - Ignore, L - Low, M - Medium, H - High, or C - Critical.

User response:

Enter a valid value as described in the message text.

DAJ638E   **If the Keycard parameter is specified, then the Index ALL parameter must be "Y".**

Explanation:

Collection of distinct column values is allowed only when you are collecting statistics for columns of indexes on a table space. This parameter is valid with `RUNSTATS INDEX(ALL)`.

User response:

Either change the **Index All** field to Y, or change the **Keycard** field to N.

DAJ639E   **The value entered must be a whole number between 0 and 100.**

Explanation:

An invalid or negative number was entered in a column that requires a valid positive whole number between 0 and 100.

User response:

Enter a valid value as described in the message text.

DAJ640E   **The total of these values must be less than or equal to 100.**

Explanation:

The total of all entered values must be less than or equal to 100.

User response:

Change the values so their sum is less than or equal to 100.

DAJ641I   **The action/object/symptom priorities have been updated.**

Explanation:

The overall action, object, and symptom priorities were successfully updated.

User response:

No action is required.

DAJ642E   **Multiple Symptom Processing must be either "A" - Average or "H" - Highest.**

Explanation:

An invalid value was entered in a column that requires one of the following values: A - Average or H - Highest.

User response:
Enter A to calculate an average of the symptom priorities. Enter H to use the symptom with the highest priority.

DAJ643E	The value entered must be between 1 and 100. The number may have a decimal point. For example, 2.5 is valid.

Explanation:
An invalid or negative number was entered in a column that requires a valid positive number between 1 and 100. A decimal point in the number is valid. For example, a number like 3.45 is valid.

User response:
Enter a valid value as described in the message text.

DAJ645E	A "G", "+", and "-" command can only be entered on a group.

Explanation:
A G, +, or - line command was entered in a non-group field. These commands can only be used on exception groups.

User response:
Clear the line command from the command area.

DAJ646E	Only one option may be selected on this panel.

Explanation:
Only one field may be selected on this panel.

User response:
Clear all but one selection.

DAJ647I	The selected category of exception conditions is displayed.

Explanation:
All exception conditions that are related to the selected category are displayed.

User response:
Specify the complete selection criteria for non-DSNACCOX exceptions, or replace all "?" in the DSNACCOX-like exceptions with the values that you want exception condition processing to evaluate.

DAJ648I	The selected category of exception conditions was successfully processed.

Explanation:
All changes that were made on the category display panel were successfully merged into the profile display panel.

User response:
No action is required.

DAJ649E	A "U" command can only be entered on a DSNACCOX exception condition that is currently selected (displayed in white).

Explanation:
The U (update) line command was entered next to a selectable exception condition that is not a DSNACCOX-like exception. The U command can only be used for updating a currently selected DSNACCOX-like exception that is shown in white.

User response:
Clear the line command from the selection area.

DAJ650E	Only one DSNACCOX exception condition can be selected in an exception profile. Create another exception profile to have multiple DSNACCOX exceptions in one job.

Explanation:
You attempted to selected more than one DSNACCOX-like exception condition. However, only one DSNACCOX-like exception can be selected in an exception profile, because the same exception condition may be part of multiple DSNACCOX-like formulas.

User response:
Clear the line command from the selection area. To have more than one DSNACCOX-like exception in the same job group, create another exception profile that contains a DSNACCOX-like exception, and specify **One at a time** for **Evaluate Multiple Exception Profiles** in the job generation options.

DAJ651I	Updating a DSNACCOX exception condition.

Explanation:
An Update line command was entered. All related DSNACCOX-like exception conditions are displayed.

User response:
Modify the appropriate exception condition values. Press PF3 to save changes or enter CANCEL to discard changes.

DAJ652I	No changes were made.

Explanation:
Either a VIEW C command or U (update) line command was entered to display a category of exception conditions, and PF3 was pressed. No modifications were made to any of the exception conditions.

User response:
No action is required.

DAJ653E	The value entered must be numeric. The number may have a

decimal point. For example, 2.5 is valid.

Explanation:
The value entered must be a ratio. A decimal point is optional. For example, valid ratios are .5, 2, and 2.5.

User response:
Enter a valid ratio.

| DAJ654E | Invalid Value. Enter "G" to toggle the group; "+" to 'expand the group; or "-" to contract the group. |

Explanation:
An invalid group line command was entered.

User response:
Enter G to toggle the group, enter + to expand the group, or enter - to contract the group.

| DAJ657E | When Reorg Avoidance is selected, there must be at least one other exception condition selected. The other exception condition must be something other than Day of Week/Month/Time of Day. |

Explanation:
You attempted to invoke reorganization recommendations, but have not selected an exception condition other than the REORG_OVERRIDE exception condition. Another exception condition must be selected, and it cannot be one of the time-related exceptions that is listed in the message text.

User response:
Select a valid exception condition in addition to the REORG_OVERRIDE exception condition. It is recommended that you choose an exception that evaluates whether the objects in the job profile require reorganization, such as real-time statistic DAYS_SINCE_LAST.

| DAJ659E | EDIT must be "B" - Boolean logic. |

Explanation:
An invalid EDIT command was entered on the **Update Exceptions Profile Display**.

User response:
To edit the exceptions using a panel that shows the conditions in a Boolean logic format, enter EDIT B in the option line.

| DAJ660E | Command must be either A - After, B - Before, C - Copy, D - Delete, I - Insert, L - bLank, M - Move, R - Repeat, or U - Update. |

Explanation:
An invalid line command was entered.

User response:
Enter a valid value as described in the message text.

| DAJ661E | AO must be either A - And or O - Or. |

Explanation:
An invalid value was entered in the **AO** (And/Or) area.

User response:
Clear the invalid character, or enter A to logically "and" the exception conditions, or enter 0 to logically "or" the exception conditions.

| DAJ662E | ( ) must be either a left parenthesis "(", a right parenthesis ")", or an asterisk "*". |

Explanation:
An invalid character was entered in the ( ) (logical grouping) area.

User response:
Clear the invalid character, or enter a left parenthesis "(", a right parenthesis ")", or an asterisk "*".

| DAJ663E | Unbalanced parentheses. |

Explanation:
The number of left and right parentheses do not match in the IF_ENDIF code section. There must be the same number of logical groupings (left and right parentheses).

User response:
Specify the same number of left and right parentheses.

| DAJ664I | Updating Boolean Logic exception conditions. |

Explanation:
An U(pdate) line command was entered. No updates were made to any exception conditions.

User response:
No action is required. You can modify the exception conditions values, and press PF3 (END) to save changes, or enter CANCEL to discard changes.

| DAJ665E | Cannot Copy/Move more than one exception condition within the same IF-ENDIF at a time. |

Explanation:
More than one C(opy) or M(ove) line command was entered in the same IF-ENDIF code section. Only one copy or move operation can be performed at a time.

User response:
Remove all but one copy or move line command.

| DAJ666E | Cannot specify more than one After or Before command within the same IF-ENDIF at a time. |

Explanation:

More than one A(fter) or B(efore) line command was entered in the same IF-ENDIF code section. Only one copy or move operation can be performed at a time.

User response:
Remove all but one A or B line command.

DAJ667W	Copy/Move is pending. Can only Copy/Move an exception condition within the same IF-ENDIF.

Explanation:
A(fter) or B(efore) and C(opy) or M(ove) line commands were entered in different IF-ENDIF code sections. Copy and move operations can only be performed within the same code section.

User response:
Enter the required line command to complete the copy or move operation within the same code section, or remove one of the line commands.

DAJ668E	Cannot repeat this exception condition.

Explanation:
A R(epeat) line command was entered on an exception condition that cannot be repeated.

User response:
Remove the R line command.

DAJ669I	Copy/Move is pending.

Explanation:
A single A(fter), B(efore), C(opy), or M(ove) line command was entered.

User response:
Enter the corresponding line command to complete the copy or move operation.

DAJ670E	Can only Delete/Insert/bLank this type of exception condition or Copy/Move a user comment.

Explanation:
An attempt was made to copy or move an exception condition that cannot be copied or moved.

User response:
Clear the A, B, C, or M line command.

DAJ671I	Exception profile options updated.

Explanation:
The exception profile options were updated.

User response:
No action is required.

DAJ672W	All exception conditions for this category are already selected.

Explanation:
An I(nsert) line command was entered. However, all exception conditions for that code section are already selected. No more exception conditions can be selected.

User response:
Clear the I(nsert) line command.

DAJ673I	No changes were made.

Explanation:
An U(pdate) line command was entered. No updates were made to any exception conditions.

User response:
No action is required.

DAJ674I	The selected exception conditions were added to the list.

Explanation:
An I(nsert) line command was entered. The selected exception conditions were added to the other Boolean logic exception conditions.

User response:
No action is required.

DAJ675I	The exception conditions have been updated.

Explanation:
An U(pdate) line command was entered. At least one of the exception conditions was updated.

User response:
No action is required.

DAJ676E	Invalid Value - Enter an "S" to select a column, an "A" to select a column as an "A"nd condition, or an "O" to select a column as an "O"r condition.

Explanation:
An U(pdate) line command was entered and the **Update Boolean Logic Exceptions** panel was displayed. An invalid line command was entered. You can only modify values on this panel. Deleting or inserting new exception conditions is not allowed.

User response:
Clear the invalid command or enter one of the commands listed in the message.

DAJ677E	Can only Delete/bLank/Update this type of exception condition or Copy/Move a user comment.

Explanation:
An attempt was made to copy or move an exception condition that cannot be copied or moved.

User response:
Clear the A(fter), B(efore), C(opy), or M(ove) line command.

DAJ678E　　Can only Delete/bLank this type of exception condition or Copy/Move a user comment.

Explanation:
An attempt was made to copy or move an exception condition that cannot be copied or moved.

User response:
Clear the A(fter), B(efore), C(opy), or M(ove) line command.

DAJ679I　　All Boolean Logic conditions were deleted. Select new exception conditions to continue.

Explanation:
All exception conditions were deleted on the **Edit Exceptions Boolean Logic** panel. The **Update Exceptions Profile Display** is displayed.

User response:
Select new exception conditions.

DAJ680E　　Cannot mix ANDs and ORs within a logical group.

Explanation:
An And condition and an Or condition are specified in the same logical grouping. A logical grouping is everything between a left parenthesis "(" and a right parenthesis ")".

User response:
Specify all the same logical conditions in the group, or delete the conflicting conditions.

DAJ681W　　A group must contain at least two exception conditions.

Explanation:
There are no exception conditions, or only one exception condition between a left parenthesis "(" and a right parenthesis ")".

User response:
Clear the parentheses or insert at least two exception conditions between them.

DAJ682E　　Can only comment a blank line.

Explanation:
An asterisk was found in the ( ) column for an existing exception condition. An asterisk can only be used on a blank line that was inserted with the L line command.

User response:
Clear the asterisk from the ( ) column.

DAJ683W　　There are no exception conditions that can be updated.

Explanation:
An U(pdate) line command was entered in an IF-ENDIF section where all exception conditions have

already been selected. No more exception conditions can be inserted into that IF-ENDIF section.

User response:
Use the R(epeat) line command to repeat an existing exception condition within the IF-ENDIF section.

DAJ684E　　Invalid value - Turn off Tape Stacking must be Y, N, or P.

Explanation:
An invalid value was entered in the **Turn off Tape Stacking** field.

User response:
Enter Y to exclude the STACK keyword, P to exclude the STACK keyword only when pending definition changes are detected, or N to let Db2 Automation Expert determine if STACK should be generated.

DAJ685E　　Closing parenthesis must be on a line by itself.

Explanation:
A right parenthesis must be on a line that does not contain an exception condition.

User response:
Clear the parenthesis or insert a blank line and enter a right parenthesis in the ( ) column.

DAJ686W　　This exception condition cannot be updated.

Explanation:
An U(pdate) line command was entered on an exception condition that cannot be updated. For example, DAY_OF_WEEK exception conditions can only be inserted and deleted.

User response:
Clear the U(pdate) line command.

DAJ687I　　There must be at least one exception condition selected prior to entering an EDIT B command.

Explanation:
An EDIT B command was entered, but no exception conditions have been defined for the profile.

User response:
Select at least one exception condition prior to entering the EDIT B command.

DAJ700E　　*field_name* Options can only be updated when the "Include" *field_name* Options field is set to "Y".

Explanation:
A Y was entered in the Update field for the field that is listed in the message text, but the field's corresponding Include field contains N.

User response:

Enter Y in the Include field for the field that is listed in the message text, then enter Y in the corresponding Update field.

DAJ702E   **Invalid Value - Select "Y", "N", "F", or blank.**

Explanation:
An invalid value was entered in the Db2 field.

User response:
Enter Y to allow Db2 to process SELECT statements that are not supported by Db2 HPU. Type N to reject SELECT statements that are not supported by Db2 HPU. Type F to force reading of the table using Db2 SQL access.

DAJ703E   **Invalid Value - Select "O", or blank.**

Explanation:
An invalid value was entered in the **NULL off** field.

User response:
Enter 0 for Off to bypass the NULL information, or leave the field blank.

DAJ704E   **Invalid Value - This field must remain blank if the "NULL Off" field is set to "O".**

Explanation:
If O is specified in the **NULL Off** field, the **when NULL** and **when not NULL** fields must be left blank.

User response:
Remove the values from these fields, or remove the value from the **NULL Off** field.

DAJ705E   **Invalid Value - Select "A", "B", or blank.**

Explanation:
An invalid value was entered in the **NULLPOS** field.

User response:
To specify the position of the NULL indicator, enter A for after, B for before, or leave this field blank.

DAJ706E   **Invalid Value - Select "+", "-", "P", or blank.**

Explanation:
An invalid value was entered in the **PIC sign** field.

User response:
Enter a plus sign (+), minus sign (-), or P in the **PIC sign** field, or leave the field blank.

DAJ707E   **Invalid Value - Select "L", "T", or blank.**

Explanation:
An invalid value was entered in the **PIC position** field.

User response:

Enter L to place the sign before the numeric value or T to place the sign after the numeric value, or leave the field blank.

DAJ708E   **Invalid Value - Select ",", ".", or blank.**

Explanation:
An invalid value was entered in the **PIC decimal** field.

User response:
Enter a comma (,) or a period (.) to include a decimal separator, or leave the field blank.

DAJ709E   **Invalid Value - Select "?" for a list of valid values.**

Explanation:
An invalid value was entered. The cursor is positioned in the field that contains the invalid value.

User response:
To display a list of valid values, enter ? in the field. Correct the value.

DAJ710E   **Invalid Value - Select "R", "M", or blank.**

Explanation:
An invalid value was entered in the **LENGTH** field.

User response:
Enter R for Real, M for Max, or leave the field blank.

DAJ711E   **Invalid hexadecimal value. Valid values are 0123456789ABCDEF.**

Explanation:
An invalid value was entered in the **ORIGINOBID** field.

User response:
Enter a valid hexadecimal value. Valid values are 0 through 9 and A, B, C, D, E, and F.

DAJ712E   **Invalid Value - Select "D", "L", or numeric value greater than zero.**

Explanation:
An invalid value was entered in the **COPYDDN** field.

User response:
Enter D for DDN; you must also provide data set and unit type information on the remainder of the panel. Enter L to use the most recent valid registered image copy. Enter an integer (n) to use the *n*th latest valid registered full image copy. Valid values are 1 - 999; 1 indicates the most recent valid registered full image copy). In the job syntax, the integer is preceded by a minus sign (-).

DAJ713E   **Invalid Value - Select "C", "I", or "N".**

Explanation:
An invalid value was entered in the **IC** field.

User response:

Enter I to include an inline image copy, N to indicate that the image copy is not inline, or C to check whether the image copy is inline.

DAJ714E   **Unload DSN Options must be included before generating HPU JCL.**

Explanation:
Before you can build the Db2 HPU job, you must configure the UNLDDN DD data set specifications. The **UNLDDN Options** field **Include** and **Update** fields are set to Y.

User response:
Press Enter to continue to the **UNLDDN Options** panel and configure the UNLDDN DD.

DAJ715E   **Only one table space can be selected. Choose one table space and resubmit.**

Explanation:
You selected more than one table space on the **HPU Tablespace Selection** panel. One table space or multiple partitions of the same table space can be selected at a time processing.

User response:
To continue, select a single table space or select partitions of the same table space.

DAJ716E   **Invalid value - COPYDDN is only valid when Db2 is set to "N".**

Explanation:
An image copy cannot be used as the source for the unload job when the **Db2** field is set to Y for Yes or F for Force.

User response:
Either remove the value in the **Db2** field, or set the **COPYDDN Options** field **Include** and **Update** fields to N.

DAJ717E   *ddname* **Options were selected but no DSN was included.**

Explanation:
The *ddname* that is listed in the message text was selected for inclusion, but its data set name and other specifications are not defined.

User response:
Specify Y in the *ddname* **Include** and **Update** fields and press Enter.

DAJ718E   **The *field_name* field can be blank or in the range of 1 - 2147483647.**

Explanation:
An invalid value was entered in the field that is listed in the message text.

User response:

Enter an integer in the range of 1-2147483647.

DAJ719E   **Duplicate DSN found. The *ddname_1* DSN matches the *ddname_2* DSN. Provide a unique DSN for each.**

Explanation:
The *ddname_1* data set name is identical to the *ddname_2* data set name. The data set names must be unique to avoid errors at run time.

User response:
Change one of the data set names to ensure that the data set names are unique.

DAJ720E   **Invalid Value - Only one table can be selected at once.**

Explanation:
More than one table was selected. You can select only one table at a time. After the required settings for a table are configured, such as column selection and output DD specifications, you can select another table for processing.

User response:
Select a single table and press Enter.

DAJ721E   **Invalid Value - Select "A", "C", or "O", or leave this field blank.**

Explanation:
An invalid value was entered in the **OUTEXIT exit name in** field.

User response:
Enter A for assembler, C for C language, O for Cobol2, or leave this field blank.

DAJ723E   **Invalid Value - Select "A", "E", "S", "U", or leave this field blank.**

Explanation:
An invalid value was entered in the **Scheme** field.

User response:
To specify the format of the unloaded data, enter A for ASCII, E for EBCDIC, S for "as is", U for Unicode, or leave this field blank.

DAJ724E   **Invalid Combination - Select a value for ORIGINOBID in either Hex or Decimal.**

Explanation:
A value was entered in both of the **ORIGINOBID** hexadecimal and decimal value fields.

User response:
Enter either a hexadecimal or decimal value in one of the **ORIGINOBID** fields.

DAJ725E   **The Include field for Select Table and Columns field is set to "Y" but no table was selected.**

Explanation:
The **Select Table and Columns Include** field is set to Y, but a table was not selected.

User response:
Press Enter to select a table and columns to unload.

DAJ726E **Select Table and Columns can only be updated when the "Include" Select Table and Columns field is set to "Y".**

Explanation:
A Y was entered in the **Select Table and Columns Update** field, but the **Select Table and Columns Include** field is set to N.

User response:
Enter Y in the **Select Table and Columns Include** field and enter Y in the **Select Table and Columns Update** field.

DAJ727E **Invalid value - Enter a value for HPU Version from the list displayed.**

Explanation:
Enter a valid value for your Db2 HPU version from the list displayed. Db2 Automation Expert currently supports Db2 HPU V4.2 and V4.3.

User response:
Enter a valid version in the **HPU Version** field.

DAJ728W **The Include and Update fields have been set to "N" for the Select Table and Columns field because a table was not selected.**

Explanation:
No table or column was selected by using the **Select Table and Columns** fields. The **Select Table and Columns Include** and **Update** fields were set to N.

User response:
No action is required.

DAJ729E **OUTDDN DSN Options must be included before generating HPU JCL.**

Explanation:
An OUTDDN DD data set name and specifications must be specified before you generate the JCL.

User response:
Include a valid OUTDDN DD.

DAJ730E **Invalid Value - DSNTIAUL can be selected only when FORMAT is set to "T".**

Explanation:

An invalid value was entered in the **DSNTIAUL STRICT** field. This option is only allowed when the **FORMAT** field is set to T for DSNTIAUL.

User response:
Clear the value from the **DSNTIAUL STRICT** field or change the value in the **FORMAT** field.

DAJ731E **Invalid Value - Select "D", "T", "E", "U", "V", or "I".**

Explanation:
An invalid value was entered in the **FORMAT** field.

User response:
Enter D for Delimited, T for DSNTIAUL, E for External, I for Internal, U for User, or V for Variable.

DAJ732E **Invalid Value - Delimited values are only allowed when FORMAT is set to "D".**

Explanation:
An invalid value was entered in the **DELIMITED SEP**, **DELIMITED DELIM**, or **NULL DELIM** fields. Delimited values can be included only when the **FORMAT** field is set to D for Delimited.

User response:
Either clear the values from the **DELIMITED** field, or change the value in the **FORMAT** field.

DAJ733E **Invalid Value - Variable value is only allowed when FORMAT is set to "V".**

Explanation:
An invalid value was entered in the **Variable** field. This field can be populated only when the **FORMAT** field is set to V for Variable.

User response:
Clear the **Variable** field or change the value in the **FORMAT** field.

DAJ734E **Invalid Value - When FORMAT is set to "V", VARIABLE value must be included.**

Explanation:
If the **FORMAT** field is set to V for Variable, a value must be entered in the **VARIABLE** field.

User response:
In the **VARIABLE** field, enter E to specify that the characteristics and sequence of fields in the output data set corresponds to the characteristics and the sequence of fields in the SELECT statement. Enter A to specify that the variable columns are to be written using their actual length.

DAJ735E **Invalid Value - Select blank, "E", or "A".**

Explanation:

An invalid value was entered in the **VARIABLE** field.

User response:
Enter E for End, A for all, or leave this field blank.

DAJ736E **Invalid Value - Like** *Table |*
Creator **can only be selected when**
FORMAT is set to "V" or "T".

Explanation:
The **Like Table** and **Like Creator** fields can be
specified only when the **FORMAT** field is set to V for
VARIABLE or T for DSNTIAUL.

User response:
Remove the values from the **Like Table** and **Like**
Creator fields.

DAJ737E **Invalid Value - Both Like Table and**
Like Creator must be included.

Explanation:
Both the **Like Table** and the **Like Creator** fields must
be specified.

User response:
Specify values in both fields.

DAJ738E **Invalid Value - Embedded blanks**
not allowed. Enter a valid *Like*
Table | Like Creator **name.**

Explanation:
A blank was entered in either the **Like Table** or the
Like Creator field. Embedded blanks are not allowed.

User response:
Specify valid value in both fields.

DAJ740W **Since a DSN was not included for**
ddname, **the Include and Update**
fields have been set to "N" for
ddname.

Explanation:
A valid data set name and other specifications are
required for the DD name that is listed in the message.
Because valid data set information was not included,
the DD name **Include** and **Update** fields have been set
to N.

User response:
To configure the data set name and other
specifications, enter Y in the **Include** and **Update**
fields for the DD name.

DAJ741E **Incomplete value - This field must**
contain 4 hexadecimal characters
or remain blank.

Explanation:
An invalid value was entered in a field that requires a
four hexadecimal characters.

User response:

Enter four hexadecimal characters or leave this field
blank.

DAJ742E **Invalid value - If Scheme is set to**
"S" for Asis, this CCSID field must
remain blank.

Explanation:
An invalid combination of values was entered in the
Scheme and CCSID fields.

User response:
Either clear the CCSID fields, or change the value of
Scheme to include the CCSID fields.

DAJ743E **Duplicate DSN found. The**
ddname_1 **DSN matches the**
ddname_2 **DSN for Select**
select_statement. **Provide a unique**
DSN for each.

Explanation:
Duplicate data set names were found. The *ddname_1*
DSN is identical to the *ddname_2* DSN for the select
statement that is listed in the message. These data set
names must be unique.

User response:
Change either the *ddname_1* or *ddname_2* data set
name to ensure that the data set names are unique.

DAJ744E **Both the OUTEXIT name and**
language must be specified.

Explanation:
The **OUTEXIT exit name** field and the exit language
must both be specified.

User response:
Either specify a value in both fields, or leave both fields
blank.

DAJ745W **Since a DSN was not included**
for OUTDDN, the *select_statement*
Select Statement has been set to
"N".

Explanation:
An OUTDDN DSN is required but was not specified.
The SELECT statement that is listed in the message
was set to "N".

User response:
If you want to include the table in the unload job,
enter the S command to select the table and specify
an OUTDDN DSN.

DAJ746E **Invalid Value - Valid values are "S"**
for Select and "D" for Deselect.

Explanation:
An invalid value was entered in the **Select** field.

User response:
Enter a valid value as listed in the message text.

DAJ747E Invalid Value - Valid values are "K" for Keepdictionary' , "N" for Nokeepdictionary, or blank.

Explanation:
An invalid value was entered in the **Keepdictionary** field.

User response:
Enter a valid value as listed in the message text.

DAJ748E Invalid Value - Enter a numeric value, SORTKEYS, or blank.

Explanation:
An invalid value was entered in the **Sortkeys** field.

User response:
Enter a valid value as listed in the message text.

DAJ749E Invalid Value - Enter "E" for EBCDIC, "A" for ASCII, "U" for Unicode, or blank.

Explanation:
An invalid value was entered in the **Format** field.

User response:
Specify the format for the input data set. Enter E for EBCDIC, A for ASCII, U for Unicode, or leave the **Format** field blank.

DAJ805E Template data sets are not available for non-Db2 image copy utility modes.

Explanation:
Image copy utility modes E (ESS) and S (Symmetrix) do not support template data sets.

User response:
To continue, remove the template data set.

DAJ806E Single quote (apostrophe) not allowed for OPTIMIZATION_HINT.

Explanation:
A single quote was added to the OPTIMIZATION_HINT field. This might cause errors at run time if the entire string is not encased in quotes.

User response:
Remove the single quote from the OPTIMIZATION_HINT string.

DAJ807E Invalid Value - Value must be blank, numeric, or NUMRECS.

Explanation:
An invalid value was entered in the Numrecs field.

User response:
Enter a valid value as listed in the message text.

DAJ808E Invalid Value - Value must be T for Total or D for Delta.

Explanation:
An invalid value was entered in the PROCESS_MSG_FREQ type field.

User response:
Enter a valid value as listed in the message text.

DAJ809W This option is only available if the Db2 option on panel DAJ$HPUO is set to Force.

Explanation:
If the **Db2** field is not set to Force, this field will not be included in the generated JCL.

User response:
If you want to include this option, set the **Db2** field on the **HPU Options** panel to F(orce).

DAJ810E Invalid value entered. Valid values are blank, N for none, E for enable, F for enable with failback, L for eligible, or A for all.

Explanation:
An invalid value was entered in the QUERY_ACCELERATION field.

User response:
Enter a valid value as listed in the message text.

DAJ814I No *action_type* actions currently assigned to maintenance window.

Explanation:
You specified to view the action type that is listed in the message for this maintenance window, but there are none assigned.

User response:
Enter A to view active actions, P to view passive actions, or B to see both types.

DAJ818E Invalid value - EXPLAIN_TABLES_ROWS must be blank, "D" for Delete or "K" for Keep.

Explanation:
An invalid value was entered in the EXPLAIN_TABLES_ROWS field.

User response:
Enter a valid value as listed in the message text.

DAJ819E Invalid value entered. Valid values are blank, or "O" for off.

Explanation:
An invalid value was entered in the ZIIP field.

User response:
Enter a valid value as listed in the message text.

DAJ820E Invalid combination. Profile (D) is not allowed with Table All (Y).

Explanation:
An invalid combination of keywords was entered. Deleting a profile is not allowed with Table All (Y).

User response:
Enter a different value for either of the keywords to continue.

| DAJ821E | Invalid combination. Profile (I) is not allowed with Table All(Y). |

Explanation:
An invalid combination of keywords was entered. Using the existing statistics profile, including NPI statistics, is not allowed with Table All (Y).

User response:
Enter a different value for either of the keywords to continue.

| DAJ822E | Invalid combination. Profile (U) is not allowed with Index All(Y). |

Explanation:
An invalid combination of keywords was entered. Using the existing statistics profile is not allowed with Index All (Y).

User response:
Enter a different value for either of the keywords to continue.

| DAJ824W | This value exceeds the current highest activated Db2 function level of *modlevel*. |

Explanation:
The value that was entered exceeds the current activated function level of Db2 12. This value cannot exceed the highest activated Db2 version 12 function level of 500 or above. The value is retained in the field; however, at job build time, the keyword and its value are removed if the value exceeds the activated function level at job build time.

User response:
No action is required.

| DAJ825W | The NOSYSUT1 option is ignored if SHRLEVEL NONE is specified. NOSYSUT1 will be set to No. |

Explanation:
NOSYSUT1 is ignored when SHRLEVEL NONE is specified.

User response:
No action is required. NOSYSUT1 will be set to No.

| DAJ831E | Return code value must be an integer, "NULL", or blank. |

Explanation:
An invalid value was entered for the **Return Code** field. The value must be an integer, blank, or the value NULL.

User response:
Enter a valid value.

| DAJ833E | There are no entries to delete. |

Explanation:
The Delete command was entered in the **Option** field, but there are no rows displayed to delete.

User response:
Adjust the search criteria to display the desired rows and re-enter the Delete command in the **Option** field.

| DAJ834E | Line commands are not allowed with DELETE command. |

Explanation:
Line commands are not allowed with the Delete primary command.

User response:
Remove the Delete primary command or the line command(s) and retry.

| DAJ835E | Utility History is valid for Db2 13 and above |

Explanation:
The Utility History feature is only valid for Db2 13 and later.

User response:
Change the **Db2 Subsystem ID** field to a Db2 13 or later subsystem and retry.

| DAJ836E | Valid values are E, F, T, and blank |

Explanation:
An invalid value was entered in the **Condition** field. Valid values are E (ended), F (forced), T (terminated), or blank (show all conditions).

User response:
Enter a valid value in the **Condition** field and retry.

| DAJ837E | Search criteria changed. Primary and line commands ignored. |

Explanation:
A search criteria change has been detected, and primary and/or line commands were entered. Commands will be ignored.

User response:
Press Enter to display new search results.

| DAJ839E | Invalid combination. Lastlog No requires Drain All. |

Explanation:
Lastlog No is only valid with Drain All.

User response:
Enter a valid value for either the **Lastlog** or **Drain** fields and resubmit.

DAJ917E   **GDG base cannot be generated with dynamic variables. Remove the *variable_name* variable to continue.**

Explanation

Since the control cards for the GDG base are generated at build time, Db2 Automation Expert must know the fully qualified data set name. Dynamic variables are resolved at execution time; therefore, the following variables cannot be included in the data set name:

- 10. Time
- 11. Date
- 12. Year
- 13. Month
- 14. Day
- 15. Julian Day
- 16. Hours
- 17. Minutes
- 18. Seconds
- 19. Timestamp
- 20. Random Number

User response

Remove the invalid variable.

DAJ918E   **Invalid value - Recluster Yes is only valid with Sortdata No.**

Explanation:
Y was entered in both the Sortdata and Recluster fields. This combination is not allowed.

User response:
Change the value of either the Sortdata or the Recluster field.

DAJ919E   **Invalid value - Recluster Yes is not valid with Shrlevel Change.**

Explanation:
The REORG is currently set to SHRLEVEL CHANGE, and Y was entered in the Recluster field. Recluster is not allowed with REORG SHRLEVEL CHANGE.

User response:
Change the Recluster field to N, or change the REORG to SHRLEVEL REFERENCE or NONE.

DAJ941E   **This option is not available at this time**

Explanation:
The selected option is not currently available.

User response:
Select a different option.

DAJ942I   **Debug Mode is now activated**

Explanation:
DEBUG mode is currently ON. To turn off DEBUG mode, type DEBUG in the option line of the Db2 Automation Expert main menu.

User response:
No action is required..

DAJ943I   **Debug Mode is now deactivated**

Explanation:
DEBUG mode is currently OFF. To turn ON DEBUG mode, type DEBUG in the option line of the Db2 Automation Expert main menu.

User response:
No action is required..

DAJ944I   **XDC Mode is now activated**

Explanation:
XDC mode is currently ON.

User response:
No action is required..

DAJ945I   **XDC Mode is now deactivated**

Explanation:
XDC mode is currently OFF.

User response:
No action is required..

DAJ947E   **SORTDATA NO is invalid with SHARELEVEL CHANGE**

Explanation:
The Sortdata field contains N and an online REORG with SHRLEVEL CHANGE was specified. This is not a valid option with SHRLEVEL CHANGE for Db2 V8 or above. SORTDATA NO is only valid when SHRLEVEL NONE or SHRLEVEL REFERENCE has been specified.

User response:
Change the Sortdata field to Y if you want to use REORG with SHRLEVEL CHANGE.

DAJ948I   **SHARELEVEL has been defaulted to CHANGE because ONLINE REORG was set to YES. Enter a Y for ONLINE REORG Options to change this value**

Explanation:
When ONLINE REORG is set to Yes, SHRLEVEL will be given a default value of CHANGE. The only valid options are SHRLEVEL CHANGE or REFERENCE for ONLINE REORG.

User response:

Enter a Y for ONLINE REORG Options to edit
SHRLEVEL options.

| DAJ949I | SHARELEVEL has been defaulted to NONE because ONLINE REORG was set to NO |

Explanation:
When ONLINE REORG is set to no, SHARELEVEL is not
valid. The Include SHARELEVEL option has been set to
N.

User response:
No action is required.. Enter a Y in the Include Online
REORG field to edit SHARELEVEL options.

| DAJ951E | Invalid Value - Please select a valid value from the list provided or press PF1 for more information |

Explanation:
An invalid value was entered in one of the DISP
options fields.

User response
Enter one of the following options for the DISP
parameter:

- Status: M - Modify, N - New, O - Old, S - Share

- Normal Termination: C - Catalog, D - Delete, K -
  Keep, U - Uncatalog

- Abnormal Termination: C - Catalog, D - Delete, K -
  Keep, U - Uncatalog

| DAJ952I | There are additional options on the Modify options screen. Press <PF8> to scroll down and view them |

Explanation:
This is a scrollable screen.

User response:
Press PF8 or enter the DOWN command to view
additional options.

| DAJ954E | Requested table not found |

Explanation:
The combination of table name and table creator
provided returned no results. The specified table does
not exist.

User response:
Either enter different criteria to receive more search
results, create a new table under the name specified in
the search or perform a wildcard search by entering an
asterisk (*) in both the Table creator and Table name
fields to return more results.

| DAJ955E | If Delimited is selected, a valid delimiter must be included. Please include a valid delimiter |

Explanation:
If Delimited is included, a valid delimiter must be
included.

User response:
You can either enter a single character or a two-byte
hexadecimal value.

| DAJ956E | Sample value must not exceed 100. Please correct and resubmit |

Explanation:
If included, Sample must contain a numeric value
between 1 and 100.

User response:
Clear the invalid value and enter a valid value between
1 and 100.

| DAJ957E | Invalid Value - The only valid value for Strip is B for Both, L for Leading, N for No or T for Trailing |

Explanation:
An invalid value was entered for the Strip field.

User response:
Enter a valid value as described in the message text.

| DAJ958E | Invalid Value - The only valid value is I for Internal and E for External |

Explanation:
An invalid value was entered for the Int,Ext field.

User response:
Enter a valid value as described in the message text.

| DAJ959E | Invalid Value - The only valid value for And/Or is A for And or O for Or |

Explanation:
An invalid value was entered for the And/Or field.

User response:
Enter a valid value as described in the message text.

| DAJ960E | Invalid Value - The only valid value is S for Select |

Explanation:
An invalid value was entered for the Select field.

User response:
Enter a valid value as described in the message text.

| DAJ961E | Invalid Value - The only valid values for Header is C for CONST, N for None or O for OBID |

Explanation:
An invalid value was entered for the Header field.

User response:
Enter a valid value as described in the message text.

DAJ962E   **Invalid Value - The only valid values for FLOAT is I for IEEE or S for S390**

Explanation:
An invalid value was entered for the Float field.

User response:
Enter a valid value as described in the message text.

DAJ963E   **Invalid Value - The only valid value for CLONE is Y for Yes or N for No**

Explanation:
An invalid value was entered for the Clone field.

User response:
Enter a valid value as described in the message text.

DAJ964E   **Invalid Value - The only valid value for Skip Locked Data is Y for Yes or N for No**

Explanation:
An invalid value was entered for the Skip Locked Data field.

User response:
Enter a valid value as described in the message text.

DAJ965E   **Invalid Value - The only valid value for NOSUBS is Y for Yes or N for No**

Explanation:
An invalid value was entered for the Nosubs field.

User response:
Enter a valid value as described in the message text.

DAJ967E   **Invalid Value - The only valid value for NOPAD is Y for Yes or N for No**

Explanation:
An invalid value was entered for the Nopad field.

User response:
Enter a valid value as described in the message text.

DAJ967E   **Invalid Value - The only valid value for Encoding is A for ASCII, E for EBCDIC, No for No or U for Unicode**

Explanation:
An invalid value was entered for the Encoding field.

User response:
Enter a valid value as described in the message text.

DAJ968E   **Invalid Value - A valid CCSID must be entered**

Explanation:
An invalid value was entered in the SBCS, MIXED, or DBCS CCSID fields.

User response:

Enter a valid numeric CCSID value in the appropriate field.

DAJ969E   **Invalid Value - The only valid values for Dec Float Round Mode are C for Ceiling, D for Down, F for Floor, HD for Half Down, HE for Half Even, HU for Half Up, U for Up or N for None**

Explanation:
An invalid value was entered in the Dec Float Round Mode field.

User response:
Enter a valid value as described in the message text.

DAJ970E   **Invalid Value - The only valid values for this field is C for Shrlevel Change and Isolation CS, U for Shrlevel Change and Isolation UR or R for Shrlevel Reference**

Explanation:
An invalid value was entered in the Shrlevel and Isolation field.

User response:
Enter a valid value as described in the message text.

DAJ971E   **Skip Locked Data is only valid with Shrlevel Change and Isolation of CS**

Explanation:
Skip Locked Data was set to Y, but is only allowed with Shrlevel Change and Isolation CS.

User response:
Either set Skip Locked Data to N for No, or change your settings for Shrlevel and Isolation.

DAJ972E   **Invalid Value - The only valid values for Delimited are Y for Yes or N for No**

Explanation:
An invalid value was entered for the Delimited field.

User response:
Enter a valid value as described in the message text.

DAJ973E   **Invalid Value - The only valid values for Null is *, Y for Yes or N for No**

Explanation:
An invalid value was entered in the Null column.

User response:
Enter Y for Yes, N for No and * to not check for null column.

DAJ974E   **At least one column must be specified to Unload**

Explanation:
At least one column must be selected in order to continue with the UNLOAD utility.

User response:
Use the Select Order column to specify one or more columns to unload.

DAJ976E	A constant must be included if Header is set to C for CONST

Explanation:
The Header field was set to C for constant, but no constant value was entered.

User response:
Enter a constant value in the CONST field.

DAJ977E	Strip Char must be specified when Strip L/T/B is specified

Explanation:
Strip Leading, Trailing or Both was specified without including Strip Char. If Strip Leading, Trailing or Both is specified, Strip Char must be specified.

User response:
Enter a strip character in the Strip Char field, or remove the value in the Strip L/T/B/N field.

DAJ980W	A SYSREC DSN must be included to continue. Please update the SYSREC DSN options on this screen in order to continue

Explanation:
A valid SYSREC DSN must be included to continue with the UNLOAD process.

User response:
Please complete all fields on this page and include a SYSREC DSN.

DAJ981E	When using Disk type devices, expiration date and retention period are not valid

Explanation:
A value was entered in the Expiration date or Retention period fields, when a disk type device was specified for the Unload Utility. These fields are mutually exclusive.

User response:
Clear the Expiration date and Retention period fields, or change the Unit Type field to CART.

DAJ982E	Use Freeform Literal option was selected with no value entered for Free Form Literal

Explanation:
The Freeform Literal qualifier code was selected with no value entered for Freeform Literal.

User response:

Please include a value for Freeform Literal or deselect the Freeform Literal qualifier code.

DAJ983E	The GDG limit value must be either blank or a number in the range of 1-255 | 999

Explanation:
An invalid value was entered in the GDG limit field.

User response:
Enter a numeric value between 1 and either 255 or 999 as the GDG limit for this Discard DSN, or leave this field blank. The upper limit of the range is 255 for z/OS 2.1 and earlier, and 999 for z/OS 2.2 and later. If this field is left blank, the GDG limit set in the job profile (on the Generation Options screen) applies.

DAJ984E	Update Syspunch cannot be selected if Include Syspunch is set to No

Explanation:
You specified to update Syspunch options, but the Syspunch has not yet been selected for inclusion.

User response:
Type Y in the Include field for Syspunch, then type Y in the Update field for Syspunch to update the options.

DAJ985I	Since the Include Syspunch option was selected and none of the options have been updated, this screen is being displayed

Explanation:
You specified to include Syspunch options, but Syspunch has not yet been updated for inclusion.

User response:
This screen will allow you to update Syspunch options to be included for Unload.

DAJ986W	Since the Include Syspunch option was selected and none of the options have been updated, the Include Syspunch option has been set to No

Explanation:
You specified to include Syspunch options, but the Syspunch has not been updated for inclusion.

User response:
The Include Syspunch option has been set to No.

DAJ987E	Dec Float Round Mode is only valid when using a Db2 Version 9.1 or later Db2 subsystem

Explanation:
You set an option to a setting that requires Db2 Version 9.1 or later.

User response:

Set this option to No to continue for your version of Db2.

DAJ988E   **Skip Locked Data is only valid when using a Db2 Version 9.1 or later Db2 subsystem**

Explanation:
You set an option to a setting that requires Db2 Version 9.1 or later.

User response:
Set this option to No to continue for your version of Db2.

DAJ989E   **Rebalance is only valid when using a version 9 or higher Db2 subsystem. It will be set to No**

Explanation:
You set an option to a setting that requires Db2 Version 9.1 or later.

User response:
This option will be set to No for your version of Db2.

DAJ990E   **The SYSREC DSN and SYSPUNCH DSN are identical. Please update either DSN to be unique**

Explanation:
The DSN specified for SYSREC and SYSPUNCH are identical.

User response:
Change one of the DSNs to make it unique.

DAJ991I   **All fields were saved to the current values**

Explanation:
All fields were defaulted to the current values displayed on the screen.

User response:
No action is required..

DAJ992I   **All fields were set to default values**

Explanation:
All fields were set back to default values. Any changes made were lost.

User response:
No action is required..

DAJ993E   **Invalid value. The Header Constant cannot contain quotes as this will cause errors during Job Run Time**

Explanation:
An invalid value was entered in the Header Constant Field.

User response:

Enter a valid value that does not include quotes.

DAJ994E   **Invalid value. The first character of the Header constant must contain a letter**

Explanation:
An invalid value was entered in the Header Constant Field. The first byte must contain a letter.

User response:
Enter a valid value with a letter in the first byte.

DAJ995E   **Invalid value. This field must contain either a single character delimiter or valid hexadecimal value**

Explanation:
An invalid value was entered in the Delimiter Field. The first byte must contain a single character delimiter. Otherwise a valid hexadecimal value must be entered.

User response:
Enter a valid value as described in the message text.

DAJ996E   **Invalid value. Days entered for a leap year cannot exceed 366**

Explanation:
An invalid value was entered in the Expiration Date Field. The year entered is a leap year and the day exceeds 366.

User response:
Correct the date and resubmit.

DAJ997E   **An invalid value was entered in the Expiration Date Field**

Explanation:
The year entered is not a leap year and the day exceeds 365.

User response:
Correct the date and resubmit.

DAJ998E   **Invalid value. The expiration date must be in the form of YYDDD or YYYYDDD. Please correct and resubmit**

Explanation:
An invalid value was entered in the Expiration Date Field.

User response:
Enter a value in the format of YYDDD or YYYYDDD.

DAJB001E   **An error occurred connecting to Db2 SSID** *ssid* **in** *program* **RC =** *rc***.**

Explanation:
The specified program could not connect to the Db2 subsystem. The return code from the Call Attach Facility is listed in the message. The message returned

by the Call Attach Facility is listed in message DAJB005I.

User response:
Review the DAJB005I message and the return code provided by the Call Attach Facility. Correct the problem and resubmit the job.

DAJB002I	The program *program* returned with RC= *return_code*.

Explanation:
The program listed in the message returned the specified return code.

User response:
No action is required.

DAJB003E	The routine *routine* returned RC=*return_code*; *additional_message_text*

Explanation:
An error was detected during the build process by the listed routine. If available, additional information is provided in the message text.

User response:
Review this message and any additional messages to determine the nature of the problem.

DAJB004E	GETMAIN error; RC=*rc*

Explanation:
A program encountered a GETMAIN error while executing.

User response:
Increase the REGION size on the job card.

DAJB005I	*message_text*

Explanation:
This message displays information related to processing. It may be used to provide information to supplement other messages.

User response:
No action is required.

DAJB006I	Routine: *routine_name* *additional_text*

Explanation:
This message contains processing information about the routine in which an error occurred during the build process.

User response:
No action is required.

DAJB007I	*nnnnnn* objects were triggered by exception processing

Explanation:
The number of objects listed in the message were triggered by exception processing.

User response:
No action is required.

DAJB008E	The job profile *profile_creator.profile_name* contains no profiles.

Explanation:
The job profile that was built does not contain any profiles. At a minimum, a job profile must contain one object and one utility profile.

User response:
Edit the job profile and add an object and a utility profile, and optionally an exception profile. Then rebuild the job profile.

DAJB009E	There are no objects to process due to prior errors; build process terminated

Explanation:
The job does not contain any objects because of errors identified in prior messages.

User response:
Refer to the prior messages, correct the problem(s) and resubmit the job.

DAJB010E	A file tailor include error occurred in program *program_name*; return code =*return_code*; member name=*member_name*

Explanation:
The build process attempted to include the indicated ISPSLIB member when generating JCL. However, ISPF returned the indicated return code. The member was most likely not found in the ISPSLIB libraries allocated to the job.

User response:
Make sure the indicated member exists in the ISPSLIB libraries allocated to the job.

DAJB011E	Invalid jobname *jobname*. Probable cause is invalid jobcard or jobcard template. Replaced by default jobname. | Invalid jobcard title. It should be prefixed with //. Force to prefixed with //

Explanation:
An invalid job name or an invalid job card was specified. For an invalid job name, a default job name was provided. For an invalid job card, the job card was corrected to include the required // prefix.

User response:
No action is required; the job name or job card was corrected and processing continues. To prevent this message in the future, either correct the invalid job name or job card on the Build Job for *jobname* window, or if the job name or job card was provided via

data set, correct the invalid job name or job card in the job card member.

DAJB011W   **Unable to generate valid jobname; probable cause is no objects are selected**

Explanation:
There are no objects in the job. Either an object profile is included that contains no objects, or the objects that were included in the profile were also excluded.

User response:
Ensure that at least one object is contained in the object profile.

DAJB012I   **Data set *data_set_name*; member name *member_name*.**

Explanation:
This informational message is associated with another DAJB message. It provides a data set name and member name.

User response:
No action is required.

DAJB013E   **ISPF Environment and Services are not available; ISPF is required to execute a CLIST/REXX EXEC**

Explanation:
The ISPF environment is not available to execute a CLIST/REXX EXEC user exit. This environment is required for further processing.

User response:
Contact IBM Software Support for assistance.

DAJB014I   **Calling DAJ$EXUX to process exceptions user exits**

Explanation:
This informational message states that user exit is about to be processed.

User response:
No action is required.

DAJB016E   **No RUNSTATS statistics were found for any objects.**

Explanation:
There were no RUNSTATS statistics in the Db2 catalog, Db2 shadow catalog, history tables, or Db2 Automation Expert repository (depending on the type of exception processing specified). Exception processing could not be performed.

User response:
Run RUNSTATS to update the appropriate repository and resubmit the job.

DAJB017E   ***package_list_type* package name not set; use option 3 on the Setup panel to specify.**

Explanation:
Exception processing attempted to retrieve RUNSTATS statistics from the location specified in the Use Stats From field in the exception profile (refer to the description for message DAJB088I for additional details). However, the package list has not been defined on the corresponding PackageList field on the Setup panel.

User response:
Access the Shared Profile Parameters panel via product Setup options and add the correct package list name for the type of statistics you want Db2 Automation Expert to use.

DAJB018W   **Multiple exception profiles found; the value for USE STATS FROM is taken from the first profile**

Explanation:
More than one exception profile was included in the job profile, and the exception profiles had different settings in the Use Stats from field.

User response:
Db2 Shared Profile Support uses the statistics based on the Use Stats from field in the first exception profile processed. If this result is not what you expected, review and update your exception profiles.

DAJB019W   **CLUSTERRATIO|F exceptions are only applied to clustering indexes.**

Explanation:
An exception condition specified a CLUSTERRATIO or CLUSTERRATIOF column. Only clustering indexes have valid CLUSTERRATIO|F values. Therefore, the CLUSTERRATIO|F exception conditions are only applied to clustering indexes. Non-clustering indexes are skipped.

User response:
No action is required. If you expected a clustering index to be included in this job, review your object profiles and other included exception profiles to determine why the clustering index was not included.

DAJB020I   **It is a new condition and was added to the exceptions list.**

Explanation:
Multiple exception profiles are included in the job profile, and the job generation option Evaluate Multiple Exception Profiles is set to All. An exception condition in a subsequent profile (displayed in message DAJB076I) was detected; the exception was added to the list of conditions in the prior profiles.

User response:
No action is required.

DAJB021W   **It is a duplicate condition and was not added to the exceptions list.**

Explanation:
Multiple exception profiles are included in the job profile, and the job generation option Evaluate Multiple Exception Profiles is set to All. An exception condition in a subsequent profile (displayed in message DAJB076I) was detected and was the same condition specified in a prior profile. The condition was skipped.

User response:
No action is required.

DAJB022W	Object profile includes Db2 database *database*; object will not be processed.

Explanation:
The object profile specified a temporary Db2 database or a Db2 directory. Db2 Automation Expert does not allow certain utilities to be executed on temporary or directory databases.

User response:
Examine your object profile contents. Adjust the object profile or the utility profile as needed.

DAJB023W	Saved exception condition for *statistics_type.column* not found; the profile was most likely saved under a different version of Db2.

Explanation:
An exception condition in an exception profile is not valid for the version of Db2 under which the job will be run. The profile may have been created under a version of Db2 in which the statistics type and column type are not valid.

User response:
Ensure that the exception condition is valid for the Db2 version under which the job will be run. You can export the exception profile to the correct subsystem, then update the exception profile to ensure the contents are valid.

DAJB024W	*space_type creator|database space_name partition_number stepname* step will have a duplicate utility ID of another job

Explanation:
In the job's generation options, multiple jobs were allowed but the utility ID was not specified to be prefixed with the job name. This combination may result in duplicate utility IDs being generated.

User response:
Set the job generation options to allow only one job, or set the prefix for the utility ID to the job name.

DAJB025I	Build JCL	control cards will be written to *dsn*

Explanation:

You specified to build the job in batch. The output from the build JCL or the control cards will be written to the data set that is specified in the message text.

User response:
No action is required.

DAJB026I	Build JCL	control card member *member* successfully written

Explanation:
You specified to build the job in batch. The output from the build job or control card member was written to the data set that is listed in DAJB025I.

User response:
No action is required.

DAJB027I	Jobs generation options follow:

Explanation:
This is the first in a series of messages that list the job generation options. This message is followed by a series of other messages that each describe an option setting.

User response:
No action is required.

DAJB028I	Maximum Number of Jobs...*n*

Explanation:
This message is used with message DAJB027I and lists the maximum number of unique jobs that will be generated.

User response:
No action is required.

DAJB029I	Maximum Number of Objects per Job...*n*

Explanation:
This message is used with message DAJB027I and lists the maximum number of objects that will be included per job.

User response:
No action is required.

DAJB030I	Automatically generate GDG Base...*n*

Explanation:
This message is used with message DAJB027I and specifies whether a GDG will be automatically generated for image copy data sets if the base does not already exist. that will be generated. The GDG limit is listed in *num*; if the value is 0, GDG bases are not automatically created.

User response:
No action is required.

DAJB031I	Load Balance Jobs by...*time/ DASD/none*

Explanation:
This message is used with message DAJB027I and lists how copy and REORG jobs are load balanced.

User response:
No action is required.

DAJB032I	Capture Run Times for Load Balancing...*y*/*n*

Explanation:
This message is used with message DAJB027I and indicates whether run times will be captured for load balancing.

User response:
No action is required.

DAJB033I	Process Spaces in Utility (UT) Mode...*y*/*n*

Explanation:
This message is used with message DAJB027I and indicates if spaces will be started with utility-only access before running the utilities.

User response:
No action is required.

DAJB034I	Prefix Utility ID with Jobname... *job*/*step*/*both*/*no*

Explanation:
This message is used with message DAJB027I and indicates the prefix to be used with the utility ID.

User response:
No action is required.

DAJB035I	Set JCL Member Name to Jobname...*y*/*n*

Explanation:
This message is used with message DAJB027I and indicates if the JCL member generated will be the same as the job name in the job card.

User response:
No action is required.

DAJB036I	Generate Job When Errors Encountered...*y*/*n*/*w*

Explanation:
This message is used with message DAJB027I and shows how Db2 Shared Profile Support will proceed if errors are encountered during job build.

User response:
No action is required.

DAJB037I	Utility Data Set High Level Qualifier...*hilevel*

Explanation:
This message is used with message DAJB027I and lists the utility work data set high level qualifier.

User response:
No action is required.

DAJB039I	Retrieve Jobcard and Comments from Data Set

Explanation:
This message is used with message DAJB027I and precedes DAJB040I. It appears if the job card and comments were retrieved from a data set.

User response:
No action is required.

DAJB040I	Data set: *data_set_name*

Explanation:
This message is used with message DAJB027I and follows DAJB039I. It lists the data set name that holds the job card and comments.

User response:
No action is required.

DAJB041I	Member: *member_name*

Explanation:
This message is used with message DAJB027I and follows DAJB040I. It lists the member name that holds the job card and comments.

User response:
No action is required.

DAJB042I	Jobname template "*override_byte_characters*"

Explanation:
This message is used with message DAJB027I and lists the job override byte characters, if specified.

User response:
No action is required.

DAJB043E	File tailor *open*/*close* error in *program_name*; RC=*return_code*

Explanation:
The build process attempted to open or close the indicated member when generating JCL. However, ISPF returned the indicated return code. The member was most likely either not found or the member was already opened (being used) by another job.

User response:
Make sure the indicated member exists and that no other job has the member opened.

DAJB044E	An error was encountered attempting to execute DAJ$TSOC; RC=*return_code*

Explanation:
An attempt to execute an APF authorized program failed.

User response:

Make sure the Db2 Shared Profile Support modules were correctly installed.

| **DAJB045E** | **Load library not APF authorized -APF authorization required** |

Explanation:
The target load library SDAJLOAD was not APF authorized. APF authorization is required.

User response:
Ensure the target load library SDAJLOAD is APF authorized.

| **DAJB046E** | **Subsystem ID *ssid* could not be found in the operating system** |

Explanation:
The subsystem ID provided is either invalid or the subsystem has not been started since the last IPL.

User response:
Use a valid subsystem ID or start the subsystem.

| **DAJB047E** | **A critical error has occurred attempting to resolve the subsystem; RC=*return_code*** |

Explanation:
Shared Profile Support was unable to access Db2 internal control blocks.

User response:
Note the return code provided in the message and contact IBM Software Support for assistance.

| **DAJB048I** | **Db2 subsystem ID: *ssid*; Db2 version:*version*; SQLID:*sqlid*; ZUSER:*userid*** |

Explanation:
This informational message provides information about the Db2 subsystem, version, user ID, and SQLID.

User response:
No action is required.

| **DAJB049I** | **Using JOBS profile *profile_creator.profile_name* that includes...** |

Explanation
This message might include the following subheading:

```
Excp Rule
```

```
Order Accp Rjct Type Creator.Profile Name
```

The list of all the profiles in the jobs profile follows this message.

User response:
No action is required.

| **DAJB050I** | *message_text* |

Explanation
This message is used with DAJB049I. This message formats the following text as a heading in the message output:

```
Excp Rule
```

```
Order Accp Rjct Type Creator.Profile Name
```

User response:
No action is required.

| **DAJB051E** | ***statistics_column* exception not found; *statistics_type* exceptions not applied** |

Explanation:
An internal processing error occurred. A selected exception condition was not found in the list of exception conditions.

User response:
Rerun the job with DEBUG_MODE ON and save the job output. Contact IBM Software Support for assistance.

| **DAJB052W** | ***index_database_name index_name partition_number* IXOWNER=*index_owner*; associated TS object not found for triggered IX; IX triggers TS condition** |

Explanation:
An exception condition for the specified index (such as CLUSTERRATIO) indicates that the associated table space is triggered. However, the associated table space is not included in any objects profile in the job.

User response:
Examine the objects profile and the exceptions profile to determine the corrective action.

| **DAJB053I** | *Message_text* |

Explanation:
This message is issued at the end of a build job. It indicates the status of the job build, and describes whether the JCL was built based on the settings in the Build Job on Errors or Warnings field.

User response:
No action is required.

| **DAJB054E** | *profile_type profile_creator.profile_name* **cannot be found on Db2 subsystem *ssid*.** |

Explanation:
The indicated profile could not be found on the specified Db2 subsystem during the build process. The profile may have been deleted from the Db2 subsystem.

User response:

Examine your profile contents. Create or adjust the exception, job, object, or utility profile as needed.

DAJB055E	Neither SQLID nor user is authorized to use *profile_type* profile *profile_creator.profile_name.*

Explanation:
The Update option for the indicated profile is either View or No and your user ID or SQLID does not match the creator ID of the profile. If the profile has an Update option of View or No, your user ID or the job's SQLID must match the Creator ID of the profile.

User response:
Examine the profile in question. If you are not authorized to use the profile, select a different profile.

DAJB056W	*space_type creator/database space_name partition_number* - RUNSTATS statistics do not exist; default stat values will be used.

Explanation:
No RUNSTATS statistics were found for the indicated object in the statistics repository in use as indicated by the Use Stats From field in the exception profile (see message DAJB088I).

User response:
Run RUNSTATS and save the statistics in the appropriate repository. To run RUNSTATS, set the Use Stats from field in the exception profile.

DAJB057E	SQL Error in *program_name*: *SQL_error_message_text.*

Explanation:
The program listed in the error message encountered an SQL error. The SQL error message text is listed in the message.

User response:
Ensure that a bind has been properly performed on the appropriate Db2 subsystem and that the bind job completed without errors. Resubmit the job when the error has been corrected.

DAJB058E	NO exception conditions were found in the exception profiles; or RUNSTATS statistics are being retrieved from the history tables and ALL exception conditions are for columns not included in the history tables; or only partitioned object exception conditions are selected but there are no partitioned objects in the object profiles.

Explanation
One of the following:

1. An exception profile is being used that has no exception conditions specified.

2. The Use Stats From field indicates to use RUNSTATS statistics from the history tables, but all specified exception conditions are for non-history table columns. This occurs when you create an exception profile with a Use Stats From value of Repository, Catalog, or Runstats, specify exception conditions for statistic columns that are not part of the history tables but are part of the other repository table, and then change the Use Stats From value to History.

3. An exception profile contains only conditions for partitioned objects, but no partitioned objects are included in the object profiles.

User response
Update the exception profile to:

1. Select and specify at least one exception condition; or

2. Change the Use Stats From value to Repository, Catalog, or Runstats, or select at least one exception condition for a history table statistic column.

3. Remove the exception conditions for partitioned objects; or, update the object profile to include partitioned objects.

DAJB059E	No object profiles were found in the jobs profile or no objects were found in any included object profile

Explanation:
An object profile is missing from the job profile, or the object profile in the job profile is empty. The build process cannot build a utility job without objects.

User response:
Include an object profile in the jobs profile, or add objects to the empty object profile.

DAJB060E	Only table space exceptions were specified but there are NO table space objects included in the object profiles

Explanation:
The exception profile specified exception conditions that apply only to table spaces. However, no table spaces are included in the object profiles.

User response:

Correct the object profile to include table spaces, or change the exceptions profile to specify conditions that do not apply to table spaces.

| DAJB061E | Only index exceptions were specified but there are NO index objects included in the object profiles |

Explanation:
The exception profile specified exception conditions that apply only to indexes. However, no indexes are included in the object profiles.

User response:
Correct the object profile to include indexes, or change the exceptions profile to specify conditions that do not apply to indexes.

| DAJB062W | Table space exceptions were specified but there are NO table space objects included in the object profiles |

Explanation:
The exception profile specified some exception conditions that apply only to table spaces. However, no table spaces are included in the object profiles.

User response:
Correct the object profile to include table spaces, or change the exceptions profile to specify conditions that do not apply to table spaces.

| DAJB063W | Index exceptions were specified but there are NO index objects included in the object profiles |

Explanation:
The exception profile specified exception conditions that apply only to indexes. However, no indexes are included in the object profiles.

User response:
Correct the object profile to include indexes, or change the exceptions profile to specify conditions that do not apply to indexes.

| DAJB064W | RUNSTATS was requested. However, no catalog table exceptions were specified. Therefore, RUNSTATS will NOT be run |

Explanation:
The exception profile indicated to run RUNSTATS. However, no exception conditions for Db2 catalog tables were selected. It is not necessary to run RUNSTATS in this instance since RUNSTATS statistics are not required to evaluate any of the specified exception conditions.

User response:

Change the exception profile to select at least one catalog table exception condition.

| DAJB065E | *space_type creator|database space_name partition_number* DSN *data_set_name* truncated - too many symbolics |

Explanation:
The symbolics used to generate the data set name caused the name to be greater than 44 characters. The maximum number of characters allowed for a data set is 44. The data set name for the indicated object was truncated to 44 characters.

User response:
Reduce the number or type of symbolics in the generated data set name.

| DAJB066E | *space_type creator|database space_name partition_number* **Invalid SYMBOLIC parameter** *parameter_name* **found - skipped** |

Explanation:
An invalid symbolic parameter was detected while generating a data set name.

User response:
Update the utility profile and specify only valid symbolic parameters shown on the panel.

| DAJB067E | *space_type creator|database space_name partition_number* **Index object IXOWNER=**_index_owner_ **IX=**_index_name_ **not found for triggered index** |

Explanation:
The indicated index was triggered by an exception condition. The associated table space was found and an attempt was made to find the index, but the index was not found in the list of objects. This is an internal processing error.

User response:
Rerun the job with DEBUG_MODE ON and save the job output. Contact IBM Software Support for assistance.

| DAJB068W | TS *database_name_pattern tablespace_name_pattern* **TS CREATOR=**_creator_name_ **- No table spaces found for this pattern.** |

Explanation:
A wild card pattern was specified on the Objects Profile Display. However, no objects were found for the specified wildcard pattern in the Db2 subsystem.

User response:
Correct the wildcard in object profile.

DAJB069W   **IX** *database_name_pattern*
index_name_pattern **No indexes
found for this pattern.**

Explanation:
A wild card pattern was specified on the Objects
Profile Display. However, no objects were found for the
specified wildcard pattern in the Db2 subsystem.

User response:
Correct the wildcard in object profile.

DAJB070I   *space_type creator|database
space_name partition_number*
Duplicate object skipped

Explanation:
An object was included in the build more than once,
probably because it was specified in two or more
object profiles. The duplicate objects are skipped.

User response:
No action is required.

DAJB071I   *space_type creator|database
space_name partition_number*
**Table space excluded because it
was created with DEFINE NO and
underlying file not yet created**

Explanation:
An object was included in an object profile, but the
underlying file has not yet been created.

User response:
Either create the underlying file or remove the object
from the object profile.

DAJB072I   *space_type database_name
tablespace_name
partition_number utility_name* **Run
times do not exist for this table
space**

Explanation:
The job profile specified to capture run times for
load balancing. This is the first time run times have
been captured for this object. This message is strictly
informational.

User response:
No action is required.

DAJB073E   *space_type creator|database
space_name partition_number*
Space no longer exists

Explanation:
The specified object has been deleted from the Db2
catalog. The object may have deleted since the object
profile was created.

User response:

Recover the object or remove the object from the
object profile.

DAJB074E   *space_type database_name
tablespace_name partition*
Underlying VSAM file not found

Explanation:
An object was included in an object profile but the
underlying file could not be found.

User response:
Either create the underlying file or remove the object
from the object profile.

DAJB075I   *space_type creator|database
space_name partition_number*
**Utility JCL has been created for
this LOB table space**

Explanation:
A LOB table space is part of the object profile. Utility
JCL has been generated if applicable to the LOB table
space.

User response:
No action is required.

DAJB076I   **Multiple exception
condition detected for**
statistics_type.column **in profile**
profile_creator.profile_name

Explanation:
Evaluate Multiple Exception Profiles is set to All
together and multiple exception profiles are included
in the jobs profile. An exception condition in a
subsequent profile was detected and is the same
condition that was specified in a prior profile. The
duplicate exception condition was skipped.

User response:
No action is required.

DAJB077I   *space_type creator|database
space_name partition_number*
**Table space excluded because it is
a TEMP or WORK database**

Explanation:
The indicated temporary database was found in the
job. JCL cannot be generated for temporary databases.

User response:
Remove the temporary database from the object
profile.

DAJB078E   *space_type creator|database
space_name partition_number*
**Image copy data set name
generated for utility** *utility*
IC type *copy_type* **generated
incorrectly. Data set has been**

truncated DSN=_data_set_name_
NODE=_nodemessage_text_

Explanation
This message is issued when building an image copy data set name. One of the following messages may appear in the message text:

- Invalid Data Set Node Detected Length Greater than 8 Characters
- Invalid Data Set Node Detected - 2 Consecutive Periods
- Invalid Ending Period Detected
- Invalid Data Set Node Detected - First Character Not Alphabetic or National
- Invalid Characters Detected in Data Set Node
- Invalid Data Set Node Detected after a GDG

User response:
Update the utility profile and make sure a valid data set name pattern is specified.

DAJB079E   **Too many** _syscopy_|_Db2_display_ **exceptions were specified; reduce the number of exceptions to be less than or equal to** _number_

Explanation:
An internal table overflowed.

User response:
Reduce the number of SYSCOPY and Db2 display exceptions to be less than or equal to the value listed in the message.

DAJB080E   _space_type creator_|_database space_name partition_number_ **Quiesce TABLESPACESET not supported on partitioned spaces with multiple job options turned on.**

Explanation:
For partitioned spaces, a QUIESCE TABLESPACESET cannot be generated when a job profile specifies that more than one job is to be built (when a value greater than 1 was specified in the Maximum nbr of jobs field in the job profile).

User response:
Either delete the QUIESCE TABLESPACESET from the job profile or update the job profile options so that the maximum number of jobs is 1.

DAJB081I   _space_type creator_|_database space_name partition_number_ **Image copy bypassed on this index because the index was not created with the COPY YES option**

Explanation:
The index listed in the message text cannot be copied because it was created without the COPY YES keyword.

User response:
No action is required.

DAJB082E   _space_type creator_|_database space_name partition_number_ **GDG base not found for image copy data set** _data_set_name_ **when generating DDs for utility** _utility_ **IC type** _copy_type_**; Automatically Gen GDG Base = 000**

Explanation:
The image copy data set is specified to be a GDG. The GDG base does not exist, and the Automatically Gen GDG base field was set to 0 on the job options screen. Therefore, the GDG base cannot be created.

User response:
If you want to use GDGs for the image copy data set, create the GDG base yourself, or set the Automatically Gen GDG base field to something other than 000.

DAJB083I   _space_type creator_|_database space_name partition_number_ **GDG base not found for image copy data set** _data_set_name_ **when generating DDs for utility** _utility_ **IC type** _copy_type_**; GDG base will be generated**

Explanation:
The image copy data set is specified to be a GDG. The GDG base does not exist, and the Automatically Gen GDG base field was set to a valid limit on the job options screen. Shared Profile Support will create the GDG base with the specified limit.

User response:
No action is required.

DAJB084E   **CLUSTERED and/or CLUSTERRATIO|F is specified in an exceptions profile but there are NO table space objects in the object profiles**

Explanation:
The listed exception conditions relate to indexes. If the condition is met, the associated table space is triggered. However, no table spaces are included in any of the object profiles in the job.

User response:
Update the object profile to include table spaces or delete the CLUSTERED and CLUSTERRATIO|F exception from the exception profile.

DAJB085W	*space_type creator|database space_name partition_number* **Underlying file has been migrated; space quantities have been defaulted**

Explanation:
The indicated object included in an object profile has been migrated from disk. The primary and secondary space quantities for the object have been defaulted to 500 tracks.

User response:
Either remove the object from the object profile or recall the object back to disk.

DAJB087W	**Job** *jobname* **required** *number* **objects |** *Utilityname* **utility steps required** *number* **objects per step**

Explanation:
These messages indicate that the job breakdown process overrode user-specified values. The job name listed in the message required the listed number of objects, which overrode the number displayed in DAJB029I; or the utility listed in the message required the number of objects per step listed in the message, which overrode the number displayed in DAJB375I.

User response:
No action is required.

DAJB088I	**RUNSTATS statistics are being retrieved from the** *stats_source*

Explanation:
RUNSTATS statistics are being retrieved from the repository specified in the Use Stats From field in the first exception profile.

User response:
No action is required.

DAJB089I	**Calling IBM RUNSTATS utility to collect current statistics for included objects; see SYSOUT file for additional RUNSTATS messages.**

Explanation:
RUNSTATS statistics were collected prior to exceptions processing. RUNSTATS parameters and messages are displayed in the SYSOUT.

User response:
Review the SYSOUT file to determine if any errors need to be resolved.

DAJB090E	**RUNSTATS detected an unrecoverable error and terminated processing; RC=***return_code***; see SYSOUT file for more details.**

Explanation:
RUNSTATS statistics were specified to be collected prior to exceptions processing. However, RUNSTATS ended with an error and provided the return code listed in the message.

User response:
Review the SYSOUT file to determine the error. Correct the error and resubmit the job.

DAJB091I	*space_type creator|database space_name partition_number* **Logging for REORG TABLESPACE utility has been set to LOG YES for this LOB table space**

Explanation:
The utility profile specifies a REORG TABLESPACE with LOG NO. For LOB table spaces, REORG LOG NO is not recommended, as this parameter will leave the LOB table space in COPY PENDING status. Shared Profile Support changed the REORG to LOG YES for the LOB space.

User response:
No action is required.

DAJB092I	*space_type creator|database space_name partition_number* **Inline copy for REORG TABLESPACE utility has been turned off for this LOB table space**

Explanation:
The utility profile specifies a REORG TABLESPACE with an inline image copy. For LOB table spaces, an inline copy cannot be created during a REORG. Shared Profile Support removed the inline copy for the LOB space.

User response:
No action is required.

DAJB093E	**Unexpected return code** *return_code* **from CAF command processor; reason X '***reason_code***'.**

Explanation:
The Call Attach Facility returned the indicated error while attempting to process a `-DISPLAY` command.

User response:
To determine the cause of the problem, refer to the Call Attach Facility codes for your version of Db2 in the IBM Information Management Software for z/OS Solutions Information Center. Correct the problem and resubmit the job.

DAJB094E	**Unexpected error parsing CAF command processor output - Status not found**

Explanation:

The status of an object in the output from the -DISPLAY command could not be found.

User response:
Rerun the job with DEBUG_MODE ON and save the job output. Contact IBM Software Support for assistance.

DAJB095I   *space_type creator/database space_name partition_number* **Online REORG TABLESPACE utility not supported on LOB table spaces; share level changed to NONE**

Explanation:
The utility profile specifies a REORG TABLESPACE with SHRLEVEL CHANGE or REFERENCE. For LOB table space REORGs, these parameters are not allowed. Shared Profile Support changed the REORG to SHRLEVEL NONE for the LOB space.

User response:
No action is required.

DAJB096I   *space_type creator/database space_name partition_number* **Inline statistics for REORG TABLESPACE utility has been turned off for this LOB table space**

Explanation:
The utility profile specifies a REORG TABLESPACE with STATISTICS option. For LOB table space REORGs, inline statistics collection is not allowed. Shared Profile Support removed the STATISTICS keyword from the REORG for the LOB space.

User response:
No action is required.

DAJB097W   *space_type creator/database space_name partition_number* - **REALTIME statistics row not found; object will not be processed**

Explanation:
A real time exception condition was specified for the indicated object. However, a row in the real time statistic table could not be found. The real time exception condition will not be applied to the object.

User response:
Ensure that real time statistics are being collected on the Db2 subsystem.

DAJB098W   *space_type creator/database space_name partition_number* - **REALTIME statistics row not found; object will not be processed**

Explanation:
A real time exception condition was specified for the indicated object. However, a row in the real time

statistic table could not be found. The real time exception condition will not be applied to the object.

User response:
Ensure that real time statistics are being collected on the Db2 subsystem.

DAJB099E   **User exit** *exit_name* **not found**

Explanation:
The indicated user exit could not be found in any of the libraries allocated to the job.

User response:
Make sure a load module is in an ISPLLIB data set and a CLIST or a REXX EXEC is in a SYSPROC data set allocated to the job.

DAJB100I   **Calling** *CLIST/REXX_EXEC/ load_module* **user exit** *user_exit_name* **to process** *nnn* **objects**

Explanation:
The indicated user exit was specified in an exception profile. Exception processing displays this message just prior to calling the user exit for the first time.

User response:
No action is required.

DAJB101E   **CLIST/REXX EXEC specified; ISPF service routine** *routine* **returned an error; RC=***return_code*

Explanation:
An attempt to initialize the ISPF environment to process user exits failed. Processing of user exits terminates. Processing of other exception conditions continue.

User response:
Refer to the SYSTSPRT file, which describes the error condition, and take the appropriate corrective action.

DAJB102E   *CLIST/REXX_EXEC/load_module* **user exit** *user_exit* **error;** *descriptive_text* **RC=***return_code*

Explanation:
ISPF encountered an error attempting to execute the CLIST or REXX EXEC specified as a user exit. Processing of all user exits terminates. Processing of other exception conditions continues.

User response:
Make sure that the CLIST or REXX EXEC is a member of the SYSPROC data set(s) allocated to the job.

DAJB103E   **User exit abended with a** *SYSTEM/USER* **abend code of X'***hexadecimal_return_code***'; exception processing terminated**

Explanation:

The user exit encountered an error in processing.

User response:
Correct the user exit and resubmit.

DAJB104I   *space_type creator|database*
                 space_name partition_number
                 Space excluded from reallocation,
                 the newly calculated space is
                 smaller than the allocation

Explanation:
The space calculations for an object slated for reallocation resulted in a space smaller than the current space allocation, and the utility profile setting Allow Reallocation to Decrease Size is set to No.

User response:
If you want to allow a smaller allocation, alter the utility profile to set Allow Reallocation to Decrease Size to Yes.

DAJB105W   *space_type creator|database*
                 space_name partition_number
                 Space excluded from reallocation,
                 the space is not stogroup defined

Explanation:
The space listed in the message is VCAT defined.VCAT-defined spaces cannot be changed using Db2 ALTER.

User response:
The space can be altered using Data Set Manager.

DAJB106I   **Evaluate Multiple**
                 Exception Profiles...*all_together|*
                 one_at_a_time

Explanation:
This message is used with message DAJB027I and shows how Db2 Shared Profile Support evaluates exception profiles when more than one is specified.

User response:
No action is required.

DAJB107W   **Mutually exclusive conditions**
                 specified; objects were probably
                 not triggered or triggered
                 incorrectly

Explanation:
A jobs profile contains more than one exception profile. A subsequent exception profile has an exception condition for a statistics column that contradicts the previous condition. For example, one exception condition specifies to check for a SYSCOPY.ICTYPE = 'F' while a subsequent exception condition specifies to check for SYSCOPY.ICTYPE NE 'F', or one exception condition specifies an OR condition while the other specified an AND condition.

User response:

Examine your exception profiles and delete the exception condition that contradicts another exception condition in the job.

DAJB108E   **OPEN | CLOSE INPUT | OUTPUT**
                 error on file *ddname*; return code
                 = *return_code* X'*hex_return_code*'.

Explanation:
An error occurred on the file indicated in the message.

User response:
Make sure the file in error is included in the job. Review the related return codes, take the appropriate corrective action, and resubmit the job.

DAJB109E   **Both AGE and DATE are blank; one**
                 of these must specify a valid value

Explanation:
A MODIFY utility was specified but Db2 Shared Profile Support cannot determine which records or rows to delete.

User response:
You must specify either Date or Age on the Modify Utility options screen.

DAJB110I   **Cleanup repository delete**
                 timestamp used: *timestamp*

Explanation:
This informational message lists the timestamp used to determine which rows in the repository to delete.

User response:
No action is required.

DAJB111I   **Number of *table_name* table rows**
                 deleted...*number*

Explanation:
This informational message lists the number of rows in the specified table that were deleted.

User response:
No action is required.

DAJB112I   **Recall Migrated Spaces...***y|n*

Explanation:
This message is used with message DAJB027I and displays if migrated spaces are to be recalled during job build.

User response:
No action is required.

DAJB113I   **Use DSNACCOR Exception Table...**

Explanation:
This message is used with message DAJB027I and lists whether the DSNACCOR exception table is to be used for exception processing.

User response:
No action is required.

DAJB114E   **No parameter cards were found in input file** *file_name***; utility terminated**

Explanation:
No control cards were found in the input file. The utility cannot continue.

User response:
Build the job again to generate the appropriate utility control cards.

DAJB115E   **Error loading** *profile_type* **profile; not enough records found in input file**

Explanation:
This is issued by the UNLOAD/LOAD profile program. The input file was probably corrupted.

User response:
Run the UNLOAD to recreate the file and re-run the LOAD using the new file.

DAJB116E   **Utilities Profile "***profile_creator.profile_name***" COPYTOCOPY Utility LP copy conflicts with prior image copy**

Explanation:
You have requested an LP type image copy, but the image copy to be used in the COPYTOCOPY utility is registered as an LP image copy. You cannot make the same type of copy using COPYTOCOPY.

User response:
On the Copy to Copy Image Copy Options screen, specify N in the Local Primary - Take Image Copy field. Select another image copy type and resubmit the job.

DAJB117E   **Utilities Profile "***profile_creator.profile_name***" COPYTOCOPY Utility LB copy conflicts with prior image copy**

Explanation:
You have requested an LB type image copy, but the image copy to be used in the COPYTOCOPY utility is registered as an LB image copy. You cannot make the same type of copy using COPYTOCOPY.

User response:
On the Copy to Copy Image Copy Options screen, specify N in the Local Backup - Take Image Copy field. Select another image copy type and resubmit the job.

DAJB118E   **Utilities Profile "***profile_creator.profile_name***" COPYTOCOPY Utility RP copy conflicts with prior image copy**

Explanation:
You have requested an RP type image copy, but the image copy to be used in the COPYTOCOPY utility is

registered as an RP image copy. You cannot make the same type of copy using COPYTOCOPY.

User response:
On the Copy to Copy Image Copy Options screen, specify N in the Recover Site Primary - Take Image Copy field. Select another image copy type and resubmit the job.

DAJB119E   **Utilities Profile "***profile_creator.profile_name***" COPYTOCOPY Utility RB copy conflicts with prior image copy**

Explanation:
You have requested an RB type image copy, but the image copy to be used in the COPYTOCOPY utility is registered as an RB image copy. You cannot make the same type of copy using COPYTOCOPY.

User response:
On the Copy to Copy Image Copy Options screen, specify N in the Recover Site Backup - Take Image Copy field. Select another image copy type and resubmit the job.

DAJB120E   **Utilities Profile** *profile_creator.profile_name* **Util Work high level in Jobs Options is required with REPAIR DBD**

Explanation:
The utility profile specifies a REPAIR DBD option. This option requires a utility work data set high level qualifier to be set in the job options.

User response:
Edit the job profile job generation options to include a utility work data set high level qualifier.

DAJB121E   *space_type creator|database space_name partition_number* **No image copy exists to support COPYTOCOPY utility**

Explanation:
A utility profile specifies a COPYTOCOPY utility, but one or more objects in the object profile do not have a supporting image copy.

User response:
The COPYTOCOPY utility requires an image copy. Change the utility profile settings or create image copies of the objects before submitting the job.

DAJB122E   *space_type creator|database space_name partition_number* **Last image copy backup** *backup_type* **conflicts with COPYTOCOPY utility backup types**

Explanation:
You specified to COPYTOCOPY using the most recent copy, but that copy is of a type that conflicts with the

image copy type selected on the Copy to Copy Image Copy Options screen.

User response:
Select another image copy type and resubmit the job.

DAJB123E	*space_type creator|database space_name partition_number* **No recovery information was found in SYSCOPY for this space**

Explanation:
No recovery information was found for the object listed in the message.

User response:
The object cannot be recovered.

DAJB124E	*space_type creator|database space_name partition_number* **Recovery point could not be found for this space**

Explanation:
A recovery utility profile was specified, but no recovery point can be found for the listed space.

User response:
The object cannot be recovered.

DAJB125E	*space_type creator|database space_name partition_number* **An Alter has been done on this table space. Object Restore required for recovery**

Explanation:
The listed object has been ALTERED since it was created.

User response:
The index cannot be recovered unless your site has a license for Db2 Object Restore.

DAJB126W	*space_type creator|database space_name partition_number* **This index has been rebuilt, which prohibits recovery. Index will be rebuilt instead**

Explanation:
The listed index has been rebuilt since it was created. The index cannot be recovered, but can and will be rebuilt.

User response:
No action is required.

DAJB127E	*space_type creator|database space_name partition_number* **Space is not recoverable to desired point. A CHECK DATA with LOG NO prohibits recovery**

Explanation:

This space cannot be recovered to the selected point in time because a CHECK DATA with LOG NO has been executed on the space.

User response:
Select a recovery point in time before the CHECK DATA was executed.

DAJB128W	*space_type creator|database space_name partition_number* **Required full image copy *image_copy_data_set* could not be found**

Explanation:
A full image copy for the listed space could not be found, and cannot be used in the recovery.

User response:
No action is required.

DAJB129W	*space_type creator|database space_name partition_number* **Incr Image copy *image_copy_data_set* could not be found. Must log apply**

Explanation:
An incremental image copy for the listed space could not be found, and cannot be used in the recovery. Db2 Shared Profile Support will use another valid copy and apply log changes to recover the object.

User response:
No action is required.

DAJB130W	*space_type creator|database space_name partition_number* **Partial Recovery has been found. Recovery is still allowed**

Explanation:
Db2 Shared Profile support detected a partial recovery of the listed object. However, it may be possible to still recover the object. If further processing detects that the object cannot be recovered, additional messages will be issued.

User response:
No action is required.

DAJB131E	*space_type creator|database space_name partition_number* **Space is not recoverable to desired point. A LOAD REPLACE with LOG NO prohibits recovery**

Explanation:
This space cannot be recovered to the selected point in time because a LOAD REPLACE with LOG NO has been executed on the space.

User response:
Select a recovery point in time before the LOAD REPLACE was executed.

DAJB132E	*space_type creator/database space_name partition_number* **Space is not recoverable to desired point. A LOAD RESUME| REORG with LOG NO prohibits recovery**

Explanation:
This space cannot be recovered to the selected point in time because a LOAD RESUME or REORG with LOG NO has been executed on the space.

User response:
Select a recovery point in time before the LOAD RESUME or REORG was executed.

DAJB133E	*space_type creator/database space_name partition_number* **A valid starting point could not be found for the recover utility**

Explanation:
The listed object cannot be recovered because events occurred that rendered recovery impossible, such as a REORG LOG NO without a successive image copy.

User response:
The space is not recoverable.

DAJB134I	*space_type creator/database space_name partition_number* **Index excluded because it was created with DEFINE NO and underlying file not yet created**

Explanation:
The listed index was excluded from recovery. When the index was created, DEFINE NO was used. However, the underlying VSAM file has not yet been created.

User response:
No action is required.

DAJB135I	*space_type creator/database space_name partition_number* **Reorg Table Space option KEEPDICTIONARY has been turned off for non compressed space**

Explanation:
The REORG utility profile specified KEEPDICTIONARY YES, but the listed space is not a compressed space. KEEPDICTIONARY will be suppressed for this space.

User response:
No action is required.

DAJB136E	**There was an error initializing the DAJ#LRGN function; the SYSCOPY.CHGD_SINCE_LAST_IC exceptions will NOT be processed; RC=*return_code***

Explanation:
An exception profile contains the indicated statistics type. An error occurred during the initialization of the function. Processing of these exception conditions are skipped. Processing of other exception conditions continue.

User response:
Rerun the job with DEBUG ON, save the job output, and contact IBM Software Support.

DAJB137E	*space_type creator/database space_name partition_number* **There was an error attempting to process a SYSCOPY.CHGD_SINCE_LAST_IC exception condition**

Explanation:
An exception profile contains the indicated statistics type. An error occurred while evaluating the exception condition. Processing of the current object is skipped. Processing of other objects continues.

User response:
Rerun the job with DEBUG ON, save the job output, and contact IBM Software Support.

DAJB138E	*space_type creator/database space_name partition_number* **Object excluded. The data set** *data_set_name* **not found in SYSCOPY**

Explanation:
You specified to recover to a particular copy (data set), but the data set is not found in SYSCOPY.

User response:
The space is not recoverable to that copy. However, you might be able to recover the space using another recovery point.

DAJB139W	**Profile** *profile_creator.profile_name* **re-startability has been disabled; JCL for this job will be saved to the SAME DSN/mbr**

Explanation:
The profile name listed in the message will not be able to be restarted because the JCL output for the current job profile is being written to the same data set and member name.

User response:
No action is required.

DAJB140I	*space_type creator/database space_name partition_number* **Primary space necessary for allocation has been truncated to user specified quantity**

Explanation:

The listed object's primary allocation was truncated due to the user-specified maximum primary space allocation limits. These limits are specified in the Shared Profile Support - Update Parameters for Db2 Subsystem screen. It is possible that adequate secondary space will be allocated for the object.

User response:
No action is required.

DAJB141W	*space_type creator*|*database space_name partition_number* **Prime and Secd Space necessary for allocation have been truncated to user specified qty**

Explanation:
The listed object's primary and secondary allocations were truncated due to the user-specified maximum space allocation limits.

User response:
The job will probably fail due to lack of space. Re-evaluate your maximum space quantity allocations.

DAJB142I	**DSNACCOR EXCEPT_TBL not found; Utilities will not be excluded from generated JCL**

Explanation:
You specified to use the DSNACCOR table for exception processing, but no exception data was found in the DSNACCOR table.

User response:
To use the DSNACCOR EXCEPT_TBL, ensure that the table exists and that it populated with exception data.

DAJB143I	**TS|IX** *creator*|*database space_name partition_number utility_type* **turned off because object was found in the DSNACC.EXCEPT_TBL**

Explanation:
This informational message lists the object that will be excluded by the listed utility because it was found in the DSNACCOR table.

User response:
No action is required.

DAJB144W	**Column exceptions were specified but there are NO table space or index objects included in the object profiles**

Explanation:
The exception profile specified some column exception conditions. However, no table or index spaces are included in the object profiles. The objects may have been filtered by a previous exception.

User response:

Ensure that the object profile will include objects for this exception. Check the exceptions profile to ensure conditions are properly set.

DAJB145I	**IX** *creator index_name partition_number* **REORG turned off for this index since the table space is being REORGed**

Explanation:
The table space associated with the listed index is being REORGed. When a table space is REORGed, its associated indexes are also REORGed. Therefore, the REORG utility that was specified for the index has been disabled to prevent a second REORG on the index.

User response:
No action is required.

DAJB146I	**IX** *creator index_name partition_number* **RUNSTATS turned off for this index since RUNSTATS is being performed on the table space**

Explanation:
The RUNSTATS utility was already specified for the table space associated with the listed index. When RUNSTATS is run on a table space, RUNSTATS is also run on its associated indexes. Therefore, the RUNSTATS utility that was specified for the index has been disabled to prevent a second RUNSTATS on the index.

User response:
No action is required.

DAJB147W	**OBJS Profile** *profile_creator.profile_name*: **Volume processing at ALL level is not allowed with Symmetrix/ESS backups**

Explanation:
The object profile contains objects selected by volume. When the volumes were selected, processing at the "All" level was specified. However, when processing IBM ESS or Symmetrix copies, the objects must have been selected with processing at the "Part" level.

User response:
Change the object profile to process the objects selected by volume to the "Part" level.

DAJB148E	**Not enough FlashCopy Target volumes are specified; The number of Source volumes (***num_source***) exceeds the number of Target volumes (***num_target***)**

Explanation:
There are more source volumes to be copied than there are target volumes specified. This is not allowed.

User response:
Add or change the target volumes so there are at least as many target volumes as source volumes.

DAJB149E   **ANTRQST is not installed on this system; System Data Mover (SDM) functions are not available; FlashCopy canceled**

Explanation:
Utility JCL for image copies of objects on IBM ESS devices was to be generated. However, Db2 Automation Expert requires IBM ESS devices with Advanced Copy Services and the DFSSMS system data mover (SDM) API (macro ANTRQST) installed.

User response:
The System Data Mover, level 5 or above, must be installed in order to use FlashCopy features.

DAJB150E   **FlashCopy is not available at this level of ANTRQST (*level*) running on this system; ANTRQST Level must be >= *level*; FlashCopy canceled**

Explanation:
Db2 Automation Expert requires IBM ESS devices with Advanced Copy Services and the DFSSMS system data mover (SDM) API (macro ANTRQST) installed. However, the System Data Mover is not at the required level; it must be level 5 or above.

User response:
Update your System Data Mover to the required level.

DAJB151E   **Unexpected return code from ANTRQST *level*|ESSRVCS request; Return code = *return_code*; Reason code = *reason_code*. See z/OS DFSMSdfp Advanced Services manual for a description of the Return Codes. ANTF0 *message_number* For a Return Code of 7620. See z/OS MVS System Messages manual for a description of ANTF0nnn messages**

Explanation:
An error was encountered when building or processing the ESS image copy utility JCL.

User response:
Refer to the message text for appropriate action.

DAJB152E   **FlashCopy Volume *volume* is not an ESS (Shark) device**

Explanation:
The specified volume is not an IBM ESS device.

User response:

Enter a valid ESS volume on the IBM ESS Backup Options panel and resubmit.

DAJB153E   **FlashCopy Volume *volume* is in *status* status; It must be in SIMPLEX status to execute FlashCopy functions**

Explanation:
The ESS volume must be in SIMPLEX status to process the FlashCopy job. If the volume is in a state other than SIMPLEX, another FlashCopy job may be in progress.

User response:
Wait until the current FlashCopy job is completed, or specify a different ESS volume.

DAJB154I   **Source FlashCopy volume *source_volume* will be FlashCopied to target volume *target_volume***

Explanation:
This informational message lists the source volume to be flash copied and the target volume to which it will be copied.

User response:
No action is required.

DAJB155E   **Unexpected Return Code (*return_code*) attempting to establish communications with the Symmetrix; Copy functions canceled**

Explanation:
Db2 Shared Profile Support encountered an error communicating with the Symmetrix device. There may be a problem with the Symmetrix SCF started task.

User response:
Check that the SCF started task is running. Consult your Symmetrix user guide for further assistance. Contact IBM Software Support if additional assistance is required.

DAJB156E   **Unexpected Return Code (*return_code*) attempting to query the Symmetrix; Copy functions canceled**

Explanation:
Db2 Shared Profile Support encountered an error attempting to query the Symmetrix device. There may be a problem with the Symmetrix SCF started task.

User response:
Check that the SCF started task is running. Consult your Symmetrix user guide for further assistance. Contact IBM Software Support if additional assistance is required.

DAJB157E	Volume *volume* is not on an EMC Symmetrix device; Copy functions canceled

Explanation:
The specified volume is not an EMC Symmetrix device.

User response:
Enter a valid EMC device on the EMC Backup Options panel and resubmit.

DAJB158E	EMCDASD scan failed with an RC = *return_code* attempting to find the UCB for Symmetrix device *device_address*; Copy functions canceled

Explanation:
Db2 Shared Profile Support could not find the unit control block for the specified device.

User response:
Note the return code and contact IBM Software Support.

DAJB159E	UCBDASD scan failed with an RC = *return_code* attempting to find the UCB for Symmetrix device *device_address*; Copy functions canceled

Explanation:
An error occurred when attempting to access the Symmetrix device. The UCB scan could not find the corresponding MVS device.

User response:
Note the return code and contact IBM Software Support.

DAJB160I	*space_type creator/database space_name partition_number* Reorg Table Space utility does not support REUSE on LOB table spaces; Reuse has been turned off

Explanation:
The REORG utility does not support the REUSE keyword on LOB table spaces. The job will be built without the REUSE keyword.

User response:
No action is required.

DAJB161I	*space_type creator/database space_name partition_number* Reorg Table Space option NOSYSREC not allowed since no clustering index found for this space

Explanation:
The listed object does not have a clustering index; therefore, the NOSYSREC keyword cannot be specified. NOSYSREC will not be included the REORG syntax.

User response:
No action is required.

DAJB162I	*space_type creator/database space_name partition_number* REUSE parm in Reorg Tbsp/Index has been turned off because object was ALTERED

Explanation:
The listed object has been ALTERed since creation. Therefore, the REUSE keyword cannot be specified. REUSE will not be included the REORG syntax.

User response:
No action is required.

DAJB163E	The DAJ database is not in a read/write status. Correct the invalid status and rerun

Explanation:
The DAJ database must be available in read/write status.

User response:
Correct the invalid status and rerun the job.

DAJB163I	*space_type creator/database space_name partition_number* Table space is not in a read/write status. Correct the invalid status and rerun

Explanation:
The table space listed in the message must be available in read/write status.

User response:
Correct the invalid status and rerun the job.

DAJB163E	Current user ID does not have sufficient authority to perform a DISPLAY DATABASE command

Explanation:
The user ID under which the job is being generated does not have sufficient authority to perform the DISPLAY DATABASE command on the Db2 Automation Expert database. At a minimum, DISPLAYDB authorization is required in order to generate jobs.

User response:
Grant the user ID DISPLAYDB authority on the Db2 Automation Expert database.

DAJB164W	*space_type creator/database space_name partition_number* The primary space quantity has been truncated due to the MAXPRIME rules set in reallocation

Explanation:
The primary space allocation was truncated because the reallocation utility profile was configured to apply the maximum primary space allocation setting. The maximum primary allocation is specified in Setup on the Shared Profile Support setup parameters screen.

User response:
No action is required.

DAJB165W	*space_type creator/database space_name partition_number* **The primary space quantity has been truncated due to the PIECESIZE for this index**

Explanation:
The primary space allocation was truncated because the allocation quantity exceeded the PIECESIZE specified when the index was created.

User response:
No action is required.

DAJB166W	*space_type creator/database space_name partition_number* **The secondary space quantity has been truncated due to the PIECESIZE for this index**

Explanation:
The secondary space allocation was truncated because the allocation quantify exceeded the PIECESIZE specified when the index was created.

User response:
No action is required.

DAJB167I	**REORG TS Turn off tape stacking was selected with an image copy template on a tape device. STACK has been set to No.**

Explanation:
The Turn off Tape Stacking field was set to Y in the utility profile, and an image copy utility using templates is being generated for REORG TABLESPACE. STACK YES will not be included in the job; the default of STACK NO is assumed.

User response:
No action is required.

DAJB168I	**Invalidatecache Yes is required for [RUNSTATS Update None Report No	Reset Accesspath] Invalidatecache has been set to Yes.**

Explanation:
INVALIDATECACHE is required for RUNSTATS when both UPATE and REPORT are set to NO, or when RESET ACCESSPATH is specified.

User response:
No action is required. INVALIDATECACHE is set to YES.

DAJB169I	*space_type creator/database space_name partition_number* **Reorg Table Space option SORTDATA is not supported on LOB table spaces; option removed**

Explanation:
The REORG utility does not support the SORTDATA keyword for LOB table spaces. The job will be built without the SORTDATA keyword.

User response:
No action is required.

DAJB170I	*space_type creator/database space_name partition_number* **Reorg Table Space option SORTKEYS is not supported on LOB table spaces; option removed**

Explanation:
The REORG utility does not support the SORTKEYS keyword for LOB table spaces. The job will be built without the SORTKEYS keyword.

User response:
No action is required.

DAJB171I	*space_type creator/database space_name partition_number* **Reorg Table Space option NOSYSREC is not supported on LOB table spaces; option removed**

Explanation:
The REORG utility does not support the NOSYSREC keyword for LOB table spaces. The job will be built without the NOSYSREC keyword.

User response:
No action is required.

DAJB172I	*space_type creator/database space_name partition_number* **Reorg Table Space option SORTDEVT is not supported on LOB table spaces; option removed**

Explanation:
The REORG utility does not support the SORTDEVT keyword for LOB table spaces. The job will be built without the SORTDEVT keyword.

User response:
No action is required.

DAJB173I	*space_type creator/database space_name partition_number* **Reorg Table Space not supported for this space**

Explanation:

A REORG is not allowed on the listed space, most likely because the space is a system catalog space that does not allow REORGs (such as SYSUTILX). The object was skipped.

User response:
No action is required.

DAJB174I	*space_type creator/database space_name partition_number* **Online Reorg Table Space Utility not supported on DSNDB01 spaces; Share level changed to NONE**

Explanation:
An online REORG is not allowed on DSNDB01 spaces. The REORG syntax was built with SHRLEVEL NONE.

User response:
No action is required.

DAJB175I	*space_type creator/database space_name partition_number* **Inline statistics for Reorg Table Space Utility has been turned off for this DSNDB01 space**

Explanation:
Inline statistics is not allowed for DSNDB01.

User response:
No action is required.

DAJB176I	**Generate Templates........................*y/n***

Explanation:
This message is used with message DAJB027I and indicates whether TEMPLATE syntax is used when generating utilities.

User response:
No action is required.

DAJB177I	**Generate Listdefs........................*y/n***

Explanation:
This message is used with message DAJB027I and indicates whether LISTDEF syntax is used when generating utilities.

User response:
No action is required.

DAJB178I	**Preview Only.............................*y/n***

Explanation:
This message is used with message DAJB027I and indicates whether the job will be generated in PREVIEW mode.

User response:
No action is required.

DAJB179I	**Continue on Item Error................*y/n***

Explanation:
This message is used with message DAJB027I and indicates whether processing will continue if an error message with return code 8 is received (not including ABENDS).

User response:
No action is required.

DAJB180I	**Return code 0 on Warnings..............*y/n***

Explanation:
This message is used with message DAJB027I and indicates whether a return code of 0 is forced for jobs that end with return code 4.

User response:
No action is required.

DAJB181I	**Override Work File Unit.....................*unit***

Explanation:
This message is used with message DAJB027I and displays the Work File Unit setting on the Override Setup Options screen.

User response:
No action is required.

DAJB182I	**Override Sort Work File Unit...............*unit***

Explanation:
This message is used with message DAJB027I and displays the Sort Work File Unit setting on the Override Setup Options screen.

User response:
No action is required.

DAJB183I	**Override Job Track Db2 Subsystem....*ssid***

Explanation:
This message is used with message DAJB027I and displays the Job Track Db2 SubSys setting on the Override Setup Options screen.

User response:
No action is required.

DAJB184I	**Override Max Primary Space Allocation.....*allocationunit***

Explanation:
This message is used with message DAJB027I and displays the Max Prime Space Alloc setting on the Override Setup Options screen.

User response:
No action is required.

DAJB185I   **Override Utility REGION Size.............*amount* M**

Explanation:
This message is used with message DAJB027I and displays the Utility Region Size setting on the Override Setup Options screen.

User response:
No action is required.

DAJB186I   **Override Parallel MVS Catalog LOCATEs..... *number***

Explanation:
This message is used with message DAJB027I and displays the Parallel MVS Cat LOCs setting on the Override Setup Options screen.

User response:
No action is required.

DAJB187I   **Override Terminate Utility if ABEND.......*y/n***

Explanation:
This message is used with message DAJB027I and displays the Term Utility if Abend setting on the Override Setup Options screen.

User response:
No action is required.

DAJB188I   **Override Generate STEPLIB DDs.............*y/n***

Explanation:
This message is used with message DAJB027I and displays the Generate STEPLIB DDs setting on the Override Setup Options screen.

User response:
No action is required.

DAJB189I   **Override Generate Copy DSNs in GMT........*y/n***

Explanation:
This message is used with message DAJB027I and displays the Gen Copy DSNs in GMT setting on the Override Setup Options screen.

User response:
No action is required.

DAJB190I   **Override Primary Sort Work Space..........*cylinders* C**

Explanation:
This message is used with message DAJB027I and displays the Prim SortWork Space setting on the Override Setup Options screen.

User response:
No action is required.

DAJB191I   **Override Secondary Sort Work Space........*cylinders* C**

Explanation:
This message is used with message DAJB027I and displays the Prim SortWork Space setting on the Override Setup Options screen.

User response:
No action is required.

DAJB192I   **Override Number of Sort Work DDs..........*cylinders***

Explanation:
This message is used with message DAJB027I and displays the Nbr of SortWork DDs setting on the Override Setup Options screen.

User response:
No action is required.

DAJB193I   **Reorg Table Space with Unload Pause requires a Work DSN High level on Jobs Option Screen. All Data will be lost. HIGHLVL defaulted**

Explanation:
You must specify a utility work data set high level qualifier to be used for REORG work data set DDs. If you specified to build the job regardless of errors or warnings, the high level qualifiers for those data sets will default to HIGHLVL.

User response:
On the Generation Options screen for the job profile, specify a utility work data set high level qualifier and rebuild the job.

DAJB194W   **Maximum job steps exceeded. Job *jobname* has been split into *number_of_jobs* jobs**

Explanation:
The job exceeds the maximum number of job steps allowed. The listed job name has been split into the specified number of jobs.

User response:
No action is required.

DAJB195W   **The primary space quantity has been truncated due to the DSSIZE for this space**

Explanation:
The primary space reallocation quantity exceeds the maximum DSSIZE (data set size) for this object type. The primary space quantity has been truncated.

User response:
No action is required.

DAJB196W **The secondary space quantity has been truncated due to the DSSIZE for this space**

Explanation:
The secondary space reallocation quantity exceeds the maximum DSSIZE (data set size) for this object type. The secondary space quantity has been truncated.

User response:
No action is required.

DAJB197W **You have selected utility profiles with exception rules set for rejected, but no exception profiles exists**

Explanation:
The utility profiles included in the job profile have the Exception Rule field set to Rejected. However, no exception profiles were included in the job profile. Objects cannot be considered rejected unless they have been excluded through exception processing.

User response:
Change the Exception Rule field in the utility profile, or include appropriate exception profiles in the job profile.

DAJB198E *space_type creator|database space_name partition_number* **Index excluded due to exclusion of associated table space**

Explanation:
Exception processing resulted in the exclusion of the table space listed in the message. Because in the object profile the table space has the Process Dependent Indexes field set to Y, the space's associated indexes will also be excluded.

User response:
No action is required.

DAJB199W **Util Profile** *profile_creator.profile_name* **has no utilities selected - profile ignored**

Explanation:
The job profile contains a utility profile that has not specified any utilities (all utilities in the utility profile are set to 'N'). The utility profile is ignored. If the job was built in batch, a return code of 4 is produced.

User response:
Update the utility profile to include the desired utility, or remove the utility profile from the job.

DAJB200W **Optimization Hint | Query Acceleration will be ignored because Db2 Force was not selected.**

Explanation:

The Optimization Hint or Query Acceleration options are only valid if Db2 is set to Force. The option will not be included in the generated JCL.

User response:
If you want to include one of these options, set the Force option on the HPU Options panel to F(orce).

DAJB201I **Recover Index has been disabled for this table space. Process Indexes was set to No**

Explanation:
The listed index will not be recovered because the Process Indexes field was set to Y.

User response:
No action is required.

DAJB202I *space_type creator|database space_name partition_number* **Runstats UPDATE option has been changed to NONE for this LOB tablespace**

Explanation:
The listed LOB was included in a LISTDEF; the RUNSTATS option must be set to NONE.

User response:
No action is required.

DAJB203I **Rebind Dependent Plans / Packages ...**

Explanation:
This message is used with message DAJB027I and displays the Rebind Dependent Plans/Packages setting on the Generation Options screen.

User response:
No action is required.

DAJB204I *space_type creator|database space_name partition_number* **Reorg Index not supported for this space**

Explanation:
A REORG is not allowed on the listed index, most likely because it is an index for a system catalog space that does not allow a REORG INDEX. The object was skipped.

User response:
No action is required.

DAJB205I *space_type creator|database space_name partition_number* **Runstats not supported for this object**

Explanation:
RUNSTATS cannot be executed on this object. The object will be skipped.

User response:
No action is required.

DAJB207W   *space_type creator|database space_name partition_number* **Space with page size > 4K excluded from concurrent image copy with SHARELEVEL CHANGE**

Explanation:
Concurrent COPY with SHRLEVEL CHANGE is not valid for objects with a page size greater than 4 KB. These objects will be excluded from the generated JCL.

User response:
No action is required.

DAJB208E   **Image copy FILTERDDN option must be used with templates only**

Explanation:
A filter DD name was specified in the COPY utility profile, but the job profile did not specify to use templates. It is required to set the Generate Templates option in Y in order to use the filter DD name.

User response:
Update the job profile to set the Generate Templates job option to Y.

DAJB210I   *space_type creator|database space_name partition_number utility* **Utility has been turned off for this object**

Explanation:
The utility listed in the message has been turned off for the object because the utility does not apply to this type of object.

User response:
No action is required.

DAJB211I   **All ACCEPTED/REJECTED Utilities have been turned off for this object**

Explanation:
This message indicates that an object does not have any utilities to be run against it and therefore will not be included in the JCL. This condition might occur when an object is initially included but later is excluded.

User response:
No action is required.

DAJB213I   **Severity of DAJB524 message has been overridden to Info | Warning**

Explanation:
The severity of the DAJB524E message was manually overridden to either an informational message or a warning message (as stated in the message text).

User response:
No action is required.

DAJB214I   **Maintenance Window Options: Action Type.............................***action_type* **| Selected Maintenance Window ....***maintenance_window*

Explanation:
This message displays information about the action type and the name of the specified maintenance window.

User response:
No action is required.

DAJB215W   **IDAA exceptions were specified but there were no IDAA appliances found on this SSID. IDAA exceptions are disabled.**

Explanation:
IDAA exception conditions were selected. However, no IDAA accelerators were found attached to the Db2 subsystem. Therefore, the IDAA exception conditions were disabled.

User response:
Remove the IDAA exception conditions from the exception profile.

DAJB216W   **IDAA exceptions were specified but there were no IDAA-enabled tables found on this SSID. IDAA exceptions are disabled.**

Explanation:
IDAA exception conditions were specified. However, no tables in any table spaces in the object profiles were found on any IDAA accelerators attached to the Db2 subsystem. Therefore, the IDAA exception conditions were disabled.

User response:
Remove the IDAA exception conditions from the exception profile.

DAJB217W   **IDAA exceptions were specified but there are no IDAA utilities in this job group. IDAA exceptions are disabled.**

Explanation:
IDAA exception conditions were selected. However, no load accelerator tables utility was found in the current job group in the job profile. Therefore, the IDAA exception conditions were disabled for the current job group.

User response:

Either remove the IDAA exception conditions from the exception profile or add a load accelerator tables utility to the job group.

DAJB218W	IDAA table may not be accelerated. The database and accelerator tables are out of sync. *accelerator-name.schema-name.table-name integrityStatus. loadStatus. accelerationStatus.*

Explanation:
The IDAA NOT_OPERATIONAL exception condition was selected. The indicated table has an IDAA integrity status, load status, and acceleration status that is listed in the message.

User response:
Refer to the IDAA documentation for specifics about the statuses of an IDAA-enabled table. In most cases, message DAJB219I is also displayed and includes additional information regarding the table.

DAJB219I	An IDAA stored procedure returned the following *informational	warning	error* message and reason-code *reason-code* for accelerator *accelerator-name*: *message-text; message-description; action-text*

Explanation:
An IDAA stored procedure returned an SQLCODE = 466, indicating that a result set was returned. However, an informational, warning, or error message was also issued. *Message-text* and *message-description* indicate the situation that the stored procedure detected. Refer to the IDAA documentation for more information about the *reason-code*.

User response:
Take the specified action as described in *action-text* to resolve the issue.

DAJB221I	Explode IXs with DEFINE NO TSs............Y|N

Explanation:
The Setup or Job Override value being used for the current job profile is displayed.

User response:
No action is required.

DAJB222I	Altered Object Adjustment.................A|P

Explanation:
The Setup or Job Override value being used for the current job profile is displayed.

User response:
No action is required.

DAJB225W	Refresh of the real time statistics failed. Processing continues. Rerun job with "DEBUG_MODE ON" for diagnostic information.

Explanation:
Externalization of the real-time statisttics to the catalog tables failed due to unavailable resources.

User response:
Rerun the job in DEBUG mode to view more detailed diagnostic information.

DAJB300I	*space_type creator|database space_name partition_number* Logging for Reorg Tablespace Utility has been set to LOG NO for this LOB tablespace

Explanation:
LOG YES is not allowed for LOB table spaces when the REORG type is set to SHRLEVEL REFERENCE or SHRLEVEL CHANGE. The LOG keyword has been set to NO.

User response:
No action is required.

DAJB301W	*space_type creator|database space_name partition_number* Reorg SHARELEVE(CHANGE) not supported on not logged spaces

Explanation:
The listed space was created with NOT LOGGED attribute. An online REORG cannot be performed on this space.

User response:
No action is required.

DAJB302W	*space_type creator|database space_name partition_number* Copy SHARELEVEL(CHANGE) not supported on not logged spaces

Explanation:
The listed space was created with the NOT LOGGED attribute. An online COPY cannot be performed on this space.

User response:
No action is required.

DAJB303W	*space_type creator|database space_name partition_number* Recover LOGONLY not supported on not logged spaces

Explanation:
The listed space was created with the NOT LOGGED attribute. A RECOVER LOGONLY cannot be performed on this space.

User response:
No action is required.

DAJB304W	*space_type creator|database space_name partition_number* **Quiesce WRITE(NO) not supported on not logged spaces**

Explanation:
The listed space was created with the NOT LOGGED attribute. An QUIESCE WRITE(NO) cannot be performed on this space.

User response:
No action is required.

DAJB305E	*space_type creator|database space_name partition_number* **The state of the object at selected point in time was not logged**

Explanation:
At the specified recovery point, the listed space contained the NOT LOGGED attribute. This space cannot be recovered to a point in time without log records.

User response:
Select a different recover point for the space.

DAJB306I	**Not Logged objects may need to be recovered to establish a point of consistency**

Explanation:
This informational message states that if there were any spaces with the NOT LOGGED attribute when the system backup was performed, these spaces will be in RECOVER PENDING after the system restore is completed.

User response:
No action is required.

DAJB307I	**The FASTSWITCH option is not supported on Online Reorg**

Explanation:
The FASTSWITCH keyword is not valid with online REORG for Db2 Version 9.1 or later. This keyword will be ignored.

User response:
No action is required.

DAJB309I	**All associated Runstats statistics will be collected regardless of the specified exception conditions**

Explanation:
In an exception profile, the Collect All Statistics field on the Runstats Options screen was set to Y. Therefore, RUNSTATS keywords will be generated to collect all associated statistics for an object, regardless of the exception conditions that are specified in the exception profiles. This allows the Db2 catalog and/or the Db2 Automation Expert repository to have current table space and index statistics for all objects in the job.

User response:
No action is required.

DAJB310W	*space_type creator|database space_name partition_number* **Clone objects no longer exist**

Explanation:
The object profile specified to process clone objects for the object listed in the message. However, a clone object no longer exists, therefore clones will not be processed for this object.

User response:
No action is required.

DAJB3111W	**Rebalance has been turned off for this Partition by Growth Tablespace**

Explanation:
REBALANCE is not allowed for partition-by-growth table spaces.

User response:
No action is required.

DAJB312W	**Clone object detected. Care must be taken executing COPY, REORG, or RECOVER utilities due to exchanging base/clone objects**

Explanation:
A clone object was detected. Clone table support in Db2 Version 9.1 added the ability to exchange the base table with the cloned table. It is therefore possible that the utility may be performed on the wrong object. In addition, if a table is cloned and exchanged after the job is built, the job may be executed on the wrong object without warning.

User response:
Ensure that the correct object (clone or base) is being included in the job.

DAJB313I	*space_type creator|database space_name partition_number* **FASTSWITCH option will be ignored for clone indexes**

Explanation:
The FASTSWITCH option of the REORG utility is not allowed for any object involved in cloning. The FASTSWITCH keyword will be ignored.

User response:
No action is required.

DAJB314I	*space_type creator|database space_name partition_number*

RUNSTATS will be ignored for clone objects

Explanation:
RUNSTATS cannot be executed on cloned objects. The listed object will not be processed.

User response:
No action is required.

DAJB315W	The Force option should be used with caution. The oldest version of the database/log will be overwritten before saving to tape

Explanation:
The FORCE option was specified for BACKUP SYSTEM utility. This message wars that the oldest fast replication copy of the database copy pool and/or the log copy pool might be overwritten, even if the dump to tape of the copy pools' DFSMShsm dump classes have been initiated but are only partially completed.

User response:
No action is required.

DAJB316W	*space_type creator|database space_name partition_number* **REORG SHRLEVEL(CHANGE) not supported on LOB Table spaces. SHRLEVEL will be set to NONE	REORG SHRLEVEL(CHANGE) not supported on LOB TS with base TS defined as LOG NO. SHRLEVEL set to REFERENCE**

Explanation
For Db2 V9 and earlier, SHRLEVEL CHANGE is not valid for a REORG of a LOB table space. SHRLEVEL has been changed to NONE for this LOB object.

For Db2 V10 and later, SHRLEVEL CHANGE is not valid when the base table space is NOT LOGGED. SHRLEVEL has been changed to REFERENCE for this LOB object.

User response:
No action is required.

DAJB317W	The REALTIME statistics tables were not found. No REALTIME exception conditions will be processed

Explanation:
The Db2 subsystem on which the job is being generated does not contain the required real-time statistics tables. These tables are user-defined on Db2 subsystems prior to Db2 Version 9.1. Db2 Automation Expert cannot process conditions related to real-time statistics.

User response:
No action is required.

DAJB318W	*space_type creator|database space_name partition_number* **Rebalance has been turned off for this XML tablespace**

Explanation:
REBALANCE is not allowed for XML table spaces. The REBALANCE keyword has not been included.

User response:
No action is required.

DAJB319W	*space_type creator|database space_name partition_number* **DISCARD has been set to NO because it is not allowed with an XML table space**

Explanation:
The DISCARD option is not allowed for XML table spaces. The DISCARD keyword has not been included.

User response:
No action is required.

DAJB320W	UNLOAD EXTERNAL not allowed with XML table space. Defaulting to UNLOAD PAUSE

Explanation:
The UNLOAD option EXTERNAL is not a valid option with a REORG of an XML table space. The UNLOAD option will be set to PAUSE.

User response:
No action is required.

DAJB323E	Exception Profile *profile_creator.profile_name* is corrupted and must be recreated

Explanation:
The exception profile listed in the message has been damaged or corrupted and cannot be used.

User response:
Recreate the exception profile.

DAJB324W	Quiesce Tablespaceset is no supported with LISTDEFs. LISTDEF turned off for this utility

Explanation:
LISDEF is not valid with QUIESCE TABLESPACESET. LISTDEF has been turned off for this utility.

User response:
No action is required.

DAJB325W	Modify SYSIBM STATISTICS not supported for cloned object. Option turned off for this object

Explanation:

The MODIFY STATISTICS utility does not delete statistics history records for clone tables because statistics are not collected for these tables. The option has been turned off for the cloned object.

User response:
No action is required.

DAJB326W	**Modify RUNSTATS REPOSITORY TABLE not supported for cloned objects. Option turned off for this object**

Explanation:
The MODIFY utility does not delete statistics records from the Db2 Automation Expert RUNSTATS repository tables for clone tables because statistics are not collected for clone tables. The option has been turned off for the cloned object.

User response:
No action is required.

DAJB327W	**REORG DISCARD was selected without including a Discard dataset**

Explanation:
A REORG was specified with the DISCARD option, but the utility profile did not specify a discard data set. The discard records will not be saved.

User response:
No action is required.

DAJB328W	**Reallocate turned off for object related to a cloned table**

Explanation:
The object listed is a clone of an object, has been cloned by another object, or is otherwise related to a clone. Cloned objects cannot be ALTERed. The object is skipped. This message will be generated for base objects with clones even if the Process Clones option is turned off.

User response:
No action is required.

DAJB330W	*space_type creator|database space_name partition_number* **Rebalance has been turned off for this non-partitioned table space**

Explanation:
The REBALANCE option is not valid for non-partitioned table spaces. The REBALANCE keyword has not been included.

User response:
No action is required.

DAJB331W	*space_type creator|database space_name partition_number*

Rebalance has been turned off for this non-partitioned table space

Explanation:
The REBALANCE option is not valid for non-partitioned table spaces. The REBALANCED keyword has not been included.

User response:
No action is required.

DAJB332E	**LISTDEFs must be specified when PROCESS RI=R is encountered**

Explanation:
The object profile specified to process RI objects at run time, but LISTDEFs were not specified in the job profile. LISTDEF must be specified in the job options to use this feature.

User response:
Either change the job profile and include LISTDEFs, or change the object profile to specify a different RI object processing option.

DAJB338I	**Preview Exception Report............... *y	n***

Explanation:
This message is used with message DAJB027I and displays the Preview Exception Report value, as set on the job Generation Options window. If set to Y, a batch job will be built to generate a triggered objects report; no utility JCL will be generated.

User response:
No action is required.

DAJB339E	**You specified Preview Exception Report, but there are no exception profiles in the job profile**

Explanation:
The Preview Exception Report value was set to Y on the job Generation Options window, but there is no exceptions profile in the job profile. At least one exceptions profile must be in the job profile to preview an exception report.

User response:
Add an exceptions profile to the job profile and rebuild the job.

DAJB340I	**No JCL was generated since you specified Preview Exception Report**

Explanation:
The Preview Exception Report value was set to Y on the job Generation Options window. This setting produces a report of objects that would be triggered by exception processing, without generating JCL.

User response:
No action is required.

DAJB342I   **Processing jobs profile group**
profile_group_name

Explanation:
This informational message displays the name of the
job profile group currently being processed.

User response:
No action is required.

DAJB343E   **Invalid group. There must be at
least one object and one utility
profile in the group when the
Preview Exception Report Jobs
Generation option is No. Build
terminated**

Explanation:
The Job Generation option **Preview Exception Report**
is set to No. When this option is specified, a group in
the job profile must contain at least one object profile
and one utility profile. The build terminates.

User response:
Either delete the group from the job profile or add the
required profiles to the job group.

DAJB344E   **Invalid group. There must be
at least one object profile and
one exception profile in the
group when the Preview Exception
Report Jobs Generation Option
is Yes or the Maintenance
Window option is selected. Build
terminated**

Explanation:
The Job Generation option **Preview Exception Report**
is set to Yes, or this profile will be used in a
maintenance window build. When these options are
specified, a group in the job profile must contain at
least one object profile and one exception profile. The
build terminates.

User response:
Either delete the group from the job profile or add the
required profiles to the job group.

DAJB345E   **Invalid exception rule. The
exception rule profile for**
profile_creator.profile_name **does
not exist in group** *job_group_name*.
Build terminated

Explanation:
The exception rule for the profile and the job group
listed in the message does not exist. The build
terminates.

User response:
Edit the job profile and define the exception rules for
the job group.

DAJB347I   **Exception rule in utility
profile** *profile_creator.profile_name*
overridden to *Accepted | Rejected |
Both*

Explanation:
The exception rule as specified in the utility profile was
overridden by the exception rules specified in the job
group.

User response:
No action is required.

DAJB348W   **Conditional exception profiles
override the Evaluate Multiple
Exception Profiles value to One at
a time**

Explanation:
The **Evaluate Multiple Exception Profiles** field in the
job generation options was set to A for all. However,
exception rules are specified in a job group in the
job profile, which overrides the Evaluate Multiple
Exception Profiles setting, so it was set to O for One
at a time.

User response:
No action is required.

DAJB349W   **Conditional exception profiles
override the Reallocation Utility
"Use ONLY Exception Profile
Criteria" to Yes**

Explanation:
In the reallocation utility profile, the **Use ONLY
Exception Profile Criteria** is set to No. However,
exception rules are specified in a job group in the
job profile, which overrides the **Use ONLY Exception
Profile Criteria** setting, so it was set to Yes.

User response:
No action is required.

DAJB350I   *space_type creator|database
space_name partition_number*
**Object included via Referential
Integrity explode**

Explanation:
The object listed in the message has been included in
the job due to a referential integrity relationship.

User response:
No action is required.

DAJB351I   **Profile** *profile_name profile_creator*
**Registration step has been turned
off for this job**

Explanation:
The jobs profile listed in the message has the Include
Registration Step option in the Job Generation options
set to N. The job will not contain a registration step.

User response:
No action is required.

DAJB352I   **Override Db2 Buffer Size** *buffer_size* **M**

Explanation:
This message is used with message DAJB027I and shows the size of the Db2 buffer size override as set in the Job Generation options.

User response:
No action is required.

DAJB353E   **Generation user exit** *exit_name* **not found. Build processing aborted**

Explanation:
The pre- or post-generation user exit specified in the job profile was not found.

User response:
Check that the user exit has been placed in the correct library.

DAJB354W   **Generation user exit ended with return code 04. Build processing continues**

Explanation:
The pre- or post-generation user exit ended with a RC of 4. This RC means that an object was triggered. Build processing continues.

User response:
No action is required.

DAJB355E   **Generation user exit ended with return code 08. Build processing aborted**

Explanation:
The pre-or post-generation user exit ended with a return code of 8. This RC indicates a severe error. Build processing is aborted.

User response:
No action is required.

DAJB356I   **Override Secondary Allocation Percent ...***percent***%**

Explanation:
This message is used with message DAJB027I and lists the override for the secondary allocation percent.

User response:
No action is required.

DAJB357I   **Pre-Generation user exit has altered the build input**

Explanation:
This informational message states that a user exit has been called that altered the build input.

User response:

No action is required.

DAJB358I   **Post-Generation user exit has altered build output**

Explanation:
This informational message states that a user exit has been called after JCL generation that altered the build output.

User response:
No action is required.

DAJB359E   **Pre-Generation user exit has corrupted data**

Explanation:
A user exit was specified in the job and was called during processing. When the data was returned from processing by the user exit, Db2 Automation Expert found that the data has been corrupted. The build process is canceled.

User response:
Check the contents of the user exit. One or more elements of the pre-generation sort key (step sequence, job sequence and/or object sequence) may have been incorrectly specified. Correct the sort key and resubmit the job.

DAJB360E   **AGE, DATE, JOBS_PROFILE, and JOBS_CREATOR are blank; one of these must specify a valid value**

Explanation:
You must specify either the Date, Age, Jobs Profile Like, or Jobs Creator Like fields for the modify utility.

User response:
Edit the utility profile and specify a value in one of the fields.

DAJB361I   **Jobs Reporting Facility Cleanup is being performed by JOBS_CREATOR** *creator_name* **and JOBS_PROFILE** *profile_name*

Explanation:
This message lists the name of the job profile and job profile creator that are being used to clean up the Jobs Reporting Facility repository.

User response:
No action is required.

DAJB363W   *space_type creator|database space_name partition_number* **LISTDEFs are not supported for PAGE recovery. LISTDEF turned off for Recover in Step** *stepname*

Explanation:
LISTDEF is not valid with RECOVER to a page. LISTDEF has been turned off for this utility.

User response:
No action is required.

DAJB364E	No utility profiles were found in the jobs profile or no utility found in any included utility profile; build process terminated

Explanation:
The job build was terminated because there were no utility profiles contained in the job profile, or because none of the utility profiles included in the job profile specified utilities.

User response:
Ensure that one or more utility profiles are included in the job profile. Check the included utility profiles to ensure that one or more utilities is specified.

DAJB365I	Modify utility Exception Rule set to "B"oth. Job Profile and/or Creator Like is specified. JCL is always generated in this case

Explanation:
The exception rule for this utility has been set to B for both, since Jobs Profile Like and/or Jobs Creator Like criteria was entered. JCL will always be generated when Jobs Profile Like and/or Jobs Creator Like criteria are specified.

User response:
No action is required.

DAJB366W	Group Parts By for *utility* detected. However, PARALLEL NO was specified or ZPARM REORG_LIST_PROCESSING is SERIAL | Group Parts By for *utility* detected. However, LISTPARTS 1 was specified | Group Parts By for *utility* detected. However, LISTPARTS is blank and ZPARM REORG_LIST_PROCESSING is SERIAL

Explanation
Group Partitions By job or step was specified in a utility profile, but one of the following is true:

- The functionality will be limited due to the maximum number of list partitions that were specified.

- Group Partitions by has been turned off for one of the following reasons. The reason is displayed in the message text.

  – Db2 V8 | V9 LISTDEF does not support more than one PARTLEVEL number

  – PARALLEL NO was specified or ZPARM REORG_LIST_PROCESSING is SERIAL

  – LISTPARTS 1 was specified

  – LISTPARTS is blank and ZPARM REORG_LIST_PROCESSING is SERIAL

The following text may appear in conjunction with the message text to provide additional information: *parameter* `overrides Grouping of partitioned objects.` where *parameter* can be LISTDEF, LISTPARTS, or PARALLEL NO. If LISTPARTS or PARALLEL NO, grouping of objects will be performed, but Db2 will process those objects serially.

User response:
No action is required. Processing continues; however, Group By Partitions may be disabled or limited depending on the conditions.

DAJB367E	Insufficient storage for Db2 work area buffer

Explanation:
Storage for a Db2 work area buffer could not be obtained.

User response:
Increase your TSO region size and rerun the application.

DAJB368W	*space_type creator|database space_name partition_number* Sample will not be included for this LOB tablespace

Explanation:
The Sample option is not allowed for LOB table spaces. The keyword will not be included.

User response:
No action is required.

DAJB369W	*space_type creator|database space_name partition_number* Table All has been set to No for this LOB tablespace

Explanation:
The Table All option is not allowed for LOB table spaces. The keyword will not be included.

User response:
No action is required.

DAJB370E	Current User ID does not have sufficient authority to perform a -DISPLAY command

Explanation:
Your authorization ID has not been granted privileges to issue the DISPLAY GROUP command.

User response:
Check with your Db2 administrator to verify or obtain the proper authority.

DAJB372W	A system level backup was not found for this object

Explanation:
No SLB was found was found that contains this object. The object is skipped.

User response:
Ensure the object name was properly specified and an SLB exists that contains the object.

DAJB373W	**Object was not included in the selected system level backup**

Explanation:
This object was not included in the selected system level backup. The object is skipped.

User response:
Ensure that the object name was properly specified and the correct SLB was selected.

DAJB374W	**Recovery Expert Image Copy will be bypassed for index defined with COPY NO**

Explanation:
The index was defined with COPY NO. Therefore, no image copy can be extracted from SLB. The index is skipped.

User response:
No action is required.

DAJB375I	**Maximum Number of Objects per Step........ *nn***

Explanation:
This message is used with message DAJB027I and displays the Maximum nbr of objects per step value, as set on the Job Breakdown Options window.

User response:
No action is required.

DAJB376I	**Pad Jobs if Max not Exceeded..............*y/n***

Explanation:
This message is used with message DAJB027I and displays the Pad Jobs if max not exceeded value, as set on the Job Breakdown Options window.

User response:
No action is required.

DAJB377I	**Partitioned Objects will be grouped together in the same Job/Step. This may override other job breakdown values.**

Explanation:
The Group by Partitions field was set for the utility profile to J for job or S for step. This setting determines how partitions of a partitioned object are grouped in the same job. This value may override whatever job breakdown options are set.

User response:

No action is required.

DAJB378E	**Unload Pause is not compatible with the Group Partitions value. Defaulting to Continue.**

Explanation:
You indicated that partitions are to be grouped together by job or step. REORG with UNLOAD PAUSE causes additional job steps to be generated. Therefore, the REORG option has been changed to UNLOAD CONTINUE.

User response:
If you want REORG with UNLOAD PAUSE, you must change the Group by Partitions value to N.

DAJB380E	**System Level Backup specified no longer exists**

Explanation:
The SLB selected no longer exists. The object is skipped.

User response:
Select a different SLB.

DAJB381W	**Recovery Expert image copy cannot be performed at the PART ALL level. Partitions processed individually**

Explanation:
SLBs taken with Db2 Recovery Expert do not allow image copies to be made at the all partition level. Objects in Db2 Automation Expert profiles that specify PART ALL will be exploded into individual partitions and the copies taken at the individual partition level.

User response:
No action is required.

DAJB385W	*space_type creator|database space_name partition_number* **Underlying VSAM file not found; object included for Recover only**

Explanation:
During a RECOVER utility JCL build, an underlying VSAM file was not found. However, the RECOVER utility does not require a STOGROUP-managed data set to be present before execution, because RECOVER recreates the data set from an image copy. Note that this applies to STOGROUP-managed data sets only; user-managed data sets must be manually created before running the recovery.

User response:
The object is included for RECOVER processing; for other utilities, either create the underlying file or remove the object from the object profile.

DAJB386I	*dbname|tsname* **Indexes could not be obtained for Alt DB.TS. Db2**

**REBUILD INDEX job will build with
source system indexes.**

Explanation:
Index objects could not be found for
database.tablespace specified in the **Alt Output
DBNAME.TSNAME** field on the DAJ$OXLT panel. Db2
REBUILD INDEX job will generated with index names
from original database.tablespace.

User response:
User may want to correct the **Alt Output
DBNAME.TSNAME** field on the DAJ$OXLT panel and
rebuild a job or to change index object names
manually before submitting Db2 REBUILD INDEX job.

DAJB386W	*space_type creator|database space_name partition_number* **TableSample will not be included for this LOB table space**

Explanation:
TableSample was specified for the RUNSTATS utility,
but TableSample is not valid for LOB table spaces. The
keyword will not be included.

User response:
No action is required.

DAJB387W	*space_type creator|database space_name partition_number* **TableSample will not be included for this table space since it contains more than 1 table**

Explanation:
TableSample was specified for the RUNSTATS utility,
but TableSample is not valid for table spaces that
contain than one table. The keyword will not be
included.

User response:
No action is required.

DAJB403E	**Invalid *exception | utility* profile *profile_creator.profile_name*. The profile will not be executed. No other profile points to this profile. Build terminated**

Explanation:
The profile that is listed in the message is not valid.
It might have been deleted since the job profile was
built. The build process was terminated.

User response:
Re-create the missing job profile, or modify the job
profile and include a valid profile and rebuild the job.

DAJB404E	**Invalid exception profile *profile_creator.profile_name*. There are no exception rules specified. However, there are conditional**

**profiles in the jobs group. Build
terminated**

Explanation:
The exception profile that is listed in the message is
not valid. No exception rules are defined in the profile.
The build process was terminated.

User response:
Update the exception profile and specify exception
rules for accepted and rejected objects.

DAJB405E	**Invalid exception profile *profile_creator.profile_name*. Both exception rules point to the same profile. Build terminated**

Explanation:
The exception profile that is listed in the message is
not valid. The exception rules that are defined in the
profile both point to the same utility profile. The build
process was terminated.

User response:
Update the exception profile to specify a different
utility profile for accepted and rejected objects.

DAJB407I	**Reallocation will use Db2 real-time statistics in addition to MVS catalog statistics.**

Explanation:
The reallocation utility settings in the utility profile
specified that when calculating reallocation criteria,
Db2 real-time statistics are to be used in addition to
MVS catalog statistics.

User response:
No action is required.

DAJB408W	*space_type creator|database space_name partition_number* **Db2 real-time statistics are unavailable for this object.**

Explanation:
The reallocation utility settings in the utility profile
specified that when calculating reallocation criteria,
Db2 real-time statistics are to be used in addition
to MVS catalog statistics. However, Db2 real-time
statistics are not available for the object that is listed
in the message.

User response:
No action is required; MVS catalog statistics will be
used for reallocation calculations.

DAJB409W	**TS *database space_name partition_number* DSSIZE and/or NPAGES is 0. Db2 Real Time Statistic SPACEUSED_PCT is set to 0.**

Explanation:

The exception condition SPACEUSED_PCT was specified, but either DSSIZE or NPAGES was found to be less than or equal to 0; therefore, SPACEUSED_PCT is set to 0.

User response:
No response is required.

| **DAJB410I** | **Include Job Registration Step.............*y* | *n*** |

Explanation:
This message is used with message DAJB027I and displays whether the job registration step is to be included in the job.

User response:
No action is required.

| **DAJB411W** | ***space_type creator|database space_name partition_number* DATASIZE for a LOB is 0. Db2 Real Time Statistic SPACE_DATA_RATIO is set to 0.** |

Explanation:
The total number of bytes occupied by the LOB (DATASIZE) is 0. SPACE_DATA_RATIO = [(SPACE * 1024) / DATASIZE]; therefore, the result is 0.

User response:
No action is required.

| **DAJB412W** | **IX *creator indexspace_name partition_number* NLEAF and/or NPAGES is 0. Db2 real-time statistic EMPTY_LEAF_PCT is set to 0.** |

Explanation:
INDEXSPACESTATS.EMPTY_LEAF_PCT is the ratio of pseudo-empty pages to the total number of leaf pages. This ratio is calculated as the number of pseudo-empty leaf pages that were created since the last CREATE, REORG, REBUILD INDEX, or LOAD REPLACE, divided by the total number of leaf pages in the index space or partition, expressed as a percentage (NPAGES*100/NLEAF). You can use this statistic for recommending a REORG on an index space. However, in this case, either NPAGES or NLEAF is 0. Therefore, EMPTY_LEAF_PCT is set to 0.

User response:
No action is required.

| **DAJB413W** | **Exception profile *profile_creator.profile_name* is corrupted. The corrupted exception condition was removed from the profile. Exception condition: *exception_condition* [An exception value is missing. | There** |

are multiple And/Or conditions for repeated lines.]

Explanation:
The exception profile that is listed in the message is damaged. An exception condition value was missing, or multiple And/Or conditions were detected for repeated lines. The exception condition was removed from the profile. Processing continues.

User response:
Update the exception profile and re-enter the exception condition, then rebuild the job.

| **DAJB414I** | **Wildcarded objects selected by partition cannot include RI via LISTDEFS. RI related objects will be exploded during build.** |

Explanation:
The R option for Process RI, which specifies that RI is expanded at utility run time, was selected. However, objects in the object profile are wildcarded objects that are processed by partition. Those objects cannot be expanded at utility run time because the LISTDEF RI and the PARTLEVEL keywords are mutually exclusive.

User response:
No action is required. Affected wildcard objects will be exploded at build time.

| **DAJB500I** | ***space_type creator|database space_name partition_number* AUX has been set to YES for this Partition by Growth Tablespace** |

Explanation:
The object listed in the message is a partitioned-by-growth table space, which requires AUX YES. AUX has been changed to YES.

User response:
No action is required.

| **DAJB502I** | **LISTDEFs were overridden because the DISCARD FROM clause was defined for REORG TS.** |

Explanation:
LISTDEFs are not supported when discarding rows from a table. When this combination occurs, the job fails with return code 8 and the following message is displayed: DSNU070I — KEYWORD OR OPERAND 'DISCARD FROM TABLE' IS INVALID WITH 'LIST'.

User response:
No action is required. LISTDEFs will be turned off.

| **DAJB504I** | ***space_type creator|database space_name partition_number* LISTDEFs were overridden since** |

RUNSTATS INDEX(indexname) was requested.

Explanation:
Object-specific utilities were specified for the object listed in the message. LISTDEFs will be turned off for this object.

User response:
No action is required.

DAJB505I   *space_type creator|database space_name partition_number* **LISTDEFs were overridden since RUNSTATS TABLE(tablename) was requested.**

Explanation:
Object-specific utilities were specified for the object listed in the message. LISTDEFs will be turned off for this object.

User response:
No action is required.

DAJB506I   *space_type creator|database space_name partition_number* **RUNSTATS TABLE(ALL) was overridden since object-specific table stats were requested.**

Explanation:
Object-specific utilities were specified for the object listed in the message. Therefore, RUNSTATS TABLE ALL was turned off.

User response:
No action is required.

DAJB507I   *space_type creator|database space_name partition_number* **RUNSTATS INDEX(ALL) was overridden since object-specific index stats were requested.**

Explanation:
Object-specific utilities were specified for the object listed in the message. Therefore, RUNSTATS INDEX ALL was turned off.

User response:
No action is required.

DAJB508I   *space_type creator|database space_name partition_number* **LISTDEFs were overridden since RUNSTATS NUMCOLS was requested.**

Explanation:
Object-specific utilities were specified for the object listed in the message. Therefore, LISTDEFS will be turned off for this object.

User response:

No action is required.

DAJB509W   *space_type creator|database space_name partition_number* **REORG SHRLEVEL(CHANGE) mapping table will be ignored for this LOB table space**

Explanation:
The object listed in the message is a LOB table space and REORG SHRLEVEL (CHANGE) was specified. A mapping table is not required for a REORG of a LOB space. The mapping table definitions will be ignored.

User response:
No action is required.

DAJB510I   *space_type creator|database space_name partition_number* **AUX has been set to YES for this Partitioned Base TS**

Explanation:
The object listed in the message is a partitioned base table space, which requires AUX YES. AUX has been changed to YES.

User response:
No action is required.

DAJB511W   *space_type creator|database space_name partition_number* **REORG SHRLEVEL(CHANGE) not supported on BASE TS defined as LOG NO. SHRLEVEL reset to NONE**

Explanation:
The object listed in the message is a LOB table space and REORG SHRLEVEL (CHANGE) was specified. The base table space was defined as NOT LOGGED, therefore, SHRLEVEL CHANGE is not allowed. SHRLEVEL has been set to NONE.

User response:
No action is required.

DAJB513W   *space_type creator|database space_name partition_number* **AUX has been set to NO because DB name or Space name was not included in the template**

Explanation:
AUX YES was specified and inline image copies will be taken on the base table space and LOB table spaces being reorganized. The COPYDDN and RECOVERYDDN keywords must specify a TEMPLATE name with &DB. or &SN for the inline copies. AUX has been changed to NO.

User response:
Correct the template and resubmit.

DAJB513I **Runstats turned on for this NPI since REORG is being performed on the related partitioned table space.**

Explanation:
RUNSTATS will be generated for the nonpartitioned secondary index because a REORG is being performed on the related partitioned table space.

User response:
No action is required.

DAJB514I *space_type creator|database space_name partition_number* **RUNSTATS SAMPLE is not valid with Set, Update, or Delete Profile. Sample ignored**

Explanation:
In the utility profile, RUNSTATS SAMPLE was specified, as well as USE PROFILE, DELETE PROFILE, or SET PROFILE. This combination is invalid. The SAMPLE keyword is ignored.

User response:
No action is required.

DAJB515I *space_type creator|database space_name partition_number* **RUNSTATS USE, DELETE, SET FROM EXISTING STATS profile specified. Column and Colgroup specs ignored**

Explanation:
In the object profile, column or column group statistics were specified; in addition, in the utility profile, RUNSTATS USE PROFILE, DELETE PROFILE, or SET PROFILE FROM EXISTING STATS was specified. This combination is invalid. The column or column group statistics specifications are ignored.

User response:
No action is required.

DAJB516I *space_type creator|database space_name partition_number* **RUNSTATS USE, DELETE, SET FROM EXISTING STATS profile specified. Index specs ignored**

Explanation:
In the utility profile, RUNSTATS USE PROFILE, DELETE PROFILE, or SET PROFILE FROM EXISTING STATS was specified with INDEX ALL. This combination is invalid. INDEX ALL is ignored.

User response:
No action is required.

DAJB517E **FlashCopy requires templates option**

Explanation:
A FlashCopy was requested but the job profile did not specify the templates option. Templates are required for FlashCopy copies.

User response:
Edit the job profile to specify job templates and resubmit the job.

DAJB518I *space_type creator|database space_name partition_number* **FlashCopy will be ignored. Index has COPY=NO**

Explanation:
A FlashCopy was requested for the object listed in the message, but the associated index was defined as COPY NO. The object will be skipped.

User response:
No action is required.

DAJB519I *space_type creator|database space_name partition_number* **DISCARD has been set to NO because it is not allowed with versioned tables**

Explanation:
The object listed in the message is a temporal table space. The DISCARD option cannot be specified for temporal table spaces. The DISCARD option will be ignored.

User response:
No action is required.

DAJB521E **FlashCopy incompatible with CONCURRENT keyword**

Explanation:
A FlashCopy was requested, but the CONCURRENT keyword was also specified in the utility profile. This combination is not allowed.

User response:
Either change the Concurrent field to N, or specify a copy type other than a FlashCopy.

DAJB520W *space_type creator|database space_name partition_number* **REORG SHRLEVEL(NONE) not supported on LOB Table spaces. SHRLEVEL will be set to REFERENCE**

Explanation:
The object listed in the message is a LOB table space and REORG SHRLEVEL (NONE) was specified. This combination is not supported. SHRLEVEL has been set to REFERENCE.

User response:
No action is required.

DAJB523W   *space_type creator|database*
space_name partition_number
[LOB validation failed. Missing
LOB TS(s) for this BASE TS] |
[LOB validation failed for this TS.
Incomplete LOB related TS set.]
The exclusion of this object could
possibly be the result of exception
processing.

Explanation:
Dependency checking failed for the object that is listed
in the message. Either the dependent table space or
the base table space for the listed LOB was not found,
or one of those objects was excluded via exception
processing.

User response:
Ensure that when one member of a LOB referentially
related table space set is present in the object profile,
all members in that set are present. If the message
indicates that the object may have been excluded
via exception processing, examine the object and
exception profiles and adjust them as required.

DAJB524E   *space_type creator|database*
space_name partition_number
[LOB validation failed. Missing
LOB TS(s) for this BASE TS] |
[LOB validation failed for this TS.
Incomplete LOB related TS set.]
Object excluded for *utility_name*
utility. The exclusion of this object
could possibly be the result of
exception processing.

Explanation:
Dependency checking failed for the object that is listed
in the message. Either the dependent table space or
the base table space for the listed LOB was not found,
or one of those objects was excluded via exception
processing. The object is excluded from processing.

User response:
Ensure that if one member of a LOB referentially
related table space set is present in the object profile,
all members in that set are present. If the message
indicates that the object may have been excluded
via exception processing, examine the object and
exception profiles and adjust them as required.

DAJB525W   *space_type creator|database*
space_name partition_number
Unload *external | only* **not allowed**
with Inline LOB. Defaulting to
Unload Continue

Explanation:
The object listed in the message is an inline LOB.
UNLOAD EXTERNAL and UNLOAD ONLY are not

allowed with inline LOBs. UNLOAD was changed to
CONTINUE.

User response:
No response required. To eliminate this message,
change the Unload Data option on panel DAJ$UREO
to C and rebuild the job.

DAJB526W   **Reallocate with Dataset Manager**
turned off because of Hash Access
objects. Db2 ALTER must be used
to modify Hash Space

Explanation:
Dataset Manager was selected for reallocation, but
hash space reallocation can only be done with Db2
ALTER.

User response:
No action is required.. Db2 ALTER will reallocate the
hash space.

DAJB527E   **Both HASHSPACE and DATASIZE**
percent are blank in the
Reallocation Utility. Hash Space
will not be reallocated

Explanation:
A reallocation utility job was submitted against hash
access tables created under Db2 V10, however
the reallocation utility profile does not contain the
required HASHSPACE or DATASIZE parameters for
reallocating these tables.

User response:
Update the reallocation profile to define the
HASHSPACE or DATASIZE parameters, then resubmit
the job.

DAJB528W   **Reallocation of hash space is**
requested by DATASIZE, but real
time statistics are not available.
HASHSPACE will be used instead

Explanation:
DATASIZE is a real-time statistic that is only available
when an exception profile with real-time statistics
exceptions is included in the job. Since an exception
profile with real-time statistics was not included in the
job profile, DATASIZE cannot be used.

User response:
Add an exception profile with real-time statistics to the
job profile and rebuild the job.

DAJB529W   *space_type creator| database*
space_name partition_number
Reallocated HASH SPACE has
been truncated to 64GB |
Reallocated HASH SPACE has
been truncated to 128TB

Explanation:

The reallocated hash space was truncated to the maximum value listed in the message.

User response:
No action is required.

DAJB531E	*space_type creator*| *database space_name partition_number* **Cannot reallocate HASH SPACE. The associated IX is not included in the objects profile**

Explanation:
Hash space for a table can only be altered when the associated index is included in the object profile.

User response:
Include the associated index in the object profile.

DAJB533I	**Templates are required for TEMPLATEDD. Templates have been turned on for** *utility_name*.

Explanation:
If templates are set to No in job options, the template value will be set to Yes for this utility because it is required for TEMPLATEDD support.

User response:
No action is required.

DAJB535W	**Default setup |** *utility_name* **TEMPLATEDD data set does not exist.**

Explanation:
The template data set that is included in the utility profile, or in the setup panels, no longer exists.

User response:
Update the utility profile and select a template name from a valid data set, or specify a template via Db2 Automation Expert.

DAJB540W	**Reallocate with Dataset Manager turned off when DROPping Pending Changes. Db2 ALTER must be used to DROP Pending Changes**

Explanation:
Use of Dataset Manager for reallocation was specified in combination with DROP Pending Changes. This combination is not allowed. Db2 ALTER must be used for reallocation when pending changes will be dropped. Reallocation with Dataset Manager was turned off.

User response:
No action is required.

DAJB544W	**DROP Pending Changes will not be generated because there is no exception profile in the job**

Explanation:

DROP pending changes was requested for an object in a reallocation utility profile, but an exception profile that specifies the PENDING_DEF_CHGS exception condition was not included in the job profile. The DROP pending changes request is ignored.

User response:
If pending changes should be dropped for objects, include an exception profile with the PENDING_DEF_CHGS exception condition in the job profile.

DAJB547W	*space_type creator*	*database space_name partition_number* **RUNSTATS RESET ACCESSPATH has been turned off for this LOB table space.**

Explanation:
RUNSTATS RESET ACCESSPATH was included in the utility profile, however, the object listed in the message is a LOB. RESET ACCESSPATH is not valid for LOBs. The keyword will be removed from the RUNSTATS utility JCL.

User response:
No action is required.

DAJB548W	*space_type creator*	*database space_name partition_number* **After RUNSTATS RESET ACCESSPATH is executed, the statistics cannot be rolled back to previous values.**

Explanation:
RUNSTATS RESET ACCESSPATH was included in the utility profile. RESET ACCESSPATH should be used only when you want to reset all the access path statistics for all the objects in a given table space. If this function is executed, all previously collected access path statistics for the objects in the target table space will be reset or removed.

User response:
No action is required; however, resetting statistics cannot be reversed. If you want to retain the ability to roll back statistics, update the utility profile, set RESET ACCESSPATH to NO, and regenerate the JCL.

DAJB549W	*space_type creator*	*database space_name partition_number* **RUNSTATS RESET ACCESSPATH is not valid at the partition level. Partition will be ignored.**

Explanation:
RUNSTATS RESET ACCESSPATH was included in the utility profile, and the object listed in the message was included at the partition level. RESET ACCESSPATH can be used only for ALL partitions of an object.

User response:

No action is required.

| DAJB551I | MAXPRIME \| PCTPRIME option is ignored when primary and secondary allocation values are specified for the template: *utility_type* |

Explanation:
When primary and secondary space allocation values are specified for the template, MAXPRIME or PCTPRIME are ignored.

User response:
No action is required.

| DAJB559E | Error adding task: *task_name* |

Explanation:
An error occurred when calling the Db2 administrative task scheduler's SYSPROC.ADMIN_TASK_ADD stored procedure. This error lists the task name that encountered the error, and is followed by additional messages returned from the stored procedure.

User response:
Examine the messages returned from the stored procedure to determine the course of action. Contact IBM Software Support if you require assistance.

| DAJB560I | Scheduled Taskname: *task_name* Dataset: *data_set_name* Trigger Task: *trigger_task_name* Trigger Cond: *trigger_condition* Trigger Code: *trigger_code* |

Explanation:
This informational message displays the scheduled task name, its associated dataset, and the trigger information associated with the task.

User response:
No action is required.

| DAJB571W | *function_type* for *utility_name* utility has been turned off because a required TEMPLATEDD template name is missing. |

Explanation:
A template data set has been deleted or renamed, so the template name no longer exists.

User response:
Update the utility profile or the setup template DD default value to specify a valid template data set, member, and name.

| DAJB572E | Required TEMPLATEDD template name missing. *utility_name* has been turned off. |

Explanation:
A template data set may have been deleted or renamed.

User response:
Update the utility profile or the setup template DD default value to specify a valid template data set, member, and name.

| DAJB573I | Template data sets are not available for non-Db2 utility modes. The data set name created via Image Copy Options will be generated. |

Explanation:
An image copy utility mode was selected other than Db2, and a template data set and member was also specified. Template data sets are not valid with non-Db2 image copy modes. The image copy data set name will be generated using image copy DSN generation options.

User response:
No action is required.

| DAJB574W | *database space_name partition_number* Tape Stacking has been turned off because this table space contains a LOB column and the AUX keyword \| Tape Stacking has been turned off for this LOB table space with AUX Yes \| Tape Stacking has been turned off because this table space with a LOB column will default AUX to Yes \| Tape Stacking has been turned off for this LOB table space because AUX will default to Yes |

Explanation

Tape stacking is not valid for the reasons that are listed in the message. The job profile uses templates and the specified unit type is a tape device. However, if one of the following conditions are met, tape stacking is turned off:

- The REORG utility profile contains the AUX YES keyword and the table space is a LOB or contains a LOB column.

- The REORG utility profile contains the AUX NO keyword or the AUX field was left blank, but the table space is LOB or contains a LOB column; therefore, Db2 requires and defaults to AUX YES.

Under certain conditions, the AUX keyword is not included in the JCL; however, Db2 defaults to AUX YES at run time. For detailed information about those conditions, consult the documentation for your version of Db2.

User response:
No action is required.

DAJB575W **LISTPARTS keyword is only valid when LISTDEFs are specified. LISTPARTS will be turned off.**

Explanation:
The LISTPARTS keyword was specified in a REORG utility profile, but LISTDEFS have not been specified. The LISTPARTS keyword has been removed from the utility JCL.

User response:
Update the job profile and specify Y in the Generate Listdefs field in the job options.

DAJB577W **REORG with SHRLEVEL NONE or FASTSWITCH NO does not apply pending definition changes.**

Explanation:
Pending definition changes cannot be applied when REORG SHRLEVEL NONE or FASTSWITCH NO are specified.

User response:
To materialize the pending definition changes, run REORG with SHRLEVEL REFERENCE or SHRLEVEL CHANGE, and do not specify FASTSWITCH NO.

DAJB578E **No recovery information was found in SYSCOPY for this space.**

Explanation:
An image copy was specified as the source for the unload job, but no image copy information was found in SYSCOPY for the table space. The unload job cannot be generated.

User response:
Locate the image copy data set, or specify a different source for the unload job.

DAJB579W **The selected event notification profile for this job has been removed because it does not exist on Db2 subsystem *ssid*.**

Explanation:
Either the job profile containing the selected event notification profile was imported from another SSID, or the event notification profile was deleted from the current SSID.

User response:
Update the job profile options to remove the selected event notification profile.

DAJB580W *space_type creator | database space_name partition_number* **REORG TABLESPACE option SORTDATA NO is not allowed with Shrlevel Change. SORTDATA will be changed to YES.**

Explanation:

A REORG TABLESPACE SHRLEVEL CHANGE was specified with SORTDATA NO in the utility profile. This combination is not allowed. The SORTDATA keyword will be added to the utility JCL.

User response:
No action is required.

DAJB582W *space_type creator | database space_name partition_number* **REPAIR INSERTVERSIONPAGES has been turned off for this LOB | XML table space.**

Explanation:
The REPAIR VERSIONS keyword is not supported for LOB or XML spaces. This combination will result in message DSNU068I and a return code of 8 at run time.

User response:
No action is required.

DAJB584E *space_type creator | database space_name partition_number* **REORG for partition-by-growth hash TS cannot be done by partition. Object excluded.**

Explanation:
A partition-by-growth hash table space must be reorganized in its entirety. When a REORG TABLESPACE on a PBG hash table space violates this restriction, this message is issued and the object is excluded from REORG TABLESPACE processing.

User response:
Update the object profile. On the Include Tablespace Selection panel, specify all partitions for the partition-by-growth table space by selecting the table space that contains ALL in the Part column.

DAJB585E *space_type creator | database space_name partition_number* **REORG for partition-by-growth hash TS missing one or more partitions. Object excluded.**

Explanation:
A partition-by-growth hash table space must be reorganized in its entirety. When a REORG TABLESPACE on a PBG hash table space violates this restriction, this message is issued and the object is excluded from REORG TABLESPACE processing.

User response:
Update the object profile. On the Include Tablespace Selection panel, specify all partitions for the partition-by-growth table space by selecting the table space that contains ALL in the Part column.

DAJB586W *space_type creator | database space_name partition_number*

REPAIR CATALOG has been turned off for this LOB | XML table space.

Explanation:
REPAIR CATALOG is not valid for LOB or XML spaces. The keyword has been removed from the utility JCL.

User response:
No action is required.

DAJB587W   *space_type creator | database space_name partition_number* **REPAIR CATALOG TEST has been turned off for this LOB | XML table space.**

Explanation:
REPAIR CATALOG TEST is not valid for LOB or XML spaces. The keyword has been removed from the utility JCL.

User response:
No action is required.

DAJB588I   **ORIGINOBID keyword will be generated because it is required with COPYDDN.**

Explanation:
COPYDDN requires the ORIGINOBID keyword. The ORIGINOBID keyword is included in the job.

User response:
No action is required.

DAJB589I   *space_type creator | database space_name partition_number* **Object converted to PART level for REPAIR LEVELID.**

Explanation:
The object that is listed in the message must be processed at the PART level when the REPAIR LEVELID keyword is specified. Db2 Automation Expert will convert the object to PART level processing.

User response:
No action is required.

DAJB590E   **REPAIR PROCESS SET turned on with no REPAIR type functions selected. Turning REPAIR off for this object.**

Explanation:
If a REPAIR option that was selected in the utility profile is turned off during the build process, an empty REPAIR control card might be generated. This message is displayed when the REPAIR is turned off for an object because no additional REPAIR options exist.

User response:

No action is required.The build continues, but this object will be excluded from the generated JCL for the REPAIR utility.

DAJB595E   **Image Copy** *data_set_name* **not found. COPYDDN has been turned off. | Inline Image Copy** *data_set_name* **not found. COPYDDN has been turned off. | Non-inline Image Copy** *data_set_name* **not found. COPYDDN has been turned off.**

Explanation:
The image copy data set name that is listed in the message was not found. The COPYDDN DD requires a valid image copy.

User response:
Ensure that the data set name is valid and is available for processing. When the problem has been identified, resubmit the job.

DAJB597E   **TS | IX** *dbname tsname nnnn* **Object defined in object profile not found in the catalog. Object was altered or dropped.**

Explanation:
The non-wildcarded non-partitioned object could not be found in the Db2 catalog.

User response:
Either recreate the object or delete the object from the object profile.

DAJB600I   *space_type creator | database space_name partition_number* **Maintenance Window Action** *inserted | updated* **for** *action* **Action ID=***action_id*

Explanation:
This message provides details about the object for which the action was generated. It also states whether the action was added to the list to be run during the maintenance window or whether the action was updated, and lists the generated action ID.

User response:
No action is required.

DAJB601I   *space_type creator | database space_name partition_number* **SORTDEVT defaulted to** *value* **for maintenance window build**

Explanation:
The utility for this action requires a SORT. The SORTDEVT keyword was added to the utility with the default value that is listed in the message.

User response:
No action is required.

DAJB603W　　**REORG ALL PARTS value exceeded. This table space will be converted to PART ALL.**

Explanation:
A value was specified in the REORG utility profile for "REORG ALL PARTS if percentage exceeded". The value was exceeded; therefore, all partitions will be reorganized with the REORG TABLESPACE.

User response:
No action is required.

DAJB604I　　**Maintenance Window Build History ID = *history_ID***

Explanation:
This message provides the history ID for the maintenance window build.

User response:
No action is required.

DAJB605W　　**The current unit of work has been rolled back due to deadlock or timeout in *module_name***

Explanation:
A -911 SQL code was encountered during the current unit of work. The current unit of work was the victim in a deadlock, or experienced a timeout, and must be rolled back.

User response:
No action is required. The application terminates.

DAJB606E　　**TS REORG for a PBR2 requires Generate Templates = Y. TS REORG disabled.**

Explanation:
A table space REORG was specified for a PBR2 space. This option requires the Generate Templates field in the job generation options to be set to Y. The PBR2 space is excluded from this utility.

User response:
In the job profile, specify **Generate Templates** = Y.

DAJB607I　　**Including required [SYSDISC DD | SYSPUNCH DD | SYSDISC and SYSPUNCH DDs] for pending ALTER PARTITION.**

Explanation:
A REORG is being performed on a table space that is in REORG-pending (AREOR) advisory status due to an ALTER to add a partition. SYSDISC and SYSPUNCH DDs are both required.

User response:
No action is required.

DAJB608I　　**Specifying the partition number for the page dsnum.**

Explanation:
A PBR2 object was detected with the RECOVER PAGE option. The required DSNUM parameter was not specified; however, the object was included by partition number. Therefore, that partition number is used for the DSNUM parameter.

User response:
No action is required.

DAJB609E　　**DSNUM parameter is required for PBR2 recover to page. Recovery disabled.**

Explanation:
A PBR2 object was detected with the RECOVER PAGE option. The required DSNUM parameter was not specified, and all partitions were selected for the object. This requires that the DSNUM symbolic must be included in the copy data set name. The PBR2 object is excluded from this utility.

User response:
Update the RECOVER utility profile to include the Page dsnum value.

DAJB610I　　**TS | IX *dbname tsname nnnn* Object defined in object profile not found in the catalog. Object may have been altered or dropped. Retrying with part *nnnn***

Explanation:
The non-wildcarded non-partitioned object could not be found in the Db2 catalog. Db2 Automation Expert will retry to retrieve the object as a partitioned object.

User response:
No action is required.

DAJB611I　　**TS | IX *dbname tsname nnnn* Object was converted to a partitioned object.**

Explanation:
A non-wildcarded non-partitioned object was successfully converted to a partitioned object. The object will be treated as a partitioned object in generated JCL.

User response:
No action is required.

DAJB612W　　***space_type creator | database space_name partition_number* Unload Pause | Only | External not allowed with SHRLEVEL REFERENCE. Defaulting to Unload Continue.**

Explanation:
When a REORG with SHRLEVEL REFERENCE has been specified, the Unload parameter must be set to Continue. set the UNLOAD parameter to CONTINUE.

User response:
No action is required.

| DAJB613W | *space_type database_name tablespace_name partition* **COPYTOCOPY turned off for this object because it is not supported.** |

Explanation:
A COPYTOCOPY utility was specified for this object, but the COPYTOCOPY utility is not valid for this object. The COPYTOCOPY utility will not be run on this object.

User response:
For information about restrictions for running the COPYTOCOPY utility, refer to the Utility Guide and Reference for your version of Db2.

| DAJB616I | **Page Validation was selected for this utility profile in a previous release of Db2 Automation Expert, but is no longer valid.** |

Explanation:
The utility profile was created in a previous release and included page validation options. The page validation option has been removed from Db2 Automation Expert; therefore, this option is not valid. The option will be removed from the utility profile.

User response:
No action is required.

| DAJB652I | **Table(ALL) is not valid with the Set Profile keyword. Table(tablename) will be generated.** |

Explanation:
The SET PROFILE option was specified, and TABLE (ALL) was also specified. This combination is invalid. TABLE(*tablename*) syntax is generated.

User response:
No action is required.

| DAJB653W | **Tablesample will not be included with Set Profile.** |

Explanation:
The SET PROFILE option was specified, and TABLESAMPLE was also specified. This combination is invalid. The TABLESAMPLE keyword is removed.

User response:
No action is required.

| DAJB658I | *space_type database_name tablespace_name* **Non-Partitioning Index detected for this table space. Partitions will be reorganized together.** |

Explanation:
The table space that is listed in the message has a nonpartitioned index and Y was specified in the **Group**

Partitions with NPI field in the REORG utility profile. All partitions of the table space will be grouped into the same job step, regardless of the job breakdown options.

User response:
No action is required.

| DAJB660E | **Unexpected JSON token | Type=*type* | Name=*name*** |

Explanation:
An unexpected JSON token was encountered.

User response:
Contact IBM Software Support.

| DAJB661E | **Query Monitor Error, RC=*return_code*** |

Explanation:
An error was returned from Db2 Query Monitor. The return code is provided in the message text.

User response:
Contact IBM Software Support.

| DAJB662I | **Query Monitor reorg recommendation: *recommendation*** |

Explanation:
This informational message displays the reorganization recommendation that was made by Db2 Query Monitor.

User response:
No action is required.

| DAJB663I | **Query Monitor Performance Window Options: | Performance Window *performance_window* | Collection Duration *duration*** |

Explanation:
This informational message lists the settings for the performance window.

User response:
No action is required.

| DAJB664W | **Query Monitor Performance Window is blank. Query Monitor Performance has been disabled.** |

Explanation:
A performance window is required when a Db2 Query Monitor REORG_OVERRIDE exception is specified. Since no performance window was specified, this exception is disabled.

User response:
If Db2 Query Monitor reorganization recommendations are desired, specify a performance window in the job profile job options.

DAJB665W   **Performance Window *window*
does not exist. Query Monitor
Performance has been disabled.**

Explanation:
The performance window that is listed in the
message does not exist. It may have been deleted.
Db2 Query Monitor cannot provide reorganization
recommendations without a performance window;
therefore, reorganization recommendations have been
disabled.

User response:
Re-create the performance window, associate it with a
job profile, and rebuild the job profile.

DAJB666W   **A REORG TS utility was not found
in the current Jobs Group. Query
Monitor Performance has been
disabled.**

Explanation:
In order to provide smarter reorganization
recommendations, a utility profile that contains a
REORG TABLESPACE utility must be included in
the job profile. Db2 Query Monitor reorganization
recommendations have been disabled.

User response:
Add a utility profile that contains a REORG
TABLESPACE utility to the job profile, then rebuild the
job profile.

DAJB668W   *space_type database_name
tablespace_name partition* **[XML
object excluded for Check Data.
Use Include All XML spaces with
base objects to perform the check.
| XML object excluded for Check
Data. Check the corresponding
base object.]**

Explanation:
An XML object was included in the object profile. The
CHECK DATA utility only applies to the base object.
Therefore, the XML object will be excluded.

User response:
Include the base table space for the XML table space
and resubmit the job.

DAJB669W   **The specified mapping table
table_creator.*table_name* does not
exist in the Db2 catalog.**

Explanation:
A user-specified mapping table was provided for the
online REORG utility with SHRLEVEL CHANGE, but the
table does not exist.

User response:
Ensure that the mapping table exists before job run
time. If the job is submitted with a mapping table

name that does not exist, a DSNU056I message is
received along with a return code of 8.

DAJB670W   *space_type creator | database
space_name partition_number*
**Copy SHRLEVEL(CHANGE) not
supported with FlashCopy on not
logged LOB table spaces.**

Explanation:
For an image copy of a LOB table space that
is not logged, SHRLEVEL CHANGE is not allowed
when FLASHCOPY YES or FLASHCOPY CONSISTENT
has been specified. Db2 Automation Expert changes
SHRLEVEL to REFERENCE and the build continues.

User response:
No action is required.

DAJB671I   **Pre-Generation User Exit | Post-
Generation User Exit has started**

Explanation:
This message indicates that the pre-generation or
post-generation user exit started.

User response:
No action is required.

DAJB675W   **RI keyword will be generated
with RI B and LISTDEFs. Related
objects will be included at job run
time.**

Explanation:
The object profile specified that RI is to be expanded
at build time. However, the LISTDEF job option is set
to Y. If the LISTDEF job option is set to Y, RI is always
expanded at run time.

User response:
No action is required; if this is not the desired result,
change the settings in the job options or in the object
profile.

DAJB676I   **Object exploded via Process
AUX for parent table space
*database.spacename partition***

Explanation:
This message explains that the object that is described
in the message will be included in the job profile
because the **Process AUX tablespaces** option was
selected in the object profile. It also includes
information about the base table space and partition, if
applicable.

User response:
No action is required.

DAJB677W   **No XML | LOB objects exist for this
object**

Explanation:

Either the parent object is not a base table space, or there were no XML or LOB objects defined for this object.

User response:
Ensure that the parent object was correctly specified in the object profile.

DAJB680W	LOB | XML object excluded from job build. LISTDEF ALL generated for parent table space.

Explanation:
The object is excluded from the generated JCL for all utilities because its related base table space will be generated with the LISTDEF ALL keyword, which will include this LOB or XML space at run time.

User response:
No action is required. The object is automatically excluded.

DAJB681W	*utility_name* turned off for this LOB | XML table space. LISTDEF ALL generated on the base table space.

Explanation:
The object is excluded from the generated JCL for the utility that is listed in the message because its related base table space will be generated with the LISTDEF ALL keyword, which will include this LOB or XML space at run time.

User response:
No action is required. The object is automatically excluded from the JCL, but will be automatically included at run time by the LISTDEF ALL keyword.

DAJB682W	The Utility Work Dataset High Level Qualifier | Utility Work Dataset Second Qualifier contains a period. This may result in multiple qualifiers.

Explanation:
A period was used for one of the utility work data set qualifiers (for example, 'A.B' was provided as the qualifier in one field). This would result in multiple qualifiers in the place of one qualifier, and may not generate the utility work data set name as expected. This message is displayed when a previously created job contains a period in one or both of these qualifiers.

User response:
If the data set qualifier does not resolve as expected, edit the job profile, update the job generation options, and remove the period from the utility work data set field that is listed in the message text.

DAJB683I	History object excluded from job build with RECOVER VERIFYSET YES.

Explanation:

When RECOVER keyword VERIFYSET YES is selected with LISTDEF YES, Db2 Automation Expert generates the HISTORY keyword on the LISTDEF INCLUDE statement. This ensures that all related history items are processed at run time. Related objects in the profile will be removed to avoid duplicate processing.

User response:
No action is required.

DAJB685I	*space_type creator* | *database space_name partition_number* **RUNSTATS USE PROFILE has been turned on for this object because of SYSSTATFEEDBACK information.**

Explanation:
The object that is listed in the message was triggered by the RUNSTS_RECOMMENDED exception, and a RUNSTATS utility is included in the job profile. The RUNSTATS utility profile field **Profile** is automatically set to U.

User response:
No action is required.

DAJB684I	*space_type creator* | *database space_name partition_number* **LISTDEF ALL generated for this object with RECOVER and VERIFYSET YES.**

Explanation:
When the RECOVER keyword VERIFYSET YES is selected with LISTDEF YES, Db2 Automation Expert will specify LISTDEF ALL on the INCLUDE statement for this object.

User response:
No action is required.

DAJB690W	REORG TABLESPACE has been turned off for this object because it does not contain any tables.

Explanation:
It is not necessary to perform a REORG on a table space that does not contain any tables. Db2 Automation Expert will remove the object from the generated JCL.

User response:
No action is required. To avoid this message in the future, either add tables to this table space or exclude it from the object profile.

DAJB700W	Invalid combination. Deleting a profile is not allowed when collecting statistics for all tables. The profile option will be removed.

Explanation:

An invalid combination of keywords was specified. Deleting a profile is not allowed with the Table All (Y) option for REORG statistics options. The profile option will be removed.

User response:
No action is required.

DAJB701W   **Invalid combination. Using a profile that includes NPI statistics is not allowed when collecting statistics using TABLE ALL syntax. The profile option will be removed.**

Explanation:
An invalid combination of keywords was specified. Using the existing statistics profile, including NPI statistics, is not allowed with Table All (Y) for REORG statistics options. The profile option will be removed.

User response:
No action is required.

DAJB702W   **Invalid combination. Using a profile is not allowed when collecting statistics using INDEX ALL syntax. The profile option will be removed.**

Explanation:
An invalid combination of keywords was specified. Using the existing statistics profile is not allowed with Index All (Y) for REORG statistics options. The profile option will be removed.

User response:
No action is required.

DAJB703I   *space_type creator | database space_name partition_number* **STATCLGMEMSRT has been turned off for this index**

Explanation:
The STATCLGMEMSRT keyword is not allowed for index RUNSTATS.

User response:
No action is required.

DAJB704I   *space_type creator | database space_name partition_number* **History | archive object excluded from job build because the HISTORY | ARCHIVE keyword was specified.**

Explanation:
The specified object will not be included in the generated JCL because the object will be included via the HISTORY or ARCHIVE keyword at job run time.

User response:
No action is required.

DAJB705I   *database_name space_name partition_number* **- LISTPARTS set to 4096 for Group Partitions with NPI for this partition level object.**

Explanation:
Db2 Automation Expert adds the LISTPARTS keyword to reorganize all partitions together. This will occur if the table space is at the partition level, and if it contains an NPI during a REORG of a table space when group partitions with NPI is set to Yes.

User response:
No action is required. The keyword will be generated as LISTPARTS 4096 to ensure that all partitions are reorganized at once in one INCLUDE statement, which avoids multiple REORGs of the NPI.

DAJB706I   **LISTPARTS value of** *number_of_parts* **will not be overridden for Group Partitions with NPI.**

Explanation:
The LISTPARTS keyword value was set so that the value will not be overridden for table spaces that contain an NPI during a REORG.

User response:
No action is required. If you choose to REORG all partitions together and the value that is specified is less than the number of partitions being reorganized, either set the value higher for LISTPARTS, or leave it blank to allow Db2 Automation Expert to generate a value of 4096.

DAJB707I   *space_type creator | database space_name partition_number* **No history | archive objects exist for this object. The history | archive keyword will be ignored.**

Explanation:
No history or archive items were detected for the object that is listed in the message text. The HISTORY or ARCHIVE keyword will not be generated in the JCL.

User response:
No action is required.

DAJB708I   **Job option template value has been overridden to generate a [DD | template] for the SYSUT1 data set.**

Explanation:
The generation options value can override the job template option for the SYSUT1 data set. If templates are turned on in job options, and the generation option is set to D, the SYSUT1 data set will be generated as a DD instead of a template. If templates are turned

off and the generation option is set to T, a SYSUT1 template will be generated.

User response:
No action is required.

DAJB709E **Invalid repeated Exception Profile** *order_num accp_rule rjct_rule profile_creator.profile_name.* **Accp/ Rjct Rule duplicates another profile.**

Explanation:
The exception profile that is listed in the message has been repeated in a group, and the Accp or Rjct exception rule points to the same utility profile for both profiles. *order_num* is the job step order. *accp_rule* is the utility profile number for accepted objects. *rjct_rule* is the utility profile number for rejected objects. If the Accp or Rjct rule is blank, the *accp_rule* or *rjct_rule* value is 0.

User response:
Either remove the duplicate profile or change the exception rules to point to a different profile in the group.

DAJB710W **Current application compatibility register exceeds the highest activated Db2 function level of** *modlevel.* **Option removed.**

Explanation:
The value that was entered for the current application compatibility register exceeds the current activated function level of Db2 12. This value cannot exceed the highest activated Db2 version 12 function level of 500 or above. The value will be removed and the job build continues.

User response:
No action is required.

DAJB720I **REBUILD INDEX generated for this index because it was created with COPY NO**

Explanation:
A RECOVER INDEX utility was specified, but an index was created with COPY NO, and the RECOVER utility profile has REBUILD INDEX set to NO. In this case, Db2 Automation Expert will generate a REBUILD INDEX statement on the index instead of RECOVER.

User response:
No action is required.

DAJB725W *space_type creator | database space_name partition_number* **DISCARD has been set to NO because it is not allowed on a table space with an XML column.**

Explanation:

The DISCARD option is not allowed for a table spaces with an XML column. The DISCARD keyword has not been included.

User response:
No action is required.

DAJB730I **Severity of DAJB605 message has been overridden to Info | Error.**

Explanation:
Message DAJB605 defaults to W for warning, but might be altered via a batch build parameter to generate either an error or informational message (PARM (DAJB605=E) or PARM (DAJB605=I)).

User response:
No action is required.

DAJB731I **The SYSUT1 data set will not be generated for REORG IX SHRLEVEL [Reference | Change].**

Explanation:
As of Db2 13, the NOSYSUT1 keyword is the default and only behavior allowed for REORG INDEX SHRLEVEL REFERENCE or CHANGE. In Db2 Automation Expert, when REORG INDEX SHRLEVEL REFERENCE or CHANGE is specified in a utility profile on a Db2 13 subsystem, the SYSUT1 data set is not generated or used.

User response:
No action is required.

DAJB750W **Tape Stacking has been turned off because this table space contains pending definition changes.**

Explanation:
Pending definition changes were detected with a tape-type device on a REORG image copy. The Pending Only option was set for the **Turn Off Tape Stacking** field on the **Reorg Utility Profile Options** panel.

User response:
No action is required. The STACK   YES keywords will automatically be removed from the generated template JCL.

DAJB751W **Lastlog No requires Drain All. Lastlog will be set to Yes**

Explanation:
This message is generated one time when an existing Db2 12 NFM job profile is built that contains a REORG table space or index utility with SHRLEVEL CHANGE, and where Drain is not set to All.

User response:
No action is required. Lastlog Yes will automatically be generated.

DAJB752I *database_name table_space_name partition_number* **Not all pending**

definition changes are applied because this affected partition is missing.

Explanation:
Pending ALTER PARTITION changes will not be materialized via REORG unless all affected partitions are included.

User response:
Include the missing partition that is described in the message text. Rebuild the job to materialize the pending definition changes.

DAJB753W	*database_name table_space_name partition_number* **Pending definition changes were not applied because the entire object was not specified.**

Explanation:
Db2 will not materialize pending definition changes for a DROP COLUMN statement unless all parts are being REORGed together.

User response:
Include all partitions to materialize the DROP COLUMN pending status.

DAJB754I	**SORTDATA set to YES to materialize ALTER PARTITION pending changes for REORG TS.**

Explanation:
SORTDATA NO was specified and pending ALTER PARTITION changes were detected for this object. This will cause a return code of 8 at run time.

User response:
No action is required. SORTDATA will be set to YES.

DAJB755W	**DISCARD has been set to NO because it is not allowed on a LOB table space.**

Explanation:
If DISCARD is generated for a LOB, the job will fail with a return code of 8 at run time.

User response:
No action is required. Db2 Automation Expert will automatically turn off DISCARD.

DAJB756I	**Inline copy for REORG TABLESPACE utility has been turned off since no copy options are selected.**

Explanation:
If no COPY options are selected, image copies for REORG will be turned off.

User response:
No action is required.

DAJB757I	**REORG SHRLEVEL CHANGE | REFERENCE requires an inline copy. Share level changed to None.**

Explanation:
REORG SHRLEVEL CHANGE or REFERENCE requires an inline image copy. If COPY is turned off during the build process, SHRLEVEL will be set to NONE.

User response:
No action is required.

DAJBE01E	**Error: Environment initialization failed. RC=16. Aborting.**

Explanation:
Establishing the Db2 Automation Expert runtime environment failed.

User response:
Ensure that the control file and configuration ID are correct. Ensure that plans have been correctly bound. Ensure that all data sets are correct.

DAJBE02E	**Error: Plan fetch failed. RC=16. Aborting.**

Explanation:
The retrieval of Db2 Automation Expert plan names from the control file failed.

User response:
Ensure that the control file update jobs have run, and the plan binds have been run. Ensure that the configuration ID is correct.

DAJBE03E	**Error: Call attach initialization failed. Return code:** *return_code***. Reason code:** *reason_code* **Setting RC=12. Terminating.**

Explanation:
Call attach facility initialization failed.

User response:
Make sure the Db2 data sets for the SSID are correct by entering option 0.1 from the Db2 Automation Expert main menu.

DAJBE04E	**Error: Profile not found. RC=12. Terminating. Creator:** *profile_creator* **Profile name:** *profile_name*

Explanation:
The input profile creator and name was not found in the Db2 Automation Expert repository.

User response:
Verify the profile name, creator, and profile type.

DAJBE05E	**Error: Export data set does not exist. RC=16. Aborting.**

Explanation:

The export data set does not exist.

User response:
Create a valid export data set with LRECL= 4096 and retry.

DAJBE06E	Error: Export data set being used by another user. RC=12. Aborting.

Explanation:
The export data set is in use by another user.

User response:
Export requires exclusive access. Retry when the data set is accessible.

DAJBE07E	Error: Export data set does not exist. Please create an export data set with LRECL= 4096 and try again. RC=16.

Explanation:
The export data set does not exist.

User response:
Create a valid export data set and try again.

DAJBE08E	Error: Export data set is partitioned and no member was specified. RC=12. Aborting.

Explanation:
The member name for the export data set does not exist.

User response:
Specify a member name and try again.

DAJBE09E	Error: Export member already exists. RC=12. Aborting.

Explanation:
The member name for the export data set already exists.

User response:
Select a member name that does not exist and try again.

DAJBE10E	Error: Export member not allowed on a non-partitioned data set. RC=16. Aborting.

Explanation:
A member name was specified but the export data set is not a partitioned data set.

User response:
Clear the member name and try again.

DAJBE11E	Error: Export data set must have an LRECL of 4096. RC=16. Aborting.

Explanation:
The export data set has an incorrect LRECL. The incorrect data set may have been specified.

User response:
Ensure the correct data set was specified. Use a data set with LRECL = 4096.

DAJBE12E	Error: Open failed on export data set. RC=12. Aborting.

Explanation:
Opening the export data set failed.

User response:
Ensure that the data set name is correct. Try to browse or edit the data set.

DAJBE13E	Error: Invalid SSID. RC=16. Aborting.

Explanation:
The SSID that the profiles are being exported to is not available in the Db2 Automation Expert control file. The SSID must exist in the control file in order to export profiles.

User response:
Use Tools Customizer to associate the SSID and regenerate the export jobs, or add the SSID via option 0.1 on the Db2 Automation Expert main menu.

DAJBE14E	Error: This profile's data has been corrupted in the DLC tables. It must be re-created. RC=8. Creator: *profile_creator* Profile name: *profile_name*

Explanation:
The profile that is listed in the message has been corrupted and cannot be exported.

User response:
Try to edit the profile in the ISPF interface. You might have to delete the profile and re-create it.

DAJBE15E	Error: Unable to export profile. RC=8. Creator: *profile_creator* Profile name: *profile_name*

Explanation:
Export of the profile failed.

User response:
Review related messages to determine the cause of the failure.

DAJBE16I	Export successful. Creator: *profile_creator* PROFNAME: *profile_name*

Explanation:
The profile that is listed in the message has been successfully exported.

User response:
No action is required.

DAJBE17I	Printing out the exported profiles: *Profile1 Profile2 Profile3...*

Explanation:
This message displays the name of each profile that was exported.

User response:
No action is required.

DAJBE18I   **Number of *profile_type* profiles found: *nnnn***

Explanation:
This message displays the number of profiles that were encountered. *profile_type* is either job, exception, utility, or object.

User response:
No action is required.

DAJBE19E   **Error: Invalid first record of DAJ#DATA input file. RC=16. Terminating.**

Explanation:
The DAJ#DATA input data is damaged.

User response:
Regenerate the job using Tools Customizer. If the error recurs, contact IBM Software Support.

DAJBE20E   **Error: Internal parse routine failed. RC=16. Aborting.**

Explanation:
The routine to parse the DAJ#DATA input records failed.

User response:
Contact IBM Software Support.

DAJBE21E   **Error: Profile retrieve failed. RC=12. Terminating. Internal code: *error_code* Creator: *profile_creator* Profile name: *profile_name***

Explanation:
The profile that is listed in the message could not be found. It is likely that the profile filter did not return any profiles for export.

User response:
Review the export profile filters.

DAJBE22E   **Export failed. Creator: *profile_creator* PROFNAME: *profile_name* RC=8. Internal code: *error_code***

Explanation:
The call to DAJ$IMPD had a non-zero return code.

User response:
Review related messages to determine the cause of the failure.

DAJBE23I   **Number of *profile_type* profiles successfully exported: *nnnn***

Explanation:
This message displays the number of profiles that were successfully exported. *profile_type* is either job, exception, utility, or object.

User response:
No action is required.

DAJBE24I   **Number of errors found: *nnnn***

Explanation:
This message displays the number of error messages issued.

User response:
No action is required.

DAJBI01E   **Error: Environment initialization failed. RC=16. Terminating.**

Explanation:
Establishing the Db2 Automation Expert runtime environment failed.

User response:
Ensure that the control file and configuration ID are correct. Ensure that plans have been correctly bound. Ensure all data sets are correct.

DAJBI02E   **Error: Plan fetch failed. RC=16. Terminating.**

Explanation:
The retrieval of Db2 Automation Expert plan names from the control file failed.

User response:
Ensure that the control file update jobs have run, and the plan binds have been run. Ensure that the configuration ID is correct.

DAJBI03E   **Error: Call attach initialization failed. Return code: *return_code*. Reason code: *reason_code* Setting RC=12. Terminating.**

Explanation:
Call attach facility initialization failed.

User response:
Make sure the Db2 data sets for the SSID are correct by entering option 0.1 from the Db2 Automation Expert main menu.

DAJBI04E   **Error: The import data set could not be allocated. RC=16. Terminating.**

Explanation:
The import data set could not be allocated.

User response:

Ensure that the data set name is correct. Try to browse or edit the data set.

DAJBI05E   **Error: Import data set is partitioned and no member was specified. RC=12. Aborting.**

Explanation:
The member name was not specified for the import data set, which is partitioned.

User response:
Specify a member name and try again.

DAJBI06E   **Error: A member name is not allowed on a non-partitioned data set. RC=16. Aborting.**

Explanation:
A member name was specified, but the import data set is not a partitioned data set.

User response:
Clear the member name and try again.

DAJBI07E   **Error: Import data set must have an LRECL of 4096. RC=16. Aborting.**

Explanation:
The import data set has an incorrect LRECL. The incorrect data set may have been specified.

User response:
Ensure that the correct data set was specified.

DAJBI08E   **Error: Member does not exist in the partitioned data set. RC=12. Aborting.**

Explanation:
The member name for the import data set does not exist.

User response:
Locate or create the exported member name.

DAJBI10E   **Error: Open of import data set failed. RC=12. Aborting.**

Explanation:
Opening the export data set failed.

User response:
Make sure the data set name is correct. Try to browse or edit the data set.

DAJBI12E   **Error: Invalid SSID. RC=16. Aborting.**

Explanation:
The SSID that the profiles are being imported to is not available in the Db2 Automation Expert control file. The SSID must exist in the control file in order to import profiles.

User response:

Use Tools Customizer to associate the SSID and regenerate the import jobs, or add the SSID via option 0.1 on the Db2 Automation Expert main menu.

DAJBI13W   **Warning: Import successful but the RECOVER RBA/LRSN was not found in SYSCOPY. This value will be discarded. RC=4. Creator:** *profile_creator* **Profile name:** *profile_name*

Explanation:
The imported profile contained a recovery scenario that contained a 6-byte recovery RBA or LRSN, and the new SSID has 10-byte RBA/LRSN values. Db2 Automation Expert attempted to convert the RBA/LRSN from 6 to 10 bytes, but the program to convert the value failed.

User response:
Create this profile from scratch.

DAJBI14I   **Import successful. Creator:** *profile_creator* **PROFNAME:** *profile_name*

Explanation:
The import was successful.

User response:
No action is required.

DAJBI15W   **Warning: Import file contains an incompatible version. RC=8. Skipping. Creator:** *profile_creator* **Profile name:** *profile_name*

Explanation:
Import does not support profiles from Db2 Automation Tool Version 1.3 and earlier.

User response:
Create this profile from scratch.

DAJBI16I   **Printing out imported profiles:** *Profile1 Profile2 Profile3...*

Explanation:
This message displays the name of each profile that was imported.

User response:
No action is required.

DAJBI19E   **Error: Unknown utility type. RC=8. Aborting.**

Explanation:
This is an internal error.

User response:
Contact IBM Software Support.

DAJBI20E   **Error: Object function create call failed. RC=8. Aborting.**

Creator: *profile_creator* **Profile name:** *profile_name*

Explanation:
This is an internal error.

User response:
Contact IBM Software Support.

DAJBI21I	Number of *profile_type* profiles found: *nnnn*

Explanation:
This message displays the number of profiles that were encountered. *profile_type* is either job, exception, utility, or object.

User response:
No action is required.

DAJBI22E	Error: Import data set is not a valid export data set. RC=16. Aborting.

Explanation:
The data set that was specified as the source for profiles to be imported is not a valid export data set.

User response:
Make sure the import data set contains at least one exported profile.

DAJBI23E	Error: Internal parse routine failed. RC=16. Aborting.

Explanation:
The routine to parse the DAJ#DATA input records failed.

User response:
Contact IBM Software Support.

DAJBI24E	Error: Invalid first record of DAJ#DATA input file. RC=16. Terminating.

Explanation:
The DAJ#DATA input data is damaged.

User response:
Regenerate the job using Tools Customizer. If the error recurs, contact IBM Software Support.

DAJBI25E	Import failed. Creator: *profile_creator* PROFNAME: *profile_name* return code: *return_code*.

Explanation:
A call to DAJ$IMPD received a non-zero return code. The call failed.

User response:
Review related messages to determine the cause of the failure.

DAJBI26I	Number of *profile_type* profiles successfully imported: *nnnn*

Explanation:
This message displays the number of profiles that were successfully imported. *profile_type* is either job, exception, utility, or object.

User response:
No action is required.

DAJBI27I	Number of errors found: *nnnn*

Explanation:
This message displays the number of error messages issued.

User response:
No action is required.

DAJBI28I	Number of warnings issued: *nnnn*

Explanation:
This message displays the number of warning messages issued.

User response:
No action is required.

DAJE001I	DAJNTFY Build: *mm/dd/yy hh.ss*

Explanation:
This message displays the date and time that the profile containing the notification was built.

User response:
No action is required.

DAJE002E	Notification Function error.

Explanation:
An internal error occurred during notification.

User response:
Contact IBM Software Support.

DAJE003E	Notification Settings not found.

Explanation:
The notification settings are invalid. The notification settings are configured during product customization using Tools Customizer.

User response:
Ensure the Tools Customizer **DB2 Parameters** panel settings contains valid settings for notifications.

DAJE004E	Invalid value for setting *notification_setting*.

Explanation:
The notification setting that is listed in the message is invalid. This notification setting was configured during product customization using Tools Customizer.

User response:

Ensure the Tools Customizer **DB2 Parameters** panel settings contains valid settings for notifications.

DAJE005E　　　　　**Invalid setting keyword.**

Explanation:
An invalid keyword was encountered in notification settings.

User response:
Ensure that the notification setting keywords are valid.

DAJE006E　　　　　**Notification Profile does not exist.**

Explanation:
The notification profile associated with the action does not exist.

User response:
Create a notification profile and associate it with the job profile, then rebuild the job profile.

DAJE008E　　　　　**Expected setting continuation not found.**

Explanation:
An invalid continuation character was found in notification settings.

User response:
Ensure that the notification setting keywords are delimited with a comma.

DAJE009I　　　　　**Event not in registry.**

Explanation:
The event that is specified has not been added to the event registry table.

User response:
Add the event to the event registry table.

DAJE010E　　　　　**Invalid operator.**

Explanation:
The operator for the registered event is invalid.

User response:
Ensure that the event operator in the event registry table is valid. Valid values are EQ, NE, LE, LT, GE, or GT.

DAJM001E　　　　　**Invalid value entered - Please enter a valid value from the list displayed.**

Explanation:
You have entered an invalid value.

User response:
Enter a valid value.

DAJM002E　　　　　**A valid Db2 Subsystem ID is a required field. Please enter a valid Subsystem ID.**

Explanation:
You must enter a valid Db2 subsystem ID in order to continue.

User response:
Enter a valid Db2 subsystem ID.

DAJM003E　　　　　**User is not authorized to enter Shared Profile Support**

Explanation:
You are not authorized to enter the Data Page Display for the specified subsystem.

User response:
Check with your systems programmer to obtain proper authority. The entered command will not be processed.

DAJM004E　　　　　**Invalid Subsystem ID entered**

Explanation:
An undefined subsystem ID has been encountered.

User response:
Correct the value specified in the Db2 Subsystem ID field.

DAJM005E　　　　　**Requested object not found**

Explanation:
The requested object was not found in the Db2 catalog.

User response:
Change the selection criteria and retry the process.

DAJM006E　　　　　**Invalid line command entered**

Explanation:
A invalid value was entered in the line command area.

User response:
Enter one of the a valid line commands listed on the screen.

DAJM007E　　　　　**Page Number out of range**

Explanation:
The page number is out of range.

User response:
Enter a valid page number.

DAJM008E　　　　　**Page number must be numeric**

Explanation:
The page number entered was not a valid numeric.

User response:
Enter a valid page number.

DAJM009E　　　　　**Page number must be between 0 and *maximum_page_number***

Explanation:
The page number entered was out of the valid page range for the space.

User response:
Enter a valid page number.

DAJM011I　　　　　**Page changes have been discarded**

Explanation:
The page display editor changes have been discarded.

User response:
To apply editor changes, exit using the PF3 key.

| DAJM012I | STOP DATABASE command successful |

Explanation:
The STOP DATABASE command has been issued and completed successfully.

User response:
No action is required.

| DAJM013I | START DATABASE command successful |

Explanation:
The START DATABASE command has been issued and completed successfully.

User response:
No action is required.

| DAJM014I | Page changing is not available while in edit mode |

Explanation:
You cannot change pages while updating a space's page.

User response:
Locate the proper page before entering the EDIT command.

| DAJM015I | Data set is being viewed/edited by another session |

Explanation:
The selected Db2 data set is being viewed or edited by another Db2 Automation Expert user.

User response:
Viewing or editing the data set is not possible until the other user exits the data set.

| DAJM016I | Logged page data has been applied |

Explanation:
The selected log data page has been written to the Db2 data set it originally came from.

User response:
No action is required.

| DAJM017E | The logged page data apply has failed |

Explanation:
The logged page data cannot be applied. The space may have been deleted.

User response:

Restore the deleted space or delete the logged page data.

| DAJM018E | The space must be STOPPED to apply logged pages |

Explanation:
Logged pages cannot be applied to a page without stopping the space.

User response:
Issue the STOP DATABASE command to stop the space before applying the logged page.

| DAJM019E | The EDIT command is not available while the space is active |

Explanation:
You cannot use the EDIT command on a space that has not been stopped.

User response:
Be sure to stop the space before entering the EDIT command.

| DAJM020E | User does not have authority to use the edit plan |

Explanation:
You do not have the proper authorization to edit data pages.

User response:
Contact your Db2 Administrator to obtain the proper Db2 authorization.

| DAJM021E | User does not have authority to use the logging plan |

Explanation:
You do not have the proper authorization to use the logging facility.

User response:
Contact your Db2 Administrator to obtain the proper Db2 authorization.

| DAJM022E | Requested data set not found |

Explanation:
Db2 Shared Profile Support cannot find the data set you entered on the Object Selection screen.

User response:
Selection criteria are not allowed for data sets. Check the data set name.

| DAJM023E | Subsystem unavailable |

Explanation:
Db2 Shared Profile Support cannot connect to the specified subsystem. The call attach facility has failed.

User response:
Confirm that the Db2 subsystem is active. Contact your systems administrator.

DAJM024E   **Mapid not found**

Explanation:
The requested map ID cannot be located. The map ID (pointer offset) most likely does not exist in the page.

User response:
Enter the correct map ID.

DAJM025E   **This row is deleted**

Explanation:
The current map ID (pointer offset) has the high order bit turned on. This indicates that the row was deleted.

User response:
Select another row to view or edit.

DAJM026E   **Mapid number must be numeric**

Explanation:
The map ID you entered is not numeric.

User response:
Enter a numeric map ID.

DAJM027E   **Row navigation requires a data page**

Explanation:
Row navigation was specified, so Db2 Shared Profile Support moved to the next data page in the space.

User response:
No action is required.

DAJM028E   **Page number must be hexadecimal**

Explanation:
A non-hexadecimal value was entered in the Hexadecimal field.

User response:
Re-enter the page number in hexadecimal.

DAJM029E   **XMapid must be hexadecimal**

Explanation:
A non-hexadecimal value was entered in the XMapid field.

User response:
Re-enter the map ID in hexadecimal.

DAJM030E   **Mapid/XMapid must be 1 or greater**

Explanation:
An invalid value was entered in the MapID or XMapid field.

User response:
Re-enter the MapID or Xmapid value as hexadecimal.

DAJM031E   **A Datapage can only be logged if TS STOPPED**

Explanation:
The LOGPAGE command was entered, but the table space was not stopped, so the page cannot be logged.

User response:
Be sure to stop the space when selecting the data set for editing.

DAJM032I   **Datapage has been successfully logged**

Explanation:
The data page has been successfully logged.

User response:
No action is required.

DAJM033E   **An error has occurred obtaining ZPARM RC=*return_code***

Explanation:
An error has occurred attempting to access the Db2 ZPARM member.

User response:
Ensure that the Db2 load library containing the assembled ZPARM member has also been specified during Setup. The Db2 load library name must be specified in one of the input fields (Db2 Loadlib1-5) on the Update Parameters for Db2Subsystem SSID panel even if this load library is in the linklist.

DAJM034E   **An original page image cannot be deleted, only removed**

Explanation:
An original data page cannot be deleted from the data set.

User response:
Use the R line command to remove the image from the log.

DAJM035E   **The entered value must be an integer.**

Explanation:
An invalid integer value was entered in this field.

User response:
Enter a valid integer value.

DAJM036E   **The range of a datatype of INTEGER is -2147483648 through 2147483647**

Explanation:
An integer value was entered that is outside the specified valid range.

User response:
Enter a valid integer value.

DAJM037E   **The range of a datatype of SMALLINT is -32768 through 32767**

Explanation:
A small integer value was entered that is outside the specified valid range.

User response:
Enter a valid small integer value.

DAJM038E	This row no longer exists

Explanation:
The FORMAT command was used for a row that does not exist. The row most likely has been deleted.

User response:
Select another row for processing.

DAJM039E	Non-character data is not supported in character columns

Explanation:
Currently, bit data is not supported in the format function, or this column is a variable datatype that is set to NULL.

User response:
Select another row for processing.

DAJM040W	Variable fields will maintain their original length

Explanation:
Variable length fields cannot have their length changed.

User response:
No action is required.

DAJM041E	Only non-compressed rows may be formatted

Explanation:
A row that is compressed or composed of non-EBCDIC characters was selected for formatting.

User response:
This row cannot be edited.

DAJM042E	Formatting unavailable in data set mode

Explanation:
You selected a data set on the Object Selection screen for processing, then used the FORMAT command.

User response:
Row formatting is not available for data set processing as Db2 might not be available. To edit the row, select the object first, then drill down to the desired data set.

DAJM043E	Unsupported datatype encountered

Explanation:
An unsupported datatype has been encountered.

User response:
Verify the datatype is of a supported format.

DAJM044W	No profiles were found that match your selection criteria. Press enter to create a new profile or change the selection criteria.

Explanation:
No profiles match your selection criteria.

User response:
Press Enter to create a new profile, or change your selection criteria to get a different list.

DAJM045E	Command is not supported on this screen. Please enter a valid command or clear the primary command line.

Explanation:
An invalid command was entered in the Option line.

User response:
Correct the command or clear the Option line.

DAJM046E	You are not authorized to update or delete this profile. Enter a "V" if you would like to view this profile

Explanation:
A profile was selected for update or deletion that was created with the View only option.

User response:
Type V next to the profile to view the profile contents.

DAJM047E	The Profile Creator is a required field. Please enter a valid creator

Explanation:
When creating a new profile, the Profile Creator field was left blank.

User response:
Enter a profile creator in the Profile Creator field.

DAJM048E	The Profile Name is a required field. Please enter a unique name

Explanation:
When creating a new profile, the Profile Name field was left blank.

User response:
Enter a unique profile name in the Profile Name field.

DAJM049E	Invalid value. Enter a "U" to allow other users to Update your profile, a "V" to allow other users to just View your profile or "N" to disallow other users from viewing or updating your profile

Explanation:
When creating a new profile, an invalid value was entered in the Update Option field.

User response:

Correct the value as described in the message text.

DAJM050E	Profile "*profile_creator.profile_name*" already exists in Db2 SSID *subsystem_ID*. Please enter a unique profile name and press Enter

Explanation:
When creating a new profile, a profile name was used that duplicates another profile name created by the same user ID.

User response:
Enter a unique profile name and press Enter.

DAJM051E	Invalid Value - Please enter a "Y" if you would like to delete profile "*profile_creator.profile_name*"or an "N" if you do not want to delete it

Explanation:
An invalid value was entered in the Delete field.

User response:
Enter a valid value as described in the message text.

DAJM052I	Profile "*profile_creator.profile_name*" has been successfully deleted

Explanation:
The profile named in the message text was successfully deleted.

User response:
No action is required.

DAJM053I	Object already exists

Explanation:
The selected object already has been included in the profile.

User response:
No action is required.

DAJM054E	Invalid value. Please enter a "Y" if you would like to add objects profiles to this jobs profile or enter an "N" if you do not want to add objects profiles to this jobs profile

Explanation:
An invalid value was entered in the Add Objects Profile field.

User response:
Enter a valid value as described in the message text.

DAJM055E	Invalid value. Please enter a "Y" if you would like to add utilities profiles to this jobs profile or enter an "N" if you do not want to add utilities profiles to this jobs profile

An invalid value was entered in the Add Utilities Profile field.

User response:
Enter a valid value as described in the message text.

DAJM056E	Invalid value. The only valid values are "Y" and "N".

Explanation:
An invalid value was entered in a field that only accepts Y or N.

User response:
Enter a valid value as described in the message text.

DAJM057E	Invalid value. The only valid values are "A", "D", "U", or "V"

Explanation:
An invalid value was entered.

User response:
Enter a valid value as described in the message text.

DAJM058E	Invalid value. Please enter a "Y" if you would like to add exception profiles to this jobs profile or enter an "N" if you do not want to add exception profiles to this jobs profile

Explanation:
An invalid value was entered in the Add Exceptions Profile field.

User response:
Enter a valid value as described in the message text.

DAJM059E	Invalid value. Please indicate the order you would like the profile processed during job generation. This field must be numeric and unique from any other node of its type

Explanation:
An invalid value was entered in the Order column.

User response:
Enter a numeric value for the job step order in which the profile will be included.

DAJM060E	Invalid line command entered

Explanation:
An invalid value was entered in the line command area.

User response:
Enter one of the valid line commands listed on the panel.

DAJM061I	Object queue has been modified

Explanation:

The object you selected has been included in or deleted from the object queue, depending on what you specified.

User response:
No action is required.

DAJM062E	The online options can only be modified when the "Online Reorg" setting is set to "Y".

Explanation:
The online REORG options were selected to be updated but the online REORG has not been specified for inclusion in the profile.

User response:
Type Y in the Include field next to the online REORG option, then type Y in the Update field for online REORG to update the options.

DAJM063E	The valid values are "C"hange, "R"eference, and "N"one.

Explanation:
An invalid value was entered in the Sharelevel field.

User response:
Enter a valid value as described in the message text.

DAJM064E	The options can not be altered if they are not first selected

Explanation:
You specified to update utility options, but the utility has not yet been selected for inclusion in the profile.

User response:
Type Y in the Include field next to the utility, then type Y in the Update field for the utility to update the options.

DAJM065E	This field cannot be left blank

Explanation:
A field has been left blank that must be completed.

User response:
The cursor is positioned at the field that must be completed. Fill in the field and press Enter.

DAJM066E	The valid values for MaxRO are "DEFER" or a number.

Explanation:
An invalid value was entered for the MaxRO field.

User response:
Enter a valid value as specified in the message text.

DAJM067E	The valid values for Drain are "W"riters, "A"ll, or "N"o.

Explanation:
An invalid value was entered for the Drain field.

User response:

Enter a valid value as described in the message text.

DAJM068E	The valid values for Long Log are "C"ontinue, "T"erm, and "D"rain.

Explanation:
An invalid value was entered for the Long Log field.

User response:
Enter a valid value as described in the message text.

DAJM069E	This field must contain a number.

Explanation:
A non-numeric value was entered in a field that requires a number.

User response:
Enter a valid numeric value.

DAJM070E	The only valid values for timeout are "A"bend, "T"erm, or "N"o.

Explanation:
An invalid value was entered in the Timeout field.

User response:
Enter a valid value as specified in the message text.

DAJM071E	Unknown command

Explanation:
An invalid command was entered.

User response:
Correct the command or clear the Option line.

DAJM072E	Invalid value. Please enter an "S" to select a column, a "D" to deselect and delete exception data, an "R" to repeat an exception condition, an "A" to select a column as an "A"nd condition, or an "O" to select a column as an "O"r condition.

Explanation:
An invalid line command was entered on the Update Exceptions Profile Display.

User response:
Enter a valid value as specified in the message text.

DAJM073E	Invalid condition. Valid values are "<" "LT" "<=" "LE" "=" "EQ" ">" "GT" ">=" "GE " "^=" "NE" "<>"

Explanation:
An invalid condition was entered for a column on the Update Exceptions Profile Display.

User response:
Enter a valid value as specified in the message text.

DAJM074E	Invalid value - Please enter an "O" to generate the job online via your

ISPF session or "B" to build the job in batch

Explanation:
An invalid value was entered in the Build Online or Batch field.

User response:
Enter a valid value as specified in the message text.

DAJM075E	Invalid value. Please enter a "Y" if you would like to edit the generated JCL after the job has been built

Explanation:
An invalid value was entered in the Edit Generated Job field.

User response:
Enter a valid value as specified in the message text.

DAJM076E	Enter required field. A fully qualified data set name is required to save the generated JCL

Explanation:
The data set name is missing from the Build Job in Data Set field.

User response:
Enter a fully qualified data set name in the Build job in Data Set field to hold the generated JCL.

DAJM077E	Data set not found. Data set *data_set_name* was not found in the MVS catalog. Please enter a valid data set that is cataloged.

Explanation:
The data set name entered in the Build Job in Data Set field does not exist.

User response:
Enter an existing cataloged data set name in the Build Job in Data Set field.

DAJM078E	A problem was encountered in allocating the files necessary for ISPF file tailoring. Please try again.

Explanation:
An error occurred when dynamically allocating the ISPF work files ISPFILE, ISPWRK1, or ISPWRK2.

User response:
Retry the operation. Contact IBM Software Support if the problem persists.

DAJM079W	Please enter a condition and an exception value. To deselect an item, enter a "D" in the "S" field.

Explanation:

A table was selected on the Update Exceptions Profile Display, but you must also enter conditions and exceptions for the table.

User response:
Enter a condition and exception value for the selected table. Consult the bottom of the screen for valid condition values. Scroll right to see information about exception values.

DAJM080E	A condition or exception value was specified without the other. Both a condition and an exception value must be specified.

Explanation:
You specified either a condition without an exception value or an exception value without a corresponding condition.

User response:
Enter both a condition and an exception value for the selected column. Consult the bottom of the screen for valid condition values. Scroll right to see information about exception values.

DAJM081E	A floating point number in the form of "3.17E+05" or "317000" must be entered.

Explanation:
The exception value was entered incorrectly.

User response:
Enter the exception value as a floating point decimal as described in the message text.

DAJM082E	The only valid values for the deadline parameter are "N"one, "T"imestamp, and "L"abeled duration expression.

Explanation:
An invalid value was entered for the Deadline parameter.

User response:
Enter a valid value as specified in the message text.

DAJM083E	If the Deadline value is "None", the timestamp and labeled duration fields must be blank.

Explanation:
The Deadline field contains N for none. Timestamp and Labeled Duration Expression fields are invalid if no deadline is specified.

User response:
Remove the values from the specified fields.

DAJM084E	The valid values for the Unload field are "C"ontinue, "P"ause, "O"nly, and "E"xternal.

Explanation:
An invalid value was entered in the Unload field.

User response:
Enter a valid value as specified in the message text.

DAJM085I   **Option is currently unavailable**

Explanation:
The selected Shared Profile option is not currently available.

User response:
No action is required.

DAJM086E   **The specified qualifier code is not a supported value**

Explanation:
An invalid qualifier code was entered for the image copy data set name.

User response:
Change the qualifier code to one of the available codes listed on the screen.

DAJM087E   **Invalid hexadecimal value. Valid values are 0123456789ABCDEF.**

Explanation:
An invalid hexadecimal value was entered for the exception value.

User response:
Enter a valid hexadecimal value using the hex characters listed in the message text.

DAJM088W   **Truncation has occurred in building the data set qualifier**

Explanation:
The data set name for the image copy is too long as constructed.

User response:
Shorten the data set name by using less or shorter qualifiers.

DAJM089W   **The symbolic data set name generation field is full**

Explanation:
The symbolic input area is out of space. The maximum number of characters allowed is 159.

User response:
Reduce the number or type of symbolics in the generated data set name.

DAJM090I   **Profile "*profile_creator.profile_name*" saved**

Explanation:
The profile named in the message was successfully saved.

User response:
No action is required.

DAJM091E   **Invalid value. Please enter an "A" to AND conditions or an "O" to OR conditions together when doing exception processing.**

Explanation:
An invalid value was entered in the Conditions To Be field.

User response:
Enter a valid value as specified in the message text.

DAJM092E   **Invalid value. Please enter an "R" to use statistics from the Shared Profile Support Repository, and "C" to use statistics from the Db2 Catalog, or an "S" to use statistics from a Db2 Shadow Catalog.**

Explanation:
An invalid value was entered in the Use Stats From field.

User response:
Enter a valid value as specified in the message text.

DAJM093E   **Sharelevel has valid values of "R"eference, and "C"hange**

Explanation:
An invalid value was entered in the Sharelevel field.

User response:
Enter a valid value as specified in the message text.

DAJM095I   **DEBUG command processed**

Explanation:
This message appears after issuing a DEBUG ON|OFF command. Some screens allow this command, but the DEBUG mode should only be used under the direction of IBM Software Support.

User response:
No action is required.

DAJM097E   **Object profile contains no objects to view**

Explanation:
The object profile you selected to view does not contain any objects to view.

User response:
Select a different profile for viewing.

DAJM098E   **The entered device type is not recognized by OS/390® as a valid device type**

Explanation:
An invalid device type was entered in the Unit Type field.

User response:
Enter a valid device type or CART for tape devices.

DAJM099E   **When using disk type devices, expiration date and retention period are not valid**

Explanation:
A value was entered in the Expiration date or Retention period fields, when a disk type device was specified for the image copy. These fields are mutually exclusive.

User response:
Clear the Expiration date and Retention period fields, or change the Unit Type field to CART.

DAJM104E   **Both components of an LDE modifier are required.**

Explanation:
You must specify both the value and a value modifier for the labeled duration expression.

User response:
Enter the missing value or value modifier (+ or -).

DAJM133E   **The data set could not be allocated**

Explanation:
The dynamic allocation of the specified data set failed.

User response:
Verify that the data set exists and is available for allocation.

DAJM134E   **The member name is not allowed on a non-partitioned data set**

Explanation:
A member name was included for the specified data set, but the data set is sequential, not a PDS.

User response:
Remove the member name or use a PDS.

DAJM135E   **The *data set_name (member_name)* | *data_set_name* name selected for the generated job cannot be the same as the one used for the generation job (which was specified in the data set shown at the text at the beginning of this window).**

Explanation:
The same data set name, or the same member name in a partitioned data set, was specified for the batch job to generate the JCL as was specified for the generated JCL. These two cannot be the same.

User response:
Change one of the data set names or member names.

DAJM136E   **Invalid date. Enter a valid date in the form of MM/DD/YYYY.**

Valid ranges are 01/01/1901 to 12/31/2041

Explanation:
An invalid date was entered.

User response:
Enter a valid date as specified in the message text.

DAJM137E   **Invalid time. Valid ranges are 00:00:00 to 23:59:59. Enter a valid time in the form of HH:MM:SS. Valid ranges are 00:00:00 to 23:59:59**

Explanation:
An invalid time was entered.

User response:
Enter a valid time as specified in the message text.

DAJM138E   **Invalid Date/Time. Enter a starting date/time combination that does not exceed the ending date and time**

Explanation:
The date and time entered in the From dates are later than the date and time entered in the To dates.

User response:
Enter a valid starting date in the Date From and Time From fields.

DAJM143I   **Job *job_name job_number* has been successfully deleted**

Explanation:
The job listed in the message has been successfully deleted from the execution reports.

User response:
No action is required.

DAJM144E   **This field can be blank or a number in the range of 1 to 100**

Explanation:
An invalid value was entered in the NUMCOLS or NUMQUANTILES field.

User response:
Enter a valid value as specified in the message text.

DAJM147E   **This percentage field has a valid range of *range***

Explanation:
An invalid value was entered in a percentage field.

User response:
Enter a valid value as specified in the message text.

DAJM152I   **Import/export successful**

Explanation:

The import or export of the selected profile was successful.

User response:
No action is required.

DAJM155W	Export successful, but since the Db2 version is different than the source version, some exceptions may be missing

Explanation:
The exceptions profile was successfully exported to a Db2 subsystem that is a different version than the source. Because some exceptions are Db2 version dependent, they may not appear in the exported profile.

User response:
When imported, check the exception profile carefully to ensure the desired results.

DAJM157E	Profile "*profile_creator.profile.name*" already exists in Db2 SSID *subsystem_ID*. Please enter a "Y" to replace the existing profile

Explanation:
The profile you selected for export already exists on the selected subsystem.

User response:
Type Y to replace the profile, or type N to cancel the export.

DAJM158E	*profile_type* Profile "*profile_creator.profile_name*" does not exist. The profile was deleted after the jobs profile was created. Either delete the *profile_type* profile from the jobs profile or recreate it

Explanation:
The profile you selected to view or update from the Update Jobs Profile screen has been deleted since the selected job profile was created.

User response:
Either recreate the object, utility, or exceptions profile, or delete the named profile from the job profile.

DAJM159E	Data set must have a LRECL of 4096

Explanation:
The data set that you are exporting the profile to must have been defined with an LRECL of 4096.

User response:
Either recreate the data set with the proper LRECL, or delete it and allow Db2 Automation Expert to create it for you by typing Y in the Create Export Data Set field.

DAJM160E	JOBS Profile *profile_creator.profile_name* does not exist on Db2 SSID *ssid*. Execution terminated

Explanation:
The job profile you are trying to build has been renamed or deleted.

User response:
Check for the presence of the profile. Recreate or rename the profile if necessary.

DAJM165E	Enter required field. A fully qualified data set name is required.

Explanation:
A fully qualified data set name was not specified in the **Output DSN** field.

User response:
Enter a fully qualified data set name in the **Output DSN** field.

DAJM169W	No objects were triggered for exception processing

Explanation:
When building a job online, none of the objects in the specified object profile met the exception processing criteria. Therefore, no job is built.

User response:
If you feel this message was received in error, examine the profiles to ensure accuracy.

DAJM172E	The import file does not contain an object profile

Explanation:
The source data set you are importing from does not contain an object profile.

User response:
Check the data set name from which you are importing. Check the contents of the data set. Before importing, re-export the desired object profile if necessary.

DAJM174E	The import file does not contain a utility profile

Explanation:
The source data set you are importing from does not contain a utility profile.

User response:
Check the data set name from which you are importing. Check the contents of the data set. Before importing, re-export the desired utility profile if necessary.

DAJM175E	The import file does not contain an exception profile

Explanation:
The source data set you are importing from does not contain an exception profile.

User response:
Check the data set name from which you are importing. Check the contents of the data set. Before importing, re-export the desired exception profile if necessary.

DAJM176E	Invalid GDG limit parameter - Valid values are 1 - 255	999. Please enter a zero if you do not want to automatically define a GDG base or a valid value from 1 to 255	999 of the nbr of generations you would like to keep

Explanation:
An invalid value was entered for the Automatically Gen GDG Base field.

User response:
Enter a valid value as specified in the message text. The upper limit of the range is 255 for z/OS 2.1 and earlier, and 999 for z/OS 2.2 and later.

DAJM177E	Invalid Nbr of Jobs Parameter - Please enter a valid nbr between 0 and 999 of the nbr of jobs you would like Shared Profile Support to generate for this profile

Explanation:
An invalid value was entered for the Maximum nbr of jobs field.

User response:
Enter a valid value as specified in the message text.

DAJM178E	Invalid Nbr of Objects per Job. Please enter a valid nbr between 0 and 9999 of the maximum nbr of objects you would like in each job. Enter 9999 if you want all objects included in a single job

Explanation:
An invalid value was entered for the Maximum nbr of objects per job field.

User response:
Enter a valid value as described in the message text.

DAJM179E	Invalid Load Balance Jobs parameter. Please enter a "T" if you would like to balance multiple jobs by previous run times, a "D" if you would like to balance by DASD tracks or "N" for no load balancing necessary

Explanation:

An invalid value was entered for the Load Balance jobs by field.

User response:
Enter a valid value as specified in the message text.

DAJM180E	Invalid Capture Run Times parameter. Please enter a "Y" if you would like Shared Profile Support to compute the run times for each object of each utility executed or enter an "N" to bypass capturing runtime statistics. These run times will be used for future load balancing by time

Explanation:
An invalid value was entered for the Capture run times for Load Balancing field.

User response:
Enter a valid value as specified in the message text.

DAJM181E	Invalid Utility Mode parameter. Please enter a "Y" if you would like the spaces started in UT mode before running utilities or "N" to leave the spaces in the status they are currently in

Explanation:
An invalid value was entered for the Process spaces in utility (UT) mode field.

User response:
Enter a valid value as specified in the message text.

DAJM184E	Member does not exist in the partitioned data set

Explanation:
A partitioned data set and member name were specified, but the member does not exist.

User response:
Correct the member name.

DAJM185E	Data set could not be created, because it already exists

Explanation:
A data set name was specified for creation, but the data set already exists.

User response:
Choose a different data set name, or use the existing data set but enter N in the Create Export Data Set field.

DAJM187E	You are not authorized to enter any line commands for this profile. The creator of the profile is restricting all activity

Explanation:

The creator of the selected profile specified that no other user is to view, update, or export the selected profile.

User response:
Choose a different profile to work with.

DAJM190I	Profile *"profile_creator.profile_name"* has been successfully deleted (removed) from the jobs profile

Explanation:
The selected object, utility, or exception profile was deleted from the job profile.

User response:
No action is required.

DAJM191I	The underlying VSAM data set not found for table space

Explanation:
The data set for the selected table space was not found.

User response:
Check for the existence of the VSAM data set. It may have been deleted outside of Db2.

DAJM193E	Member name not allowed when Jobs option Set Member to Jobname has been turned on

Explanation:
On the Generation Job Options screen, the Set JCL member equal to jobname field was set to Y.

User response:
Do not specify a member name in the Build Job in Data Set member field. The member name is generated from the job name.

DAJM195E	Invalid value - Please enter a "T" to override character with object type, "O" to override with the object name, "#" to increment with numerics, " to increment with alphanumerics, "P" to override with partition number, or "D" to override with the database name

Explanation:
An invalid value was entered in the job template override byte.

User response:
Enter a valid value as specified in the message text.

DAJM196E	Combination not allowed - The number of jobs and number of objects per job are both zero. One of these fields must be zero and the other field greater than zero

Explanation:
You must enter a non-zero value in either the Maximum nbr of jobs field or the Maximum nbr of objects per job field.

User response:
Enter a valid value in one field and 0 in the other field.

DAJM197E	Combination not allowed - You have entered both Number of Jobs and Number of objects per job. One of these fields must be zero and the other field greater than zero

Explanation:
You must enter a zero value in either the Maximum nbr of jobs field or the Maximum nbr of objects per job field and a valid value in the other.

User response:
Enter a valid value in one field and 0 in the other field.

DAJM198E	Invalid value - Enter a "Y" if you would like the JCL generated to be saved in the PDS with the member name equal to the job name or enter an "N" and the JCL will be generated to the member name you supply.

Explanation:
An invalid value was entered for the Set JCL member equal to jobname field.

User response:
Enter a valid value as specified in the message text.

DAJM199E	Invalid value - Enter a "Y" to generate the job when errors are encountered in building the job, an "N" to bypass job generation when errors, or "W" to allow job generation when warnings are found

Explanation:
An invalid value was entered for the Generate Job when Errors encountered field.

User response:
Enter a valid value as specified in the message text.

DAJM200E	Input required. When requesting space reallocation, one of the two available trigger fields (extents in space or percentage used) must be entered.

Explanation:
You must specify one of the two available trigger fields (extents in space or percentage used).

User response:

Specify extents in space or percentage used.

| DAJM201W | There are unentered fields on the Space Reallocation screen that are required for processing. Because of this, the Space reallocation option on the main options screen has been set to "N". |

Explanation:
You must fill in the empty fields or the space reallocation option is automatically set to N.

User response:
Specify all required fields or leave the space reallocation option set to N.

| DAJM202W | All of the Image Copy Options (for the LP, LB, RP, and RB image copies) have been set to "N"o. Because of this, the Copy Options field on the Reorg options screen has been set to a "N". |

Explanation:
At least one of the image copy options (for LP, LB, RP or RB image copies) must be set to Y if copy options is to be set to Y on the Reorg options screen.

User response:
Set at least one of the image copy options (for LP, LB, RP or RB image copies) to Y if you want to specify Y in the copy options field on the Reorg options screen.

| DAJM203W | All of the Image copy options (for the LP, LB, RP, and RB image copies) have been set to "N"o. Because of this, the Image Copy field on the main utility screen has been set to a "N" |

Explanation:
An image copy was specified to be included in the profile, but the image copy type has not been selected. The Image Copy option Include field was set to N.

User response:
If you want to include an image copy in the profile, select one or more image copy types and set their associated options on the Image Copy Options screen.

| DAJM205E | Orphaned utility profile *profile_creator.profile_name* is not valid in this job profile. Build terminated. |

Explanation:
The utility profile that is listed in the message has no objects to act upon. The utility profile must be associated with objects that were either accepted or rejected using an exception profile.

User response:

Update the job group and add an exception profile that is associated with this utility profile, and rebuild the job profile.

| DAJM206I | *device_type* device *device_name* saved. |

Explanation:
The device name *device_name* has been successfully added to the device table as a *device_type* device.

User response:
No action is required.

| DAJM207E | If the Utility Work Dataset High Level is not filled in, the Utility Work Dataset Second Qualifier cannot be specified |

Explanation:
A value was entered for the utility work data set second qualifier, but no value is entered for the utility work data set high-level qualifier. If the utility work data set high-level qualifier is not supplied, utilities that require work data sets are built with temporary data sets, and the value of the utility work data set second-level qualifier is not used.

User response:
Enter a value in both the Utility work dataset high level field and the Utility work dataset second qualifier field, or remove the value from both fields.

| DAJM208I | *command* request canceled. |

Explanation:
The request that is listed in the message was canceled.

User response:
No action is required.

| DAJM225W | There are no spaces that meet the wildcard selection criteria. Press Enter to accept the wildcard anyway or change the selection criteria. |

Explanation:
The wild card field was specified, but Db2 Automation Expert could not find any spaces that meet your selection criteria.

User response:
Press Enter to accept the wild card as is, or change your selection criteria.

| DAJM230E | The Export output data set does not exist. Specify the Create option to create a new data set, or specify one that exists |

Explanation:

When exporting a profile to a data set, the Create Export Data Set field was set to N, but the data set specified in the Data Set Name field does not exist.

User response:
Enter Y in the Create Export Data Set field to create a new data set, or specify an existing data set.

DAJM231E	The export data set contains a jobs profile. An exported jobs profile cannot be imported into a non-jobs profile

Explanation:
The profile you are attempting to import from a data set is a job profile. You can only import a job profile from the Jobs Profile Display.

User response:
Access the Jobs Profile Display and import the jobs profile from the data set.

DAJM232E	Objects profile *profile_creator.profile_name* has been previously selected in this jobs profile, but has since been deleted from this subsystem. Job Build Process has been terminated

Explanation:
The listed object profile has been deleted from the subsystem, so the job cannot be built.

User response:
Follow the instructions in the message text to delete and/or recreate the object profile.

DAJM233E	Utility Profile *profile_creator.profile_name* has been previously selected in this jobs profile, but has since been deleted from this subsystem. Job Build Process has been terminated

Explanation:
The listed utility profile has been deleted from the subsystem, so the job cannot be built.

User response:
Follow the instructions in the message text to delete and/or recreate the utility profile.

DAJM234E	Exceptions Profile *profile_creator.profile_name* has been previously selected in this jobs profile, but has since been deleted from this subsystem. Job Build Process has been terminated

Explanation:
The listed exception profile has been deleted from the subsystem, so the job cannot be built.

User response:

Follow the instructions in the message text to delete and/or recreate the exception profile.

DAJM236E	Only (A)LL or (P)art are valid explode options

Explanation:
An invalid value was entered in the Explode field.

User response:
Enter A to run utilities against all partitions. Enter P to run utilities against each partition individually.

DAJM237I	Profile *profile_creator.profile_name* has been successfully added to your jobs profile

Explanation:
The selected object, utility, or exception profile has been added to the job profile.

User response:
No action is required.

DAJM238E	You are not authorized to update, view, or use profile profile_creator.profile_name

Explanation:
The profile you selected was created with limited access. If you are not the profile creator, you may not view, update, or use this profile.

User response:
If you are the profile creator, you can change the Share option by updating the profile.

DAJM240E	Invalid value - Enter a "Y" to view the messages from building this profile or "N" to bypass viewing the messages

Explanation:
An invalid value was entered when viewing the messages summary window for the job build.

User response:
Enter a valid value as specified in the message text.

DAJM241E	Invalid value - Enter a "Y" to continue building the job or "N" to exit the building of this profile

Explanation:
An invalid value was entered when viewing the Continue Building jobname window for the job build.

User response:
Enter a valid value as specified in the message text.

DAJM242I	Building of jobs profile *profile_creator.profile_name* has been canceled

Explanation:
The job build has been canceled.

User response:
No action is required.

DAJM243I	Editing of directory spaces not supported

Explanation:
An edit command was entered for a Db2 directory table space. This command is not supported for these spaces.

User response:
No action is required.

DAJM245E	An error was encountered attempting to execute DAJ$TSOC

Explanation:
An error occurred while executing the listed program.

User response:
Ensure that the CLIST installation instructions and the DAJ$TSOC authorization instructions for SYS1.PARMLIB were followed. Contact IBM Software Support if necessary.

DAJM246E	Load library not APF authorized - APF authorization required

Explanation:
The DAJMhilvl.SDAJMLOAD library must be APF authorized.

User response
This message is issued if you have not APF authorized the DAJM load library. This message is also issued if the DAJ$TSOC program is not added to the AUTHPGM and AUTHTSF sections of member IKJTSO00 in SYS1.PARMLIB. Refer to IBM z/OS documentation to access the z/OS MVS Initialization and Tuning Reference for your version of z/OS.

Note: Changes you make to SYS1.PARMLIB require an IPL for the PARMLIB updates to take effect.

DAJM247E	Subsystem ID could not be found in the operating system

Explanation:
A symbolic data set name calls for the subsystem ID, but the subsystem ID could not be found to resolve the data set name.

User response:
Contact IBM Software Support.

DAJM248E	A critical error has occurred attempting to resolve the subsystem RC=return_code

Explanation:
A symbolic data set name calls for the subsystem ID, but the subsystem ID could not be found to resolve the data set name.

User response:
Contact IBM Software Support.

DAJM249E	Invalid data set node detected length greater than 8 characters

Explanation:
The substring entered caused a data set node to be greater than eight characters.

User response:
Shorten the substring to less than eight characters.

DAJM250E	Invalid data set node detected - first character not alphabetic or national

Explanation:
The first character of the entered substring resolved to an invalid character. Data set nodes must begin with alphabetic or national characters.

User response:
Change the starting character to a valid character.

DAJM251E	Invalid data set node detected - 2 consecutive periods

Explanation:
The qualifier string contains two consecutive periods as resolved. Data set names cannot contain two consecutive periods.

User response:
Change the qualifier string so that two periods do not appear consecutively.

DAJM252W	Data set truncation may occur

Explanation:
When resolved, the data set name may be too long. The maximum number of characters allowed for data set names is 44.

User response:
Shorten the data set name so it resolves to less than 44 characters.

DAJM253E	Invalid characters detected in data set node

Explanation:
An invalid character was entered into a data set node. The first character must be alphabetic or national and the remaining seven characters must be alphabetic, numeric, national, or a hyphen.

User response:
Correct the data set name.

DAJM254E	Invalid ending period detected

Explanation:
The data set name as resolved contains a period as the last character, which is invalid.

User response:

Correct the data set name.

DAJM255E	Invalid data set node detected after a GDG

Explanation:
If used, the GDG substring must be the last node in the symbolic data set name.

User response:
Ensure the GDG is the last node in the data set name.

DAJM256E	Invalid value. Enter a "Y" to set the options for utilities to generate Templates, Listdefs or Option keywords or "N" to bypass updating utility options

Explanation:
An invalid value was entered in the Update Template/Listdef/Option parms field.

User response:
Enter a valid value as described in the message text.

DAJM257E	Duplicate Entry. Change the Object Database, Object Name, or Object Type fields

Explanation:
Duplicate object prioritization entries are not allowed.

User response:
Enter a unique value in the Object Database, Object Name, or Object Type fields.

DAJM258E	Invalid member name. Only A-Z, 0-9, @, #, and $ are valid; First character must be A-Z, @, #, or $

Explanation:
An invalid partitioned data set member name was entered.

User response:
Enter a valid member name as specified in the message text.

DAJM259W	If the utility work data set high level is not filled in, your utilities requiring work data sets will be built with temporary data sets. Using temp work data sets in utilities will eliminate the utility from being restarted

Explanation:
The utility work data set high level qualifier field was left blank, so temporary data sets will be used for work data sets. Utilities cannot be restarted if temporary data sets are used for work data sets.

User response:
If you want to restart utilities in the event of job failure, enter a work data set high level qualifier.

DAJM262E	Jobs Profile *profile_creator.profile_name* on Db2 SSID *ssid* is empty and does not contain any exception, object, or utility profiles

Explanation:
An attempt was made to build a job profile that is empty.

User response:
Cancel the job build. Update the profile to add the appropriate object, utility, and/or exception profiles.

DAJM263E	Invalid starting position entered. Enter a numeric value for the starting position in the symbolic to substring

Explanation:
An invalid value was entered in the Enter Starting Position field.

User response:
Enter a valid numeric as specified in the message text.

DAJM264E	Invalid substring length entered. Enter a numeric value greater than 1 to substring the symbolic

Explanation:
An invalid value was entered in the Enter Substring Length field.

User response:
Enter a valid numeric as specified in the message text.

DAJM265E	Invalid substring starting position entered. Enter a starting position that is within the range of generated symbolic

Explanation:
An invalid value was entered for the starting position of the substring.

User response:
Enter a valid numeric as specified in the message text.

DAJM266E	Invalid substring length. Length exceeds end of data. Enter a length where the starting position plus length are less than or equal to the maximum length of data

Explanation:
An invalid length was entered for the selected qualifier in the substring. The length is longer than the longest possible value for the substring.

User response:
Enter a valid length as specified in the message text.

DAJM267W **No profiles were found that match your selection criteria. Only recent profiles are displayed.**

Explanation:
No profiles match your selection criteria. Only recent profiles are displayed.

User response:
Enter the C line command to create a new profile, or change your selection criteria to get a different list.

DAJM277E **Varchar column has a length of zero and cannot be viewed**

Explanation:
A VARCHAR column was selected for editing, but the column length is 0. There is no data to view.

User response:
Select a different column for editing.

DAJM278I **Varchar column has a length of zero and cannot be viewed**

Explanation:
While processing the UPDATE FIRST VOLUME request, some stogroup defined target data sets were located with target stogroups that are SMS managed. First volume update processing was bypassed for all applicable data sets.

User response:
Do not specify volume information for stogroup defined data sets when the stogroup is SMS managed.

DAJM280I **Unable to display another product's utility profile**

Explanation:
You attempted to view or update a utility profile that was created in a Db2 Tool other than the product you are using. This is not allowed.

User response:
No action is required.

DAJM281E **No table spaces found on volume**

Explanation:
No Db2 table spaces reside on the selected volume.

User response:
Select another volume to view.

DAJM282E **Invalid value - The only valid values are "A", "T", or "I"**

Explanation:
For a volume object selection, you can specify to process all objects, table spaces only, or index spaces only.

User response:
Enter a valid value as listed in the message text.

DAJM283E **Invalid value - Enter a "J" if you would like to prefix the utility ID with the jobname, an "S" if you would like to prefix the utility ID with the stepname, a "B" if you would like to prefix the utility ID with jobname.stepname or "N" for no prefix**

Explanation:
An invalid value was entered in the Prefix Utility ID with jobname field.

User response:
Enter a valid value as listed in the message text.

DAJM284E **Required field - Please enter a profile creator**

Explanation:
When renaming a profile, the new profile creator was not specified.

User response:
Enter the new profile creator in the Creator field.

DAJM285E **Required field - Please enter a profile name**

Explanation:
When renaming a profile, the new profile name was not specified.

User response:
Enter the new profile name in the Profile Name field.

DAJM286E **Duplicate profile - Please change the profile creator or profile name to make it unique**

Explanation:
When renaming the profile, the combination of profile name and profile creator entered is identical to another profile.

User response:
Enter a different profile creator or name to make the profile unique.

DAJM287I **Profile was successfully renamed**

Explanation:
The profile has been successfully renamed.

User response:
No action is required.

DAJM288E **New profile already exists for profile type** *profile_type*. **Please enter a unique profile name and press Enter**

Explanation:

When renaming the profile, the combination of profile name and profile creator entered is identical to another profile.

User response:
Enter a different profile creator or name to make the profile unique.

DAJM289E	Invalid value - Enter an "A" to have all exception profiles processed as ONE big exception profile, i.e., all exception conditions are merged together into one unit, or an "O" to have multiple exception profiles processed one at a time, i.e., on an individual basis. Press Help for more information

Explanation:
The Evaluate Multiple Exception Profiles field contains an invalid value. When there is more than one exception profile in a jobs profile, the exception profiles can be evaluated and processed differently based on this value.

User response:
Enter a valid value as specified in the message text. Press PF1 for an explanation of the evaluation process.

DAJM290E	Invalid value - Enter a "D" to delete job data, "S" to select step data, or "O" to select object data

Explanation:
An invalid line command was entered next to a job name on the Execution Reports Job Display.

User response:
Enter a valid value as specified in the message text.

DAJM291E	Invalid value - Enter a "J" to display job level data or "O" to display object level data

Explanation:
An invalid value was entered in the View Type field.

User response:
Enter a valid value as specified in the message text.

DAJM292E	Invalid value - Enter a "S" to display job related data for the selected object

Explanation:
An invalid line command was entered next to an object on the Execution Reports Object Display.

User response:
Enter a valid value as specified in the message text.

DAJM293E	Invalid value - Enter a "I" to limit the display to indices, "T" to limit

the display to table spaces or "A" for no filtering of object data

Explanation:
An invalid value was entered in the Space Type field.

User response:
Enter a valid value as specified in the message text.

DAJM294E	Invalid value - Enter a "Y" to recall migrated spaces

Explanation:
An invalid value was entered in the Recall Migrated Spaces field.

User response:
Enter a valid value as specified in the message text.

DAJM295E	Invalid value - Enter an "R" if you would like to Restart job or an "F" if you would like to Force this job completed and regenerate another job

Explanation:
An invalid value was entered in the Restart or Force Completion field.

User response:
Enter a valid value as listed in the message text.

DAJM296E	Invalid value - Enter a "Y" if you would like Db2 Shared Profile Support to submit the new job or "N" to bypass job submission

Explanation:
An invalid value was entered in the Submit Job field.

User response:
Enter a valid value as described in the message text.

DAJM297E	Invalid member name - You must specify a different member name when restarting the job in the same data set

Explanation:
When restarting a job, you cannot use the same data set and member name that was used for the original JCL.

User response:
Specify a different member name, or use a different data set to generate the JCL.

DAJM298E	Utility profile *profile_creator.profile_name* is included in this jobs profile but no longer exists. The job cannot be built. Update the jobs profile to either delete the utility profile from the jobs profile or create the utility profile

Explanation:
The listed utility profile has been deleted from the subsystem, so the job cannot be built.

User response:
Follow the instructions in the message text to delete and/or recreate the utility profile.

DAJM299I	Job *jobname*, *job_number* was successfully forced complete

Explanation:
The job listed in the message was successfully forced to completion.

User response:
No action is required.

DAJM300E	Option not allowed - The only valid option is "V" for View while you are in View mode

Explanation:
An invalid line command was entered next to a profile. When viewing job profiles, you can only view the associated object, utility, and exception profiles.

User response:
Enter V to view the object, utility, or exception profile.

DAJM301E	Invalid value - Enter a "Y" to terminate the existing Db2 utility ID or "N" to have the utility restarted where it left off

Explanation:
An invalid value was entered in the Terminate existing utility ID field.

User response:
Enter a valid value as described in the message text. If you are attempting to restart a utility, terminating the utility ID will not allow the utility to restart. Refer to IBM Db2 for z/OS documentation for information about the messages and codes for your version of Db2.

DAJM302E	Allocation failed - Dynamic allocation failed for the input build data set during restart processing

Explanation:
The data set containing the JCL for restart processing could not be allocated.

User response:
Ensure the data set exists and is available for use.

DAJM303E	Allocation failed - Dynamic allocation failed for the output build data set during restart processing

Explanation:
The data set specified to contain the output JCL for restart processing could not be allocated.

User response:
Ensure the data set exists and is available for use.

DAJM304E	Return code *return_code* reason code *reason_code* received from the Db2 command processor attempting to terminate the utility

Explanation:
An error was encountered when attempting to terminate a utility. The return and reason codes are provided in the message.

User response:
Refer to IBM Db2 for z/OS documentation for information about the messages and codes for your version of Db2. Contact IBM Software Support if additional assistance is required.

DAJM305E	An excluded object cannot be exploded

Explanation:
You entered the explode line command next to an object or objects that are being excluded from the profile. Excluded objects cannot be exploded.

User response:
To continue, clear the line command from the excluded object.

DAJM306E	Object already excluded

Explanation:
The object you selected to exclude from the object list has already been excluded.

User response:
To continue, clear the line command from the excluded object.

DAJM307E	No objects meet wildcard criteria

Explanation:
You entered the explode line command next to an object detail line that contains wildcard selection criteria. However, no objects exist on the Db2 subsystem that meet the wildcard criteria. The object or objects may have been dropped.

User response:
Press Enter to continue.

DAJM308E	No indexes found on volume

Explanation:
There are no indexes on the selected volume.

User response:
Enter a valid line command or select a different volume.

DAJM309E	Non hexadecimal value entered. All page changes discarded

Explanation:

Invalid data was entered on the selected page. That change and all page changes have been discarded.

User response:
Enter page changes in hexadecimal.

DAJM310E	**Invalid Value - Please enter the Maximum Primary Space Allocation quantity that you want Shared Profile Support Services to generate when generating utility JCL. This value must be numeric and be > 0 and <= 999999**

Explanation:
An invalid value was entered for the Max Primary Space Allocation field on the Setup panel or the Override Setup options panel.

User response:
Enter a valid value as described in the message text.

DAJM311E	**Invalid Value - Please enter either (C)ylinders, (T)racks, or (M)egabytes. This value represents the unit type of the maximum primary space, i.e., how many cylinders, tracks, or megabytes that you want Shared Profile Support Services to generate when generating utility JCL**

Explanation:
An invalid unit was entered for the maximum primary space allocation.

User response:
Enter one of the valid units listed in the message text.

DAJM312E	**Invalid Value - Please enter the REGION Size in megabytes that you want Shared Profile Support Services to generate when generating utility JCL. This value must be numeric and be >= 0 and <= 2047**

Explanation:
An invalid value was entered when specifying utility region size.

User response:
Enter one of the valid values listed in the message text.

DAJM313E	**Invalid Value - Please enter the number of subtasks, i.e., parallel processes, that you want Shared Profile Support Services to create when performing MVS catalog LOCATEs. This value must be numeric and be > 0 and <= 99**

Explanation:

An invalid value was entered when specifying the number of subtasks that can be initiated when performing parallel MVS catalog locates.

User response:
Enter one of the valid values listed in the message text.

DAJM314E	**Invalid Value - Please enter either (Y)es or (N)o. This value indicates whether you want Shared Profile Support Services to generate termination JCL for utilities if an abend occurs**

Explanation:
An invalid value was entered when specifying whether Shared Profile Support will terminate a utility upon abend.

User response:
Enter one of the valid values listed in the message text.

DAJM315E	**Invalid Value - Please enter the unit device (SYSDA, DISK, etc.) that you want Shared Profile Support Services to generate when generating SORT WORK file DDs**

Explanation:
An invalid value was entered when specifying the device for sort work files.

User response:
Enter one of the valid values listed in the message text.

DAJM316E	**Invalid Value - Please enter the primary space allocation quantity in cylinders that you want Shared Profile Support Services to generate when generating SORT WORK JCL. This value must be > 0 and <= 99999**

Explanation:
An invalid value was entered for the amount of primary space allocation for sort work JCL.

User response:
Enter one of the valid values listed in the message text.

DAJM317E	**Invalid Value - Please enter the secondary space allocation quantity in cylinders that you want Shared Profile Support Services to generate when generating SORT WORK JCL. This value must be numeric and be > 0 and <= 999999**

Explanation:
An invalid value was entered when specifying the amount of secondary space allocation for sort work JCL.

User response:
Enter one of the valid values listed in the message text.

DAJM318E	Invalid Value - Please enter the number of DDs that you want Shared Profile Support Services to generate when generating SORT WORK JCL. This value must be numeric and be > 0 and <= 99

Explanation:
An invalid value was entered for the number of DDs to be generated for sort work JCL.

User response:
Enter a valid value as listed in the message text.

DAJM319E	At least one of the Shared Profile Support Services Setup Parameters is missing or invalid for Db2 Subsystem *subsystem* Please review and update the Setup Parameters on the Option 3 Setup panel. Enter an "S" in the Option field of the Main panel, then "3" in the Command field of the following panel. Specify the appropriate value(s)

Explanation:
This message appears when attempting to use Db2 Automation Expert on a subsystem, but the Db2 Shared Profile Support setup parameters for this subsystem have not yet been configured.

User response:
Access the setup panel as described in the message text. Enter the subsystem ID to configure on the first screen, then choose option 3 to complete configuration.

DAJM320E	Invalid Update Setup Override Options parameter. Please enter a "Y" if would like to update the setup parameters for this job or an "N" to bypass updating the setup parameters for this job

Explanation:
An invalid value was entered in the Update Setup Override Options field.

User response:
Enter a valid value as listed in the message text.

DAJM321E	Invalid Value - Please enter the Unit Device (SYSDA, DISK, etc.) that you want Shared Profile Support Services to generate when generating utility JCL

Explanation:
A value was not entered for the work file unit devices.

User response:
Specify a valid unit device that Db2 Shared Profile Support can use when generating utility JCL.

DAJM322E	Invalid Value - Please enter the Db2 subsystem ID that you want Shared Profile Support Services to use when capturing job runtime statistics

Explanation:
An invalid job tracking subsystem ID was specified on the Override Setup Options screen.

User response:
Enter a valid job tracking subsystem name.

DAJM323E	Input member not found. The input build member is missing for the restart job

Explanation:
The output from the job profile you want to build previously ended in an abend. Re-startability was enabled, but the input member required for re-startability does not exist or has been deleted. Therefore, the job cannot be restarted.

User response:
Check for the existence of the data set and/or member where the job profile was last built. Contact IBM Software Support if assistance is required.

DAJM326E	Invalid Value - Please enter either (Y)es or (N)o. This value indicates whether you want Shared Profile Support Services to generate STEPLIB DDs when generating utility JCL

Explanation:
An invalid value was entered when specifying whether to generate STEPLIB DDs in the utility JCL.

User response:
Enter a valid value as specified in the message text. Note that if you specify N, the Db2 Automation Expert and Db2 Shared Profile Support libraries must be in your site's LINKLST data set.

DAJM327E	Invalid Value - Please enter either (Y)es or (N)o. This value indicates whether you want Shared Profile Support Services to generate Greenwich Mean Time (GMT) values rather than local time when generating utility JCL

Explanation:
An invalid value was entered when specifying whether to use GMT (Greenwich Mean Time) time format when generating image copy data set names.

User response:

Enter a valid value as listed in the message text.

DAJM328E   **Quotations are not accepted in the data set field. Please specify the fully qualified data set name without quotations**

Explanation:
An invalid value was entered when specifying the data set name. Quotations are not permitted in the data set name field.

User response:
Enter a fully qualified data set name without quotations.

DAJM329E   **Field Required - The data set entered is a partitioned data set and the member name is required**

Explanation:
An invalid value was entered when specifying the data set and member name. The specified data set is a PDS and the existing member name is required.

User response:
Enter the member name in the member field. The member name must already exist.

DAJM330E   **Parm not allowed. A secondary quantity can not be entered without a primary quantity**

Explanation:
You entered a secondary quantity without entering a primary quantity.

User response:
Enter a primary quantity to set or override, then specify the secondary quantity.

DAJM331E   **UNICODE/ASCII formatting not supported prior to Db2 V8**

Explanation:
Db2 Shared Profile Support only displays Unicode and ASCII characters on Db2 V8 or higher subsystems.

User response:
No action is required.

DAJM332E   **An error has occurred attempting to use Unicode conversion services Return Code=*return_code* Reason Code=*reason_code***

Explanation:
An error occurred during a call to Unicode Conversion Services. The return and reason codes are supplied in the message.

User response:
Ensure Unicode Conversion Services is installed at your site. Call IBM Software Support for additional assistance.

DAJM333E   **Invalid Value - Enter a "Y" if you would like TEMPLATES generated for image copy data sets or "N" to have image copy DDs generated**

Explanation:
An invalid value was entered when specifying whether to generate TEMPLATE syntax.

User response:
Enter a valid value as listed in the message text.

DAJM334E   **Invalid Value - Enter a "Y" if you would like LISTDEFs generated for object lists or "N" to have objects generated within a utility**

Explanation:
An invalid value was entered when specifying whether to generate utility control statements using LISTDEFS.

User response:
Enter a valid value as listed in the message text. If you want to use LISTDEFS, you must also specify Y in the Generate Templates field.

DAJM335E   **Invalid Value - Enter a "Y" if you would like to run the utility with the OPTIONS PREVIEW to bypass utility execution and check utility syntax**

Explanation:
An invalid value was entered when specifying PREVIEW mode. PREVIEW mode checks for syntax errors in all utility control statements, but normal utility execution does not take place.

User response:
Enter a valid value as listed in the message text.

DAJM336E   **Invalid Value - Enter a "Y" if you would like the utility to continue processing when errors are encountered or "N" to halt execution when errors are encountered**

Explanation:
An invalid value was specified when entering the Continue on Item Error field.

User response:
Enter a valid value as listed in the message text.

DAJM337E   **Invalid Value - Enter a "Y" if you would like the utility return code to zero when warnings are encountered or "N" to leave the return code to a 4 when warnings are encountered**

Explanation:

An invalid value was specified when entering the Return Code 0 on Warnings field.

User response:
Enter a valid value as listed in the message text. **CAUTION**: Specifying this option should generally be avoided. Warning messages should not generally be disregarded. Use this option only when RC 4 is expected, is acceptable, and other mechanisms are in place to validate the results of a utility execution.

DAJM338E	Option not Allowed - Utilities that Image Copy spaces require TEMPLATEs be used when generating LISTDEFs. Enter a "Y" for TEMPLATEs in order to generate LISTDEFs

Explanation:
You specified a Y in the Generate Listdefs field, but did not specify Y in the Generate Templates field.

User response:
If you want to use LISTDEFS, you must specify Y in the Generate Templates field. Otherwise, set the Generate Listdefs field to N.

DAJM339E	Table space *creator.tablespace* is not in a read/write status. Db2 Automation Expert cannot continue until this invalid status is resolved. Please resolve the problem with this space and try your request again

Explanation:
The table space listed in the message cannot be accessed because it is not in read/write status.

User response:
Attempt to resolve the status of the space and retry the request.

DAJM340E	The entire database *database* is not in a read/write status. Db2 Automation Expert can not continue until this invalid status is resolved. Please resolve the invalid status and try your request again

Explanation:
The Db2 Shared Profile Support DAJM database is not available because it is not in read/write status. Availability of the DAJM database is required for processing to continue.

User response:
Attempt to resolve the status of the space and retry the request.

DAJM341E	Invalid Value - Enter a "Y" to Use the DSNACCOR EXCEPT_TBL

when generating JCL for selected objects or "N" to not use the DSNACCOR EXCEPT_TBL

Explanation:
An invalid value was specified in the Use DSNACCOR Exception Table field.

User response:
Enter a valid value as listed in the message text.

DAJM342E	An invalid Return code of *return_code* Reason *reason_code* was encountered issuing -DISPLAY DATABASE(*database_name*) command to verify Shared Profile Services repository spaces are available

Explanation:
An error was encountered when attempting to verify the availability of the Db2 Shared Profile Support database.

User response:
Examine the return and reason codes provided in the message and attempt to correct the error. Contact IBM Software Support if assistance is required.

DAJM343E	User is not authorized to issue -DISPLAY DATABASE(*database_name*) to verify Shared Profile Services repository spaces are available

Explanation:
Your authorization ID has not been granted privileges to issue the DISPLAY DATABASE command for the listed database.

User response:
Check with your Db2 administration programmer to verify or obtain proper authority.

DAJM344E	Graphic data is currently not supported

Explanation:
The FORMAT command was entered, but the page contains graphic data. Graphic data cannot be displayed with the FORMAT command.

User response:
No action is required.

DAJM345W	User is not authorized to overwrite existing profile. You must change the profile creator or name

Explanation:
A profile already exists on this subsystem with a Share Option of V(iew). This profile cannot be overwritten.

User response:

Change the profile creator or the profile name to create a new copy of the profile.

DAJM346W   **Input data set is not a valid export data set**

Explanation:
The data set you entered is not a valid export data set.

User response:
Enter a valid export data set name that contains the profiles you want to import.

DAJM347I   **Profile could not be imported. You may Edit or Overwrite the profile or PF3 to cancel**

Explanation:
A duplicate profile exists on the subsystem. You must specify to edit the profile creator and/or name, or overwrite the existing profile with the imported profile.

User response:
Enter the "O" or "E" line commands as appropriate.

DAJM348I   **Overwrite command is only valid for duplicate profiles. Command ignored**

Explanation:
You entered the O line command next to a profile that is not a duplicate profile. Only duplicate profiles can be overwritten.

User response:
Clear the line command.

DAJM349E   **Unable to export profile(s). Press PF3 to cancel**

Explanation:
There was a severe error trying to export one or more of the profiles.

User response:
Contact IBM Software Support.

DAJM350E   **Command not allowed. Profile was not exported**

Explanation:
When exporting a job profile, there was a problem exporting one of the object, utility, or exception profiles contained in the job profile. During import, a line command was entered next to one of these profiles, but the profile cannot be imported.

User response:
Clear the line command from the profile.

DAJM351E   **Invalid data set/member/alias - the data set, member name, or Alias entered does not meet the MVS data set naming standards**

Explanation:

The data set, member name, or alias entered is not valid for MVS data set names. The first character must be capitalized alphabetic (A-Z,@,$,#) and the remaining characters must be capitalized alphanumeric (A-Z,0-9,@,$,#).

User response:
Correct the data set, member name, or alias.

DAJM352E   **Only 1 data set may be selected**

Explanation:
You selected multiple image copy data sets on the Recovery File Selection screen. However, you can only select one image copy data set at a time for recovery.

User response:
Select only one image copy data set for recovery.

DAJM353E   **Invalid data set DSORG - The file containing the jobcards must be a sequential file or a PDS/PDSE. VSAM and other data types are not supported for jobcard retrieval**

Explanation:
The data set organization of the file you entered is not supported for job card retrieval. The data set must be a QSAM sequential or partitioned data set.

User response:
If you want to retrieve the job card from a data set, use the specified data set type.

DAJM354E   **Export data set in use by another user**

Explanation:
The data set specified as the export data set is in use by another user.

User response:
You may wait for the data set to be released or specify a different data set.

DAJM355E   **The page number must be decimal digits or hex digits enclosed in single quotation marks**

Explanation:
The page number must be a 1 to 8 digit base 10 number or a 1 to 5 digit base 16 number enclosed in a hexadecimal indicator. (X'89ABC').

User response:
Correct the page number and press Enter.

DAJM356E   **File tailoring skeleton *member_name* does not exist for utility *utility***

Explanation:
An attempt to perform file tailoring failed because the tailoring process could not locate a required tailoring skeleton.

User response:
Assure that all required files are allocated to perform file tailoring.

DAJM357E   **Unexpected error returned from** *program_name***, RC=***return_code*

Explanation:
An unexpected error was encountered. Processing has aborted.

User response:
Note the program name and return code and contact IBM Software Support.

DAJM358E   **Invalid data set DSORG - The job can only be built into a sequential file or a PDS/PDSE. VSAM and other data types are not supported for job generation**

Explanation:
The data set organization of the file you entered is not supported for job generation. The data set must be a QSAM sequential or a partitioned data set.

User response:
Specify a data set of the proper type.

DAJM359E   **If volume information is entered, a data set name must also be entered**

Explanation:
Entering volume serial information without a related data set is not consistent. A data set name must be entered as well.

User response:
Enter a data set name or remove the value from the volume serial field.

DAJM360E   **If sequence number information is entered, a data set name must also be entered**

Explanation:
Entering volume sequence information without entering a related data set is not allowed. A data set name must be entered as well.

User response:
Enter a data set name or select a data set using the Select recovery file field.

DAJM361E   **If sequence number information is entered, volume information must also be entered**

Explanation:
Entering volume sequence information without entering volume serial information is not allowed. A volume serial must be entered as well.

User response:

Enter the volume serial of the data set.

DAJM362E   **Profile creator/name conflicts with another profile being imported**

Explanation:
The creator or name of the profile being edited conflicts with another profile being exported within the same job profile.

User response:
Change the name and/or the creator name to ensure the profile is unique.

DAJM363E   **Import file contains a profile with an incompatible version**

Explanation:
The import file contains a profile that was created prior to Db2 Shared Profile Support V1.3. Profiles created in prior versions must be converted to the current version before export.

User response:
Before exporting the profile, convert the previous version of the profile using the DAJCVBCT in *hilevel*.SAMPLIB. Then import the profile again.

DAJM364I   **Data set attribute change detected. Enter "Y" to export to data set**

Explanation:
A value in the Data Set Name or Member fields was changed, but the Export to Data Set field is set to N.

User response:
Press Enter to export to the target subsystem rather than a data set. If you want to export to a file, enter Y in the Export to Data Set field before pressing Enter.

DAJM365E   **Dataset must be a partitioned data set because multiple members will be generated**

Explanation:
The data set to hold the generated Restore System utility JCL must be a partitioned data set because multiple jobs are generated.

User response:
Enter a partitioned data set and two unique member names.

DAJM366E   **The member name entered for the Conditional Restart job cannot be the same as the Restore System Utility member. Please enter a different member for one of the jobs**

Explanation:
The member names entered must be unique because two jobs are generated to support the Restore System

utility. The first job contains JCL to create the
conditional restart control record. The second job
contains JCL to invoke the Restore System utility.

User response:
Enter two unique member names.

DAJM367E   **The only valid values to the
exception rule are "A"ccepted,
"R"ejected, and "B"oth**

Explanation:
An invalid value was entered in the Exception Rule
field. This field determines when the utility is run
on the objects accepted or rejected as a result of
exception processing

User response:
Type A in this field to run the utility on objects
accepted (included) as a result of exception
processing. Type R to run the utility on objects
that are rejected (excluded) as a result of exception
processing. Type B to run this utility on all objects
regardless of exception processing.

DAJM370E   **Invalid Value - Please enter the
Db2 Buffer Size in Megabytes that
you want to allocate. This buffer is
used to improve SQL performance
for Db2 Version 8 and above. This
value must be numeric and be >= 1
and <= 2047**

Explanation:
An invalid value was entered in the Db2 Fetch Buffer
size field.

User response:
Enter a valid value as described in the message text.

DAJM371E   **Invalid Value - Please enter the
Secondary Space Allocation as a
Percentage of the Primary Space.
This value must be numeric and be
>= 1 and <= 999**

Explanation:
An invalid value was entered in the Secondary
Allocation Percent field.

User response:
Enter a valid value as described in the message text.

DAJM372E   **The maximum value for the drain
wait is 1800 seconds**

Explanation:
The maximum value for drain wait is 1800 seconds.

User response:
Enter a value between 0 and 1800 seconds.

DAJM373E   **The maximum value for the
number of retries is 255**

Explanation:
An invalid value was entered in the Retry field.

User response:
Enter a valid value that is less than or equal to the
maximum of 255.

DAJM374E   **The range of valid values for the
retry delay is 1-1800 seconds**

Explanation:
An invalid value was entered in the Retry Delay field.

User response:
Enter a valid value that is in the range of 1 to 1800
seconds.

DAJM375E   **The object has been dropped
from Db2, yet still exists in this
object profile. OBIDXLAT functions
cannot be selected.**

Explanation:
The object has been dropped from Db2 but is still
present in the object profile.

User response:
Remove the object from your object profile.

DAJM380E   **The Input DSN and RBA/LRSN,
if specified, have to be specified
together.**

Explanation:
You must specify an RBA/LRSN value if you specify a
input DSN.

User response:
You must specify a value in the RBA/LRSN field for the
input DSN you specified.

DAJM382E   **Single quote (apostrophe) not
allowed in profile name.**

Explanation:
You included a single quote (apostrophe) in a profile
name. Single quotes are not allowed in a profile name.

User response:
Remove the single quote character.

DAJM390E   **The Group command can only be
used on a group profile**

Explanation:
The G(roup) line command was entered next to an
object, utility, or exception profile. The G command
can only be used on a job group.

User response:
Clear the line command from the Cmd line.

DAJM391E   **The Repeat command can only be
used on a group or an exception
profile**

Explanation:

The R(epeat) line command was entered next to an object or utility profile. The R command can only be used on a group or an exception profile.

User response:
Clear the line command from the Cmd line.

DAJM392E	Profiles can only be added to a group when the group is not hidden

Explanation:
The A(dd) line command was entered next to a job group that is hidden.

User response:
Enter the G command next to the job group to display all the profiles in the group, then use the A command to add more profiles.

DAJM393E	Invalid group. There must be at least one object profile and one utility profile in the group when the Preview Exception Report Jobs Generation Option is No. Either delete the group and all of its profiles or add the missing profiles

Explanation:
The Job Generation option **Preview Exception Report** is set to No. When this option is specified, a group in the job profile must contain at least one object profile and one utility profile.

User response:
Either delete the group or add the required profiles to the group.

DAJM394E	Invalid group. There must be at least one object profile and one exception profile in the group when the Preview Exception Report Jobs Generation Option is Yes or Build Output is either Active actions or Passive actions. Either delete the group and all its profiles or add the missing profiles.

Explanation:
The Job Generation option **Preview Exception Report** is set to Yes or **Build Output** is set to Active actions or Passive actions. When either of these are specified, a group in the job profile must contain at least one object profile and one exception profile.

User response:
Either delete the group from the job profile or add the required profiles to the job group.

DAJM395E	Invalid exception rule. The exception rule profile does not exist in the group or points to itself. Either delete the exception

rule or specify a valid profile number within the group.

Explanation:
The **Excp Rule Accp** or **Excp Rule Rjct** field points to a utility profile that does not exist or it points to itself.

User response:
Specify a valid utility profile or remove the integer from the exception rule field.

DAJM396E	Invalid repeated profile. The profile's Accp or Rjct Rule duplicates another profile. Either delete the profile or change the exception rule to point to another profile within the group.

Explanation:
An exception profile was repeated in a group. Its Accp or Rjct Rule matches the Accp or Rjct Rule of the same profile. The exception profile name is listed in the message help text.

User response:
Either remove the duplicate exception profile or change the exception rules to point to a different profile in the group.

DAJM397E	Invalid *utility_type* profile. The profile will not be executed. No other profile points to this profile. Either delete the profile or link an exception profile to it

Explanation:
A utility profile was included in the group, but no exception rule points to this utility profile.

User response:
Delete the profile or link an exception rule to the utility profile.

DAJM398E	Invalid exception profile. There are no exception rules specified. However, there are conditional profiles in this jobs group. Either delete the profile or specify an exception rule

Explanation:
Exception rules were defined for some of the exception profiles in the group, but not all.

User response:
Either delete the exception profile or define exception rules for all of the exception profiles.

DAJM399E	Invalid exception rule. Indicate the order number of the profile to be executed next. If specified, it must be numeric and point to another exception profile after the current profile or to a utility profile

Explanation:
An invalid value was entered in an exception rule field.

User response:
Enter a valid value in the exception rule field to point to a utility profile, or delete the exception profile.

DAJM400E   **The online options can only be modified when the "Online 'Rebuild" setting is set to "Y."**

Explanation:
The online REORG options were selected to be updated, but the online REORG has not been specified for inclusion in the utility profile.

User response:
Type Y in the Include field next to the online REORG option, then type Y in the Update field for online REORG to update the options.

DAJM401E   **This option is only valid when using a version 9 or higher Db2 subsystem**

Explanation:
You set an option to a setting that requires Db2 Version 9 or higher.

User response:
Change the option setting to an appropriate setting for your version of Db2.

DAJM402E   **Invalid RESTOREBEFORE Log RBA/LRSN. Specify *number* hexadecimal digits, or leave blank for none**

Explanation:
An invalid value was entered in the RESTOREBEFORE Log RBA/LRSN field.

User response:
Enter a valid value as listed in the message text, or enter Y in the Select RESTOREBEFORE field to locate an appropriate RBA or LRSN.

DAJM403E   **A RESTOREBEFORE Log RBA/ LRSN point must be before the point-in-time Log RBA/LRSN (TOLOGPOINT) value**

Explanation:
A RESTOREBEFORE Log RBA/LRSN must be *before* the specified point-in-time Log RBA/LRSN.

User response:
Enter a RESTOREBEFORE Log RBA/LRSN that is *before* the point-in-time RBA/LRSN, or enter Y in the Select RESTOREBEFORE Log RBA/LRSN field to locate an appropriate RBA or LRSN.

DAJM404E   **Invalid value. The only valid values are "E" and "I"**

Explanation:
The value specified in the Exclude field is invalid. Valid values are E (Exclude) and I (Include).

User response:
Enter a valid value as described in the message text.

DAJM405E   **Invalid Value – Please enter the number of DDs that you want Shared Profile Support Services to generate when generating SORT WORK JCL. For tape SORT work datasets this field can be left blank or must be numeric and be >=3 and <=99.**

Explanation:
An invalid value was entered for the number of DDs to be generated for tape sort work JCL. For tape sort work data sets this field can be left blank or must be numeric and be >= 3 and <= 99.

User response:
Enter a valid value as described in the message text.

DAJM406E   **Invalid Value - Please enter either (D)fsort or (S)yncsort. This value indicates which sort program you want to use for sort processing.**

Explanation:
An invalid value was entered when specifying which sort program to use for sort processing.

User response:
Enter a valid value as described in the message text.

DAJM407E   **Invalid Value - Please specify the SORTLIB data set name. If Sort Work File Unit Device is set to Tape, then Sortlib DSN has to be specified.**

Explanation:
A value was not entered for the SORTLIB data set name.

User response:
Specify a valid SORTLIB data set name. If Sort Work File Unit Device is set to Tape, then Sortlib DSN has to be specified.

DAJM408E   **The specified data set could not be found in the MVS catalog**

Explanation:
The specified data set could not be found in the MVS catalog.

User response:
Verify that the data set you specified is correct.

DAJM409E   **Invalid value. Valid values are "Y", "N", "B", "R"**

Explanation:
An invalid value was entered in the Process Referentially Dependent Tablespaces field.

User response

Enter one of the following valid values:

- B: Include RI at build time regardless of LISTDEF job option.
- R: Include RI at run time. LISTDEF job option must be Yes.
- Y: Process RI. LISTDEF job option determines when RI is included. LISTDEF Yes causes RI to be included at runtime. LISTDEF No causes RI to be included at build time.
- N: Do not process RI.

DAJM410E   **Duplicate group number. Each group must be unique. Change the group number to be unique among all groups in the jobs profile**

Explanation:
A group number (in the Order column) is a duplicate of another group.

User response:
Change the group's order number so that it is unique.

DAJM411E   **Duplicate order number. Each order number must be unique among all other profiles of its type**

Explanation:
An order number duplicates the order number of another of the same type of profile.

User response:
Change one of the order numbers so that it is unique among profiles of that type.

DAJM412E   **Cannot reorder a repeated profile. To reorder a profile that is repeated, reorder the "original" line**

Explanation:
You cannot reorder a profile or group that was repeated.

User response:
Change the order number of the original profile or group.

DAJM413E   **Invalid exception profile. Both exception rules point to the same profile**

Explanation:
The same utility profile was specified for objects both accepted and rejected by exception processing.

User response:
Change the exception rule so that different utility profiles are paired with accepted and rejected objects.

DAJM414E   **When a control card data set is specified, only 39 job groups are allowed. Press the help key for more information**

Explanation:
When a control card data set is specified, only 39 job groups are allowed in the job profile. This is because each job group's JCL is generated into a unique member name. The last character of the member name is generated by the build process. The build process uses numbers 1 - 9 for the first nine job groups, letters A through Z for the next 26 job groups, then 0, $, #, and @ for the remaining job groups.

User response:
Either reduce the number of job groups in the jobs profile or clear the control card data set name in the job options.

DAJM415E   **Invalid value. Enter a "Y" if you would like to add a new group to this jobs profile or enter an "N" if you do not want to add a new group to this jobs profile**

Explanation:
An invalid value was entered in the **Add a Group** field.

User response:
Enter a valid value as described in the message text.

DAJM416E   **Invalid group name. The group name cannot be blank. Enter a group name**

Explanation:
The group name is blank. A name must be specified for a group.

User response:
Enter a valid group name.

DAJM417E   **Invalid value. The "U" and "V" commands are not valid on a job group**

Explanation:
An invalid line command was entered for a group.

User response:
Remove the invalid line command.

DAJM423E   **Invalid Value - Enter either (A)ll to process non-partitioned objects altered to partitioned objects at the All Level or P(art) to process altered objects at the Partition Level**

Explanation:

An invalid value was entered in the Altered Object Adjustment field.

User response:
If you want Db2 Automation Expert to treat ALTERed objects at the ALL Level, enter A. If you want Db2 Automation Expert to treat ALTERed objects at the PART Level, enter P.

DAJM424E   **The number field can be blank or in the range of 2 - 255.**

Explanation:
An invalid value was entered in the number field.

User response:
Enter a valid value as specified in the message text.

DAJM425E   **The timeperiod is duplicated, please update it or delete it.**

Explanation:
A time period was created that exactly matches an existing time period for the current performance window.

User response:
Either change at least one value for the time period to make it unique, or remove it from the performance window.

DAJM426W   **Freeform text has been appended to a variable. It could possibly be excluded if it exceeds 8 bytes at build time.**

Explanation:
If a variable includes free-form text, the variable value when resolved might exceed the maximum allowed length of 8 bytes, and therefore be excluded from the template at job build time.

User response:
To prevent the variable from being removed from the template, ensure that the variable value including the free-form text will not exceed 8 bytes when it is expanded at job build time.

DAJM427I   **Copy pool name has already been selected.**

Explanation:
The selected copy pool name already exists as the alternate copy pool name for this RECOVER utility profile.

User response:
Press PF3 or enter the Cancel command to retain the copy pool name that has already been selected, or choose a different copy pool name.

DAJM428I   *copy-pool-name* **has been selected as the alternate copy pool name.**

Explanation:

The copy pool name that is listed in the message has been selected as the alternate copy pool for the current RECOVER utility profile.

User response:
No action is required.

DAJM429E   **Only one copy pool name can be selected. Choose one copy pool name and resubmit.**

Explanation:
You entered multiple select line commands.

User response:
Remove the additional line commands and enter S next to only one copy pool name to select it.

DAJM430E   **Invalid Value. Enter 0-6, SUN-SAT, or ***

Explanation:
An invalid value was entered in the Day of the Week field.

User response:
Enter a valid value as described in the message text.

DAJM431E   **Invalid Value. Enter 1-12, JAN-DEC, or ***

Explanation:
An invalid value was entered in the Month field.

User response:
Enter a valid value as described in the message text.

DAJM432E   **Invalid Value. Enter 1-31, or ***

Explanation:
An invalid value was entered in the Day of Month field.

User response:
Enter a valid value as described in the message text.

DAJM433E   **Invalid Value. Enter a time between 00:00 - 23:59. * may be used in the hour to indicate each hour of the day**

Explanation:
An invalid value was entered in the Time of Day field.

User response:
Enter a valid value as described in the message text.

DAJM434E   **Invalid Value. Enter a length of time in the format HHHH:MM:SS, between *minimum_length* and 9999:59:59.**

Explanation:
An invalid value was entered in the field. The minimum and maximum lengths of time that can be provided are listed in the message.

User response:

Enter a valid value as described in the message text.

DAJM435I   **No time periods were found. Press enter to create a time period**

Explanation:
No time periods have been created for this maintenance window.

User response:
Press Enter to create a time period.

DAJM436E   **Duration must be greater than 0000:00:00**

Explanation:
The duration of a time period must be greater than zero.

User response:
Enter a value between 0000:00:00 and 9999:59:59.

DAJM437E   **There are no defined time periods available to schedule or unschedule**

Explanation:
The S or X line command was used to schedule or unschedule a maintenance window, but no time periods are defined for the maintenance window.

User response:
Press Enter to continue.

DAJM438I   **There are multiple time periods available to schedule/unschedule. Select the time periods that you want to schedule/unschedule**

Explanation:
You specified to schedule or unschedule a maintenance window, but multiple time periods are defined in the maintenance window.

User response:
Select the time periods that you want to schedule or unschedule.

DAJM439I   **This time period is not currently scheduled in Admin Scheduler**

Explanation:
The X line command to unschedule a maintenance window was entered next to a time period that is not currently scheduled.

User response:
Clear the line command and press Enter.

DAJM440E   **Unschedule command is only available for Automation Expert windows.**

Explanation:
The X line command to unschedule a maintenance window was entered next to an automated statistics maintenance window. This command is only available for Db2 Automation Expert maintenance windows.

User response:
Clear the line command and press Enter.

DAJM441E   **Source must be D - maintwinDows or S - autoStats**

Explanation:
An invalid value was entered in the **Source** field.

User response:
Enter a valid value as described in the message text.

DAJM442E   **When Source is 'S', Window Like must be '*'**

Explanation:
When you are viewing statistics maintenance windows, the only valid value for the Window Like field is *.

User response:
Enter * in the Window Like field.

DAJM445I   **No actions currently assigned to maintenance window.**

Explanation:
You specified to view the workload for a maintenance window, but there are no actions currently assigned to the maintenance window. It is possible that the maintenance window has not been scheduled.

User response:
No action is required.

DAJM447I   **No timeperiods defined for this maintenance window.**

Explanation:
There are no defined time periods to view for this maintenance window.

User response:
To add time periods, enter the U line command to update the maintenance window.

DAJM448E   **Valid values are N-None, R-Reassign or D-Delete.**

Explanation:
An invalid value was entered in the **Action Disposition** field. Valid values are N (none) to leave actions assigned to current maintenance window, R (reassign) to reassign to a different maintenance window, or D (delete) to delete all actions currently assigned to the selected maintenance window.

User response:
Enter a valid value as listed in the message text.

DAJM449I   **Actions reassigned to *maintenance_window*.**

Explanation:

Action(s) have been reassigned to the maintenance window that is listed in the message.

User response:
No action is required.

DAJM450E **No maintenance window selected for reassignment.**

Explanation:
A maintenance window was not selected for reassignment of actions.

User response:
If you want to reassign actions, select a maintenance window.

DAJM457E **Invalid Value - Please enter either (Y)es or (N)o. This value indicates whether you want to execute the -ACCESS DATABASE(*database*) SPACE(*space*) MODE(STATS) command for every object in the object profiles prior to retrieving real-time statistics.**

Explanation:
An invalid value was entered when specifying whether the -ACCESS DATABASE(*database*) SPACE(*space*) MODE(STATS) command is run for every object in the object profiles before exception processing retrieves real-time statistics.

User response:
Enter a valid value as described in the message text.

DAJM500E **Acquire must be "A"llocate, "U"se, or Blank(existing value)**

Explanation:
An invalid value was entered in the Acquire field.

User response:
Valid values are A to specify that resources for DBRMs are acquired when the plan is allocated or U to specify that resources are acquired when the application first accesses them.

DAJM501E **Cachesize must be 0-4096 or Blank(existing value)**

Explanation:
An invalid value was entered in the Cachesize field.

User response:
Enter the size of the authorization cache acquired in the EDM pool for the plan. Valid values are from 0 to 4096.

DAJM502E **This option is only valid when using a version 9 or higher Db2 subsystem**

Explanation:

You set an option to a setting that requires Db2 Version 9.1 or later.

User response:
Change the option setting to an appropriate setting for your version of Db2.

DAJM503E **Degree must be "1", "A"ny, or Blank(existing value)**

Explanation:
An invalid value was entered in the Degree field.

User response:
Type A to allow parallel processing; type 1 to prohibit parallel processing.

DAJM504E **Disconnect must be "A"utomatic, "C"onditional, "E"xplicit, or Blank (existing value)**

Explanation:
An invalid value was entered in the Disconnect field.

User response:
Type A to destroy all remote connections. Type C to destroy all remote connections unless an open cursor defined as WITH HOLD is associated with the connection. Type E to destroy only connections in the release pending state.

DAJM505E **When either Histogram NUMCOLS or NUMQUANTILES is specified, then both values must be specified**

Explanation:
You entered a value for one of the Histogram fields.

User response:
You must specify a value for both of the Histogram fields.

DAJM506E **Encoding must be "A"SCII, "E"BCDIC, "U"NICODE, numeric CCSID, or Blank (existing value)**

Explanation:
An invalid value was entered in the Encoding field. This field sets the application encoding for all host variables static statements in the plan or package.

User response:
Enter a valid value as described in the message text.

DAJM507E **Flag must be "C", "E", "I", "W", or Blank (existing value)**

Explanation:
An invalid value was entered in the Flag field.

User response
Enter one of the following:

- C: Completion messages only
- E: Error and completion messages

- I: Information, warning, error and completion messages
- W: Warning, error and completion messages
- blank: Previous value

DAJM508E   **Isolation must be "CS", "NC", "RR", "RS, "UR", or Blank (existing value)**

Explanation:
An invalid value was entered in the Isolation field.

User response
Enter one of the following:

- CS: Cursor stability
- NC: No commit
- RR: Repeatable read
- RS: Read stability
- UR: Uncommitted read

DAJM509E   **Release must be "C"ommit, "D"eallocate, or Blank (existing value)**

Explanation:
An invalid value was entered in the Release field.

User response:
Type C to release at each commit point. Type D to release when the program terminates.

DAJM510E   **Reopt must be "A"lways, "N"one, "O"nce, or Blank (existing value)**

Explanation:
An invalid value was entered in the Reopt field.

User response
Enter one of the following:

- A: Always: Determines the access path again at run time each time the statement is run.
- N: None: Does not determine an access path at run time.
- O: Once: Determines the access path for any dynamic statement only once, at the first run time or at the first time the statement is opened.

DAJM511E   **SQL Rules must be "D"B2, "S"tandard, or Blank (existing value)**

Explanation:
An invalid value was entered in the SQL RULES field.

User response:
Enter D to indicate that no error occurs if CONNECT identifies an existing SQL connection. Enter S to indicate that an error occurs if CONNECT identifies an existing SQL connection.

DAJM512E   **Validate must be "B"ind, "R"un, or Blank (existing value)**

Explanation:
An invalid value was entered in the Validate field.

User response:
Enter B to indicate that if not all objects or needed privileges exist at bind time, the process issues error messages, and does not bind or rebind the plan or package. Enter R to indicate that if not all objects or privileges exist at bind time, the process issues warning messages, but the bind succeeds.

DAJM513E   **Invalid value. The only valid values are "Y"es, "N"o, and "V"iew.**

Explanation:
The value specified is not valid.

User response:
Specify a valid value, "Y"es, "N"o, or "V"iew.

DAJM514I   **There are additional options on the Rebind Utility Options screen. Press <PF8> to scroll down and view them**

Explanation:
This informational message appears upon accessing a scrollable screen as a reminder to scroll down to view all fields. Press PF8 to scroll down and view the rest of the fields. Press PF7 to scroll up.

User response:
No action is required.

DAJM515E   **Field must be "Y"es, "N"o, or Blank (existing value)**

Explanation:
An invalid value was entered in a field. The cursor is positioned on the invalid entry.

User response:
Correct the invalid value.

DAJM516E   **Invalid value. The OBID must be in the range of 1-32767.**

Explanation:
The specified OBID value is not valid.

User response:
Specify an OBID value in the range of 1-32767.

DAJM517E   **The Translate data set name must be specified.**

Explanation:
The translate data set name was not specified.

User response:

Specify the translate data set name.

DAJM518E **The value must be between 1 and 65535, or if negative, between -32768 and -1.**

Explanation:
The specified value is not valid.

User response:
Specify a value between 1 and 65535, or if negative, between -32768 and -1.

DAJM519E **Invalid value. The only valid values are "Y"es, "N"o, and "V"iew.**

Explanation:
The value specified is not valid.

User response:
Specify a valid value, "Y"es, "N"o, or "V"iew.

DAJM522E **Field must be "Y"es, "N"o, or Blank (existing value)**

Explanation:
An invalid value was entered in a field. The cursor is positioned on the invalid entry.

User response:
Correct the invalid value.

DAJM523E **REOPTSCOPE may only be specified with REOPT(ONCE) or REOPT(AUTO)**

Explanation:
You entered N or A in the Reopt field, but entered a value other than blank in the Reopt Scope field. This combination is not allowed.

User response:
Change either Reopt or Reopt Scope so that the values do not conflict.

DAJM525E *field_name* **is only valid for Db2 version** *version* **or higher. It will be set to a** *valid_value*

Explanation:
You set an option to a setting that requires a Db2 higher than the version you are using.

User response:
This option will be set to a valid value for your version of Db2.

DAJM528E *field_name* **must be in range** *range*

Explanation:
An invalid value was entered in the Exceptions field.

User response:
Enter a numeric value for the maximum number of exceptions allowed, from 0 to 9999999.

DAJM529E *field* **must be blank or in range** *valid_range*

Explanation:
An invalid value was entered in the field listed in the message.

User response:
Enter a valid value as described in the message text.

DAJM530E **LOB dependency checking not available before Db2 V10**

Explanation:
LOB dependency checking is not available in the current release.

User response:
Set this field to N or CANCEL out of the current panel.

DAJM531E **LOB exclude function not available before Db2 V10**

Explanation:
LOB exclude function is not available in the current release.

User response:
Set this field to N or CANCEL out of the current panel.

DAJM532E **Cannot exclude LOBs unless checking LOB dependencies**

Explanation:
Exclude objects that failed Dependency check was selected, but Perform LOB Dependency checks was not selected. The exclude selection is only available when the dependency check is also selected.

User response:
Set this field to N, or set the Perform LOB Dependency Checks field to Y, or cancel out of the current panel.

DAJM534E **Switch must be "O"riginal, "P"revious, or Blank(existing value)**

Explanation:
Switch restores all previous or original package/plan information in the catalog and directory to that of the specified package/plan copy. This option allows fallback to an older copy in the event of a performance regression.

User response:
Set this field to P for Previous or O for Original.

DAJM535E **Switch option may not be specified with any other rebind option.**

Explanation:
The Switch rebind option may not be specified with any other rebind option.

User response:

Either remove the Switch option or remove all other rebind options.

DAJM536E **Invalid device type. Must be D, T, or blank**

Explanation:
You selected a device type that was not D (DASD), T (tape), or blank.

User response:
Specify D or T to indicate that the device should be accepted as a valid DASD or tape device. If the device entered was a mistake, leave the device type blank.

DAJM537E **Access Path Retain Duplicate only applies when Plan Management is Basic or Extended**

Explanation:
You specified Access Path Retain Duplicate REBIND option. This is only valid when Plan Management is Basic or Extended.

User response:
Either remove the Access Path Retain Duplicate option or change Plan Management to Basic or Extended.

DAJM544E **Invalid Value - Please enter either (Y)es or (N)o. This value indicates whether you want to preview what objects are triggered by exception processing without generating JCL**

Explanation:
An invalid value was entered in the Preview Exception Report field.

User response:
Enter Y if you want to preview the objects that exception processing triggers without generating utility JCL. This allows you to see which objects are be triggered by using only object and exception profiles. Enter N to have Db2 Automation Expert generate utility JCL based on the specified object, utility, and exception profiles.

DAJM546E **Invalid value. The only valid values are "Y" and "N", "C" and blank.**

Explanation:
An invalid value was entered in the FlashCopy Options field.

User response
Enter one of the following valid values:

- Y: Generate FLASHCOPY YES.
- C: Generate FLASHCOPY CONSISTENT.
- N: Generate FLASHCOPY NO.

- blank: Omit the FLASHCOPY keyword. If there is a system default setting for FLASHCOPY, it will be honored when this field is left blank.

DAJM547E **FlashCopy Dataset option can be Y only when FlashCopy is Y or C.**

Explanation:
A Y was entered in the Update FlashCopy Dataset Options field, but no value was entered in the FlashCopy Options field.

User response:
Change the value in the Update FlashCopy Dataset Options field to N, or change the FlashCopy Options field to Y or C.

DAJM550E **Command conflict.**

Explanation:
Two conflicting line commands have been specified.

User response:
Remove one of the conflicting line commands.

DAJM551E **Block command incomplete.**

Explanation:
The line commands that are required to complete a block action were not specified.

User response:
Specify the required line commands to complete the block action.

DAJM552I **The SQL statement returned 0 rows.**

Explanation:
The WHERE clause returned no rows.

User response:
If this result is unexpected, edit the WHERE clause.

DAJM553I **Move/Copy pending.**

Explanation:
Either the B (Before) or A (After) command is missing for a move or copy command or a B (Before) or A (After) command is specified and the move or copy command is missing.

User response:
Reenter the line command to comply.

DAJM554E **Data set must have an LRECL of 80.**

Explanation:
The data set that you are importing must be defined with an LRECL of 80.

User response:
Re-create the data set with the correct LRECL.

DAJM555E **Update SQL cannot be "Y" if Advanced SQL is not selected.**

Explanation:
You specified to update SQL, but the Advanced SQL feature was not specified.

User response:
Either set the **Update SQL** field to N, or set the **Advanced SQL** field to Y.

DAJM556E   **SQL statement does not conform to rules.**

Explanation

The statement does not conform to the rules for SQL statements. The statement must be a SELECT statement that meets the following requirements:

- Two or three columns must follow the SELECT keyword.
- The first column must be a column of a Db2 table that represents a database name.
- The second column must be a column of a Db2 table that represents a table space or index name.
- The third column is optional, but if specified must be a column of a Db2 table that represents a partition number.
- The FROM keyword must follow the select columns.

User response:
Correct the SQL statement. To test the validity of the statement, enter the EXECUTE command in the **Option** field.

DAJM557E   **No SQL statement specified. Resetting Advanced SQL to "N".**

Explanation:
Advanced SQL was specified, but no SQL statement was provided. The **Advanced SQL** field was set to N.

User response:
To specify an SQL statement, enter Y in the **Update SQL** field.

DAJM558E   **There is no SQL statement to execute.**

Explanation:
The EXECUTE command was ignored because no SQL statement was specified.

User response:
Before you enter the EXECUTE command, enter a valid SQL statement.

DAJM559E   **Invalid substring. Required trailing period missing.**

Explanation:
A substring was detected that did not have a trailing period. This is required for template variables.

User response:

Before you enter the EXECUTE command, enter a valid SQL statement.

DAJM562E   **Dsnum number must be decimal digits or hex digits enclosed in single quotation marks.**

Explanation:
An invalid value was entered in the **Page Dsnum** field. If specified, the DSNUM must be a 1- through 8-character base 10 number, or a 1- through 5-character base 16 number that is enclosed in a hexadecimal indicator (for example, X'89ABC').

User response:
Correct the invalid value and press Enter.

DAJM563W   **An exception condition is corrupt and was removed from the profile. Save the profile to save the change.**

Explanation:
The exception profile that is listed in the message is damaged. An exception condition value was missing, or multiple And/Or conditions were detected for repeated lines. The exception condition was removed from the profile. Processing continues.

User response:
Issue the SAVE command to save the profile.

DAJM564E   **The profile cannot be saved due to a shortage of virtual storage. Reason=*reason_code*.**

Explanation:
An attempt was made to save the profile. Prior to saving the profile, all exception conditions are verified to ensure there are no errors. Additional storage must be obtained to perform the verification; however, the total amount of storage could not be obtained. The hexadecimal reason code is displayed in the message.

User response:
Contact IBM Software Support if additional assistance is required.

DAJM566E   **The entered device type is not allowed for the sort device type.**

Explanation:
An invalid device type was entered in the Sort Device Type field.

User response:
Enter an existing device type that is listed in the Eligible Device Table, or enter a new valid DASD device name.

DAJM567E   **Deplevel must be "S"tatement, "P"ackage, or Blank (existing value).**

Explanation:

An invalid value was entered in the **Deplevel** field.

User response
Enter one of the following values:

- P: Package will record package-level dependencies in SYSIBM.SYSPACKDEP.
- S: Package will record statement-level dependencies in SYSIBM.SYSPACKSTMTDEP, in addition to recording package-level dependencies in SYSPACKDEP.
- blank: Previous value.

DAJM600I   **No inline data to format in CLOB column**

Explanation:
You selected a CLOB item to format, but it has no inline portion. Format only supports the inline portion of a CLOB.

User response:
No action is required.

DAJM601E   **Invalid time zone format**

Explanation:
A timestamp with time zone column was being saved, but the zone format is invalid. The correct zone format is Sdd:dd, where S is +/- (plus or minus), and d are valid decimal digits.

User response:
Changes are discarded.

DAJM602E   **Db2 Automated Statistics is only valid for Db2 Version 10 NFM and above**

Explanation:
Db2 automated statistics is not valid for your version of Db2.

User response:
Verify that you have the correct version of Db2.

DAJM603E   **SPRMADMT is missing.**

Explanation:
The SPRMADMT field is missing. This field is found in the ZPARMS load module. It is required when scheduling a task to the Db2 administrative task scheduler.

User response:
Ensure that the Db2 load libraries and the Db2 ZPARMs member, which are specified in the setup options (option 0.1 from the Db2 Automation Expert main menu), are correct.

DAJM605W   **Import successful but the RECOVER RBA/LRSN was not found in SYSCOPY. This value will be discarded.**

Explanation:
The point-in-time LOG RBA/LRSN and/or RESTOREBEFORE LOG RBA/LRSN values were not found in SYSCOPY. These values will be discarded.

User response:
No action is required.

DAJM606E   **When TO Method=L(og), the value for Verifyset should be Y(es) or N(o).**

Explanation:
In Db2 V10 NFM and above, when the field **TO Method**=L(og), the value for the **Verifyset** field should be Y(es) or N(o).

User response:
Enter a valid value in the **Verifyset** field.

DAJM607E   **Invalid value. The only valid values are "Y", "N", and blank.**

Explanation:
An invalid value was entered in a field that only accepts Y, N, or blank.

User response:
Enter a valid value as described in the message text.

DAJM608E   **When TO Method=C(opy), the value for VERIFYSET should be blank.**

Explanation:
In Db2 V10 NFM and above, when the field **TO Method**=C(opy), the value for the **Verifyset** field should be blank.

User response:
Enter a valid value as described in the message text.

DAJM610E   **Invalid TO method. Specify "L" for Log, "C" for Copy, or "E" for Error**

Explanation:
An invalid value was entered in the TO method field. Valid values are L to recover to a point on the log, C to recover to an image copy, or E to recover pages with reported I/O errors.

User response:
Enter a valid value as listed in the message text.

DAJM611E   **Invalid site. Specify "L" for Local, "R" for Recovery, or blank for current**

Explanation:
An invalid value was entered in the Site field. This field specifies which image copies are used during the recovery. If no value is specified, the RECOVER

utility will use image copies from the current site of invocation.

User response:
Enter a valid value as listed in the message text.

DAJM612E   **Invalid object event. Specify "Q" for Quiesce, or blank for none**

Explanation

An invalid value was entered in the Object Event field. This field is used to specify the type of log recovery:

- If you enter Q in the Object event field, and enter a value in the Event generation field other than 00 (such as -2), recovery will be to the specified number of quiesce points back from the last quiesce point.

- If you leave the field blank, you must select a point-in-time recovery and select options for the recovery.

User response:
Enter a valid value as listed in the message text.

DAJM613E   **Invalid event generation. Specify "00" for the most recent event, "-1" for the one before that, and so on, up to a maximum of "-9"**

Explanation

An invalid value was entered in the Event generation field. This field is used to specify the copy to which to recover:

- If you enter L, F, or I in the Object event field, and enter 00 in the Event generation field, recovery will be to the last (most recent) specified copy.

- If you enter L, F, or I in the Object event field, and enter a value in the Event generation field other than 00 (such as -2), recovery will be to the specified number of copies back from the last (most recent) copy.

User response:
Enter a valid value as listed in the message text.

DAJM614E   **Invalid Log RBA/LRSN. Specify *number* hexadecimal digits, or leave blank for current**

Explanation:
An invalid value was entered in the Log RBA/LRSN field.

User response:
Enter a valid value as listed in the message text, or enter Y in the Select point-in-time field to locate an appropriate RBA or LRSN.

DAJM615E   **Invalid log reuse. Specify "Y" for Yes, "N" for No, or "L" for Log Only**

Explanation:

An invalid value was entered in the Reuse existing data sets field.

User response:
Enter a valid value as listed in the message text. Y in this field specifies that RECOVER should logically reset and reuse Db2 managed data sets without deleting and redefining them. N specifies that the Db2 managed data sets should be deleted and redefined to reset them. L (log only) specifies that the target objects should be recovered from their existing data sets by applying only log records (no image copies) to the data sets.

DAJM616E   **Invalid object event. Specify "L" for Last, "F" for Full, "I" for Incremental, "N" for Nosyscopy, or blank for none**

Explanation

An invalid value was entered in the Object Event field. This field is used to specify the type of recovery to a copy:

- If you enter L, F, or I in the Object event field, and enter 00 in the Event generation field, recovery will be to the last (most recent) specified copy.

- If you enter L, F, or I in the Object event field, and enter a value in the Event generation field other than 00 (such as -2), recovery will be to the specified number of copies back from the last (most recent) copy.

- If you leave this field blank, you must enter or select a recovery file from which to recover.

- For Db2 V12 and later, you can enter N to recover from a copy that is not included in SYSIBM.SYSCOPY. You must enter a recovery file from which to recover.

User response:
Enter a valid value as listed in the message text.

DAJM617E   **Invalid copy reuse. Specify "Y" for Yes, or "N" for No**

Explanation:
An invalid value was entered in the Reuse existing data sets field.

User response:
Enter a valid value as listed in the message text.

DAJM618E   **Invalid RBA/LRSN value. Specify *number* hexadecimal digits.**

Explanation:
The RBA/LRSN value you specified is not valid.

User response:
Correct the JCL and resubmit the job.

DAJM619E   **Invalid timestamp. Format "CCYY-MM-DD-HH.MM.SS.thmiju", from**

**"1990-01-01-00.00.00.000000",
to "2042-09-17-00.00.00.000000"**

Explanation:
An invalid timestamp was entered in the Start or End timestamp fields.

User response:
Enter a valid value as listed in the message text.

DAJM620E	FlashCopy dsn requires dsnum qualifier code

Explanation:
FlashCopy data sets must include the dsnum number variable as part of the data set name. A substring of the dsnum variable will also work.

User response

Enter a dsnum as part of the data set name. Qualifier code 32 will insert the required value.

Note: The dsnum variable is numeric, so it cannot stand alone as a data set qualifier.

DAJM621E	FlashCopy is only valid when using a version 10 or higher Db2 subsystem

Explanation:
Support for Db2 FlashCopy was introduced in Db2 V10. The current subsystem is not at a level capable of supporting FlashCopy.

User response:
Select a different method for the image copy.

DAJM622E	Specify all disposition values or none of them

Explanation:
You have specified at least one of the three data set disposition values, but not all of them.

User response:
Either specify all of the disposition values or none of them.

DAJM623E	The retention period and expiration date fields cannot be entered at the same time

Explanation:
You entered a value in both the Expiration date and Retention period fields. This combination is not allowed.

User response:
Clear the value from either the Expiration date or Retention period field.

DAJM624E	Invalid value. The expiration date must be in the form of YYDDD

or YYYYDDD. Please correct and resubmit

Explanation:
An invalid value was entered in the Expiration Date Field.

User response:
Enter a value in the format YYDDD or YYYYDDD.

DAJM625E	Invalid value. Days entered for a leap year cannot exceed 366

Explanation:
An invalid value was entered in the Expiration Date Field. The year entered is a leap year and the day exceeds 366.

User response:
Correct and resubmit.

DAJM626E	Invalid value. Days entered cannot exceed 365

Explanation:
An invalid value was entered in the Expiration Date Field. The year entered is not a leap year and the day exceeds 365.

User response:
Correct and resubmit.

DAJM627E	Use Freeform Literal option was selected with no value entered for Free Form Literal

Explanation:
Freeform Literal qualifier code was selected with no value entered for Freeform Literal.

User response:
Include a value for Freeform Literal or deselect the Freeform qualifier code.

DAJM628E	The entered device type is not recognized by z/OS as a valid DASD device type

Explanation:
An invalid device type was entered in the Unit Type field.

User response:
Enter a valid DASD device type or clear the field.

DAJM631E	The only valid values are "S" for the Set command, "D" for the DBD command, and "L" for the LevelID command

Explanation:
An invalid value was entered in the Process field.

User response:
Enter a valid value as listed in the message text.

DAJM632E   **The only valid values are "N" for no DBD control statement extra options, "D" for the Drop control card, "T" for the Test control card, "I" for the Diagnose control card, and "R" for the Rebuild control card**

Explanation:
An invalid value was entered in the Db2 Process Option field.

User response:
Enter a valid value as listed in the message text.

DAJM633E   **If the DBD option is selected, the DBD sub-option selection cannot be set to "N"o**

Explanation:
You selected the DBD option for repair (D in the Process field), but an N still appears in the DBD Process Option field.

User response:
Specify one of the DBD Process Options of Drop, Test, Diagnose, or Rebuild.

DAJM634E   **If the process mode is not DBD, the DBD sub-option field must be set to "N"o**

Explanation:
An invalid value was entered in the Db2 Process Option field.

User response:
Enter a valid value as listed in the message text.

DAJM635E   **If the process mode is not DBD, the output DDNAME for the DBD processing mode cannot be specified**

Explanation:
You entered a DD name in the Output DDname field for the DBD options, but DBD processing has not been specified.

User response:
Either clear the Output DDname field or change the Process field to D to select DBD processing.

DAJM637E   **At least one repair type function must be selected when repair is used**

Explanation:
If the Process field is set to S, one of the repair functions must be selected. This option resets the pending statuses of the objects.

User response:

Select one of the repair functions (No Copy Pending, No Recover Pending, No Check Pending, No Auxiliary Warning, No Auxiliary Check Pending, or No Rebuild Pending).

DAJM638W   **Because an invalid combination of options existed in the Repair Options screen, the Repair option has been set to "N"o**

Explanation:
The repair utility option was set to N.

User response:
No action is required.

DAJM639E   **Invalid Update option. Specify "A" for All, "P" for Path, "S" for Space, or "N" for None**

Explanation:
An invalid value was entered in the Update catalog tables or Update history tables field.

User response:
Enter a valid value as listed in the message text.

DAJM639E   **Invalid Update option. Specify "A" for All, "P" for Path, "S" for Space, or "N" for None**

Explanation:
An invalid value was entered in the Update catalog tables or Update history tables field.

User response:
Enter a valid value as listed in the message text.

DAJM640E   **Allocation Error - The ISPFILE DD is already allocated and cannot be deallocated - Process not completed**

Explanation:
The ISPFILE DD allocation failed. The DD is already allocated and cannot be deallocated for this TSO session. The process did not complete successfully.

User response:
Free the ISPFILE DD. You must exit the product and re-enter, then rebuild the job.

DAJM641E   **Allocation Error - An error was encountered allocating the ISPWRK1 or ISPWRK2 DD - Process not completed**

Explanation:
The ISPWRK1 or ISPWRK2 DD allocation failed. The process did not complete successfully.

User response:
Verify TSO session parameters are set correctly for your site prior to allocation of these DD statements.

DAJM642E   **Field Required - The data set entered is a partitioned data set and the member name is required**

Explanation:
A required field was not entered. The data set entered is a PDS (partitioned data set) and a member in this PDS must be referenced.

User response:
Enter a valid member name for PDS access.

DAJM643W   **The Static Job Build data set was specified in job options, but is either invalid or no longer exists in the MVS catalog. Pre-existing data set and member values will be used.**

Explanation:
A value was specified for the Static Job Build Dataset and Member fields, but the data set is either invalid or it no longer exists in the MVS catalog.

User response:
Update the Generation Options panel to include a valid job build data set and member, or enter the desired values here.

DAJM644E   **The only valid values are "N"o to not use the skeletals, "B"efore to insert the skeletals before generated JCL, and "A"fter to insert the skeletals after the generated JCL**

Explanation:
An invalid value was entered in the Run User Step field.

User response:
Enter a valid value as described in the message text.

DAJM645E   **If the skeletal control is "B"efore or "A"fter, at least one skeletal member name must be entered in the following fields**

Explanation:
You specified to run a user step either before or after the generated job, but no JCL skeleton member has been specified. You must enter a member name in the JCL Skeletal, Control Cards Skeletal, and/or Step End Skeletal fields.

User response:
Enter the member name of the skeleton you wish to use in the appropriate field.

DAJM646E   **Invalid Value. Enter a "Y" if you would like to Rebind dependent Plans and Packages or "N" to bypass Rebind**

Explanation:
An invalid value was entered in the Rebind Dependent Plans / Packages field.

User response:
Enter a valid value as listed in the message text.

DAJM647E   **Invalid Value. Enter a "Y" if you would like to pad unused jobs with IEFBR14 jobs or "N" to build only the nbr of jobs necessary**

Explanation:
An invalid value was entered in the Pad Jobs if max not exceeded field.

User response:
Enter a valid value as listed in the message text.

DAJM648E   **Invalid value. The Utility ID, if entered, must be an alphabetic character followed by alphanumerics, "#", "$", ".", "¢", "!", "¬", or "@" characters with no embedded blanks.**

Explanation:
An invalid value was entered in the Utility ID field.

User response:
Enter a valid value as listed in the message text.

DAJM649W   **Line commands were cleared for a cursor sensitive screen command.**

Explanation:
When a screen command such as "FORM" is entered, the screen navigation follows the cursor position, not any entered line command. Non-blank line commands have been cleared.

User response:
No action is required.

DAJM650E   **Invalid value - Enter a "B" to build the job, "D" to delete job data, "S" to select step data, or "O" to select object data.**

Explanation:
An invalid line command was entered next to a job name on the Execution Reports Job Display.

User response:
Enter a valid value as listed in the message text.

DAJM651E   **"R" command invalid on successfully completed job**

Explanation:
An R command was entered next to a job that successfully completed. You cannot restart a job that has a RC of 0.

User response:
Clear the R command from the line command area.

DAJM652E   **Process RI must be N when partition is specified**

Explanation:
The Process RI field cannot be set to Y for a partitioned space.

User response:
Change the Process RI field to N.

DAJM653E   **Control card data set must be a valid, existing partitioned data set**

Explanation:
An invalid data set was entered for the control card data set.

User response:
Enter an existing partitioned data set in the Control Card Dataset field.

DAJM654E   **Invalid member name. Only A-Z, 0-9, @, #, and $ are valid; First character must be A-Z, @, #, or $**

Explanation:
An invalid member name was entered.

User response:
Enter a valid member name or press END to exit the panel.

DAJM655E   **An Exception CONDition has been corrupted in this profile. Page through the profile to find the corrupted CONDition or enter the END command (default PF3) to position to the corrupted condition. Update the condition and save the updated profile**

Explanation:
One or more of the exception conditions in this exception profile has been corrupted.

User response:
Press PF3 (END) to exit the help panel, then press PF3 (END) again to position the cursor on the corrupted condition. Update the condition and save the updated profile.

DAJM656E   **An exception condition has been corrupted in this profile. Page through the profile to find the corrupted condition. Update the exception profile to specify the missing condition**

Explanation:
One or more of the exception conditions in this exception profile has been corrupted.

User response:

Press PF3 (END) to exit the help panel, then press PF3 (END) again to locate the corrupted condition. You must then exit view mode and update the exception profile to correct the condition. Save the updated profile.

DAJM658E   **User does not have sufficient authority to perform a -DISPLAY command. This command is used to determine the current Db2 operating Mode**

Explanation:
Your authorization ID has not been granted privileges to issue the DISPLAY GROUP command.

User response:
Check with your Db2 administrator to verify or obtain the proper authority.

DAJM659E   **Insufficient storage for Db2 work area buffer**

Explanation:
Storage for a Db2 work area buffer could not be obtained.

User response:
Increase your TSO region size and rerun the application.

DAJM660E   **A name of a valid partitioned data set and member name are required**

Explanation:
The partition data set name and member name are required.

User response:
Specify a valid partitioned data set and member name.

DAJM661E   **LISTAPARS Job** *jobname* **successfully submitted.**

Explanation:
The job was successfully submitted.

User response:
No action is required.

DAJM662E   **Invalid Value - Enter "N" for None, "B" for Basic, "E" for Extended, or blank.**

Explanation:
An invalid value was entered in the RBALRSN_CONVERSION field.

User response
Enter one of the following valid values:

- N: No conversion is to be performed.

- B: Convert objects in extended format to basic format.
- E: Convert objects in basic format to extended format.
- blank: The conversion specified in the UTILITY_OBJECT_CONVERSION ZPARM setting will be honored.

DAJM663E   **The Exception Profile cannot be saved. The number of selected exception conditions exceeds the storage area used to contain the exceptions. Deselect one or more exception conditions and try to save the profile again.**

Explanation:
The storage area containing the exception conditions has been exceeded.

User response:
Deselect one or more conditions so that the storage area is not exceeded. If more exception conditions are required, create multiple exception profiles and, on the **Generation Options** panel, specify All in the **Evaluate Multiple Exception Profiles** field. Exception processing will process all exception profiles in the jobs profile as one conglomerate exception profile.

DAJM664E   **Data set must be a partitioned data set because multiple members will be generated**

Explanation:
The data set to hold the generated JCL must be a partitioned data set. Multiple members are generated since a control card data set is specified and multiple job groups are being built. Each job group's JCL is generated into a unique member name. The last character of the member name is generated by the build process. The build process uses numbers 1 - 9 for the first nine job groups, letters A - Z for the next 26 job groups, then 0, $, #, and @ for the remaining job groups.

User response:
Change the output data set to a partitioned data set.

DAJM665E   **The JCL member name must be less than or equal to 7 characters**

Explanation:
Multiple members will be generated since a control card data set is specified and multiple job groups are being built. Each job group's JCL is generated into a unique member name. The last character of the member name is generated by the build process. The build process uses numbers 1 - 9 for the first nine job groups, letters A - Z for the next 26 job groups, then 0, $, #, and @ for the remaining job groups. If a batch job is being generated, this restriction prevents

a duplicate member name from being generated when the same job build data set is specified for the batch build job output and the output data set that holds the generated utility JCL.

User response:
Change the member name to 7 characters or less.

DAJM667E   **Select Performance Window must be Y – Yes, N – No, or C – Clear.**

Explanation:
An invalid value was entered in the field to select a performance window.

User response:
Enter a valid value as described in the message text.

DAJM668E   **A Maintenance Window must be specified when Build Output is A - Active actions or P - Passive actions.**

Explanation:
A maintenance window must be selected when the **Build Output** field is set to active or passive.

User response:
Either select a maintenance window, or enter N in the **Build Output** field.

DAJM670E   **Process RI cannot be R for wildcarded objects by partition.**

Explanation:
The **Process RI** field cannot be set to R for wildcarded objects that are processed at the partition level.

User response:
Specify Y, B, or N in the **Process RI** field.

DAJM672E   **"YES" is the only valid option. Press PF3 to cancel.**

Explanation:
YES is the only valid option on the confirmation panel.

User response:
Enter YES or press PF3 to cancel the operation.

DAJM673E   **&CURRENT is the only variable allowed.**

Explanation:
&CURRENT is the only variable that is allowed in this field.

User response:
Remove all other variables and ensure that at least one space follows &CURRENT.

DAJM674E   **&CURRENT may only be specified once.**

Explanation:
&CURRENT may only be specified once in the **Started From** and **Started To** fields.

User response:
Remove the duplicate &CURRENT from the field.

DAJM675E &CURRENT must be specified at the beginning of the field.

Explanation:
&CURRENT may only be specified at the beginning of the field. For example: &CURRENT - 5 Days.

User response:
Correct the field and retry.

DAJM676E Invalid timestamp specification.

Explanation
An invalid timestamp was entered in the **Started From** or **Started To** fields. A timestamp must be in one of the following forms:

- &CURRENT - *duration* where *duration* can be any of the valid labeled duration expression keywords. For valid LDE keywords, see IBM Db2 for z/OS documentation. Example: &CURRENT - 5 Days
- *YYYY-MM-DD-HH.MM.SS.NNNNNN*: An abbreviated form of timestamp with at least *YYYY* specified. If you enter a four-digit year and press Enter, a generic timestamp value in the correct format is entered in the field. You can overtype the generic values to create the desired timestamp.

User response:
Correct the **Started From** or **Started To** field and retry.

DAJM677E Expression too short for auto-complete.

Explanation:
A generic timestamp cannot be displayed because an invalid value was entered in the **Started From** or **Started To** fields. At least a four-digit value must be entered.

User response:
Enter a four-digit year and press Enter to display a generic timestamp value in the correct format. You can overtype the generic values to create the desired timestamp.

DAJM678E The Boolean Logic is corrupted. Exception Processing will attempt to recreate it from the original profile.

Explanation:
The Boolean logic is corrupted and cannot be used. Exception processing will rebuild the Boolean logic from the original exception profile data.

User response:
You might need to update the Boolean logic to restore it to its previous state.

DAJM679E Select Maintenance Window must be one of the following values: A, C, S, U, V or blank.

Explanation:
An invalid value was entered in the **Select Maintenance Window** field.

User response:
Enter a valid value as described in the message text.

DAJM680E A Maintenance Window must be specified when Maintenance Window Option is U - Update or V-View

Explanation:
Updating or viewing a maintenance window is only valid when a maintenance window has been selected.

User response:
Either select a maintenance window, or select a different option.

DAJM681I Automation History is not available for this job profile.

Explanation:
The job profile that you selected does not have any available history.

User response:
No action is required.

DAJM700I Private Protocol is not supported in this release of Db2. Defaulting to blank

Explanation:
Private protocol is only supported for Db2 V9 and earlier. The value is removed from the Database Connect Protocol field.

User response:
Specify a different value or leave this field blank.

DAJM701E Reopt Scope must be "A"ll, "D"ynamic, "S"tatic, or Blank(existing value)

Explanation:
An invalid value was entered in the Reopt Scope field.

User response:
Enter a valid value as described in the message text.

DAJM702E Access Path Compare must be "W"arn, "E"rror, "N"one, or Blank(existing value)

Explanation:
An invalid value was entered in the Access Path Compare field.

User response:
Enter a valid value as described in the message text.

DAJM703E **Access Path Reuse must be "Y"es, "N"o, or Blank(existing value)**

Explanation:
An invalid value was entered in the Access Path Reuse field.

User response:
Enter a valid value as described in the message text.

DAJM704E **Plan Management must be "O"n, o"F"f, "B"asic, "E"xtended, 'or Blank(existing value)**

Explanation:
An invalid value was entered in the Plan Management field.

User response:
Enter a valid value as described in the message text.

DAJM705E **Plan Management Scope must be "A"ll, "D"ynamic, "S"tatic, or Blank(existing value)**

Explanation:
An invalid value was entered in the Plan Management Scope field.

User response:
Enter a valid value as described in the message text.

DAJM706E **Explain must be "Y"es, "N"o, "O"nly or Blank(existing value)**

Explanation:
An invalid value was entered in the Explain field.

User response:
Enter a valid value as described in the message text.

DAJM707E **Explain "O"nly is valid for Db2 Version 10 and above. Resetting to blank.**

Explanation:
The value you specified is not valid for your version of Db2.

User response:
Correct the JCL and resubmit the job.

DAJM708E **Concurrent Access Resolution must be "U"se Currently Committed, "W"ait for Outcome, or Blank(existing value)**

Explanation:
Concurrent Access Resolution option must be one of the following values: U - Use currently committed, W - Wait for outcome or blank - use previous value.

User response:
Specify a different value or leave this field blank.

DAJM709E **Utilities cannot be defined on excluded objects.**

Explanation:
You attempted to define a utility on an excluded object.

User response:
Modify the utility so it does not reference an excluded object.

DAJM710E *field* **must not be blank**

Explanation:
The field listed in the message is blank. This field is required.

User response:
Type a valid value in this field and press Enter.

DAJM711E **Invalid Value. Job Wait must be Y, N, or P**

Explanation:
An invalid value was entered in the Job Wait field.

User response:
Enter Y to indicate synchronous execution; enter N to indicate asynchronous execution; or enter P to specify synchronous execution after which the job status in z/OS is purged.

DAJM712E **Invalid Value. Job Condition must be GT, GE, EQ, LT, LE or NE**

Explanation:
An invalid value was entered for the trigger task Cond field.

User response:
Enter a valid value as listed in the message text.

DAJM713E **Task name already exists**

Explanation:
The task name entered duplicates another task name. The task name must be unique.

User response:
Enter a unique task name and press Enter.

DAJM714I **Specify selection criteria and press <Enter>**

Explanation:
To display a list of tasks for the Db2 administrative task scheduler, enter criteria in the Task Name Like and Task Creator Like fields and press Enter.

User response:
No action is required.

DAJM715I **Task** *task_name* **has been successfully deleted**

Explanation:

The task listed in the message has been successfully deleted.

User response:
No action is required.

DAJM716I **No tasks were found that meet selection criteria. Press enter to create a task or change the selection criteria**

Explanation:
There are no tasks that meet the selection criteria entered in the Task Name Like and Task Creator Like fields.

User response:
Press Enter to create a new task, or change the selection criteria in those fields.

DAJM717I **Task *task_name* has been successfully added**

Explanation:
The task listed in the message has been successfully added.

User response:
No action is required.

DAJM718E **A JCL library or Procedure must be specified**

Explanation:
An execution source must be provided for the task.

User response:
Enter either a JCL job in a data set or a stored procedure, then press Enter.

DAJM719I **Task *task_name* has been updated.**

Explanation:
The task listed in the message has been successfully updated.

User response:
No action is required.

DAJM720E **_Begin | End_ Timestamp must be later then current time.**

Explanation:
The beginning or ending timestamp listed in the message is before the current time.

User response:
Enter a timestamp that is after the current timestamp and press Enter.

DAJM721I **_Window | time_period task_name_ has been successfully unscheduled**

Explanation:

The window or time period specified in the message text has been successfully unscheduled.

User response:
No action is required.

DAJM722I **This task has not been executed**

Explanation:
The task you selected to check the status of has not been executed.

User response:
No action is required.

DAJM723E **Invalid CRON minute**

Explanation:
The CRON minute in the Point in Time field is not valid.

User response
Valid values are:

- A numeric from 0 to 59
- A range (two numbers separated with a hyphen, such as 2-50)
- A list (numbers separated with commas, such a 1,3,5)
- An asterisk (*), which represents all possible values

For information about the unix CRON format for the Db2 administrative task scheduler, refer to IBM Db2 for z/OS documentation and the administration topics for your version of Db2.

DAJM724E **Invalid CRON hour**

Explanation:
The CRON hour in the Point in Time field is not valid.

User response
Valid values are:

- A numeric from 0 to 23
- A range (two numbers separated with a hyphen, such as 1-3)
- A list (numbers separated with commas, such a 1,3,5)
- An asterisk (*), which represents all possible values

For information about the unix CRON format for the Db2 administrative task scheduler, refer to IBM Db2 for z/OS documentation and the administration topics for your version of Db2.

DAJM725E **Invalid CRON day of month**

Explanation:
The CRON day of the month in the Point in Time field is not valid.

User response

Valid values are:

- A numeric from 0 to 31

- A range (two numbers separated with a hyphen, such as 1-3)

- A list (numbers separated with commas, such a 1,3,5)

- An asterisk (*), which represents all possible values

For information about the unix CRON format for the Db2 administrative task scheduler, refer to IBM Db2 for z/OS documentation and the administration topics for your version of Db2.

DAJM726E   Invalid CRON month

Explanation:
The CRON month in the Point in Time field is not valid.

User response

Valid values are:

- A numeric from 1 to 12

- A range (two numbers separated with a hyphen, such as 1-3)

- A list (numbers separated with commas, such a 1,3,5)

- An asterisk (*), which represents all possible values

- Upper-, lower-, or mixed-case three-character strings, based on the English name of the month: jan, feb, mar, apr, may, jun, jul, aug, sep, oct, nov, or dec

For information about the unix CRON format for the Db2 administrative task scheduler, refer to IBM Db2 for z/OS documentation and the administration topics for your version of Db2.

DAJM727E   Invalid CRON day of week

Explanation:
The CRON day of the week in the Point in Time field is not valid.

User response

Valid values are:

- A numeric from 1 to 7

- A range (two numbers separated with a hyphen, such as 1-3)

- A list (numbers separated with commas, such a 1,3,5)

- An asterisk (*), which represents all possible values

- Upper-, lower-, or mixed-case three-character strings, based on the English name of the day: mon, tue, wed, thu, fri, sat, or sun

For information about the unix CRON format for the Db2 administrative task scheduler, refer to IBM Db2 for z/OS documentation and the administration topics for your version of Db2.

DAJM728E   Invalid CRON character

Explanation:
An invalid character was entered in the Point in Time field.

User response:
For information about the unix CRON format for the Db2 administrative task scheduler, refer to IBM Db2 for z/OS documentation and the administration topics for your version of Db2.

DAJM729E   Incomplete CRON definition

Explanation:
The point in time field is incomplete. The field must be in unix CRON format.

User response

The format is:

```
minute hour day_of_the_month
month_of_the_year day_of_the_week
```

where:

- *minute* can be 0-59

- *hour* can be 0-23

- *day_of_the_month* can be 1-31

- *month_of_the_year* can be 1-12 or upper-, lower-, or mixed-case three-character strings, based on the English name of the month: jan, feb, mar, apr, may, jun, jul, aug, sep, oct, nov, or dec

- *day_of_the_week* can be 1-7 or upper-, lower-, or mixed-case three-character strings, based on the English name of the day: mon, tue, wed, thu, fri, sat, or sun

Each field must be separated by a blank. For information about the unix CRON format for the Db2 administrative task scheduler, refer to IBM Db2 for z/OS documentation and the administration topics for your version of Db2.

DAJM740E   Invalid CRON range

Explanation:
The range entered in the Point in Time field is not in valid CRON format. The range must be two numbers separated with a hyphen, such as 1-3.

User response:
For information about the unix CRON format for the Db2 administrative task scheduler, refer to IBM Db2 for z/OS documentation and the administration topics for your version of Db2.

DAJM741E   **Invalid CRON step**

Explanation:
The step entered in the Point in Time field is not in valid CRON format. Step values can be used in conjunction with ranges.

User response
The syntax is:

```
range/step
```

This defines the range and an execution interval. If you specify `first-last/step`, execution takes place at *first*, then at all successive values that are distant from *first* by *step*, until *last*. If you specify `*/step`, execution takes place at every interval of *step* through the unrestricted range. For information about the unix CRON format for the Db2 administrative task scheduler, refer to IBM Db2 for z/OS documentation and the administration topics for your version of Db2.

DAJM742E   **Invalid subsystem ID entered**

Explanation:
An invalid Db2 subsystem ID was entered.

User response:
Enter a valid Db2 subsystem.

DAJM743E   **Invalid data set DSORG. Only a sequential file or a PDS/PDSE is allowed**

Explanation:
An invalid data set was entered. The data set organization must be a PDS, a PDSE, or a sequential file.

User response:
Enter a different data set.

DAJM744E   **JCL Dataset and Procedure are mutually exclusive**

Explanation:
Both a JCL job and a stored procedure were entered in the Execution Source fields.

User response:
Enter either a JCL job or a stored procedure, not both.

DAJM745E   **If no invocation options are specified, max invocations must be 1**

Explanation:
A value greater than 1 was entered in the Max Invocations field, but an invocations option was not specified.

User response:
If you want the job or procedure to be invoked more than once, you must specify one of the invocation

options (minutes, trigger task, or point in time). Otherwise, enter 1 in the Max Invocations field.

DAJM746I   **Admin Scheduler feature is disabled**

Explanation:
The Db2 Admin Scheduler function is not enabled.

User response:
Contact your systems administrator.

DAJM747E   **Trigger Cond is not valid without Trigger Task**

Explanation:
A trigger condition value was entered but a trigger task was not specified.

User response:
Either clear the value from the Trigger Cond field or enter a Trigger Task Name.

DAJM748E   **Trigger Code is not valid without Trigger Cond**

Explanation:
A trigger condition code was entered but a trigger condition was not specified.

User response:
Either clear the value from the Trigger Code field or enter a trigger condition.

DAJM749E   **Interval, Trigger, and Point in Time are mutually exclusive**

Explanation:
A value was entered in more than one of the Interval, Trigger, or Point in Time fields. Only one of these options can be used to invoke the administrative scheduler task.

User response:
Enter the desired invocation options and clear the extraneous fields.

DAJM750E   **JCL member cannot be specified without a JCL data set**

Explanation:
A JCL member name was entered for the Execution Source, but the data set name has not been provided.

User response:
Enter the data set name that holds the JCL member.

DAJM751E   **PDS member does not exist**

Explanation:
The JCL member name entered for the Execution Source does not exist.

User response:
Correct the member name.

DAJM752I **The following tasks have been scheduled**

Explanation:
This informational message confirms the task or tasks that have been scheduled.

User response:
No action is required.

DAJM754E **Error scheduling job *jobname*. Hit <PF1> for info**

Explanation:
An error occurred when attempting to add a task to the Db2 administrative task scheduler. This error lists the job name that encountered the error, and is followed by additional messages returned from the Db2 administrative task scheduler.

User response:
Examine the messages returned from the Db2 administrative task scheduler to determine the course of action. Contact IBM Software Support if you require assistance.

DAJM755E **Task not deleted. RC = *return_code***

Explanation:
An error occurred when attempting to delete a task from the Db2 administrative task scheduler. This message lists the return code from the Db2 administrative task scheduler ADMIN_TASK_REMOVE stored procedure.

User response:
Examine the return code from the Db2 administrative task scheduler to determine the course of action. Contact IBM Software Support if you require assistance.

DAJM756E **Point in Time is not in unix CRON format**

Explanation
The point in time field is not in the unix CRON format. The format is:

```
minute hour day-of-the-month month-of-the-year
 day-of-the-week
```

where:

- minute can be 0-59
- hour can be 0-23
- day-of-the-month can be 1-31
- month-of-the-year can be 1-12 or upper-, lower-, or mixed-case three-character strings, based on the English name of the month: jan, feb, mar, apr, may, jun, jul, aug, sep, oct, nov, or dec

- day-of-the-week can be 1-7 or upper-, lower-, or mixed-case three-character strings, based on the English name of the day: mon, tue, wed, thu, fri, sat, or sun

Each field must be separated by a blank.

User response:
Enter a valid unix CRON format in the Point in time field.

DAJM757E **Procedure name must be specified if Procedure schema is specified**

Explanation:
A value was entered in the Procedure Schema field, but the Procedure Name was not provided.

User response:
Enter the procedure name.

DAJM758E **Trigger Cond is not valid without Trigger Code**

Explanation:
A trigger condition was entered, but a trigger condition code was not specified.

User response:
Specify a trigger condition code.

DAJM759E **Trigger Task does not exist**

Explanation:
The trigger task entered in the Task Name field does not exist.

User response:
Enter a task from the Db2 Admin Task Scheduler panel that will trigger this task.

DAJM765E **Reserved word WHERE is not valid**

Explanation:
The word WHERE is a reserved word and may not be used in the Restrict Tablespace field.

User response:
Enter the WHERE clause criteria without the restricted word.

DAJM769E **Variable names are not permitted in Trigger Task Name**

Explanation:
Variables are not allowed for the Trigger Task Name.

User response:
Remove all variables from the TriggerTask Name.

DAJM770E **Invalid Op Code. Valid values are GT, LT, GE, LE, EQ.**

Explanation:
An invalid value was entered in the Op Code field.

User response:
Enter a valid value as described in the message text.

DAJM772E   **If the Static Job Build Dataset field is specified and Set JCL member equal to jobname is Yes, the static job build member must be blank.**

Explanation:
The Static Job Build data set field was specified, and Set JCL member equal to jobname is set to Yes. Because the job name will be used for the JCL, the static job build member name must be blank.

User response:
Remove the member name from the Static Job Build Dataset member field.

DAJM773E   **Invalid value - The Op Code and Return code fields cannot be blank.**

Explanation:
A valid value must be entered for both **Op Code** and **Return Code**.

User response:
Enter a valid value in both fields.

DAJM775E   **A valid *field_name* must be selected to receive notifications**

Explanation:
An invalid value was entered in the field that is listed in the message. This field is required to update notification options.

User response:
Correct the invalid field name.

DAJM776E   **Invalid Value - Type must be Email or Text**

Explanation:
An invalid value was entered in the Type field.

User response:
Enter E for email notifications or T for text notifications.

DAJM778E   **Invalid email address. Enter a valid email address to receive a notification**

Explanation:
The email address entered was invalid.

User response:
Enter a valid email address.

DAJM779I   **Profile *profile_creator.profile_name* has been selected and is now the default notification profile**

Explanation:
The profile that is listed in the message been selected and is now the default notification profile.

User response:
No action is required.

DAJM780E   **Only one profile can be selected. Choose one profile and resubmit**

Explanation:
More than one notification profile was selected as the default notification profile.

User response:
Clear the S line command from all profiles except from the notification profile that you want to use as the default.

DAJM781E   **Invalid value - Sysout class must be A-Z or 1-9**

Explanation:
An invalid value was entered for the SYSOUT class.

User response:
Enter a valid value as described in the message text.

DAJM782I   **Profile *profile_creator.profile_name* has been selected as the notification profile for this job**

Explanation:
The profile that is listed in the message been selected and is now the notification profile for this job.

User response:
No action is required.

DAJM783I   **The *selected_type* profile has been removed**

Explanation:
The profile that is listed in the message was removed.

User response:
No action is required.

DAJM784I   **There is no designated *selected_type* profile to be removed.**

Explanation:
The REMOVE command was entered, but there is no selected or designated default profile to removed.

User response:
No action is required.

DAJM787E   **Template data set must be a valid, existing, partitioned data set.**

Explanation:
The data set is invalid or does not exist.

User response:
Enter a valid data set name.

DAJM788E   **When a template *data_set_name* | *member_name* is entered, a valid template *data_set_name***

| *member_name* must also be included.

Explanation:
A template data set name was entered but the member name is blank, or a template member name was entered but the data set name is blank.

User response:
Enter both the template data set name and a member name.

DAJM789I	Template name *template_name* was successfully selected	removed.

Explanation:
A template name was selected or removed from the template selection panel.

User response:
No action is required.

DAJM790E	When a template data set and member are specified and *function_or_type* is selected, a template name must also be included.

Explanation:
When a template data set and member name are included, a template name must also be selected.

User response:
Select a template name for the function or type displayed in the message text.

DAJM791E	OUTDDN	LOADDDN *data_set_name*	*template_name* missing for Table Sel Name *table_name*.

Explanation:
A template data set and member name was entered, and Include Select Table and Columns is set to Yes on DAJ$HPUO. However, a template name is missing for one of the tables, or a data set name is missing when a template data set and member name are not specified. The table in question is described by the table_name in the message text. This table is defined on panel DAJ$HPTB (HPU Table Selection).

User response:
On DAJ$HPUO, enter Update for Select Table and Columns, then select the table that matches the *table_name* value to include the missing template name.

DAJM792E	Duplicate Template name found. The *type* matches the type for Select *select_name*. Provide a unique name for each.

Explanation:

A template name matches another template name within Db2 HPU.

User response:
Select a unique template name for each type.

DAJM793E	A valid data set and member name must be included for *utility_name* before including or selecting a template name.

Explanation:
A template data set and member name was not entered before attempting to select or include a template name.

User response:
Enter a valid existing template data set and member name for the desired utility before including or selecting a template name.

DAJM794E	No template names exist in the specified data set and member.

Explanation:
A template data set and member were selected, but no template names exist in the member.

User response:
Update the data set member to include the desired template, or specify a different data set or member.

DAJM795W	A *type* template name must be included to continue.

Explanation:
For UNLOAD and Db2 HPU utilities, some types are required before building JCL.

User response:
Enter the required template name as described in the message text.

DAJM796W	Since a template name was not included for type, the Include and Update fields have been set to "N" for *type*.

Explanation:
A valid template name is required for the *type* listed in the message text. Because a valid template name was not included, the Include and Update fields have been set to N for *type*.

User response:
No action is required. If you want to include the *type* that is described in the message text, include a template name.

DAJM797W	The include *type* option was selected and no *type* template name exists. Select a *type* template name.

Explanation:

The include *type* option that is specified in the message is set to Yes, but the template name is blank.

User response:
Select a template name for the *type* that is described in the message text.

DAJM798W	Since a template name was not included for OUTDDN, the *select_name* Select Statement has been set to "N".

Explanation:
A table was selected for Db2 HPU, but upon exit from the **HPU Select Format** panel, the required OUTDDN template name was blank.

User response:
No action is required. If the table in question must be included, a template name must be selected for OUTDDN.

DAJM799E	Duplicate template name found. The *type* name matches the *type* name. Provide a unique name for each.

Explanation:
Duplicate template names were found. For UNLOAD or Db2 HPU utilities, these template names must be unique to avoid errors at run time.

User response:
Enter a unique template name for each type described in the message text.

DAJM800I	Entry was successfully deleted

Explanation:
The entry was successfully deleted.

User response:
No action is required.

DAJM801I	Entry was successfully created

Explanation:
The entry was successfully created.

User response:
No action is required.

DAJM802I	Entry was successfully updated

Explanation:
The entry was successfully updated.

User response:
No action is required.

DAJM803E	Invalid value - The pattern is restricted to a single asterisk at the end of the object *database | name*

Explanation:

A wildcard pattern was specified in the middle of an object database or object name. The pattern is restricted to a single asterisk at the end of the object name.

User response:
Remove the wildcard pattern from the middle of the name.

DAJM809E	Requested object not found for specified selection criteria and advanced SQL.

Explanation:
No objects were found in the Db2 catalog that match the intersection of selection criteria results with advanced SQL results.

User response:
Change the selection criteria or advanced SQL and retry.

DAJM810E	Template name required for *utility*. Enter at least one template name to continue.

Explanation:
A data set and member name were specified, but no template name was included.

User response:
Include at least one template name.

DAJM811E	A local backup template name cannot be selected without a local primary template name.

Explanation:
A local backup template name was selected without first specifying a local primary template name.

User response:
Select a local primary template name.

DAJM812E	A recovery backup template name cannot be selected without a recovery primary template name.

Explanation:
A recovery backup template name was selected without first specifying a recovery primary template name.

User response:
Select a recovery primary template name.

DAJM813E	Invalid template name. The template name does not meet the template naming standards.

Explanation:
A value was entered for template name that is not supported by Db2.

User response:

Correct the template name as described in the help text or in the Db2 utility guide and reference under template-name.

DAJM814E	Only one template can be selected.

Explanation:
More than one template name was selected for the specified type.

User response:
Select only one template name.

DAJM815E	Invalid value. Enter U for Updated, or A for All.

Explanation:
An invalid value was entered in the Scope field.

User response:
Enter a valid value as described in the message text.

DAJM816E	Invalid value. Enter N for No, P for PNMO, M for PMP, or R for PMR.

Explanation:
An invalid value was entered in the FLASHCOPY_PPRCP field.

User response:
Enter a valid value as described in the message text.

DAJM817E	Invalid value. The Update alternate copy pool field must be Y - Yes, N - No, or C - Clear.

Explanation:
An invalid value was entered in the **Update alternate copy pool** field.

User response:
Enter a valid value as described in the message text.

DAJM818E	A FlashCopy template name is required when a template data set and member have been specified.

Explanation:
If you enter a template data set and member name, a FlashCopy template name is required.

User response:
To select a template name, enter Y or C in the **FlashCopy options** field and Y in the **Update FlashCopy Dataset Options** field and press Enter.

DAJM825E	Invalid value. Valid values are "L", "X", "A", "N".

Explanation:
An invalid value was entered in the **AUX** field.

User response:
Enter a valid value as described in the message text.

DAJM826E	Invalid value. Valid values are "H", "A", "B", "N".

Explanation

An invalid value was entered. Valid values are as follows:

- H: Include related history (versioning) keyword at build time.
- A: Include related archive keyword at build time.
- B: Include both related history (versioning) and archive keyword at build time.
- N: Do not process history or archive objects.

User response:
Verify that you specified a valid value.

DAJM831E	Invalid value. Valid values are "D", "T", and "J".

Explanation:
An invalid value was entered in the **Generation Options** field.

User response:
Enter a valid value as specified in the message text.

DAJM832E	The current unit of work has been rolled back due to deadlock or timeout in *module_name*

Explanation:
A -911 SQL code was encountered during the current unit of work. The current unit of work was involved in a deadlock, or experienced a timeout, and was rolled back.

User response:
When the deadlock is resolved, retry the operation.

DAJM833E	Invalid combination. Both the profile creator and name are required.

Explanation:
Both the profile creator and profile name are required.

User response:
Add the missing profile name or creator and retry.

DAJM835E	Invalid combination. SETCURRENTVERSION is not valid with SHRLEVEL CHANGE.

Explanation:
An invalid value was entered. If you specify SHRLEVEL CHANGE, you cannot specify SETCURRENTVERSION.

User response:
Correct the value and retry.

DAJM836E   **Invalid combination. Both OMEGAMON Data Provider broker and store names are required.**

Explanation:
An invalid value was entered. Both the OMEGAMON Data Provider broker name and store name are required.

User response:
Correct one or both values and retry.

DAJM900E   **If the Object event field is blank, a data set name is required.**

Explanation:
A blank value in the **Object event** field requires you to supply the data set name to which to recover.

User response:
Enter a data set name in the **Copy data set name** field.

DAJM901E   **Invalid value. Enter Y to rename profile. Enter N or press PF3 to exit**

Explanation:
An invalid value was specified.

User response:
Enter Y to rename profile; enter N or press PF3 to cancel and exit.

DAJM902E   **Invalid value. Enter Y to Include Registration Step or N to exclude**

Explanation:
An invalid value was specified.

User response:
Enter Y to include the registration step or N to exclude the registration step.

DAJM903E   **The only valid value is A to Add Objects, Utility or Exception Profiles to the Job profile**

Explanation:
An invalid value was specified.

User response:
Enter A to add object, utility, or exception profiles to the job profile.

DAJM904E   **This option is only valid when using a version 10 or higher subsystem**

Explanation:
An invalid value was entered in the field in which the cursor is positioned. Db2 V10 or later is required for the setting you selected.

User response:
Change the value to a valid value for the Db2 version you are using.

DAJM906E   **Invalid option - Schedule Job Yes not allowed during an online maintenance window build.**

Explanation:
An invalid value was entered in the field to select a performance window. Schedule Job Yes is only valid during a batch maintenance window build.

User response:
Set this field to No, or select a batch maintenance window build to continue.

DAJM907W   **The selected event notification profile for this job has been removed because it does not exist on Db2 subsystem *ssid*.**

Explanation:
The event notification profile that was selected for this job in job options no longer exists on the Db2 subsystem that is listed in the message. The event notification profile will be removed from the job profile.

User response:
No action is required.

DAJM908E   **Invalid value. Valid options are 1, 2 and 3.**

Explanation:
An invalid value was specified in the Option line

User response:
Enter a valid value of 1, 2, or 3.

DAJM909E   **Invalid value. Valid options are 1, 2, 3, 4, 5, 6, 7, and 8.**

Explanation:
An invalid value was specified in the Option line.

User response:
Enter a valid value as described in the message text. Press PF1 for a description of the options.

DAJM910E   **No recipient has been selected for this event notification profile. Enter line command C to create a recipient.**

Explanation:
At least one recipient is required for each event notification profile.

User response:
Enter the C line command to create a recipient.

DAJM911E   **Invalid combination. The Recipient, Sender, and Type can not match other entries.**

Explanation:
The Type, Recipient, and Sender fields must be unique for each entry.

User response:
Change the entries so they are unique.

DAJM912E **No events have been selected for this recipient. Enter line command *U | A* to *add | update* events for this recipient.**

Explanation:
At least one event is required for each recipient.

User response:
Enter the line command that is listed in the message to events for this recipient.

DAJM913I **Profile *profile_creator.profile_name* saved.**

Explanation:
The profile name that is listed in this message was successfully saved.

User response:
No action is required.

DAJM914E **Event has already been selected.**

Explanation:
The event that you selected already has been selected for the recipient.

User response:
Deselect the event, select a different event, or press PF3 (END) to cancel.

DAJM915I **Profile *profile_creator.profile_name* has been selected as the notification profile for this maintenance window.**

Explanation:
The profile that is specified in this message has been assigned to the maintenance window.

User response:
No action is required.

DAJM916I **Event has been successfully selected.**

Explanation:
This event has been selected and successfully added to the specified recipient.

User response:
No action is required.

DAJM917I **Enter Type E for Email, or T for Text, and include an address for both Recipient and Sender.**

Explanation:
Type must be E for email or T for text. The **Recipient** field must include the phone number or email address that will be notified of the selected events. The **Sender** field must include the phone number or email

address that will display as the From address in the notification. If the type is Text, a valid mobile phone number must be entered in the following format: 1112223333@carrier.com This system uses an email to SMS messaging format. Either refer to your mobile phone carrier's website for your valid SMS email address, or use an SMTP to SMS gateway.

User response:
No action is required.

DAJM918E **A valid Type must be selected to receive notifications. Enter E for Email, or T for Text.**

Explanation:
An invalid value was entered in the **Type** field. **Type** cannot be blank and must be E for Email or T for text

User response:
Enter a valid value as described in the message text.

DAJM919I **No description has been defined for this event.**

Explanation:
No description was defined for the selected event.

User response:
No action is required.

DAJM920E **If Object event is N (Nosyscopy), a copy data set name is required.**

Explanation:
A value of N (Nosyscopy) in the **Object event** field requires that you enter a data set from which to recover.

User response:
Enter a data set name in the **Copy data set name** field.

DAJM921E **Object event = N (Nosyscopy) not supported for Db2 version less than V12.**

Explanation:
A value of N in the **Object event** field is not supported in Db2 versions earlier than V12.

User response:
Choose a different value.

DAJM922I **Nosyscopy type not supported for Db2 version less than V12. Value cleared.**

Explanation:
Nosyscopy type is not supported until Db2 V12.

User response:
No action is required. The value is cleared.

DAJM923E **Nonblank Nosyscopy type only allowed when Object event is N.**

Explanation:

Nosyscopy type is only supported when the **Object event** field is set to N (Nosyscopy).

User response:
Clear the **Nosyscopy type** field, or change the **Object event** field to N.

DAJM926I	No performance windows were found. Press Enter to create a performance window.

Explanation:
No performance windows were found that match the specified filter.

User response:
Either change the filtering options, or press Enter to create a new performance window.

DAJM927E	No advanced SQL exists for this object.

Explanation:
The V line command was entered to view advanced SQL, but no advanced SQL exists for this object or objects.

User response:
Remove the line command from the **Cmd** field.

DAJM940E	The specified data set could not be found in the MVS catalog.

Explanation:
The data set could not be located in the MVS catalog.

User response:
Verify that you specified the correct data set.

DAJM950E	SHRLEVEL Change Yes is only allowed when Process is set to I for Insert Version Pages.

Explanation:
SHRLEVEL CHANGE is only valid with the Insert Version Pages keyword.

User response:
Either set the **Process** field to I for Insert Version Pages or change the **SHRLEVEL Change** field to N and resubmit.

DAJM951E	Invalid Value - Please select a valid value from the list provided or press PF1 for more information

Explanation
One or more invalid values was entered in the DISP fields. The DISP parameters include the following options:

- Status: M - Modify; N - New; O - Old; S - Share
- Normal Termination: C - Catalog; D - Delete; K - Keep; U - Uncatalog

- Abnormal Termination: C - Catalog; D - Delete; K - Keep; U - Uncatalog

User response:
Enter valid parameters for all three DISP fields, or clear all three fields.

DAJM952E	Invalid Option - Backout Yes is only valid when LOG RBA LRSN is specified

Explanation:
The Backout keyword was set to Yes but the LOG RBA/LRSN field has been left blank.

User response:
Specify a value for LOG RBA/LRSN before selecting Backout Yes.

DAJM954E	An error occurred while executing advanced SQL. Ensure that the syntax is correct and resubmit.

Explanation:
An error occurred while executing the advanced SQL statement.

User response:
Ensure that the SLQ syntax is correct and resubmit.

DAJM955E	If [HTTPS Port	Host Address] is selected, [HTTPS Port	Host Address] must also be included.

Explanation:
A value was entered for only one of the two required fields on the DAJQuery Monitor Support panel (option 0.7 from the Db2 Automation Expert main menu).

User response:
Enter a value in both fields.

DAJM956E	The value for HTTPS Port must be numeric.

Explanation:
A non-numeric value was entered in the **HTTPS Port** field.

User response:
Enter a non-numeric value.

DAJM957E	SQL statement exceeds the maximum varchar length of 32704

Explanation:
A user SQL statement exceeds the maximum allowable varchar length of 32,704 bytes.

User response:
Revise the statement so that it is less than 32,704 bytes in length and resubmit.

DAJM958E	A value for collection duration must be entered when a

performance window has been selected.

Explanation:
A value was entered for only one of the two required fields on the **Generation Options** panel. A collection duration value is required when selecting a performance window.

User response:
Enter a valid value in the **Collection Duration** field.

DAJS001I   **Maintwindow Execution starting on *subsystem*. DAJADIR Build: *mm/dd/yy hh.mm***

Explanation:
This message signifies the start of the stored procedure execution.

User response:
No action is required.

DAJS002I   **History ID = *history_id***

Explanation:
This message lists the history ID of this run of the stored procedure.

User response:
No action is required.

DAJS003I   **Actual Start Time= *hhhh:mm:ss***

Explanation:
This message lists the time that this run of the stored procedure started.

User response:
No action is required.

DAJS004I   **Window Name = *window_name***

Explanation:
This message displays the name of the maintenance window.

User response:
No action is required.

DAJS005I   **Window ID = *window_id***

Explanation:
This message displays the window ID of the maintenance window.

User response:
No action is required.

DAJS006I   **Window Start CRON = *cron_string***

Explanation:
This message displays the point-in-time string in UNIX cron format of the start of the maintenance window.

User response:
No action is required.

DAJS007I   **Window Start Time = *hhhh:mm:ss***

Explanation:
This message displays the start time that is defined for the maintenance window.

User response:
No action is required.

DAJS008I   **Window Duration = *hhhh:mm:ss***

Explanation:
This message displays the duration that is defined for the maintenance window.

User response:
No action is required.

DAJS009I   **Window Overrun = *hhhh:mm:ss***

Explanation:
This message displays the defined length of time that the maintenance window allows for a task to complete when the window closes.

User response:
No action is required.

DAJS010I   **Window End Time = *hhhh:mm:ss***

Explanation:
This message displays the end time of the maintenance window.

User response:
No action is required.

DAJS011I   **Maximum Tasks = *number_of_tasks***

Explanation:
This message displays the maximum number of tasks that can be allocated during the maintenance window.

User response:
No action is required.

DAJS100I   **Open actions retrieved: *number_of_actions***

Explanation:
This message displays the total number of open actions that might be run in the maintenance window.

User response:
No action is required.

DAJS101W   **Bypassing action ID *action_id***

Explanation:
The action ID listed in the message text cannot be run within the time remaining in this maintenance window. The action is bypassed.

User response:
Ensure that the expected run time for the action is less than the overall duration of the maintenance window.

Adjust the priority for this action so that the action is dispatched earlier in the maintenance window.

DAJS102W   **Action duration exceeds time remaining in maintenance window.**

Explanation:
The estimated amount of time that the action will take is longer than the amount of time left in the maintenance window. The action is bypassed, but remains open for consideration in subsequent maintenance windows. Refer to subsequent messages to review the time estimate for the action and for the time left in the maintenance window.

User response:
Ensure that the expected run time for the action is less than the overall duration of the maintenance window. Adjust the priority for this action so that the action is dispatched earlier in the maintenance window.

DAJS103I   **Action duration = *hhhh:mm:ss***

Explanation:
This message displays the estimated amount of time that the action will take to run.

User response:
No action is required.

DAJS104I   **Time remaining = *hhhh:mm:ss***

Explanation:
This message displays the amount of time that is left in the maintenance window.

User response:
No action is required.

DAJS105I   **Dispatching action ID *IX* | *TS* = *object* ACTION= *action_key* PRIORITY=*priority***

Explanation:
An action is being dispatched to an open task. This message displays the details of the action.

User response:
No action is required.

DAJS106E   **Maintenance window does not exist.**

Explanation:
The maintenance window that is assigned to this run cannot be found. The maintenance window might have been deleted.

User response:
If the maintenance window was erroneously deleted, re-create it.

DAJS107I   **Window retrieved.**

Explanation:

The maintenance window was retrieved from SYSAUTO.TIMEWINDOWS.

User response:
No action is required.

DAJS108I   **Timeperiod retrieved.**

Explanation:
The maintenance window time period was retrieved from SYSAUTO.TIMEPERIODS.

User response:
No action is required.

DAJS109E   **Maintwindow Execution is executing outside defined maintenance window.**

Explanation:
This instance of the Db2 Automation Expert stored procedure was submitted or scheduled to run at a time that is outside the time period defined in the maintenance window.

User response
Do one of the following:

- Submit the Db2 Automation Expert stored procedure at a time that falls within the defined window start and duration of the maintenance window.
- Reschedule the stored procedure for a time that falls within the defined window start and duration of the maintenance window.
- Add a time period to the maintenance window that corresponds with the time that you want to run the stored procedure.

DAJS110W   **No open/active actions detected.**

Explanation:
A maintenance window opened, but no open or active actions are scheduled to run in the maintenance window.

User response:
Check the workload of the maintenance window.

DAJS111I   **Tasks initiated = *number_of_tasks***

Explanation:
This message display the number of tasks that were initiated.

User response:
No action is required.

DAJS112E   **Internal error validating maintenance window.**

Explanation:
An internal error occurred when the maintenance windows parameters were validated.

User response:
Contact IBM Software Support.

DAJS113I   **Highest return code = *return_code***

Explanation:
This message is displayed at the end of a stored procedure run in a given maintenance window. It displays the highest return code from the actions processed during this maintenance window.

User response:
No action is required.

DAJS301I   **Subtask starting.**

Explanation:
A Db2 Automation Expert subtask started.

User response:
No action is required.

DAJS302I   **DAJADS1 Build: *mm/dd/yy hh.ss***

Explanation:
This message displays the date and time that the Db2 Automation Expert subtask started.

User response:
No action is required.

DAJS303I   **Subtask connected to *ssid*.**

Explanation:
This message displays the Db2 subsystem ID that the Db2 Automation Expert subtask is connected to.

User response:
No action is required.

DAJS310I   **Calling RRSAF Identify.**

Explanation:
The Db2 Automation Expert subtask issued a call to the RRSAF IDENTIFY function to initialize a connection to Db2.

User response:
No action is required.

DAJS311I   **Calling RRSAF Signon.**

Explanation:
The Db2 Automation Expert subtask issued a call to the RRSAF SIGNON function to establish authorization IDs for a connection.

User response:
No action is required.

DAJS312I   **Calling RRSAF Create Thread | Terminate Thread.**

Explanation:
The Db2 Automation Expert subtask issued a call to the RRSAF CREATE THREAD or TERMINATE THREAD function, to allocate or deallocate the Db2 resources

that are required for an application to issue SQL requests.

User response:
No action is required.

DAJS313I   **Calling RRSAF Terminate Identify.**

Explanation:
The Db2 Automation Expert subtask issued a call to the RRSAF TERMINATE IDENTIFY function to terminate a connection to Db2.

User response:
No action is required.

DAJS314I   **Processing action:**

Explanation:
This informational message indicates the start of an action being processed.

User response:
No action is required.

DAJS315I   **Action start logged.**

Explanation:
The start of an action has been logged.

User response:
No action is required.

DAJS340I   **Subtask ending.**

Explanation:
A Db2 Automation Expert subtask ended.

User response:
No action is required.

DAJS800E   **End of actions.**

Explanation:
This message indicates the end of the actions to be run in this maintenance window.

User response:
No action is required.

DAJS801I   **Waiting for remaining tasks to complete.**

Explanation:
The maintenance window is closed and waiting for remaining tasks to complete before terminating.

User response:
No action is required.

DAJS802I   **All tasks completed.**

Explanation:
The maintenance window is closed and all tasks are complete.

User response:
No action is required.

DAJS803I   Terminating.

Explanation:
Maintenance window processing is terminating.

User response:
No action is required.

DAJS804I   Procedure ended.

Explanation:
Maintenance window processing ended.

User response:
No action is required.

**DAJS805I   Maintenance window duration
                    exceeded.**

Explanation:
The current maintenance window period has ended.

User response:
No action is required.

**DAJS806I   Entering maintenance window
                    overrun.**

Explanation:
The maintenance window period ended and the
window is now in the defined overrun period.

User response:
No action is required.

**DAJS807I   No additional actions will be
                    dispatched.**

Explanation:
The maintenance window period ended and the
window is now in the defined overrun period. If
possible, actions that are currently running will
complete during the overrun period. No additional
actions will be initiated.

User response:
No action is required.

**DAJS808I   Maintenance window overrun
                    exceeded.**

Explanation:
The current maintenance window period overrun has
been exceeded.

User response:
No action is required.

**DAJS809I   Actions in progress will be
                    terminated.**

Explanation:
The maintenance window period and the defined
overrun period both ended. Actions that are currently
running will be terminated.

User response:

No action is required.

**DAJS810I   Maintwindow Execution ended on
                    ssid.**

Explanation:
Db2 Automation Expert processing ended on the
specified subsystem.

User response:
No action is required.

DAJS811I   DAJADIR build: *mm/dd/yy hh:mm*

Explanation:
This message provides the timestamp for the start of
Db2 Automation Expert.

User response:
No action is required.

DAJS812I   History ID = *history_ID*

Explanation:
This message provides the history ID of this run of Db2
Automation Expert.

User response:
No action is required.

DAJS813I   Actual end time = *timestamp*

Explanation:
This message indicates the time that Db2 Automation
Expert ended.

User response:
No action is required.

**DAJS814I   Calculated priority *priority*
                    overridden by user priority
                    *user_priority***

Explanation:
The priority for this object or action was changed
because the user-specified priority overrides the
calculated priority.

User response:
No action is required.

**DAJS999E   SQL error RC = *return_code*,
                    Reason = *reason_code***

Explanation:
Db2 Automation Expert encountered an SQL error.

User response:
Contact IBM Software Support.

DAJU001I   DAJAEINI Build: *mm/dd/yy hh.ss*

Explanation:
This message displays the date and time that the Db2
Automation Expert stored procedure started.

User response:
No action is required.

DAJU002I   Procname =

Explanation:
This message displays the name of the Db2 Automation Expert stored procedure.

User response:
No action is required.

DAJU003I   Evaluation ID =

Explanation:
This message displays the name of the Db2 Automation Expert evaluator.

User response:
No action is required.

DAJU004I   Previous History ID =

Explanation:
This message displays the previous history ID of the last automated utility build for this job profile.

User response:
No action is required.

DAJU005I   No Previous History ID found.

Explanation:
This message indicates that this is the first execution of an automated utility build for this job profile.

User response:
No action is required.

DAJU006I   History ID =

Explanation:
This message displays the history ID that is assigned to the automated utility build (evaluation) for this job profile.

User response:
No action is required.

DAJV001I   DAJAEIA Build: *mm/dd/yy hh.ss xxx*

Explanation:
This message displays the date and time that the Db2 Automation Expert stored procedure started.

User response:
No action is required.

DAJV002E   Invalid Maintenance Window Name:

Explanation:
An invalid maintenance window name was found. The maintenance window may be been renamed or deleted.

User response:
Correct the maintenance window and rebuild the job profile.

DAJV003E   ACTION not found.

Explanation:
The action was not found in the action priority table.

User response:
Add the action to the action priority table and rebuild the job profile.

DAJV004E   SYMPTOM not found.

Explanation:
The symptom was not found in the symptom priority table.

User response:
Add the symptom to the symptom priority table and rebuild the job profile.

DAJV005I   Inserted | Updated Action ID =

Explanation:
This message displays the action ID and whether the action ID was updated or inserted.

User response:
No action is required.

DAJW001I   DAJAEIS Build: *mm/dd/yy hh.ss xxx*

Explanation:
This message displays the date and time that the Db2 Automation Expert stored procedure started.

User response:
No action is required.

DAJW002E   Symptom Key not found in registry.

Explanation:
The symptom key was not found in the symptom registry. Db2 Automation Expert cannot insert an action without a valid symptom key.

User response:
Add the symptom to the symptom registry table.

DAJW003E   Variance not numeric.

Explanation:
This is an internal error. The variance (the difference between the threshold and the actual value of the symptom) is not numeric.

User response:
Contact IBM Software Support.

DAJX001I   DAJAETRM Build: *mm/dd/yy hh.ss*

Explanation:
This message displays the date and time that the Db2 Automation Expert stored procedure started.

User response:
No action is required.

DAJX002I   Actions | Symptoms Deleted = *number_deleted*

Explanation:
This message displays the number of actions or symptoms that were deleted.

User response:
No action is required.

WTO messages

The following messages may appear as write-to-operator (WTO) messages in your SYSLOG or other appropriate output for your site.

DAJ1001I   DB2 SHARED PROFILE SERVICES STARTED V*v*R*r*

Explanation:
The Db2 Shared Profile Support job tracking started task has been invoked. The Db2 Shared Profile Support version and release is listed in the message.

User response:
No action is required..

DAJ1002I   DB2 SHARED PROFILE SERVICES INITIALIZATION COMPLETE

Explanation:
The Db2 Shared Profile Support job tracking started task has been invoked and has successfully completed initialization.

User response:
No action is required..

DAJ1003E   SUBSYSTEM *ssid* ALREADY ACTIVE

Explanation:
The Db2 Shared Profile Services job tracking started task is already active on the specified subsystem. Only one job tracking started task is required per LPAR.

User response:
If you need to restart the job tracking task, stop the task using the MVS STOP command before restarting the task.

DAJ1004I   DB2 SHARED PROFILE SERVICES TERMINATION IN PROGRESS

Explanation:
The Db2 Shared Profile Support job tracking started task is terminating. This message appears during normal shutdown.

User response:
No action is required..

DAJ1005I   DB2 SHARED PROFILE SERVICES TERMINATION COMPLETE

Explanation:
The Db2 Shared Profile Support job tracking started task has terminated. This message appears during normal shutdown.

User response:
No action is required..

DAJ1007I   COLD START IN PROGRESS

Explanation:
This message appears when the Db2 Shared Profile Support job tracking started task is started using the parameter setting COLDSTART (Y).

User response:
No action is required..

DAJ1008E   INVALID USERID SPECIFIED FOR AUTHID

Explanation:
The user ID entered in the AUTHID parameter in the DAJPARMS data set has not been defined to RACF or an equivalent security system.

User response:
Correct the user ID, or ensure the ID is defined to your security system.

DAJ1010E   NOT APF AUTHORIZED

Explanation:
The Db2 Shared Profile Support load library is not APF authorized.

User response:
APF authorize the Db2 Shared Profile Support load library.

DAJ1202E   INVALID SUBSYSTEM SPECIFIED *ssid*

Explanation:
Either the specified subsystem is not a valid Db2 Shared Profile Support subsystem, or the Db2 Shared Profile Support job tracking subsystem has not been started.

User response:
Ensure that the subsystem entered is a valid Db2 Shared Profile Support subsystem. If it is, then start the Db2 Shared Profile Support job tracking started task.

DAJ1203E   REGISTRATION WITH SUBSYSTEM *ssid* FAILED

Explanation:

A Db2 Shared Profile Support job could not register its status with the job tracking started task.

User response:
You must start the job tracking subsystem.

DAJ1204I	REGISTRATION WITH SUBSYSTEM *ssid* SUCCESSFUL

Explanation:
A Db2 Shared Profile Support job successfully registered its status with the job tracking started task.

User response:
No action is required..

DAJ1205E	TRACKING SUBSYSTEM *subsystem* NOT ACTIVE

Explanation:
The job tracking subsystem is not active.

User response:
You must start the job tracking subsystem.

DAJ1206E	SEVERE ERROR ENCOUNTERED DURING REGISTRATION PROCESSING

Explanation:
A internal error occurred during job registration processing. An SVC dump was produced. The task is terminating.

User response:
Contact IBM Customer Support.

DAJ1207E	*ddname* DD STATEMENT MISSING

Explanation:
The specified DD statement is missing from the JCL for the Db2 Shared Profile Support job tracking started task.

User response:
Create the appropriate DD and code the appropriate parameters in the data set. Refer to the JCL in the DAJPROC member of *dajhilvl*.SDAJSAMP for an example of the correct JCL.

DAJ2100E	PARAMETER ERROR DETECTED FOR *parameter*

Explanation:
An error was encountered when processing one of the parameters in the DAJPARMS DD for the Db2 Shared Profile Support job tracking started task. The message names the parameter that contained the error.

User response:
Correct the parameter error and restart the started task.

DAJ2101E	PARAMETER ERROR DETECTED FOR *parameter*

Explanation:

An error was encountered when processing one of the parameters in the DAJPARMS DD for the Db2 Shared Profile Support job tracking started task. The message names the parameter that contained the error.

User response:
Correct the parameter error and restart the started task.

DAJ2103E	DUPLICATE PARAMETER DETECTED FOR *parameter*

Explanation:
A duplicate parameter was entered in DAJPARMS for the Db2 Shared Profile Support job tracking started task. The message names the duplicated parameter.

User response:
Remove the duplicate parameter error and restart the started task.

DAJ3010E	DB2 SUBSYSTEM *subsystem* NOT ACTIVE

Explanation:
The subsystem listed in the message is not active.

User response:
Ensure that the requested Db2 subsystem is active.

DAJ3011I	INVALID DB2 SUBSYSTEM *subsystem*

Explanation:
The subsystem listed in the message is not valid.

User response:
Specify a valid Db2 subsystem.

DAJ3012I	INVALID DB2 SUBSYSTEM *subsystem*

Explanation:
The subsystem listed in the message is not valid. Group attach names cannot be used for this job.

User response:
Enter a valid Db2 subsystem ID of a data sharing group member; the group member must be running on the LPAR on which this job will be executing.

DAJ4001E	CONNECT FAILED - RETURN CODE *return_code* REASON CODE *reason_code*

Explanation:
While attempting to store job tracking information, the job tracking subsystem failed to connect to Db2. The return and reason codes are given in the message.

User response:
Refer to the Db2 Messages and Codes guide for your version of Db2 to resolve.

DAJ4004E	INVALID OPERAND FOR COMMAND

Explanation:
An invalid operand was entered on the MVS modify command.

User response:
Correct the operand and enter the modify command again.

DAJ4005E **INVALID COMMAND SYNTAX**

Explanation:
Invalid command syntax was entered for the MVS modify command.

User response:
Correct the invalid syntax and enter the modify command again.

DAJ4010I **DEBUG MODE ON**

Explanation:
The job tracking started task is now running in debug mode.

User response:
No action is required..

DAJ4011I **DEBUG MODE OFF**

Explanation:
Debug mode has been turned off. The job tracking started task is running in normal mode.

User response:
No action is required..

DAJ9xxxx *message text*

Explanation:
DAJ9xxxx messages are internal messages that are provided when the job tracking started task is running in debug mode. These message provide additional diagnostics and are intended for use with IBM Software Support.

User response:
No action is required..

HADM0010 **INPUT PARAMETERS LOCATED ARE AS FOLLOWS**

Explanation:
All input parameters located in the HADMPARM input parameter data set are displayed following this message.

User response:
No action is required..

HADM0020 *HH:MM:SS.TTT* **PROCESSING OF INPUT PARAMETERS HAS STARTED**

Explanation:
Processing of all input parameters located within the HADMPARM data set has started. Parameter syntax and validity will be evaluated.

User response:
No action is required..

HADM0021 *HH:MM:SS.TTT* **PROCESSING OF INPUT PARAMETERS ENDED IN ERROR, EXECUTION TERMINATED**

Explanation:
While processing the input parameters from the HADMPARM data set, an error was located within the control cards.

User response:
Additional messages will be issued to assist in locating and correcting the error. Correct the error and submit the job again.

HADM0022 *HH:MM:SS.TTT* **PROCESSING OF INPUT PARAMETERS ENDED SUCCESSFULLY**

Explanation:
All parameters within the HADMPARM input parameter data set were successfully processed. This indicates that parameter syntax and content have passed validity checking. Execution processing will continue.

User response:
No action is required..

HADM0023 *HH:MM:SS.TTT* **CHECK PARAMETERS EXECUTION SUCCESSFULLY COMPLETED**

Explanation:
The input parameter HADMPARM data set contained the CHECKPARMS(YES) control card. This message indicates that processing has ended successfully.

User response:
No action is required..

HADM0030 *HH:MM:SS.TTT* **ID=***move_ID* **ASSIGNED TO DSN=***data_set_name*

Explanation:
Move processing has assigned move ID=*move_id* to the move of DSN=*data_set_name*. The ID value assigned is used to correlate all messages for the selected data set.

User response:
No action is required..

HADM0031 *HH:MM:SS.TTT* **ID=***move_ID* **MOVE STARTED DSN=***data_set_name*

Explanation:
Move processing has started for the data set.

User response:
No action is required..

HADM0032	*HH:MM:SS.TTT* **ID=***move_ID* **MOVE ENDED SUCCESSFULLY DSN=***data_set_name*

Explanation:
Move processing has successfully completed for the data set.

User response:
No action is required..

HADM0033	*HH:MM:SS.TTT* **EXECUTION COMLETE ALL DSNS SUCCESSFULLY PROCESSED**

Explanation:
Execution has completed for all data sets. All data sets were moved successfully.

User response:
No action is required..

HADM0034	*HH:MM:SS.TTT* **MOVE PROCESSING STARTED**

Explanation:
Execution has entered the move data set phase. All input parameters were successfully processed and move processing for all data sets requested has started.

User response:
No action is required..

HADM0035	*HH:MM:SS.TTT* **ID=***move_ID* **MOVE ***FAILED*** FOR DSN=***data_set_name*

Explanation:
Move of the data set has failed.

User response:
Other messages are issued indicating the reason the selected data set move failed. Locate other messages and determine cause of failure. Perform necessary actions and re-execute a move for the selected data set.

HADM0036	*HH:MM:SS.TTT* **ID=***move_ID* **BACKOUT SUCCESSFUL FOR DSN=***data_set_name*

Explanation:
While processing the move of the data set, an error was incurred. Other messages are issued indicating the reason for failure. When an error is incurred during a data set move, Dataset Manager attempts to restore the data set status to its state prior to the attempted move. This message indicates that backout of the move request was successful and status of the data set was successfully restored the state which existed prior to the move request.

User response:

No action is required..

HADM0037	*HH:MM:SS.TTT* **ID=***move_ID***BACKOUT ***FAILED*** FOR DSN=***data_set_name*

Explanation:
While processing the move of the data set, an error was incurred. Other messages are issued indicating the reason for failure. When an error is incurred during a data set move, Dataset Manager attempts to restore the data set status to its state prior to the attempted move. This message indicates that backout of the move request failed.

User response:
Determine the current status of the data set. Perform necessary manual intervention to restore data set status. Contact IBM Customer Support if assistance is required.

HADM0038	*HH:MM:SS.TTT* **ID=***move_ID* **MOVE INIT PROCESS ERROR**

Explanation:
During move processing initialization, an environmental type of error was incurred.

User response:
Other messages are issued regarding the origin of the error. Attempt to correct the error. Contact IBM Customer Support if assistance is required.

HADM0050	*HH:MM:SS.TTT* **ID=***move_ID* **MOVE IN PROGRESS DSN=***data_set_name*

Explanation:
Data set move processing has started for the selected data set.

User response:
No action is required..

HADM0051	*HH:MM:SS.TTT* **ID=***move_ID* **RCPUTIME=***HH:MM:SS.TTTTT* **WCPUTIME=***HH:MM:SS.TTTTT*

Explanation:
This message contains CPU time-related values for the move of the selected data set. RCPUTIME consists of CPU time attributable to reading the source data set and other processing requirements. WCPUTIME consists of CPU time attributable to writing to the new target data set.

User response:
No action is required..

HADM0053	*HH:MM:SS.TTT* **ID=***move_ID* **EXECUTION ELAPSED TIME=***HH:MM:SS.TTT* **CPU TIME=***HH:MM:SS:TTTTT*

Explanation:
This message contains time-related values for the move of the selected data set. The wall clock, elapsed time and CPU time attributable to the data set move are provided.

User response:
No action is required..

HADM0054	*HH:MM:SS.TTT* **ID=*move_ID* RECORDS READ=*records_read* RECORDS WRITTEN=*records_written***

Explanation:
The message contains record counts for the move of the selected data set. Records read is the number of 4K records read from the source data set. Records written is the number of 4K records written to the target data set. The counts will should be equal.

User response:
No action is required..

HADM0055	*HH:MM:SS.TTT* **ID=*move_ID* MOVE SUCCESSFULLY COMPLETED**

Explanation:
Move processing for the selected data set has successfully completed.

User response:
No action is required..

HADM0056	*HH:MM:SS.TTT* **ID=*move_ID* MOVE HAS ***FAILED*****

Explanation:
Move processing for the selected data set has failed. Other messages are issued indicating the origin of the error.

User response:
When a data set move fails, backout processing attempts to restore the status of the data set to its status prior to the move request. Either message HADM0036 or HADM0037 is issued regarding backout success. If HADM0036 was issued, backout was successful; in this case, attempt to determine the cause of data set move failure by viewing other messages issued. Attempt to resolve the issue and resubmit the move request for the selected data set. If HADM0037 was issued, refer to message description for HADM0037 and proceed as described.

HADM0060	*HH:MM:SS.TTT* **ID=*move_ID* STOP COMMAND SUCCESSFUL DB=*database* SP=*spacename* PT=*partition_number***

Explanation:
A Db2 STOP command was successfully processed for the selected database, spacename, and partition. The data set that is owned by a partitioned space needed to be stopped for data set move processing to proceed.

User response:
No action is required..

HADM0061	*HH:MM:SS.TTT* **ID=*move_ID* START COMMAND SUCCESSFUL DB=*database* SP=*spacename* PT=*partition_number***

Explanation:
A Db2 START command was successfully processed for the selected database, spacename, and partition. This is done when the data set move was successful, or, when the data set move failed and backout of the failed data set move was successful.

User response:
No action is required..

HADM0062	*HH:MM:SS.TTT* **ID=*move_ID* SOURCEDSN *CLUSTER* RENAME SUCCESSFUL DSN=*data_set_name***

Explanation:
Data set move processing has successfully renamed the data set name being moved. Rename processing renames the data set being moved by changing the *.I000.* node within the data set name to *.IOLD.*

User response:
No action is required..

HADM0063	*HH:MM:SS.TTT* **ID=*move_ID* TARGETDSN RENAME SUCCESSFUL TDSN=*data_set_name***

Explanation:
Data set move processing has successfully renamed the new data set that was created by the move. Rename processing renames the new data set by changing the *.INEW.* node within the data set name to *.I000.*

User response:
No action is required..

HADM0064	*HH:MM:SS.TTT* **ID=*move_ID* TARGETDSN=*data_set_name***

Explanation:
This message provides the name of the new target data set which will be created as a result of the move. The data set name may differ from the original data set name if the VCAT name changes as a result of the move request.

User response:
No action is required..

HADM0065	*HH:MM:SS.TTT* **ID=*move_ID* TARGETDSN DEFINE SUCCESSFUL TDSN=*data_set_name***

Explanation:
The new data set that is the target data set of the move request was successfully created using the IDCAMS DEFINE service.

User response:
No action is required..
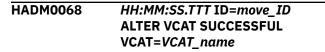
HADM0067	*HH:MM:SS.TTT* ID=*move_ID* **SOURCEDSN DELETE SUCCESSSFUL SDSN=*data_set_name***

Explanation:
The data set being moved has been deleted. The data set is deleted after the new data set is successfully created and populated.

User response:
No action is required..

HADM0068	*HH:MM:SS.TTT* ID=*move_ID* **ALTER VCAT SUCCESSFUL VCAT=*VCAT_name***

Explanation:
Necessary Db2 ALTER VCAT SQL was successfully completed for the selected data set.

User response:
No action is required..

HADM0070	**OPEN ERROR MOD=*module_name* DDNAME=*DDname* RC=*return_code***

Explanation:
A data set OPEN request failed for a data set during move processing.

User response:
Attempt to determine the reason for the OPEN failure. Contact IBM Customer Support if assistance if required.

HADM0071	**CLOSE ERROR MOD=*module_name* DDNAME=*DDname* RC=*return_code***

Explanation:
A data set CLOSE request failed for a data set during move processing.

User response:
Attempt to determine the reason for the CLOSE failure. Contact IBM Customer Support if assistance if required.

HADM0073	*HH:MM:SS.TTT* ID=*move_ID* **BACKOUT SOURCEDSN *CLUSTER* RENAME SUCCESSFUL**

Explanation:
During move processing for a data set, an error occurred that caused the move to fail. As a result of the original error, move data set backout processing is under way. During the backout process, the data

set being moved was successfully renamed back to its original data set name as it existed prior to the move request being processed. This message is normal and should be seen during backout processing after the source data set is successfully renamed.

User response:
No action is required..

HADM0074	*HH:MM:SS.TTT* ID=*move_ID* **BACKOUT DEFINE TARGETDSN SUCCESSFUL**

Explanation:
During move processing for a data set, an error occurred that caused the move to fail. As a result of the original error, move data set backout processing is under way. During the backout process, the new target data set created during the move request was successfully deleted. This message is normal and should be seen during backout processing after the target data set is successfully defined.

User response:
No action is required..

HADM0077	*HH:MM:SS.TTT* ID=*move_ID* **ALTER DEADLOCK/TIMEOUT INCURRED ALTER RETRY IN PROGRESS**

Explanation:
A lock timeout or deadlock was incurred while attempting to execute an ALTER VCAT or ALTER STOGROUP SQL call. As a result of the error, the request is being retried.

User response:
No action is required..

HADM0078	*HH:MM:SS.TTT* ID=*move_ID* **SOURCEDSN DATA SET NAME DOES NOT EXIST**

Explanation:
The source data set name specified in the SOURCEDSN parameter does not exist. Correct the data set name and resubmit the move request.

User response:
No action is required..

HADM0079	*HH:MM:SS.TTT* ID=*move_ID* **SOURCEDSN DATA SET NAME IS INVALID**

Explanation:
The source data set name specified in the SOURCEDSN parameter is invalid.

User response:
Correct the data set name and resubmit the move request.

HADM0080	*HH:MM:SS.TTT* ID=*move_ID* **SOURCEDSN COPY STARTED**

Explanation:
The copy of the selected data set to be moved has started.

User response:
No action is required..

HADM0081	*HH:MM:SS.TTT* ID=*move_ID* **SOURCEDSN COPY SUCCESSFUL**

Explanation:
The copy of the selected data set to be moved has completed successfully. Move processing will now complete additional processing required to complete the move data set request.

User response:
No action is required..

HADM0090	**INVALID KEYWORD LOCATED, KW=***keyword*

Explanation:
During input parameter processing, a control card with an invalid keyword was located.

User response:
The invalid keyword is located in the message. Correct the error and resubmit the request.

HADM0091	**MOVEDATASET COMMAND NOT FOLLOWED BY A "("**

Explanation:
During input parameter processing, a MOVEDATASET keyword was located containing invalid syntax.

User response:
Correct the error and resubmit the request.

HADM0092	**MOVEDATASET CONTAINS INVALID KEYWORD, KW=***keyword*

Explanation:
During input parameter processing of a MOVEDATASET keyword, an invalid keyword was located. The invalid keyword is located in the message.

User response:
Correct the error and resubmit the request.

HADM0093	**DUPLICATE KEYWORD LOCATED, KW=***keyword*

Explanation:
During input parameter processing, invalid duplicate keywords were located. The duplicate keyword is named in the message.

User response:
Correct the error and resubmit the request.

HADM0094	**INVALID DATA VALUE LOCATED FOR KW=***keyword*

Explanation:

During input parameter processing, an invalid data value was located for a selected keyword. The keyword containing the invalid data value is named in the message.

User response:
Correct the error and resubmit the request.

HADM0095	**REQUIRED KEYWORD IS MISSING, KW=***keyword*

Explanation:
During input parameter processing, a required keyword could not be located. The missing keyword is named in the message text.

User response:
Correct the error and resubmit the request.

HADM0096	**TARGETVCAT AND TARGETSTOGROUP ARE MUTUALLY EXCLUSIVE KEYWORDS**

Explanation:
A MOVEDATASET request contains both the TARGETVCAT and TARGETSTOGROUP keywords. This is not allowed. One or the other must be specified.

User response:
Correct the error and resubmit the request.

HADM0097	**TARGETVCAT SPECIFIED, TARGETVOLUMES OR TARGET SMS CLASS KEYWORDS MISSING**

Explanation:
A MOVEDATASET request contains the TARGETVCAT keyword, but TARGETVOLUMES or TARGETSMS keywords are missing. When the target data set of a move request is to a user-defined VCAT (non-STOGROUP), either target volumes or target SMS information must be supplied to specify where the target data set should be placed.

User response:
Correct the error and resubmit the request.

HADM0098	**TARGETVOLUMES SPECIFIED BUT TARGETVCAT IS MISSING**

Explanation:
A MOVEDATASET request contains the TARGETVOLUMES keyword, but TARGETVCAT is not present. Use of TARGETVOLUMES implies the target data set is a user-defined data set. TARGETVCAT must be provided.

User response:
Correct the error and resubmit the request.

HADM0099	**TARGETVOLUMES OR TARGET SMS CLASS KEYWORDS CANNOT BE SPECIFIED WHEN TARGETSTOGROUP USED**

Explanation:
A MOVEDATASET request contains the TARGETVOLUMES or TARGETSMS keywords, but the target data set is a STOGROUP-defined data set. Neither of these keywords are allowed if the target data set is a STOGROUP-defined data set.

User response:
Correct the error and resubmit the request.

HADM0100	EITHER TARGETVCAT OR TARGETSTOGROUP MUST BE SPECIFIED

Explanation:
A MOVEDATASET request does not contain either the TARGETVCAT or TARGETSTOGROUP keywords. One of the two keywords must be specified to specify if the target data set should be user-defined or STOGROUP-defined.

User response:
Correct the error and resubmit the request.

HADM0101	END OF MOVEDATASET NOT LOCATED, ")" IS MISSING

Explanation:
A MOVEDATASET request keyword contains invalid syntax.

User response:
Correct the error and resubmit the request.

HADM0102	TARGETVOLUMES CANNOT BE SPECIFIED WITH SMS CLASS KEYWORDS

Explanation:
A MOVEDATASET request contains both TARGETVOLUMES and TARGETSMS keywords. This is not allowed.

User response:
Correct the error and resubmit the request.

HADM0103	DSNDB06 DATA SETS REQUIRE TARGETVCAT TO BE USED

Explanation:
A MOVEDATASET request for a catalog DSNDB06 data set does not contain the TARGETVCAT keyword. DSNDB06 data sets must have the TARGETVCAT operand specified.

User response:
Correct the error and resubmit the request.

HADM0104	MODIFICATION OF A DSNDB06 DATA SET VCATNAME IS NOT ALLOWED

Explanation:
The TARGETVCAT keyword for a DSNDB06 data set is different from the VCAT currently in use for the data

set. You cannot change the VCAT name of a DSNDB06 data set.

User response:
Correct the error and resubmit the request.

HADM0105	MOVEMENT OF DSNDB01 DATA SETS NOT CURRENTLY SUPPORTED

Explanation:
A move data set request to move a DSNDB01 data set was located. Dataset Manager does not currently support the move of a DSNDB01 data set.

User response:
No action is required..

HADM0106	MOVEMENT OF DSNDB07 DATA SETS NOT CURRENTLY SUPPORTED

Explanation:
A move data set request to move a DSNDB07 data set was located. Dataset Manager does not currently support the move of a DSNDB07 data set.

User response:
No action is required..

HADM0161	*HH:MM:SS.TTT* ID=*move_ID* SOURCEDSN DATA RENAME ***FAILED***'

Explanation:
During data set move processing of the selected data set, the attempt to rename the source data set failed.

User response:
Locate and review any additional messages related to the error. Attempt to resolve the error incurred. If necessary, contact IBM Customer Support for assistance.

HADM0162	*HH:MM:SS.TTT* ID=*move_ID* SOURCEDSN *CLUSTER* RENAME ***FAILED***'

Explanation:
During data set move processing of the selected data set, the attempt to rename the source data set failed.

User response:
Locate and review any additional messages related to the error. Attempt to resolve the error incurred. If necessary, contact IBM Customer Support for assistance.

HADM0163	*HH:MM:SS.TTT* ID=*move_ID* TARGETDSN RENAME ***FAILED***

Explanation:
During data set move processing of the selected data set, the attempt to rename the target data set failed.

User response:
Locate and review any additional messages related to the error. Attempt to resolve the error incurred. If necessary, contact IBM Customer Support for assistance.

HADM0165   *HH:MM:SS.TTT* ID=*move_ID* **TARGETDSN DEFINE ***FAILED*****

Explanation:
During data set move processing of the selected data set, the attempt to create the new target data set failed.

User response:
Locate and review any additional messages related to the error. Attempt to resolve the error incurred. If necessary, contact IBM Customer Support for assistance.

HADM0167   *HH:MM:SS.TTT* ID=*move_ID* **SOURCEDSN DELETE ***FAILED*****

Explanation:
During data set move processing of the selected data set, the attempt to delete the source data set failed.

User response:
Locate and review any additional messages related to the error. Attempt to resolve the error incurred. If necessary, contact IBM Customer Support for assistance.

HADM0172   *HH:MM:SS.TTT* ID=*move_ID* **BACKOUT SOURCEDSN DATA RENAME ***FAILED*****

Explanation:
During move processing for a selected data set, an error occurred that caused the move to fail, triggering move data set backout processing. During the backout process, the source data set was being renamed back to its original data set name, but the rename failed.

User response:
Determine the reason for the failure. Attempt to rename the data set using IDCAMS ALTER command. After rename is completed, issue the necessary START DATABASE command to re-enable use of the data set. Contact IBM Customer Support if assistance is needed.

HADM0173   *HH:MM:SS.TTT* ID=*move_ID* **BACKOUT SOURCEDSN** *CLUSTER* **RENAME ***FAILED*****

Explanation:
During move processing for a selected data set, an error occurred that caused the move to fail, triggering move data set backout processing. During the backout

process, the source data set was being renamed back to its original data set name, but the rename failed.

User response:
Determine the reason for the failure. Attempt to rename the data set using IDCAMS ALTER command. After rename is completed, issue the necessary START DATABASE command to re-enable use of the data set. Contact IBM Customer Support if assistance is needed.

HADM0174   *HH:MM:SS.TTT* ID=*move_ID* **BACKOUT TARGETDSN DEFINE ***FAILED*****

Explanation:
During move processing for a selected data set, an error occurred that caused the move to fail, triggering move data set backout processing. During the backout process, the new target data set which was created is being deleted, but the delete failed.

User response:
Determine the reason for the delete failure. Attempt to delete the data set using IDCAMS DELETE command. Locate and review all messages related to data set move request. Verify the state of the source data set. Contact IBM Customer Support if assistance is needed.

HADM0180   *HH:MM:SS.TTT* ID=*move_ID* **ALLOC ***FAILED*** RC=X'***return_code***' RS=X'***reason_code***' ID=***internal_ID***

Explanation:
A dynamic allocation request failed while processing a move request for the selected data set.

User response:
Attempt to determine the cause of the allocation failure. Contact IBM Customer Support if assistance is needed.

HADM0181   *HH:MM:SS.TTT* ID=*move_ID* **DEALLOC ***FAILED*** RC='***return_code***' RS=X'***reason_code***' ID=***internal_ID***

Explanation:
A dynamic deallocation request failed while processing a move request for the selected data set.

User response:
Attempt to determine the cause of the deallocation failure. Contact IBM Customer Support if assistance is needed.

HADM0182   *HH:MM:SS.TTT* ID=*move_ID* **OPEN ***FAILED*** RC=X'***return_code***' ID=***internal_ID***

Explanation:
A data set OPEN request failed while processing a move request for the selected data set.

User response:
Attempt to determine the cause of the OPEN failure. Contact IBM Customer Support if assistance is needed.

HADM0183	*HH:MM:SS.TTT* **ID=***move_ID* **CLOSE ***FAILED*** RC=X'***return_code***' ID=***internal_ID*

Explanation:
A data set CLOSE request failed while processing a move request for the selected data set.

User response:
Attempt to determine the cause of the CLOSE failure. Contact IBM Customer Support if assistance is needed.

HADM0184	*HH:MM:SS.TTT* **ID=***move_ID* **SOURCEDSN OPEN ***FAILED*** RC=X'***return_code***' ACBERFLG=X'***access_ control_block_error_flag***'**

Explanation:
The move data set request for the selected data set failed due to an error incurred while attempting to OPEN the source data set.

User response:
Try to determine the cause of the OPEN failure using the error information provided in the message text. Resubmit the move request for the selected data set if the cause of the failure is corrected. Contact IBM Customer Support if assistance is needed.

HADM0185	*HH:MM:SS.TTT* **ID=***move_ID* **SOURCEDSN CLOSE ***FAILED*** RC=X'***return_code***' ACBERFLG=X'***access_ control_block_error_flag***'**

Explanation:
The move data set request for the selected data set failed due to an error incurred while attempting to CLOSE the source data set.

User response:
Try to determine the cause of the CLOSE failure using the error information provided in the message text. Resubmit the move request for the selected data set if the cause of the failure is corrected. Contact IBM Customer Support if assistance is needed.

HADM0186	*HH:MM:SS.TTT* **ID=***move_ID* **TARGETDSN OPEN ***FAILED*** RC=X'***return_code***' ACBERFLG=X'access_control_ block_error_flag'**

Explanation:

The move data set request for the selected data set failed due to an error incurred while attempting to OPEN the target data set.

User response:
Try to determine the cause of the OPEN failure using the error information provided in the message text. Resubmit the move request for the selected data set if the cause of the failure is corrected. Contact IBM Customer Support if assistance is needed.

HADM0187	*HH:MM:SS.TTT* **ID=***move_ID* **TARGETDSN CLOSE ***FAILED*** RC=X'***return_code***' ACBERFLG=***X'access_control_ block_error_flag'*

Explanation:
The move data set request for the selected data set failed due to an error incurred while attempting to CLOSE the target data set.

User response:
Try to determine the cause of the CLOSE failure using the error information provided in the message text. Resubmit the move request for the selected data set if the cause of the failure is corrected. Contact IBM Customer Support if assistance is needed.

HADM0188	*HH:MM:SS.TTT* **ID=***move_ID* **VSAM ALTER REMOVEVOLUMES ***FAILED*****

Explanation:
In processing the data set move request for the selected data set, an attempt was made to remove undesired candidate volumes using the IDCAMS ALTER REMOVEVOLUMES. The request failed.

User response:
Attempt to locate additional messages related to the error incurred. Try to determine the cause of the failure. Determine whether data set move backout processing was initiated and verify the status of the move request for the data set. Contact IBM Customer Support if assistance is needed.

HADM0189	*HH:MM:SS.TTT* **ID=***move_ID* **VSAM ALTER REMOVEVOLUMES SUCCESSFUL**

Explanation:
In processing the data set move request for the selected data set, an attempt was made to remove undesired candidate volumes using the IDCAMS ALTER REMOVEVOLUMES. The request completed successfully.

User response:
No action is required..

HADM0200	*HH:MM:SS.TTT* **ID=***move_ID* **TARGET STOGROUP**

**DOES NOT EXIST
TARGETSTOGROUP=*storage_group***

Explanation:
The target storage group name specified in the move request for the selected data set was invalid. The storage group name does not exist on the Db2 subsystem.

User response:
Correct the target storage group name and resubmit the move request for the selected data set.

HADM0210   *HH:MM:SS.TTT* ID=*move_ID* **ALTER
SUCCESSFUL**

Explanation:
In processing the data set move request for the selected data set, the data set was successfully altered.

User response:
No action is required..

HADM0211   *HH:MM:SS.TTT* ID=*move_ID*
ALTER ***FAILED***
SQLCODE=*SQL_code*

Explanation:
As part of the move request a Db2 SQL ALTER statement was done to alter the Db2 catalog, the Db2 VCAT, or the Db2 storage group. The ALTER statement failed with return code listed in the message.

User response:
Refer to the documentation to resolve the SQL error.

HADM0212   *HH:MM:SS.TTT* ID=*move_ID* **ALTER
NOT REQUIRED AND BYPASSED**

Explanation:
As part of the move request, a Db2 SQL ALTER was bypassed. This is an informational message.

User response:
No action is required..

HADM0213   *HH:MM:SS.TTT* ID=*move_ID* **ALTER
TEXT ABOVE NEEDS TO BE
EXECUTED MANUALLY, MOVE
COMPLETED, ALTER FAILED**

Explanation:
This message immediately follows HADM0211. The SQL error described in HADM0211 is the reason the ALTER did not complete as part of the move request.

User response:
The ALTER must still be done to complete the move request. When the SQL error is resolved, issue the ALTER statement manually to complete the move.

HADM0218   *HH:MM:SS.TTT* ID=*move_ID*
message_text

Explanation:

This message displays the SQL ALTER text issued to Db2.

User response:
No action is required.

HADM0219   *HH:MM:SS.TTT* ID=*move_ID* **ALTER
ISSUED; ALTER TEXT AS
FOLLOWS:**

Explanation:
An ALTER statement is being issued to Db2 for the move request. Message HADM0218 contains the entire ALTER statement text.

User response:
No action is required.

HADM0400   *HH:MM:SS.TTT* ID=*move_ID*
**STOP COMMAND
FAILED CAFRC=X'*return_code*'
CAFRS=X'*reason_code*'**

Explanation:
When processing the move request for the selected data set, a Db2 STOP command was issued for the necessary object. The STOP request failed.

User response:
Use the error information contained in the message and attempt to determine the cause of the failure. Resubmit the move request for the selected data set. Contact IBM Software Support if assistance is needed.

HADM0401   *HH:MM:SS.TTT* ID=*move_ID*
START COMMAND ***FAILED***
CAFRC=X'*return_code*'
CAFRS=X'*reason_code*'

Explanation:
When processing the move request for the selected data set, a Db2 START command was issued for the necessary object. The START request failed.

User response:
Use the error information contained in the message and attempt to determine the cause of the failure. Resubmit the move request for the selected data set. Contact IBM Software Support if assistance is needed.

HADM0402   *HH:MM:SS.TTT* ID=*move_ID*
**DISPLAY COMMAND
FAILED CAFRC=X'*return_code*'**
CAFRS=X'*reason_code*'

Explanation:
When processing the move request for the selected data set, a Db2 DISPLAY command was issued for the necessary object. The DISPLAY request failed.

User response:
Use the error information contained in the message and attempt to determine the cause of the failure. Verify the status of the move request for the selected

data set. Resubmit the move request for the selected data set if necessary. Contact IBM Software Support if assistance is needed.

HADM0403	*HH:MM:SS.TTT* **ID=***move_ID* **CAFINIT *FAILED*** **CAFRC=X'***return_code***'** **CAFRS=X'***reason_code***'**

Explanation:
Call attach facility initialization failed while processing the move request for the selected data set.

User response:
Attempt to determine the cause of the failure using the CAF return code and reason code provided in the message text. Correct the problem and resubmit the move request for the selected data set. Contact IBM Customer Support if assistance is needed.

HADM0404	*HH:MM:SS.TTT* **ID=***move_ID* **CONNECT *FAILED*** **CAFRC=X'***return_code***'** **CAFRS=X'***reason_code***'**

Explanation:
Call attach facility CONNECT failed while processing the move request for the selected data set.

User response:
Attempt to determine the cause of the failure using the CAF return code and reason code provided in the message text. Correct the problem and resubmit the move request for the selected data set. Contact IBM Customer Support if assistance is needed.

HADM0406	*HH:MM:SS.TTT* **ID=***move_ID* **SOURCEDSN COPY ***FAILED*****

Explanation:
The copy of the source data set to the new target data set has failed. Other messages are issued concerning the cause of the failure.

User response:
Determine the cause of the failure. Contact IBM Customer Support if assistance is needed.

HADM0407	*HH:MM:SS.TTT* **ID=***move_ID* **REQUEST BACKOUT IN PROGRESS**

Explanation:
The move request for the selected data set has failed. As a result of the failure, data set move backout processing has begun. Backout processing will attempt to restore the status of the data set to the state that existed prior to the move request.

User response:
No action is required..

HADM0408	*HH:MM:SS.TTT* **ID=***move_ID* **TARGETDSN WRITER HAS** **ABENDED**

Explanation:
An abend was incurred by the writer task during the move request for the selected data set. The move request has failed. Backout processing should have been initiated for the failed move request.

User response:
Attempt to determine the cause of the failure. Locate and retain any dumps produced for the abend. Locate and retain the joblog for the failing job execution. Verify backout success and determine the state of the source data set name. Contact IBM Customer Support if assistance is required.

HADM0409	*HH:MM:SS.TTT* **ID=***move_ID* **TARGETDSN WRITE** **ERROR RPLRTNCD=X'***return_code***'** **RPLERRCD=X'***error_code***'**

Explanation:
A write error was incurred by the writer task during the move request for the selected data set. Backout processing should have been driven for the failed move request.

User response:
Attempt to determine the cause of the write error using the information contained within the message text. Verify backout success and determine the state of the source data set name. Contact IBM Customer Support if assistance is required.

HADM0410	*HH:MM:SS.TTT* **ID=***move_ID* **TARGETDSN WRITE ERROR DATA** **SET EXTEND ***FAILED*****

Explanation:
While writing data to the target data set for the selected move request, an attempt was made to obtain an additional data set extent. The extend request failed. Move processing for the data set is terminated. Move data set backout is initiated as a result of the error.

User response:
The data set extend failure is most likely due to lack of space on the volumes selected, or the target data set having reached the maximum extents allowed. Determine the cause of the extend failure. Modify the target data set PQTY/SQTY values or the target volumes of the request and resubmit the data set move request.

HADM0411	*HH:MM:SS.TTT* **ID=***move_ID* **TARGETDSN WRITER INTERNAL** **ERROR DETECTED**

Explanation:
A write internal error was incurred by the writer task during the move request for the selected data set.

User response:

Determine if any other error related messages have been issued for the move request. Attempt to resolve the cause of the problem. Contact IBM Customer Support if assistance is required.

| HADM0412 | *HH:MM:SS.TTT* ID=*move_ID* REQUEST BACKOUT SUCCESSFUL |

Explanation:
This message is issued after successful backout of a move request for the selected data set. Backout processing is initiated if an error is incurred while processing the move request that caused the move request to fail. Backout processing has successfully restored the source data set being moved to its state prior to the move request.

User response:
No action is required..

| HADM0413 | *HH:MM:SS.TTT* ID=*move_ID* REQUEST BACKOUT HAS ***FAILED*** |

Explanation:
This message is issued when backout processing fails for a move request that has ended in error. Backout processing is initiated if an error occurs while processing the move request that caused the move request to fail. Backout processing has failed.

User response:
Determine the state of the source data set of the move request. Contact IBM Customer Support if assistance is required.

| HADM0414 | *HH:MM:SS.TTT* ID=*move_ID* SOURCEDSN READ ERROR RPLRTNCD=X'*return_code*' RPLERRCD=X'*error_code*' |

Explanation:
A read error was incurred while reading the source data set. Backout processing should have been initiated for the failed move request.

User response:
Attempt to determine the cause of the read error using the information contained within the message text. Verify backout success and determine the state of the source data set. Contact IBM Customer Support if assistance is required.

| HADM0415 | *HH:MM:SS.TTT* ID=*move_ID* WRITER ATTACH ***FAILED*** RC=X'*return_code*' |

Explanation:
The attach of a writer task during processing of the move request for the selected data set has failed.

User response:
Attempt to determine the cause of the failure using the attach return code provided in the message

text. Contact IBM Customer Support if assistance is required.

| HADM0416 | *HH:MM:SS.TTT* ID=*move_ID* MODULE LOAD ***FAILED*** FOR LMOD=*load_module* |

Explanation:
A LOAD of a load module failed while processing the move request for the selected data set.

User response:
View the execution joblog for additional messages issued relating to the LOAD failure. Attempt to resolve the cause of the LOAD failure. Contact IBM Customer Support if assistance is required.

| HADM0417 | *HH:MM:SS.TTT* ID=*move_ID* WAITING FOR STOP COMMAND COMPLETION STOPWAITTIME=*minutes* IN USE |

Explanation:
Move processing has issued a Db2 STOP command for the selected data set object. The STOP command has not yet successfully completed. Dataset Manager is waiting for the STOP command to be honored and will wait for the number of minutes contained in the message text.

User response:
If the STOP command does not complete in the amount of time specified, the move request will terminate in error. Use the Db2 DISPLAY command to determine who is currently using the object.

| HADM0418 | *HH:MM:SS.TTT* ID=*move_ID* STOP COMMAND ***FAILED*** STOPWAITTIME LIMIT EXCEEDED |

Explanation:
Move processing has issued a Db2 STOP command. The STOP command has not successfully completed in the amount of time specified in the STOPWAITTIME parameter value. The pending STOP command cannot be terminated; however, Db2 will honor the STOP command in the future. The move request is terminated as a result of the STOP command failure.

User response:
Use the Db2 DISPLAY command to determine who is currently using the object. You must START the data set object manually as a result of this failure. Resubmit the move request during a time frame in which a STOP command can be processed for the selected data set.

| HADM0419 | *HH:MM:SS.TTT* ID=*move_ID* STOP COMMAND ***FAILED*** CURRENT OBJECT STATUS=*object_status* |

Explanation:

Move processing for the selected data set has issued a Db2 STOP command. The STOP command failed due the current status of the object. This message is issued when the data set object is in any state other than RW, RO, or STOP.

User response:
Determine the reason for the existing state. Resubmit the move request after the data set state has been corrected.

HADM0420	*HH:MM:SS.TTT* ID=*move_ID* STOP COMMAND ***FAILED*** STOP BYPASSED DUE TO CURRENT USERS

Explanation:
Move processing for the selected data set has failed due to current users referencing the source data set of the selected move request. Move execution evaluates the data set being moved for any existing user activity. If user activity is located, Dataset Manager continues to recheck the current user status using an internal value. When the length of time it has spent rechecking for user activity to cease exceeds the STOPWAITTIME value, the move request terminates abnormally and this message is issued.

User response:

Determine current users of the data set object using the DISPLAY command. Attempt to resubmit the data set move request when data set use is minimal and a STOP command can be issued.

HADM0421	*HH:MM:SS.TTT* ID=*move_ID* WAITING TO ISSUE STOP, ACTIVE USERS LOCATED, STOPWAITTIME=*minutes* IN USE

Explanation:
Move processing has detected current users referencing the source data set of the move request. Move processing must issue a Db2 STOP command for the selected data set object. The STOP command will not be issued if users are currently using the object. This message indicates execution is waiting for the user activity within the object to cease so a subsequent STOP command can be issued. Move execution will continue to recheck the current use of the object using an internal value for a period of time equal to the STOPWAITTIME minutes contained in the message text. This message is informational; use the DISPLAY command if you wish to determine current users of the object.

User response:
No action is required..

Gathering diagnostic information

Before you report a problem with Db2 Automation Expert to IBM Software Support, you need to gather the appropriate diagnostic information.

Procedure

1. Provide the following information for all Db2 Automation Expert problems:

   - A clear description of the problem and the steps that are required to re-create the problem
   - All messages that were issued as a result of the problem
   - The version of Db2 that you are using and the type and version of the operating system that you are using
   - The product and release number.
   - The number of the last program temporary fix (PTF) and any relevant authorized program analysis reports (APARs) that were applied. APARs can be determined by using the LISTAPARs command, as follows:

   a) On the Db2 Automation Expert main menu, enter **LISTAPARS** in the Option line and press Enter.
   b) On the Build Job for LISTAPARS Utility window, provide a data set, member name, and job cards, and press Enter.

   The job is submitted to the internal reader. When the job completes, the job's SYSOUT DD will contain a list of each Db2 Automation Expert module and its current maintenance level.

2. Provide additional information based on the type of problem that you experienced:

   For online abends, provide the following information:

   - A screen shot of the panel that you were using when the abend occurred
   - The job log from the TSO session that encountered the abend

- A description of the task that you were doing before the abend occurred

For errors in batch processing, provide the following information:

- The complete job log
- Print output
- Contents of the any data sets that were used during the processing

Tools Customizer troubleshooting

Use this information to diagnose and correct problems that you experience with Tools Customizer.

Gathering diagnostic information

Before you report a problem with Tools Customizer to IBM Software Support, you need to gather the appropriate diagnostic information.

Procedure

Provide the following information for all Tools Customizer problems:

- A clear description of the problem and the steps that are required to re-create the problem
- Relevant screen captures
- All messages that were issued as a result of the problem
- Product release number and the number of the last program temporary fix (PTF) that was installed
- The version of Db2 that you are using and the type and version of the operating system that you are using
- The Tools Customizer trace data set
- The Tools Customizer data store data set and the *high_level_qualifier*.SCCQTENU data set

Determining the trace data set name

You will need to identify the name of the trace data set if you cannot allocate the trace data set, the trace data set runs out of space, or IBM Software Support asks for it.

The name of the trace data set depends on the prefix setting in the TSO profile. To identify the name of the trace data set, you must know the prefix setting.

- If PREFIX is set, the name of the trace data set is *prefix*.CCQ.TRACE, where *prefix* is the TSO prefix that you specified in the profile.
- If NOPREFIX is set, the name of the trace data set is *user_ID*.CCQ.TRACE, where *user_ID* is your TSO user ID.

Chapter 28. Tools Customizer reference

Before you use Tools Customizer, you should understand the Tools Customizer terminology and the data sets that Tools Customizer uses during customization.

Tools Customizer terminology and data sets

Before you use Tools Customizer, you should understand the Tools Customizer terminology and the data sets that Tools Customizer uses during customization.

Tools Customizer terminology

Tools Customizer uses several unique terms that you should be familiar with before you begin to use Tools Customizer.

Products and components
How an IBM Tool is packaged determines whether it is referred to as a product or as a component in the Tools Customizer documentation and interface. An IBM Tool that is ordered as a stand-alone entity (that is, not as part of a solution pack) is referred to as a product. An IBM Tool that is part of a solution pack is referred to as a component. Some IBM Tools are available in both formats; therefore, the same IBM Tool can be referred to as a product or as a component depending on how it is packaged.

Db2 entry

You can customize Db2 Automation Expert on one or more Db2 entries. A Db2 entry can be any of the following items:

Db2 subsystem
A distinct instance of a relational database management system (RDBMS) that is not part of a data sharing group. An example of a Db2 subsystem name is DB01.

Db2 group attach name
The name that is used by the TSO/batch attachment, the call attachment facility (CAF), DL/I batch, utilities, and the Resource Recovery Services attachment facility (RRSAF) as a generic attachment name. An example of a group attach name is DSG1.

Db2 data sharing member
A Db2 subsystem that is assigned by the cross-system coupling facility (XCF) to a data sharing group. An example of a Db2 data sharing member name is DB02.

Tools Customizer maintains the following lists of Db2 entries:

Associated list

The list of Db2 entries that are associated with Db2 Automation Expert. If the product to be customized requires Db2 entries, you can customize Db2 Automation Expert only on Db2 entries that are in the associated list. When you customize Db2 Automation Expert, this list is displayed in the DB2 Entries, Associations, and Parameter Status section of the **Customizer Workplace** panel.

You can add and copy Db2 entries to the associated list. When you add or copy Db2 entries to the associated list, the entries are associated with Db2 Automation Expert.

Master list

The list of all Db2 entries that are defined but are not associated with Db2 Automation Expert. Tools Customizer obtains information about these Db2 entries either from entries that were created manually or from the customizations of other products that were discovered. If you remove a Db2 entry from the associated list, the Db2 entry is added to the master list. When you create a new Db2 entry, it is added to the master list, and when you associate the new entry with Db2 Automation Expert, it is removed from the master list and added to the associated list. The master list is displayed on the **Associate a DB2 Entry for Product** panel.

If the associated list does not have the Db2 entries on which you want to customize Db2 Automation Expert, you can associate existing entries from the master list to the associated list.

You can create new Db2 entries and copy existing entries to the master list.

High-level qualifier
The high-level qualifier is considered to be all of the qualifiers except the lowest level qualifier. A high-level qualifier includes a mid-level qualifier.

Product parameters
Parameters that are specific to Db2 Automation Expert. These parameters are defined by Db2 Automation Expert and are stored in a data member that is defined by Db2 Automation Expert.

LPAR parameters
Parameters on the local LPAR that are required to customize Db2 Automation Expert. These parameters are defined by Tools Customizer and are stored in an LPAR parameter data member.

Db2 parameters
Parameters for a Db2 entry. These parameters are defined by Tools Customizer and are stored in a Db2 parameter data member.

Status type

Product, LPAR, and Db2 entry status type

After you specify the product that you want to customize, the product, the LPAR, and the Db2 entries have a status. The status is partly based on whether required parameters are defined. For some products, LPAR parameters or Db2 parameters might not be required. In these cases, the status is Not Required.

To customize Db2 Automation Expert, all of the required parameters must be defined.

If required parameters for the the product parameters, LPAR parameters, or Db2 parameters are not defined, the status of the parameters is Incomplete. Define values for parameters by manually editing them or by generating the customization jobs and specifying values for all of the required parameters that are displayed on the panels.

When values for all of the required parameters are defined, the status is Ready to Customize. Customization jobs can be generated only when all of the required parameters are defined and the status is Ready to Customize or Customized for the product parameters, LPAR parameters, and Db2 parameters for the Db2 entries on which Db2 Automation Expert will be customized.

The following table shows the meaning of the status types. Each status is defined differently for each type of parameter.

Table 59. Status types for the product, the LPAR, and the Db2 entries

Status	Product	LPAR	Db2 entries
Incomplete	The required product parameters are not defined.	The required parameters are not defined.	The required parameters are not defined.
Discovered	The product parameter definitions were discovered by using the product Discover EXEC.	N/A	N/A
Ready to Customize	The required product, is Ready to Customize or Customized for the LPAR and at least one associated Db2 entry. You can generate the customization jobs.	The required LPAR parameters are defined or LPAR parameters are not required.	The required Db2 parameters are defined or Db2 parameters are not required.

Table 59. Status types for the product, the LPAR, and the Db2 entries (continued)

Status	Product	LPAR	Db2 entries
Verify Values	The required product or component parameter values are defined but they either have not been verified or verification is not enabled on the Product or Component Parameters panel.	The required LPAR parameter values are defined, but they either have not been verified or verification is not enabled on the LPAR Parameters panel.	The required Db2 parameter values are defined, but they either have not been verified or verification is not enabled on the Db2 Parameters panel.
Customized	The jobs are customized on the local LPAR.	The jobs are customized for the product or for all of the associated Db2 entries on the local LPAR.	The jobs are customized for the Db2 entry.
Errors in Customization	N/A	N/A	Errors occurred while the customization jobs were being generated.
Not Required	N/A	LPAR parameters are not required.	Db2 parameters are not required.

Related tasks

Creating and associating Db2 entries
You can create new Db2 entries and associate them with Db2 Automation Expert.

Copying Db2 entries
You can copy associated and not associated Db2 entries to other Db2 entries or to new Db2 entries.

Removing Db2 entries
You can remove Db2 entries from the associated list.

Data sets that Tools Customizer uses during customization

Tools Customizer uses several unique data sets during the customization process. Familiarize yourself with these data sets before you begin to use Tools Customizer.

Several different data sets are required to customize Db2 Automation Expert with Tools Customizer. These data sets are supplied by Db2 Automation Expert, supplied by Tools Customizer, or allocated by Tools Customizer.

Db2 Automation Expert provides the following data sets:

Metadata library
Contains the metadata for the product to be customized. Tools Customizer uses the metadata to determine which tasks, steps, and parameters to display on the **Product Parameters** panel, the **LPAR Parameters** panel, and the **DB2 Parameters** panel. This data set also contains the templates that Tools Customizer uses to generate the customization jobs.

The metadata library naming convention is *high_level_qualifier*.SDAJDENU, where *high_level_qualifier* is all of the segments of the data set name except the lowest-level qualifier.

You specify the metadata library on the **Specify the Metadata Library** panel. READ access to this data set is required.

Discover EXEC library
Contains the Db2 Automation Expert Discover EXEC. When you customize Db2 Automation Expert, you can use the Discover EXEC to automatically retrieve and store product information, such as

parameter values from an already customized product. Tools Customizer saves the discovered information in the data store.

The default name of the data set is the high-level qualifier for the metadata library plus a lowest-level qualifier. For Db2 Automation Expert, the lowest-level qualifier is SDAJDENU. You can change the default value on the **Discover Customized Product Information** panel. EXECUTE access to this data set is required.

Tools Customizer provides the following data sets:

Tools Customizer metadata library
Contains the metadata for the Db2 and LPAR parameters that are required to customize Db2 Automation Expert. Tools Customizer uses the metadata to determine which parameters to display on the **DB2 Parameters** panel and the **LPAR Parameters** panel. In addition, Tools Customizer uses information in the metadata library to determine whether additional Db2 and LPAR parameters need to be displayed on these panels. As you customize different products, different Db2 and LPAR parameters might need to be defined.

The default name of the data set is DB2TOOL.CCQ110.SCCQDENU. You can change the default value on the **Tools Customizer Settings** panel. READ access to this data set is required.

Tools Customizer table library
Stores information about jobs that are customized. Job information that is stored includes a description of the job, its member name and template name, the SSID, group attach name, and when the job was generated.

The default name of the data set is DB2TOOL.CCQ110.SCCQTENU. WRITE access to this data set is required.

Tools Customizer requires that the following data sets exist during the customization process. If the data sets do not exist, Tools Customizer automatically allocates them.

Discover output data set
Contains the output that is generated when you run the Db2 Automation Expert Discover EXEC. The Db2 Automation Expert Discover EXEC retrieves the metadata and values for the parameters from a previous customization of Db2 Automation Expert.

The default name of the data set is DB2TOOL.CCQ110.DISCOVER. You can change the default value on the **Tools Customizer Settings** panel or the **Discover Customized Product Information** panel. WRITE access to this data set is required.

Data store data set
Contains product, LPAR, and Db2 parameter values, and Db2 entry associations. Tools Customizer uses this data set to permanently store all information that is acquired about the product, Db2 subsystems or data sharing groups, and LPAR when you customize products on the local LPAR.

The default name of the data set is DB2TOOL.CCQ110.DATASTOR. You can change the default value on the **Tools Customizer Settings** panel. WRITE access to this data set is required.

Customization library
Contains the customization jobs that Tools Customizer generates for Db2 Automation Expert.

Tools Customizer checks whether a customization library name was specified for more than one instance of the same version of the same product. If the same customization library name is specified for more than one product of the same version, the CCQD123E message is issued to prevent you from overwriting previously generated customization jobs. Ensure that you specify unique qualifier for the customization library for each instance of the product.

To customize Db2 Automation Expert, submit the members of the data set in the order in which they are displayed on the **Finish Product Customization** panel.

The data set naming convention is *hlq*.$*LPAR_name*$.*xyzvrm*, where:

- *hlq* is the value of the **Customization library qualifier** field on the **Tools Customizer Settings** panel (CCQPSET)

- *LPAR_name* is the four-character LPAR name
- *xyzvrm* is the three-letter product identifier with the version, release, and modification level

For example, the data set name might be DB2TOOL.PRODUCT.CUST.$MVS1$.*XYZ*410.

WRITE access to this data set is required.

Tools Customizer allocates the data sets for the discover output, the data store, and the customization library with the attributes that are shown in the following table:

Data set	Organization	Record format	Record length	Block size	Data set name type
Table 60. Data set attributes for allocating the Discover output, data store, and customization library data sets					
Discover output data set	PO	Variable block	16383	32760	LIBRARY
Data store data set	PO	Variable block	16383	32760	LIBRARY
Product customization library	PO	Fixed block	80	32720	LIBRARY

Restrictions:

- Multiple users cannot simultaneously share the discover output data set, data store data set, Tools Customizer metadata library, and metadata library.

Chapter 29. Reference

These reference topics are designed to provide you with quick access to information about Db2 Automation Expert customization, skeleton members, column display functions, sample profiles and other product usage considerations.

Skeleton variables

Db2 Automation Expert uses ISPF skeletons to build most of the JCL and control cards needed for execution. The variables contained in the skeletons are documented in this topic.

If you want to modify skeletons for your own purposes, you can use this appendix as a reference. These variables can be called from your skeletons during job building. You can copy the Db2 Automation Expert skeletons in the SDAJSLIB and modify them, but you must place the modified skeletons in your own library, and concatenate your library before the Db2 Automation Expert skeleton libraries. To do this, update the DAJV11C CLIST to specify your skeleton library. This is accomplished by inserting your skeleton library into the DAJSLIB1 library in the CLIST, as shown following:

```
        DAJSLIB1(user.skeleton.library)                        +
        DAJSLIB2(DAJLVL.SDAJSLIB)                         +
```

Note: If you choose to customize skeletons, when you upgrade to the next version or release of Db2 Automation Expert, you might need to re-customize the skeletons for the new version.

⚠️ **CAUTION:** Do not modify the value of these variables in your skeletons. Doing so will produce unpredictable results when the job is built.

General variables

The general variables available in Db2 Automation Expert skeletons may appear in multiple skeletons.

These variables are defined and maintained by ISPF and are for reference only.

&Z
This value is blank or not set.

&ZUSER
User ID.

DAJCHJ

This topic describes the variables available in Db2 Automation Expert skeleton DAJCHJ. This skeleton contains JCL for batch build of Db2 Automation Expert jobs, and is used for all jobs built in batch.

The following variables are included in this skeleton:

&WORKDEV
A device name. If the device type was not specified in the Db2 Automation Expert setup panels, the skeleton logic defaults the device type to SYSDA.

&CLTFMID
The client product FMID. This variable resolves to DAJ for Db2 Automation Expert.

&UEMCSNAP
The type of job. Valid values are: D: EMC Snap data set C: Db2 Automation Expert utility that cleans up its repository tables. R: Disaster recovery jobs to be executed at the DR site. S: Disaster recovery job step to be run at the DR site to ensure spaces are in RW mode. Blank: Any other type of job not specified.

&PROFCRTR
The profile creator name.

&PROFNAME
The profile name.

&FMEMBER
If the data set that will contain the generated job is a PDS, this variable contains the member name.

&FDATASET
The data set name that will contain the generated job.

&ISPTLIB1
The ISPF table library; this library name is obtained from the startup CLIST.

&CLTDESC
The client product name. This variable resolves to Db2 Automation Expert for Db2 Automation Expert.

&REGION
The region size for the job card.

&DB2CNTFL
The DB2PARMS control file, this name is obtained from the startup CLIST.

&CLIB
The CLIST library name, obtained from the startup CLIST. If present, the SYSPROC DD statement is inserted in the JCL.

&STEPLIBS
Step libraries. The step libraries are included if you specify Y in the Generate Steplib DDs on the Db2 Shared Profile Support setup screen or the Override Setup Options screen.

&CLTLOAD1, &CLTLOAD2
The Db2 Automation Expert load libraries; these are obtained from the CLIST.

&FECLOAD1, &FECLOAD2
The Db2 Tools common code load libraries; these are obtained from the CLIST.

&EMCLOAD1, &EMCLOAD2
The EMC load libraries; these are obtained from the CLIST.

&FDRLOAD1, &FDRLOAD2
The FDR load libraries; these are obtained from the CLIST.

&DB2LOAD1, &DB2LOAD2, &DB2LOAD3, &DB2LOAD4, &DB2LOAD5
The Db2 load libraries. These are obtained from the Db2 Automation Expert setup screen.

&CLTPLIB1, &CLTPLIB2
Db2 Automation Expert panel libraries; these are obtained from the CLIST.

&FECPLIB1, &FECPLIB2
The Db2 Tools common code panel libraries; these are obtained from the CLIST.

&ISPTLIB1, &ISPTLIB2, &ISPTLIB3
The ISPF table libraries; these are obtained from the CLIST.

&ISPMLIB1, &ISPMLIB2, &ISPMLIB3
The ISPF message libraries; these are obtained from the CLIST.

&CLTMLIB1, &CLTMLIB2
The Db2 Automation Expert message libraries; these are obtained from the CLIST.

&FECMLIB1, &FECMLIB2
The Db2 Tool common code message libraries; these are obtained from the CLIST.

&CLTSLIB1, &CLTSLIB2
The Db2 Automation Expert skeleton libraries; these are obtained from the CLIST.

&FECSLIB1, &FECSLIB2
The Db2 common code skeleton libraries; these are obtained from the CLIST.

&SSID
The Db2 subsystem ID; this value is obtained from the Db2 Automation Expert main menu.

&USERIND
The Db2 Automation Expert user indicator; this is obtained from the CLIST.

&DLCSQLID
The user SQL ID; this value is obtained from the Db2 Automation Expert main menu.

&JOBCRD11, &JOBCRD12, &JOBCRD21, &JOBCRD22, &JOBCRD31, &JOBCRD32, &JOBCRD41, &JOBCRD42
These variables hold the job card information. The job card is input on the Build Job window, or from a data set if the job generation options are set to retrieve the job card from a data set.

&EMCORESS
The type of EMC backup. Valid values are: EMCSNAPDATASET FLASHCOPYDATASET FLASHCOPYVOLUME

&UCSHRLVL
This variable determines the SHRLEVEL syntax, if any. If it is set to R, SHRLEVEL REFERENCE is generated; if set to C, SHRLEVEL CHANGE is generated.

&UMDATE, &UMAGE
These variables come from the Modify utility screen and refer to the time frame in which records are to be deleted.

&UMCLN*
These variables are set on the Modify utility screen. These variables should not be altered.

DAJBRBC

This topic describes the variables available in Db2 Automation Expert skeleton DAJBRBC. This skeleton contains control cards for the rebind utility.

The following variables are included in this skeleton:

&RBTYPE
Specifies whether the REBIND PACKAGE or REBIND PLAN syntax is to be built. Valid values: P: Plan K: Package

&RBCC1, &RBCC2, &RBCC3, &RBCC4, &RBCC5, &RBCC6, &RBCC7, &RBCC8
The plan or package name or names to be bound.

DAJBRBJ

This topic describes the variables available in Db2 Automation Expert skeleton DAJBRBJ. This skeleton contains JCL for the rebind utility.

The following variables are included in this skeleton:

&STEPNAME
This variable is used to aid in creating a unique step name generated by Db2 Automation Expert. The variable resolves to 8 alphanumeric characters in the form xxxnnyyy, where *xxx* = utility type (such as RTS for REORG TABLESPACE), *nn* = job number, and *yyy* = step number.

&REGION
The region size for the job card.

&SSID
The Db2 subsystem ID; this value is obtained from the Db2 Automation Expert main menu.

DAJBTMP

This topic describes the variables available in Db2 Automation Expert skeleton DAJBTMP. This skeleton contains JCL for capturing run-time statistics.

The following variables are included in this skeleton:

&SELECT1
Used to create a unique step name in the job card and the comments. Generates one of these single characters based on the type of utility job being built: C: Image copy I: Index copy R: REORG T: COPYTOCOPY

&STEPNAME
A three-digit number used by Db2 Automation Expert to generate a unique step name.

&CONDSTEP
An eight-character step name variable used to check the condition code of the previous utility step.

&ORIND
This variable is used to insert an OR indicator in the generated JCL.

&REGION
The region size for the job card.

&UWKALIAS
A work data set.

&JOBNAME
A unique job name.

&SSID
The Db2 subsystem ID; this value is obtained from the Db2 Automation Expert main menu.

&DB2CNTFL
The DB2PARMS control file, this name is obtained from the startup CLIST.

DAJBTSOC

This topic describes the variables available in Db2 Automation Expert skeleton DAJBTSOC. This skeleton contains control cards for stopping and starting spaces in UT or RW mode.

The following variables are included in this skeleton:

&SELECT1
Control variable that is used to build the appropriate syntax for starting and stopping spaces. X: Stop table space U or Y: Start table space in specified mode R or Z: Start table space in RW mode D: Start database in specified mode E: Start database in RW mode C: End of input

&SELECT2
Signifies what the status the space will be in for processing. Valid values: R: Read-only Any other value: Utility mode

&PARTNBR
Object partition number; 0 if object is not partitioned.

&DLCDB
Database name

&DLCTS
Table space name

&MODE
Access mode for start/stop. Valid values are: RO: Read-only UT: Utility

DAJBTSOJ

This topic describes the variables available in Db2 Automation Expert skeleton DAJBTSOJ. This skeleton contains JCL for stopping and starting spaces in various modes (UT, RW).

The following variables are included in this skeleton:

&STEPNAME
This variable is used to aid in creating a unique step name generated by Db2 Automation Expert. The variable resolves to 8 alphanumeric characters in the form xxxnnyyy, where *xxx* = utility type (such as RTS for REORG TABLESPACE), *nn* = job number, and *yyy* = step number.

&SELECT1
Control variable that is used to build the appropriate comments and JCL for starting and stopping spaces.

&SELECT2
Control variable that determines which comments are inserted into JCL. R: Read-only mode U: Utility mode

&CONDSTEP
An eight-character step name variable used to check the condition code of the previous utility step.

&REGION
Region size for the job card.

&SSID
The Db2 subsystem ID; this value is obtained from the Db2 Automation Expert main menu.

&JDATASET
The input data set containing the control cards for starting spaces in disaster recovery jobs.

&UTSRUTIL
The utility ID to be terminated; either specified on the screen or defaulted to userID.jobname.

&JOBNAME
The unique job name.

DAJBULDJ

This topic describes the variables available in Db2 Automation Expert skeleton DAJBULDJ. This skeleton contains JCL for batch build of DAJ jobs.

The following variables are included in this skeleton:

&WORKDEV
A device name. If the device type was not specified in the Db2 Automation Expert setup panels, the skeleton logic defaults the device type to SYSDA.

&CLTFMID
The client product FMID. This variable resolves to DAJ for Db2 Automation Expert.

&UEMCSNAP
The type of job. Valid values are: B: EMC BCV split D: EMC Snap data set V: EMC Snap volume F: IBM Flash Data Set S: IBM Flash Volume C: Db2 Automation Expert Utility that cleans up its repository tables. R: Disaster recovery jobs to be executed at the DR site. Blank: Any other type of job not specified.

&PROFCRTR
The profile creator name.

&PROFNAME
The profile name.

&FMEMBER
If the data set that will contain the generated job is a PDS, this is the member name.

&FDATASET
The data set name that will contain the generated job.

&CLTDESC
The client product name. This variable resolves to "Db2 Automation Expert" for Db2 Automation Expert.

&CLTFMID
The client product FMID. This variable resolves to DAJ for Db2 Automation Expert.

&REGION
The region size for the job card.

&U
Internal variable which is set to the value of UEMCSNAP for purposes of skeletal line length limitations.

&DB2CNTFL
The DB2PARMS control file, this name is obtained from the startup CLIST.

&EMCORESS

An internal variable used to set the type of processing. Valid values
are: EMC_BCV_SPLIT EMC_SNAP_DATASET EMC_SNAP_VOLUME IBM_FLASH_DATASET
IBM_FLASH_VOLUME FLASHCOPYVOLUME

&SSID

The Db2 subsystem ID; this value is obtained from the Db2 Automation Expert main menu.

&USERIND

The Db2 Automation Expert user indicator; this is obtained from the CLIST.

&DLCNAME

New VCAT name for the copied objects.

&DLCSQLID

The user SQL ID; this value is obtained from the Db2 Automation Expert main menu.

&UEPARLEL

Specifies how many parallel subtasks can be initiated during processing.

&SELECT1

Specifies what happens if the volume containing data sets to be copied is not available. Valid values:
W: wait, S: Stop.

&SELECT10

If this variable is set to C, builds ERRORS_ENCOUNTERED CONTINUE syntax; if it is set to anything
else, builds ERRORS_ENCOUNTERED STOP syntax.

&DLCDSETI

If this variable is not blank, it is the MVS user catalog data set name.

&DLCVOL

If this variable is not blank, contains the user catalog name and builds CATALOG_VOLSER syntax.

&UDATCLAS

SMS Data class.

&UMGTCLAS

SMS Management class.

&USTOCLAS

SMS Storage class.

&SELECT3

BCV Split control card. Valid values are V: split volume, any other value: split data set.

&SELECT4

Backup vendor. valid values are F: FDR; any other value: DFSMSdss.

&UCSHRLVL

This value determines the SHRLEVEL syntax, if any. R generates SHRLEVEL REFERENCE and C
generates SHRLEVEL CHANGE.

&CLTLOAD1, &CLTLOAD2

The Db2 Automation Expert load libraries; these are obtained from the CLIST.

&FECLOAD1, &FECLOAD2

The Db2 Tools common code load libraries; these are obtained from the CLIST.

**&JOBCRD11, &JOBCRD12, &JOBCRD21, &JOBCRD22, &JOBCRD31, &JOBCRD32, &JOBCRD41,
&JOBCRD42**

These variables hold the job card information. The job card is input on the Build Job window, or from a
data set if the job generation options are set to retrieve the job card from a data set.

&UMDATE, &UMAGE

These variables come from the Modify utility screen and refer to the time frame in which records are
to be deleted.

&UMCLN*

These variables are set on the Modify utility screen. These variables should not be altered.

DAJCOPYC

This topic describes the variables available in Db2 Automation Expert skeleton DAJCOPYC. This skeleton contains control cards for COPY and COPYTOCOPY image copies.

The following variables are included in this skeleton:

&SELECT1
If set to C, this skeleton builds the control cards specific to each object in the job. If set to R, the skeleton builds the remainder of the syntax that is required once per each COPY or COPYTOCOPY utility control statement.

&UICTYPE
Type of object. Valid values: TS: Table space IX: Index space

&LISTNAME
Determines whether LISTDEFs are used. Valid values: Blank: Use table space names Not blank: Use LISTDEFS

&UTILTEXT
Hold the text for the name of the utility, for example COPY or COPYTOCOPY.

&PARTNBR
Object partition number. If blank, syntax does not include partition number.

&TSIXIND
Used to insert the proper object type into the control card. Is set to TABLESPACE if &UICTYPE is TS; set to INDEXSPACE if &UICTYPE is IX.

&DLCDB
Database name

&DLCTS
Table space name

&SELECT3
Determines whether COPYTOCOPY syntax is built. If set to C, FROMLASTCOPY syntax is built; if set to F:, FROMLASTFULLCOPY syntax is built; if set to I, FROMLASTINCRCOPY syntax is built.

&COPYDDN1, &COPYDDN2
Contains DD names for the primary (&COPYDDN1) and backup (&COPYDDN2) copy data sets for the local site image copy.

&COMMA
Internal variable set to a comma if a local or recovery backup copy is specified.

&RCVYDDN1, &RCVYDDN2
Contains DD names for the primary (&RCVYDDN1) and backup (&RCVYDDN2) copy data sets for the recovery site image copy.

&UCHGLIM1
If blank, does not build CHANGELIMIT syntax; if not blank, contains the value for the first value in the CHANGELIMIT range and builds syntax with that value.

&UCONCURR
If set to Y, builds CONCURRENT syntax.

&UFULLCPY
If set to Y, builds FULL YES syntax; if set to N, builds FULL NO syntax.

&UCHGLIM2
If not blank, contains the value for the second value in the CHANGELIMIT range and builds syntax with that value. If blank, does not include the second value in the syntax.

&UCREPTON
If set to Y, builds REPORTONLY syntax.

&UPARALEL
If set to Y, builds PARALLEL syntax.

&UNUMBOBJ

If not blank, contain the number of objects for PARALLEL syntax.

&UNUMTUNT

If not blank, contain the number of tape units for PARALLEL syntax.

&UCCHKPAG

If set to Y, builds CHECKPAGE syntax.

&UCONCURR

If set to Y, builds CONCURRENT syntax.

&UFILTRDD

If not blank, contains the filter DD name for FILTER syntax.

&UCSHRLVL

If set to C, builds SHRLEVEL CHANGE syntax; if set to R, builds SHRLVL REFERENCE syntax.

&UTCLONE

If set to Y, adds CLONE syntax; the utility will act only on clone objects.

&UCSCOPE

(Db2 V9 and above) If set to P, builds SCOPE PENDING syntax; otherwise, SCOPE ALL is assumed.

DAJCOPYJ

This topic describes the variables available in Db2 Automation Expert skeleton DAJCOPYJ. This skeleton contains JCL for COPY and COPYTOCOPY copies.

The following variables are included in this skeleton:

&UTSRUTIL

The utility ID; either specified on the screen or defaulted to userID.jobname.

&STEPNAME

This variable is used to aid in creating a unique step name generated by Db2 Automation Expert. The variable resolves to 8 alphanumeric characters in the form xxxnnyyy, where *xxx* = utility type (such as RTS for REORG TABLESPACE), *nn* = job number, and *yyy* = step number.

&SELECT3

Valid values: blank: COPY utility Any other value: COPYTOCOPY utility

&REGION

Region size for job card

&SSID

The Db2 subsystem ID; this value is obtained from the Db2 Automation Expert main menu.

&UTILID

The utility ID specified on the utility options screen; if the job options specify to prefix the utility ID with the job name, step name, or both, the utility ID may be prefixed with those.

&SELECT2

Determines type of SYSPRINT DD. If set to Y, builds SYSPRINT DD with temporary data set; if set to any other value, the SYSPRINT DD goes to SYSOUT=*.

&UWKALIAS

If not blank, is set to the utility work data set high level qualifier, specified on the Job Generation Options screen, and generates a SYSPRINT DD with the specified high level qualifier. If not blank, the SYSPRINT DD is a temporary work data set.

&WORKDEV

The work unit device

DAJDATEC

This topic describes the variables available in Db2 Automation Expert skeleton DAJDATEC. This skeleton sets the variable for displaying month in job generation.

The following variables are included in this skeleton:

&ZMONTH
Numbers 1-12 correspond to the month, January through December.

DAJDSMC

This topic describes the variables available in Db2 Automation Expert skeleton DAJDSMC. This skeleton contains control cards for Dataset Manager space reallocation step.

The following variables are included in this skeleton:

&SSID
The Db2 subsystem ID; this value is obtained from the Db2 Automation Expert main menu.

&DLCDB2
The plan name of the Db2 Automation Expert plan created during the installation of Db2 Automation Expert on the Db2 subsystem owning the data sets being moved.

DAJDSMD

This topic describes the variables available in Db2 Automation Expert skeleton DAJDSMD. This skeleton contains control cards for global parameters for Dataset Manager space reallocation step.

The following variables are included in this skeleton:

&OREALPRI
Original size of the data set.

&SELECT2, &SELECT3, &SELECT4
Triggers comment box when the code has determined that one or more truncation conditions has occurred

&ICDSN
The source data set to be moved.

&PARTNBR
Whether the space is partitioned; non-blank value is partitioned; blank is non-partitioned.

&DLCDB
Db2 database name.

&DLCIX
Index space name; if non-blank, an index is included.

&DB2VER
Db2 version of the subsystem.

&IXV8DSM1, &IXV8DSM2, &IXV8DSM3, &IXV8DSM4, &IXV8DSM5
An index name. These variables allow for a long index name to be included as part of the move syntax.

&DLCNAME
Target VCAT name for user-managed data sets; if value is > 0, the TARGETVCAT keyword is generated.

&DLCDBS
Target storage group name for Db2-managed data sets; if value is > 0, the TARGETSTOGROUP keyword is generated.

&USTOCLAS
If not blank, contains the name of the target SMS storage class for the data set.

&UMGTCLAS
If not blank, contains the name of the target SMS management class for the data set.

&UDATCLAS
If not blank, contains the name of the target SMS data class for the data set.

&UREALPRI
If not blank, contains the number of kilobytes to be used as the primary space quantity when the data set is moved.

&UREALSEC
If not blank, contains the number of kilobytes to be used as the secondary space quantity when the data set is moved.

DAJDSME

This topic describes the variables available in Db2 Automation Expert skeleton DAJDSME. This skeleton contains a step end card for Dataset Manager space reallocation.

No variables are available in this skeleton.

DAJDSMJ

This topic describes the variables available in Db2 Automation Expert skeleton DAJDSMJ. This skeleton contains JCL for Dataset Manager space reallocation.

The following variables are available in this skeleton:

&DB2CNTFL
The DB2PARMS control file, this name is obtained from the startup CLIST.

DAJDSMV

This topic describes the variables available in Db2 Automation Expert skeleton DAJDSMV. This skeleton contains a target volume control card for Dataset Manager space reallocation.

The following variables are available in this skeleton:

&DLCVOL
The target volume to which the data set will be moved.

DAJDSQLC

This topic describes the variables available in Db2 Automation Expert skeleton DAJDSQLC. This skeleton contains control cards for space reallocation.

The following variables are available in this skeleton:

&UICTYPE
Type of object to be reallocated. Valid values: TS: table space IX: index space

&DLCDB
Database name of object to be reallocated.

&DLCTS
Table space name to be reallocated.

&DB2VER
Db2 version of the subsystem.

&DLCIX
Index name to be reallocated.

&IXV8LN1B
This variable is used to properly build syntax for long index names. If blank, the syntax will fit on one line; if not blank, the syntax is built on multiple lines.

&IXV8LN1A
Set to the index_creator.index_name; if the index name is short, it will fit into this variable. For long index creator names, the name is continued in variable &IXV8LN1B.

&IXV8LN1, &IXV8LN2, &IXV8LN3, &IXV8LN4
An index name. These variables allow for a long index name (up to 128 bytes) to be included as part of the syntax.

&OREALPRI
Current® primary allocation in tracks

&SELECT2
If set to Y, includes comment box for primary space truncation due to MAXPRIME.

&SELECT3
If set to Y, includes comment box for primary space truncation due to PIECESIZE for index.

&SELECT4
If set to Y, includes comment box for secondary space truncation due to PIECESIZE for index.

&PARTNBR
Object partition number; if blank, object is not partitioned.

&UREALPRI
Primary quantity for reallocation.

&UREALSEC
Secondary quantity for reallocation.

&URETPERI
PCTFREE for reallocation.

&UINDREFL
FREEPAGE for reallocation.

DAJDUMYJ

This topic describes the variables available in Db2 Automation Expert skeleton DAJDUMYJ. This skeleton generates a dummy step for exception processing.

No variables are available in this skeleton.

DAJEOFSJ

This topic describes the variables available in Db2 Automation Expert skeleton DAJEOFSJ. This skeleton contains JCL to end a SYSIN DD * card.

No variables are available in this skeleton.

DAJGDGC

This topic describes the variables available in Db2 Automation Expert skeleton DAJGDGC. This skeleton contains control cards for defining or deleting a GDG.

The following variables are available in this skeleton:

&SELECT1
Determines whether the job will be a delete or define of a GDG. Valid values: 1=delete a GDG; Any other value = define a GDG.

&ICDSN
GDG name.

&GDGBASE
GDG scratch limit .

&DLCDSET
GDG base to be deleted.

DAJGDGJ

This topic describes the variables available in Db2 Automation Expert skeleton DAJGDGJ. This skeleton contains JCL for defining or deleting a GDG.

The following variables are available in this skeleton:

&SELECT1
Generates comment blocks for deleting or defining GDGs. Valid values: 1=Delete a GDG; any other value = Define a GDG.

&STEPNAME
This variable is used to aid in creating a unique step name generated by Db2 Automation Expert. The variable resolves to 8 alphanumeric characters in the form xxxnnyyy, where *xxx* = utility type (such as RTS for REORG TABLESPACE), *nn* = job number, and *yyy* = step number.

&REGION
Region size for job card.

DAJGGCC

This topic describes the variables available in Db2 Automation Expert skeleton DAJGGCC. This skeleton contains control cards for including Db2 Change Accumulation Tool jobs.

The following variables are available in this skeleton:

&SELECT1
Controls the type of Db2 Change Accumulation Tool syntax. Valid values: C: Db2 Change Accumulation Tool job G: Db2 Change Accumulation Tool Group keyword E: Db2 Change Accumulation Tool Mini Log jobs S: Db2 Change Accumulation Tool job for a single space X: Generates several control cards at the end of the job.

&ICDSN
Mini log data set name.

&DLCDB
Data base name.

&DLCTS
Table space name.

&PARTNBR
Partition number.

&SELECT2
The specified point. Valid values: C: To current Q: To quiesce S: To End RBA or End LRSN

&DSGRPNAM
Set if the subsystem is a data sharing group. If blank, use end RBA; if not blank, use end LRSN.

&UTILRBA
The end RBA or LRSN, depending on if the subsystem is a data sharing group.

&SELECT3
If set to Y, generates a SYSCOPY control card; if set to N, generates a NO_SYSCOPY_ROW control card.

&SELECT4
If set to 1, generates a ONE_PASS control card; if set to 2, generates a TWO-PASS control card.

&SELECT5
If set to L, generates a LOCAL_SITE control card; if set to R, generates a RECOVERY_SITE control card.

&SELECT6
If set to V, generates a WRITE_TO_VSAM control card; if set to B, generates a WRITE_TO_BOTH control card; if set to I, generates a WRITE_TO_COPIES control card.

&SELECT7
If set to Y, generates a BUFFERS_IN_31_BIT control card.

&SELECT8
If set to Y, generates a FORCE_COPIES control card.

&SELECT9
If set to S, incremental mode Sort is used; if set to M, incremental mode Merge is used.

&SELECT10 - &SELECT13
These variables are used to build the LOG_COPY_PREFERENCE syntax.

DAJGGCJ

This topic describes the variables available in Db2 Automation Expert skeleton DAJGGCJ. This skeleton contains JCL for including Db2 Change Accumulation Tool jobs.

The following variables are available in this skeleton:

&SELECT1
This variable determines whether JCL or a DD is generated. Valid values: J: Generates the job cards. S: Generates the control card DD.

&STEPNAME
This variable is used to aid in creating a unique step name generated by Db2 Automation Expert. The variable resolves to 8 alphanumeric characters in the form xxxnnyyy, where *xxx* = utility type (such as RTS for REORG TABLESPACE), *nn* = job number, and *yyy* = step number.

&REGION
The region size for the job card.

&SSID
The Db2 subsystem ID; this value is obtained from the Db2 Automation Expert main menu.

&DB2CNTFL
The DB2PARMS control file, this name is obtained from the startup CLIST.

DAJICDDJ

This topic describes the variables available in Db2 Automation Expert skeleton DAJICDDJ. This skeleton contains JCL for creating image copy data set DDs.

The following variables are available in this skeleton:

&UCVOLCNT
Controls the volume count subparameter for the VOLUME parameter. Its value is assigned to the variable VC in the skeleton.

&DDNAME
The DD name for the DD statement.

&ICDSN
The image copy data set name.

&UCATALOG
Sets the CATLG subparameter for the DD statement. Valid values: C: DISP=(NEW, CATLG, DELETE) Y: DISP=(MOD, CATLG, CATLG) N: DISP=(NEW, KEEP, DELETE)

Note: Only the Y and N values are supported on the product panel for image copy options.

&REFBKDDN
If not blank, contains the DD name to be used in the referback syntax for subsequent DDs. If blank, there is no "refer back" DDN.

&USTOCLAS
If not blank, includes the STORCLAS subparameter.

&UDATCLAS
If not blank, includes the DATACLAS subparameter.

&UMGTCLAS
If not blank, includes the MGMTCLAS subparameter.

&UNITTYPE
If set to T, the unit type set on the Image Copy options screen is a tape device. If set to D, the unit type is a disk device.

&REFBKSTP
If not blank, contains the step name used when a "refer-back" DDN is available in a previous step to be used in creating the VOLUME parameter.

&UCPYUNIT
Device type for the UNIT parameter

&FDATASET
If not blank, includes the GDG base model DSN entered in on the Db2 Automation Expert Systems parameters setup screen.

&SELECT5
If set to Y, the data set name in &FDATASET is a GDG.

&UREALPRI
Primary quantity for space subparameter.

&UREALSEC
Secondary quantity for space subparameter.

&VC
Set to the variable &UCVOLCNT (volume count parameter).

&URETPERI
If not blank, the retention period for the LABEL parameter.

&UIDELAY
If not blank, the expiration date for the LABEL parameter.

DAJICDMJ

This topic describes the variables available in Db2 Automation Expert skeleton DAJICDMJ. This skeleton builds dummy DDs for REORG UNLOAD PAUSE.

The following variables are available in this skeleton:

&DDNAME
If the REORG requires a DDNAME, this is a DD name included that is consistent with what the utility requires.

&AMP
Generates two ampersands (&&) into the output JCL.

&WORKDEV
The work unit device name.

DAJJCLIN

This topic describes the variables available in Db2 Automation Expert skeleton DAJJCLIN. This skeleton contains JCL for user job cards and the comment box for job generation.

The following variables are available in this skeleton:

&SELECT1
This value is set to J to generate JCL if the job card is to be retrieved from a data set, as specified in job generation options. When set to C, only the comment box is generated.

&JCLLINE
This variable contains a line of JCL; it is called multiple times if necessary to build the JCL that was input into the data set.

&CLTDESC
The client product name. This variable resolves to Db2 Automation Expert for Db2 Automation Expert.

&CLTVER
The client product version.

&DLCPTF
The client product release level.

&SSID
The Db2 subsystem ID.

&DLCSQLID
The user SQL ID; this value is obtained from the Db2 Automation Expert main menu.

&PROFCRTR
The profile creator name.

&PROFNAME
The profile name.

&PROFDESC
The profile description.

&ZUSER
This ISPF variable is set to the user ID of the user building the job.

&ZDAYOFWK
This ISPF variable is set to the day of the week.

&DLCMONTH
The month.

&ZDAY
This ISPF variable is set to the date.

&ZSTDYEAR
This ISPF variable is set to the year.

&ZTIMEL
This ISPF variable is set to the current timestamp.

DAJJOBJ

This topic describes the variables available in Db2 Automation Expert skeleton DAJJOBJ. This skeleton contains JCL for user job cards and the comment box for job generation.

The following variables are available in this skeleton:

&JOBCARD1
First line of job card

&JOBCARD2
If not blank, second line of job card.

&JOBCARD3
If not blank, third line of job card.

&JOBCARD4
If not blank, fourth line of job card.

&CLTDESC
The client product name. This variable resolves to Db2 Automation Expert for IBM Db2 Automation Expert for z/OS.

&CLTVER
The client product version.

&DLCPTF
The client product release level.

&SSID
The Db2 subsystem ID.

&DLCSQLID
The user SQL ID; this value is obtained from the Db2 Automation Expert main menu.

&PROFCRTR
The profile creator name.

&PROFNAME
The profile name.

&PROFDESC
The profile description.

&ZUSER
This ISPF variable is set to the user ID of the user building the job.

&ZDAYOFWK
This ISPF variable is set to the day of the week.

&DLCMONTH
The month.

&ZDAY
This ISPF variable is set to the date.

&ZSTDYEAR
This ISPF variable is set to the year.

&ZTIMEL
This ISPF variable is set to the current timestamp.

DAJLISTC

This topic describes the variables available in Db2 Automation Expert skeleton DAJLISTC. This skeleton contains control cards for LISTDEF statements.

The following variables are available in this skeleton:

&PARTNBR
If not blank, contains the partition number or 0.

&UICTYPE
The object type. Valid values: TS: Table space IX: Index space

&UTILTEXT
Hold the text for the name of the utility, for example COPY or RECOVER.

&LISTNAME
The list name in the LISTDEF parameter.

&DLCDB
Database name

&CLTVER
The client product version.

&DLCTS
Table space name or index space name, depending on value in &UICTYPE variable.

&PARTLEVL
Specifies the partition granularity for partitioned table spaces, partitioning indexes, and data-partitioned secondary indexes that are to be contained in the list. If &PARTNBR is greater than 0, the syntax is built as PARTLEVEL (&PARTNBR).

&UTCLONE
If set to Y, adds the CLONED YES keywords to the INCLUDE expression. The expression then will only return the names of clone tables, table spaces that contain clone tables, indexes on clone tables or index spaces that contain indexes on clone tables.

DAJLPSTC

This topic describes the variables available in Db2 Automation Expert skeleton DAJLPSTC. This skeleton contains control cards for the registration step of job tracking. This skeleton is included only when the job tracking task has been started.

The following variables are available in this skeleton:

&SSID
The job tracking started task subsystem ID.

&PROFNAME
The profile name

&PROFCRTR
The profile creator.

&URMOUTIL
An internal job identifier.

&SELECT1
Determines whether ABEND processing is included. Valid values: Y: ABEND (YES) syntax is included N: ABEND(NO) syntax is included

&SELECT2
Determines whether WTO messages are to be produced. Valid values: Y: WTO (YES) syntax is included N: WTO (NO) syntax is included

DAJLPSTJ

This topic describes the variables available in Db2 Automation Expert skeleton DAJLPSTJ. This skeleton contains JCL for the registration step of job tracking. This skeleton is included only when the job tracking task has been started.

The following variables are available in this skeleton:

&STEPNAME
This variable is used to aid in creating a unique step name generated by Db2 Automation Expert. The variable resolves to 8 alphanumeric characters in the form xxxnnyyy, where *xxx* = utility type (such as RTS for REORG TABLESPACE), *nn* = job number, and *yyy* = step number.

&REGION
The region size for the job card.

DAJMAPTC

This topic describes the variables available in Db2 Automation Expert skeleton DAJMAPTC. This skeleton contains control cards to build DDL to create or drop the online REORG mapping table.

The following variables are available in this skeleton:

&SELECT1
Specifies whether skeleton will build create or drop DDL for the temporary mapping table. Valid values: C: Create the database and associated tables D: Drop the database

&JOBNAME
A temporary database name used for the mapping table; Db2 Automation Expert uses the job name for the database name.

&UMAPSTGR
Specifies the storage group for the temporary mapping table. Valid values: Blank: Storage group is SYSDEFLT Any other value: The storage group specified on the Change options screen for the dynamic mapping table.

&UMAPBPOL
Specifies the buffer pool for the temporary mapping table. Valid values: Blank: Buffer pool is BP0 Any other value: The buffer pool specified on the Change options screen for the dynamic mapping table.

&STEPNAME
This variable is used to aid in creating a unique step name generated by Db2 Automation Expert. The variable resolves to 8 alphanumeric characters in the form xxxnnyyy, where *xxx* = utility type (such as RTS for REORG TABLESPACE), *nn* = job number, and *yyy* = step number.

&UMAPPQTY
Specifies the primary and secondary quantity for the temporary mapping table. Valid values: Blank: Primary and secondary quantity is set to 18000 kb. Any other value: The primary quantity specified on the Change options screen is used for the dynamic mapping table.

DAJMODFC

This topic describes the variables available in Db2 Automation Expert skeleton DAJMODFC. This skeleton contains control cards for the MODIFY utility.

The following variables are available in this skeleton:

&UICTYPE
The object type. Valid values: TS: Table space IX: Index space

&SELECT2
Specifies which set of statistics is deleted from the SYSIBM statistics tables; used to set the DELOPT variable. Valid values: A: ALL C: ACCESSPATH S: SPACE

&SELECT1
Determines whether MODIFY RECOVERY or MODIFY STATISTICS syntax is built. Valid values: R: MODIFY RECOVERY S: MODIFY STATISTICS

&LISTNAME
Determines whether LISTDEFs are used. Valid values: Blank: Use table space names Not blank: Use LISTDEFS

&PARTNBR
Object partition number; 0 if object is not partitioned.

&DLCDB
Database name

&DLCTS
Table space name

&UTCLONE
If set to Y, adds CLONE syntax; the utility will act only on clone objects.

&UMRETAIN
(Db2 Version 9.1 or later) Determines how the RETAIN keyword is generated; blank if not used. Valid values: L: RETAIN LAST (&UMRETNBR) O: RETAIN LOGLIMIT G: RETAIN GDGLIMIT T: RETAIN GDGLIMIT LAST (&UMRETNBR) M: RETAIN GDGLIMIT LOGLIMIT

&UMRETNBR
(Db2 Version 9.1 or later) If specifying the RETAIN LAST or RETAIN GDGLIMIT LAST keywords, the number of records to be retained.

&OBJTYPE
Contains either TABLESPACE or INDEXSPACE, depending on which type of object is being processed.

&UMDATE
If not blank, this variable is used to set the DATE parameter for the MODIFY utility.

&UMAGE
If not blank, this variable is used to set the AGE parameter for the MODIFY utility.

DAJMODFJ

This topic describes the variables available in Db2 Automation Expert skeleton DAJMODFJ. This skeleton contains JCL for the MODIFY utility.

The following variables are available in this skeleton:

&UTSRUTIL

If not blank, sets the UTILID to the utility ID specified on the Job Generation Options screen.

&STEPNAME

This variable is used to aid in creating a unique step name generated by Db2 Automation Expert. The variable resolves to 8 alphanumeric characters in the form xxxnnyyy, where *xxx* = utility type (such as RTS for REORG TABLESPACE), *nn* = job number, and *yyy* = step number.

&REGION

The region size for the job card.

&SSID

The Db2 subsystem ID.

&UTILID

The utility ID specified on the utility options screen; if the job options specify to prefix the utility ID with the job name, step name, or both, the utility ID may be prefixed with those.

DAJOPTNC

This topic describes the variables available in Db2 Automation Expert skeleton DAJOPTNC. This skeleton contains control cards for the OPTIONS utility control statement.

The following variables are available in this skeleton:

&SELECT7

If set to Y, generates OPTIONS PREVIEW syntax. If set to any other value, generates OPTIONS EVENT syntax.

&SELECT8

If set to Y, generates OPTIONS EVENT(ITEMERROR) syntax. If set to N, generates OPTIONS EVENT(WARNING) syntax.

&SELECT9

If set to Y, generates WARNING,RC syntax for the event. If set to N, does not included WARNING,RC syntax.

DAJQUIEC

This topic describes the variables available in Db2 Automation Expert skeleton DAJQUIEC. This skeleton contains control cards for the QUIESCE utility.

The following variables are available in this skeleton:

&UQTBLSPC

If set to Y on Quiesce options screen, generates TABLESPACESET syntax for the QUIESCE.

&SELECT1

When this variable is set to C, the utility control statement is built with the utility name and objects names or LISTDEFs. When set to R, adds the remaining control cards (WRITE YES|NO syntax).

&LISTNAME

Determines whether LISTDEFs are used. Valid values: Blank: Use table space names Not blank: Use LISTDEFS

&UTILTEXT

Hold the text for the name of the utility, for example QUIESCE.

&PARTNBR

Object partition number; if blank, object is not partitioned.

&TSS

Set to TABLESPACESET if specified on the Quiesce options screen; otherwise, blank.

&DLCDB

Database name.

&DLCTS

Table space name.

&UQWRITE
Generates WRITE YES syntax if set to Y on the Quiesce options screen. Generates WRITE NO syntax if set to N on the Quiesce options screen.

&UTCLONE
If set to Y, adds CLONE syntax; the utility will act only on clone objects.

DAJQUIEJ

This topic describes the variables available in Db2 Automation Expert skeleton DAJQUIEJ. This skeleton contains JCL for the QUIESCE utility.

The following variables are available in this skeleton:

&UTSRUTIL
If not blank, sets the UTILID to the utility ID specified on the Job Generation Options screen.

&STEPNAME
This variable is used to aid in creating a unique step name generated by Db2 Automation Expert. The variable resolves to 8 alphanumeric characters in the form xxxnnyyy, where *xxx* = utility type (such as RTS for REORG TABLESPACE), *nn* = job number, and *yyy* = step number.

&REGION
The region size for the job card.

&SSID
The Db2 subsystem ID.

&UTILID
The utility ID specified on the utility options screen; if the job options specify to prefix the utility ID with the job name, step name, or both, the utility ID may be prefixed with those.

DAJRBLDC

This topic describes the variables available in Db2 Automation Expert skeleton DAJRBLDC. This skeleton contains control cards for the REBUILD INDEX utility.

The following variables are available in this skeleton:

&SELECT2
Determines what function is being performed in this call of the skeletal. Valid values: 1: generates REBUILD syntax 2: includes FREQVAL syntax 3: includes UPDATE syntax 4: inserts a control card separator.

&UICTYPE
If set to TS, generates INDEX ALL TABLESPACE syntax. If set to IX, generates individual INDEX or INDEXSPACE syntax.

&PARTNBR
Object partition number; if blank, object is not partitioned.

&DLCDB
Database name.

&DLCTS
Table space name.

&DB2VER
Db2 version of the subsystem.

&UBREUSE
If set to Y, REUSE syntax is included.

&UTCLONE
If set to Y, adds CLONE syntax; the utility will act only on indexes that are on clone tables.

&WORKDEV
The work device type for temporary data sets.

&UBONLINE

If set to Y, online REBUILD INDEX is included.

&UBSHRLVL

If set to R, SHRLEVEL REFERENCE syntax is included. If set to C, SHRLEVEL CHANGE syntax is included.

&UBDRAINW

If set to a value greater than 0, the DRAINWAIT keyword is included with the specified value.

&UBTRETRY

If set to a value greater than 0, the RETRY keyword is included with the specified value.

&UBRETRYD

If set to a value greater than 0, the RETRY_DELAY keyword is included with the specified value.

&UBMAXROW

If set to a value greater than 0, the MAXRO keyword is included with the specified value.

&UBLNGLOG

If set to C, LONGLOG CONTINUE syntax is included. If set to T, LONGLOG TERM syntax is included. If set to D, LONGLOG DRAIN syntax is included.

&UBDELAY

If set to a value greater than 0, the DELAY keyword is included with the specified value.

&UBSTATIS

If set to Y, STATISTICS syntax is included.

&UBREPORT

If set to Y, REPORT YES syntax is included.

&UBKEYCAR

If set to Y, KEYCARD syntax is included.

&UBFRQCOL

If FREQVAL syntax is included, contains the value for the NUMCOL keyword.

&UBFRQCNT

If FREQVAL syntax is included, contains the value for the COUNT keyword.

&UBUPDATE

Determines which UPDATE syntax is built. Valid values: A: UPDATE ALL P: UPDATE PATH S: UPDATE SPACE N: UPDATE NONE

&UBHISTOR

Determines which HISTORY syntax is built. Valid values: A: HISTORY ALL P: HISTORY PATH S: HISTORY SPACE N: HISTORY NONE

DAJRCDDJ

This topic describes the variables available in Db2 Automation Expert skeleton DAJRCDDJ. This skeleton contains control cards for building a DD for a recovery data set.

The following variables are available in this skeleton:

&DDNAME

The DD name for the DD statement.

&RCDSN

The data set name for the recovery data set.

DAJRCVRC

This topic describes the variables available in Db2 Automation Expert skeleton DAJRCVRC. This skeleton contains control cards for the RECOVER utility.

The following variables are available in this skeleton:

&UICTYPE
Type of object. Valid values: TS: Table space IX: Index space

&SELECT1
Valid values: C: Builds the RECOVER syntax that is required per object F: Builds the remaining syntax for the RECOVER that is required only once per utility statement.

&UTILTEXT
Hold the text for the name of the utility, for example RECOVER.

&PARTNBR
Object partition number. If blank, syntax does not include partition number.

&TSIXIND
Used to insert the proper object type into the control card. Is set to TABLESPACE if &OBJTYPE is TS; set to INDEXSPACE if &OBJTYPE is IX.

&DLCDB
Database name

&DLCTS
Table space name

&PARTNBR
Object partition number. If blank, syntax does not include partition number.

&SELECT2
Determines which type of RECOVER syntax is included. If set to L and &UESPOINT is not blank, builds TOLOGPOINT syntax. If set to C, TOCOPY syntax is included. If set to E, ERROR RANGE syntax is built.

&UESPOINT
If the recovery point is TOLOGPOINT, contains the log RBA/LRSN to which to recover.

&UERPOINT
If the recovery point is RESTOREBEFORE, contains the log RBA/LRSN to which to recover.

&UETODSN
If the recovery point is to a copy, contains the data set name to which to recover.

&UETOVOL
If not blank, contains the volume name where the image copy data set is located for TOVOLUME syntax.

&UETOSEQ
If not equal to 000, contains the file sequence number for TOSEQNO syntax.

&UEREUSE
If set to Y, REUSE syntax is included.

&UERSITE
If set to L, LOCALSITE syntax is includes. If set to R, RECOVERYSITE syntax is included.

&UEERRRNG
If set to Y, ERROR RANGE syntax is included.

&UEEPGCNT
If set to Y, sets an internal variable to CONTINUE for ERROR RANGE syntax.

&UEEPGNBR
Contains a page number for error range recovery.

&PAGECNTN
Contains CONTINUE if the page continue option was selected on the Recovery Utility Error Options screen.

&UEPARLEL
If not blank, builds PARALLEL syntax. If equal to 0, includes only the PARALLEL keyword; if not equal to 0, contains the number of objects to be processed in parallel and builds PARALLEL (num-objects) syntax.

&UETAPUNT
    If not blank, builds TAPEUNITS syntax. If equal to 0, includes only the TAPEUNITS keyword; if
    not equal to 0, contains the number of tape drives to be used with parallel processing and builds
    TAPEUNITS (num-tapeunits) syntax.

&UTCLONE
    If set to Y, adds CLONE syntax; the utility will act only on clone objects.

DAJRCVRJ

This topic describes the variables available in Db2 Automation Expert skeleton DAJRCVRJ. This skeleton
contains JCL for the RECOVER utility.

The following variables are available in this skeleton:

&UTSRUTIL
    If not blank, sets the UTILID to the utility ID specified on the Job Generation Options screen.

&STEPNAME
    This variable is used to aid in creating a unique step name generated by Db2 Automation Expert. The
    variable resolves to 8 alphanumeric characters in the form xxxnnyyy, where *xxx* = utility type (such
    as RTS for REORG TABLESPACE), *nn* = job number, and *yyy* = step number.

DAJREGJ

This topic describes the variables available in Db2 Automation Expert skeleton DAJREGJ. This skeleton
contains JCL for the registration step of job tracking. This skeleton is included only when the job tracking
task has been started.

The following variables are available in this skeleton:

&LPSSID
    This variable contains the job tracking task subsystem ID. If blank, a comment box is produced,
    stating the registration step was bypassed.

&REGION
    The region size for the job card.

&DB2CNTFL
    The DB2PARMS control file, this name is obtained from the startup CLIST.

&SSID
    The Db2 subsystem ID.

&CLTFMID
    The client product FMID. This variable resolves to DAJ for Db2 Automation Expert.

&USERIND
    The Db2 Automation Expert user indicator; this is obtained from the CLIST.

&PROFNAME
    The profile name

&PROFCRTR
    The profile creator.

&UTSRUTIL
    An internal profile identifier assigned during build processing.

&UTSCUTIL
    An internal job identifier.

DAJREOIC

This topic describes the variables available in Db2 Automation Expert skeleton DAJREOIC. This skeleton
contains control cards for the REORG INDEX or REORG INDEXSPACE utility.

The following variables are available in this skeleton:

&LISTNAME
Determines whether LISTDEFs are used. Valid values: Blank: Use index or indexspace names Not blank: Use LISTDEFS

&DB2VER
Db2 version of the subsystem.

&DLCCEATR
The index creator name.

&DLCIX
The index name.

&DLCDB
Database name.

&DLCTS
Table space name

&PARTNBR
Object partition number. If blank, syntax does not include partition number or FORCEROLLUP syntax.

&UTREUSE
If set to Y, REUSE syntax is included.

&URSHRLVL
This value determines the SHRLEVEL syntax, if any. R generates SHRLEVEL REFERENCE; C generates SHRLEVEL CHANGE; N generates SHRLEVEL NONE.

&UDEADLNE
This value determines the DEADLINE syntax, if any. N generates DEADLINE NONE; T generates DEADLINE *timestamp*; L generates DEADLINE CURRENT TIMESTAMP.

&UDEADTIM
The timestamp value for DEADLINE *timestamp* syntax.

&ULD*
These variables are used when DEADLINE syntax has been specified and a labeled duration expression is to be used for the deadline. These variables are set on the Deadlines Options screen for the REORG INDEX utility.

&UTDRAINW
If not blank, contains the drain wait value for DRAIN_WAIT syntax.

&UTTRETRY
If not blank, contains the number of retries for RETRY syntax.

&UTRETRYD
If not blank, contains the number of delay seconds for RETRY_DELAY syntax.

&UMAXROWS
If not blank, contains the value for MAXRO syntax.

&UDRAIN
Determines drain syntax. A: DRAIN ALL, W: DRAIN WRITERS

&ULONGLOG
Determines LONGLOG syntax. C: LONGLOG CONTINUE; T: LONGLOG TERM; D: LONGLOG DRAIN

&UDELAY
If not blank, contains the value for DELAY syntax.

&UTIMEOUT
Determines TIMEOUT syntax. A: TIMEOUT ABEND, T: TERM

&UILEAFDS
If not blank, contains the value for LEAFDISTLIMIT syntax.

&UIREPORT
If set to Y, generates REPORTONLY syntax.

&SELECT3
Determines FASTSWITCH syntax for online REORGS. If set to Y, generates FASTSWITCH YES syntax; if set to N, generates FASTSWITCH NO syntax.

&USTATOPT
If set to Y, generates STATISTICS syntax.

&USTREPOR
If set to Y, generates REPORT YES syntax. If set to N, generates REPORT NO syntax.

&USTUPDTE
Determines UPDATE syntax for statistics. A: UPDATE ALL; C: UPDATE ACCESSPATH; S: UPDATE SPACE; N: UPDATE NONE

&USSTATKY
If set to Y, generates KEYCARD syntax.

&USNUMCOL
If not blank, contains the value for the NUMCOLS portion of FREQVAL syntax.

&USCOUNT
Contains the value for the COUNT portion of FREQVAL syntax.

&USHISTRY
Determines HISTORY syntax for statistics. A: HISTORY ALL; C: HISTORY ACCESSPATH; S: HISTORY SPACE; N: HISTORY NONE

&USFORCER
If set to Y, generates FORCEROLLUP YES syntax. If set to N, generates FORCEROLLUP NO syntax.

&USORTDVT
If not blank, contains the device type for SORTDEVT syntax.

&USORTNUM
If not blank, contains the number of temporary data sets for SORTNUM syntax.

&UIPREFOR
If set Y, generates PREFORMAT syntax.

&UTCLONE
If set to Y, adds CLONE syntax; the utility will act only on clone objects.

DAJREOIJ

This topic describes the variables available in Db2 Automation Expert skeleton DAJREOIJ. This skeleton contains JCL for the REORG INDEX or REORG INDEXSPACE utility.

The following variables are available in this skeleton:

&UTSRUTIL
If not blank, sets the UTILID to the utility ID specified on the Job Generation Options screen.

&STEPNAME
This variable is used to aid in creating a unique step name generated by Db2 Automation Expert. The variable resolves to 8 alphanumeric characters in the form xxxnnyyy, where *xxx* = utility type (such as RTS for REORG TABLESPACE), *nn* = job number, and *yyy* = step number.

&REGION
The region size for the job card.

&SSID
The Db2 subsystem ID.

&UTILID
The utility ID specified on the utility options screen; if the job options specify to prefix the utility ID with the job name, step name, or both, the utility ID may be prefixed with those.

&SELECT2
If set to Y, builds the SYSPRINT DD to a data set. If set to any other value, builds SYSPRINT DD to SYSOUT=*

&UWKALIAS

If not blank, is set to the utility work data set high level qualifier, specified on the Job Generation Options screen, and generates a SYSPRINT DD with the specified high level qualifier. If not blank, the SYSPRINT DD is a temporary work data set.

&JOBNAME

A unique job name.

&WORKDEV

The work device type for temporary data sets.

DAJREORC

This topic describes the variables available in Db2 Automation Expert skeleton DAJREORC. This skeleton contains JCL for the control cards for the REORG TABLESPACE utility.

The following variables are available in this skeleton:

&LISTNAME

Determines whether LISTDEFs are used. Valid values: Blank: Use table space names Not blank: Use LISTDEFS

&DLCDB

Database name.

&DLCTS

Table space name

&PARTNBR

Object partition number. If blank, syntax does not include partition number or FORCEROLLUP syntax.

&UTREUSE

If set to Y, REUSE syntax is included.

&ULOG

If set to Y, generates LOG YES syntax. If set to N, generates LOG NO syntax.

&USORTDAT

If set to Y, generates SORTDATA syntax.

&UNOSYSRC

If set to Y, generates NOSYSREC syntax.

&USORTKEY

If Y, generates SORTKEYS syntax.

&COPYDDN1, &COPYDDN2

Contains DD names for the primary (&COPYDDN1) and backup (&COPYDDN2) copy data sets for the local site image copy.

&COMMA

Internal variable set to a comma if a local or recovery backup copy is specified.

&RCVYDDN1, &RCVYDDN2

Contains DD names for the primary (&RCVYDDN1) and backup (&RCVYDDN2) copy data sets for the recovery site image copy.

&URSHRLVL

This value determines the SHRLEVEL syntax, if any. R generates SHRLEVEL REFERENCE; C generates SHRLEVEL CHANGE; N generates SHRLEVEL NONE.

&UDEADLNE

If set to Y, generates DEADLINE syntax.

&UDEADVAL

This value determines the DEADLINE syntax, if any. N generates DEADLINE NONE; T generates DEADLINE *timestamp*; L generates DEADLINE CURRENT DATE or CURRENT TIMESTAMP.

&UDEADTIM

The timestamp value for DEADLINE *timestamp* syntax.

&SELECT6
If a labeled duration expression is chosen, specifies CURRENT DATE or CURRENT TIMESTAMP. D: Generates CURRENT DATE; T: generates CURRENT TIMESTAMP

&ULD*
These variables are used when DEADLINE syntax has been specified and a labeled duration expression is to be used for the deadline. These variables are set on the Deadlines Options screen for the REORG INDEX utility.

&DB2VER
Db2 version of the subsystem.

&UTDRAINW
If not blank, contains the drain wait value for DRAIN_WAIT syntax.

&UTTRETRY
If not blank, contains the number of retries for RETRY syntax.

&UTRETRYD
If not blank, contains the number of delay seconds for RETRY_DELAY syntax.

&UMAPCRTR
If not blank, contains an existing mapping table creator name.

&UMAPTBLN
If not blank, contains an existing mapping table name.

&UMAXROWS
If not blank, contains the value for MAXRO syntax.

&UDRAIN
Determines drain syntax. A: DRAIN ALL, W: DRAIN WRITERS

&ULONGLOG
If set to C, generates LONGLOG CONTINUE syntax. If set to T, generates LONGLOG TERM syntax. If set to D, generates LONGLOG DRAIN syntax.

&UDELAY
If not blank, contains the value for DELAY syntax.

&UTIMEOUT
If set to A, generates TIMEOUT ABEND syntax. If set to T, generates TIMEOUT TERM syntax.

&SELECT3
If set to Y, generates FASTSWITCH YES syntax; if set to N, generates FASTSWITCH NO syntax.

&UOFFPOSL
If not blank, contains the value for OFFPOSLIMIT syntax.

&UINDREFL
If not blank, contains the value for INDREFLIMIT syntax.

&URREPTON
If set to Y, generates REPORTONLY syntax.

&SELECT13
Determines UNLOAD syntax. P: UNLOAD PAUSE, C: UNLOAD CONTINUE; E: UNLOAD EXTERNAL; O: UNLOAD ONLY

&UKEEPDIC
If set to Y, generates KEEPDICTIONARY keyword.

&USTATOPT
If Y, generates STATISTICS syntax.

&SELECT4
If set to a value other than N, generates STATISTICS TABLE (ALL) syntax.

&USTSMPLE
If not blank, contains the percentage for the SAMPLE keyword.

&SELECT5
　　If set to a value other than N, generates STATISTICS INDEX (ALL) syntax.

&USTREPOR
　　If Y, generates REPORT YES syntax. If N, generates REPORT NO syntax.

&USTUPDTE
　　Determines UPDATE syntax for statistics. A: UPDATE ALL; C: UPDATE ACCESSPATH; S: UPDATE SPACE; N: UPDATE NONE

&USSTATKY
　　If set to Y, generates KEYCARD syntax.

&USNUMCOL
　　If not blank, contains the value for the NUMCOLS portion of FREQVAL syntax.

&USCOUNT
　　Contains the value for the COUNT portion of FREQVAL syntax.

&USHISTRY
　　Determines HISTORY syntax for statistics. A: HISTORY ALL; C: HISTORY ACCESSPATH; S: HISTORY SPACE; N: HISTORY NONE

&USFORCER
　　If Y, generates FORCEROLLUP YES syntax. If N, generates FORCEROLLUP NO syntax.

&USORTDVT
　　If not blank, contains the device type for SORTDEVT syntax.

&USORTNUM
　　If not blank, contains the number of temporary data sets for SORTNUM syntax.

&UIPREFOR
　　If set to Y, generates PREFORMAT syntax.

&SELECT11
　　If set to Y, generates DISCARDDN syntax and sets internal variable NOPAD to blanks.

&NOPAD
　　If DISCARD NOPAD is specified, contains NOPAD; otherwise, contains blanks.

&SELECT12
　　If set to Y, sets internal variable NOPAD so the DISCARD NOPAD syntax is generated.

&DDNAME
　　Contains the DD for the discard data set. If blank, set to SYSDISC.

&UTCLONE
　　If set to Y, adds CLONE syntax; the utility will act only on clone objects.

DAJREORD

This topic describes the variables available in Db2 Automation Expert skeleton DAJREORD. This skeleton contains control cards for a REORG TABLESPACE utility when disjointed partitions or partition ranges for partitioned table spaces are included, and when the Group Partitions By field in the utility profile is set to "job" or "step".

The following variables are available in this skeleton:

&GENPAREN
　　Generates required parentheses. If it is the last partition that is generated for the current object, this variable sets &RP to ")".

&LP
　　Used to insert the LISTPARTS keyword.

&RP
　　Used to insert a right parenthesis.

&LISTNAME
Determines whether LISTDEFs are used. Valid values: Blank: Use index or index space names Not blank: Use LISTDEFS.

&LISTPART
Determines the maximum number of partitions to be reorganized in a single REORG on a LISTDEF.

&DLCDB
Database name.

&DLCTS
Table space name.

&PARTRANG
If greater than 0, generates all selected partitions for the current database name and table space name in a single LISTDEF statement.

&GENPART
Determines which portion of the JCL to generate: the REORG TABLESPACE statement or disjointed partition statements.

&PARTLEVL
Contains the disjointed partitions as they are generated.

DAJREORJ

This topic describes the variables available in Db2 Automation Expert skeleton DAJREORJ. This skeleton contains JCL for the REORG TABLESPACE utility.

The following variables are available in this skeleton:

&UTSRUTIL
If not blank, sets the UTILID to the utility ID specified on the Job Generation Options screen.

&STEPNAME
This variable is used to aid in creating a unique step name generated by Db2 Automation Expert. The variable resolves to 8 alphanumeric characters in the form xxxnnyyy, where *xxx* = utility type (such as RTS for REORG TABLESPACE), *nn* = job number, and *yyy* = step number.

&REGION
The region size for the job card.

&SSID
The Db2 subsystem ID.

&UTILID
The utility ID specified on the utility options screen; if the job options specify to prefix the utility ID with the job name, step name, or both, the utility ID may be prefixed with those.

&UTILREST
This variable is set to ',RESTART' if the utility is to be restarted.

&SELECT2
If set to Y, builds the SYSPRINT DD to a data set. If set to any other value, builds SYSPRINT DD to SYSOUT=*

&UWKALIAS
If not blank, is set to the utility work data set high level qualifier, specified on the Job Generation Options screen, and generates a SYSPRINT DD with the specified high level qualifier. If not blank, the SYSPRINT DD is a temporary work data set.

&JOBNAME
A unique job name.

&UNITTYPE
If set to T, the unit type set on the Image Copy options screen is a tape device. If set to D, the unit type is a disk device.

&UCVOLCNT
If not blank, contains the value for the unit count parameter.

&WORKDEV
The work device type for temporary data sets.

&UNOSYSRC
Generates the appropriate comment box based on whether the NOSYSREC option was specified.

&SELECT9
This variable is set to 1 if NOSYSREC Y is specified in the utility profile, but Db2 Automation Expert determines that the NOSYSREC keyword is not required. If set to 1, a comment box is generated stating that the NOSYSREC keyword is not included.

This variable is set to 2 if Db2 Automation Expert determines that every object in the entire job is a LOB. If set to 2, a comment box is generated stating that the SYSREC DD was not generated because it is not needed when every object in the step is a LOB.

&SELECT8
This variable is set to 1 if NOSYSREC N is specified in the utility profile, but Db2 Automation Expert determines that the NOSYSREC keyword is required. If set to 1, the required SYSREC DD is included, and a comment box is generated stating that the NOSYSREC option and the required SYSREC DD were included.

&CONDSTEP
An eight-character step name variable used to check the condition code of the previous utility step.

&SELECT14
If set to P, indicates REORG UNLOAD PAUSE and sets DISP=(MOD,CATLG,CATLG); otherwise sets DISP=(MOD,DELETE,CATLG).

&USORTKEY
If set to Y, includes a SYSUT1 DD to rebuild indexes in parallel.

&ICDSN
If not blank, contains the name of the discard data set and generates the discard SYSPUNCH DD.

&USORTDVT
If not blank, contains the device type for SORTDEVT syntax.

&SORTWKPS
Primary quantity for sort work data sets.

&SORTWKSS
Secondary quantity for sort work data sets.

DAJREOTJ

This topic describes the variables available in Db2 Automation Expert skeleton DAJREOTJ.This skeleton builds temporary and SORTWK DDs for REORG and determines the volume count.

The following variables are available in this skeleton:

&WORKDEV
The work device type for temporary data sets. Its value is assigned to &WD in the skeleton.

&UCVOLCNT
If not blank, contains the volume count for DASD or tape, used for the sort DD UNIT and VOLUME parameters. Its value is assigned to &VC in the skeleton.

&UREALPRI
Primary quantity for SPACE parameter. Its value is assigned to &PS in the skeleton.

&UREALSEC
Secondary quantity for SPACE parameter. Its value is assigned to &SS in the skeleton.

&UNITTYPE
If set to T, the unit type is a tape device. If set to D, the unit type is a disk device.

&SORTDDNM

    Generates the name of a single DD; if blank, can be used to generate a UNIT parm for certain DDs that have already been built.

&DD

    Set to the text "DD". If blank, can be used to generate a UNIT parm for certain DDs that have already been built.

&WD

    Internal variable which is set to the value of &WORKDEV for purposes of skeletal line length limitations.

&VC

    Internal variable which is set to the value of &UCVOLCNT for purposes of skeletal line length limitations.

&PS

    Internal variable which is set to the value of &UREALPRI for purposes of skeletal line length limitations.

&SS

    Internal variable which is set to the value of &UREALSEC for purposes of skeletal line length limitations.

DAJREPRC

This topic describes the variables available in Db2 Automation Expert skeleton DAJREPRC. This skeleton contains control cards for the REPAIR utility.

The following variables are available in this skeleton:

&UPLOG

    If set to Y, sets internal variable &LOGTEXT to YES. If not set to Y, sets internal variable &LOGTEXT to NO.

&PARTNBR

    Object partition number. If blank, syntax does not include partition number.

&UPPROCES

    Specifies the type of REPAIR processing: D: REPAIR DBD S: REPAIR SET L: REPAIR LEVELID

&UPDBDPRC

    Specifies REPAIR DBD processing: D: REPAIR DBD DROP; T: REPAIR DBD TEST; I: REPAIR DBD DIAGNOSE; R: REPAIR DBD REBUILD.

&DLCDB

    Database name.

&DLCDBID

    Database descriptor identifier (DBID).

&UFILTRDD

    If not blank, contains the DD name for the OUTDDN output data set.

&UICTYPE

    Type of object. Valid values: TS: Table space IX: Index space

&UPCPYPND

    If set to Y, specifies that the COPY-pending status of the specified object is to be reset.

&LOGTEXT

    Contains YES if changes are to be logged; contains NO if changes are not to be logged.

&DLCTS

    Table space name.

&PARTTEXT

    This variable is set to blanks if the object being repaired is not partitioned; otherwise, the syntax PART is generated.

&UPRCVPND
　　If set to Y, specifies that the RECOVER-pending status of the specified object is to be reset.

&UPCHKPND
　　If set to Y, specifies that the CHECK-pending status of the specified object is to be reset.

&SELECT1
　　If this variable is set to Y, the space being repaired is a LOB.

&UPAUXWRN
　　If set to Y, specifies that the auxiliary warning status of the specified object is to be reset.

&UPAUXCHK
　　If set to Y, specifies that the auxiliary CHECK-pending status of the specified object is to be reset.

&DB2VER
　　Db2 version of the subsystem.

&DLCCEATR
　　The index creator name.

&DLCIX
　　The index name.

&UPREBPND
　　If set to Y, specifies that the REBUILD-pending status of the specified index is to be reset.

DAJREPRJ

This topic describes the variables available in Db2 Automation Expert skeleton DAJREPRJ. This skeleton contains JCL for the REPAIR utility.

The following variables are available in this skeleton:

&UTSRUTIL
　　If not blank, sets the UTILID to the utility ID specified on the Job Generation Options screen.

&STEPNAME
　　This variable is used to aid in creating a unique step name generated by Db2 Automation Expert. The variable resolves to 8 alphanumeric characters in the form xxxnnyyy, where *xxx* = utility type (such as RTS for REORG TABLESPACE), *nn* = job number, and *yyy* = step number.

&REGION
　　The region size for the job card.

&SSID
　　The Db2 subsystem ID.

&UTILID
　　The utility ID specified on the utility options screen; if the job options specify to prefix the utility ID with the job name, step name, or both, the utility ID may be prefixed with those.

&UFILTRDD
　　If not blank, contains the DD name for the OUTDDN output data set.

&UWKALIAS
　　Used in the &UFILTRDD DD statement as the data set high level qualifier.

&JOBNAME
　　A unique job name.

&WORKDEV
　　The work device type for temporary data sets.

DAJRICD

This topic describes the variables available in Db2 Automation Expert skeleton DAJRICD. This skeleton contains JCL for the integrity checker utility.

The following variables are available in this skeleton:

&JOBCARD1
First line of job card

&JOBCARD2
If not blank, second line of job card.

&JOBCARD3
If not blank, third line of job card.

&JOBCARD4
If not blank, fourth line of job card.

&SSID
The Db2 subsystem ID.

&ZUSER
This ISPF variable is set to the user ID of the user building the job.

&ZDAYOFWK
This ISPF variable is set to the day of the week.

&DLCMONTH
The month.

&ZDAY
This ISPF variable is set to the date.

&ZSTDYEAR
This ISPF variable is set to the year.

&ZTIMEL
This ISPF variable is set to the current timestamp.

DAJRUNSC

This topic describes the variables available in Db2 Automation Expert skeleton DAJRUNSC. This skeleton contains control cards for the RUNSTATS utility.

The following variables are available in this skeleton:

&UICTYPE
Type of object. Valid values: TS: Table space IX: Index space

&LISTNAME
Determines whether LISTDEFs are used. Valid values: Blank: Use index or indexspace names Not blank: Use LISTDEFS

&DLCDB
Database name.

&DLCTS
Table space name

&PARTNBR
Object partition number. If blank, syntax does not include partition number.

&DLCLOG
If this variable contains an L, the space is a LOB. If blank, the space is not a LOB.

&SELECT4
If this variable contains Y, TABLE ALL syntax is included in the utility.

&USSAMPLE
If not blank, this variable contains the value for the SAMPLE parameter.

&SELECT5
If this variable contains Y, INDEX ALL syntax is included in the utility.

&DB2VER
Db2 version of the subsystem.

&DLCCEATR
The index creator name.

&DLCIX
The index name.

&IXV8LNE1, &IXV8LNE2, &IXV8LNE3, &IXV8LNE4
An index name. These variables allow for a long index name to be included as part of the syntax.

&USSTATKY
If Y, the KEYCARD keyword is included.

&USNUMCOL
If not blank, the KEYCARD keyword is included and this variable contains the value for the NUMCOLS keyword.

&USSCOUNT
Contains the value for the COUNT keyword.

&USHNCOLS
If not blank, the HISTOGRAM keyword is included and this variable contains the value for the NUMCOLS keyword.

&USHNQNTL
Contains the value for the NUMQUANTILES keyword.

&USSHRLVL
This value determines the SHRLEVEL syntax, if any. R generates SHRLEVEL REFERENCE; C generates SHRLEVEL CHANGE.

&USREPORT
If Y, generates REPORT YES syntax. If N, generates REPORT NO syntax.

&USUPDATE
This value indicates which collected statistics are to be inserted into the catalog tables. A generates UPDATE ALL; N generates UPDATE NONE; C generates UPDATE ACCESSPATH; S generates UPDATE SPACE.

&USHISTRY
This value indicates which statistics are to be recorded in the catalog history tables. A generates HISTORY ALL; N generates HISTORY NONE; C generates HISTORY ACCESSPATH; S generates HISTORY SPACE.

&USFORCER
If set to Y, generates FORCEROLLUP YES syntax. If set to N, generates FORCEROLLUP NO syntax.

DAJRUNSJ

This topic describes the variables available in Db2 Automation Expert skeleton DAJRUNSJ. This skeleton contains JCL for the RUNSTATS utility.

The following variables are available in this skeleton:

&UTSRUTIL
If not blank, sets the UTILID to the utility ID specified on the Job Generation Options screen.

&STEPNAME
This variable is used to aid in creating a unique step name generated by Db2 Automation Expert. The variable resolves to 8 alphanumeric characters in the form xxxnnyyy, where *xxx* = utility type (such as RTS for REORG TABLESPACE), *nn* = job number, and *yyy* = step number.

&SSID
The Db2 subsystem ID.

&UTILID
The utility ID specified on the utility options screen; if the job options specify to prefix the utility ID with the job name, step name, or both, the utility ID may be prefixed with those.

&SELECT8
Determines type of SYSPRINT DD. If set to R, builds SYSPRINT DD with temporary data set; if set to any other value, the SYSPRINT DD goes to SYSOUT=*.

&WORKDEV
The work device type for temporary data sets.

DAJSORTJ

This topic describes the variables available in Db2 Automation Expert skeleton DAJSORTJ. This skeleton builds sort work files DDs.

The following variables are available in this skeleton:

&WORKDEV
The work device type for temporary data sets. The original value of this variable is saved in &WORKDEV2 and then restored at the end of skeletal, in order to preserve the variable value needed by other skeletons.

&UNITTYPE
The sort device type. The original value of this variable is saved in &UNITTYP2 and then restored at the end of skeletal, in order to preserve the variable value needed by other skeletons.

&SORTDEV
Sort work device.

&SRTDEVTP
Sort work device type.

&SORT#DDS
The number of sort DDs. If blank, the number of sort DDs is set to 3.

&SELECT7
Defines whether the REORG sort work files are built for table space or index REORGs. Valid values: I: Index REORGs R: Table space REORGs

&UNUMBOBJ
A descending number used to create a unique sort WORK DD for the sort work data set.

&UTPRINT
DD name for a sort work data set for index builds.

&SW
Used to generate sort DD names.

&SELECT15
If set to Y, creates DATAWK DDs.

&SWPREF
If set to Y, this variable is set to DATAWK and used to build the DATAWK DDs.

DAJSTEPL

This topic describes the variables available in Db2 Automation Expert skeleton DAJSTEPL. This skeleton contains JCL for including STEPLIBS.

The following variables are available in this skeleton:

&STEPLIBS
Step libraries. The step libraries are included if you specify Y in the Generate Steplib DDs on the Db2 Shared Profile Support setup screen or the Override Setup Options screen.

&CLTLOAD1, &CLTLOAD2
The Db2 Automation Expert load libraries; these are obtained from the CLIST.

&FECLOAD1, &FECLOAD2
The Db2 Tools common code load libraries; these are obtained from the CLIST.

&UEMCSNAP
    If set to B or D, includes an EMC load library in the STEPLIB.

&EMCLOAD1, &EMCLOAD2
    The EMC load libraries; these are obtained from the CLIST.

&FDRLOAD1, &FDRLOAD2
    The FDR load libraries; these are obtained from the CLIST.

&DB2LOAD1, &DB2LOAD2, &DB2LOAD3, &DB2LOAD4, &DB2LOAD5
    The Db2 load libraries. These are obtained from the Db2 Automation Expert setup screen.

DAJSYSNJ

This topic describes the variables available in Db2 Automation Expert skeleton DAJSYSNJ. This skeleton contains JCL for including the SYSIN DD * card.

No variables are available in this skeleton.

DAJTEMPC

This topic describes the variables available in Db2 Automation Expert skeleton DAJTEMPC. This skeleton contains control cards for TEMPLATE utility control statements.

The following variables are available in this skeleton:

&DDNAME
    The template name

&UCPYUNIT
    Contains the unit name for the data set.

&DLCDSET
    Contains the template for the z/OS data set name.

&DATALINE
    Contains the templated data set name from the Image Copy DSN generation screen.

&JCLLINE
    This variable contains the continuation of the template name from &DATALINE, if required.

&FDATASET
    If not blank, this variable contains the data set that contains the model DCB for GDGs.

&SELECT5
    Db2 Automation Expert sets this variable to Y if the data set name in &DATALINE and/or &JCLLINE is a GDG. If set to Y, and FDATASET is not blank, MODELDCB syntax is built.

&UNITTYPE
    If set to T, the unit type is a tape device. If set to D, the unit type is a disk device.

&MAXPRIME
    If not blank, contains the value for MAXPRIME syntax.

&UCVOLCNT
    If not blank, contains the value for the UNCNT syntax

&UDATCLAS
    If not blank, contains the value for DATACLAS syntax.

&UMGTCLAS
    If not blank, includes the value for MGMTCLAS syntax.

&USTOCLAS
    If not blank, includes the value for STORCLAS syntax.

&URETPERI
    If not blank, contains the retention period for RETPD syntax.

&UIDELAY
    If not blank, contains the expiration date for the EXPDL parameter.

&UCATALOG
 Specifies the DISP subparameter for the DD statement. Valid values: Y: DISP=(MOD, CATLG, CATLG) N: DISP=(NEW, KEEP, DELETE)

&USTACK
 If set to Y, stacks control statements under one COPY statement. If set to N, each object is listed in its own control statement.

&GDGBASE
 If not set to 0, contains the value for GDGLIMIT syntax.

&THRESDD
 If not blank, contains the template name for the threshold unit device that will be used for allocations.

&THRESLIM
 If &THRESDD is specified, the threshold quantity.

&THRESTYP
 If &THRESDD is specified, the threshold unit (megabytes, gigabytes, tracks, or cylinders).

DAJUREPJ

This topic describes the variables available in Db2 Automation Expert skeleton DAJUREPJ. This skeleton contains JCL cards for updating the Db2 Automation Expert repository from the RUNSTATS report.

The following variables are available in this skeleton:

&STEPNAME
 This variable is used to aid in creating a unique step name generated by Db2 Automation Expert. The variable resolves to 8 alphanumeric characters in the form xxxnnyyy, where *xxx* = utility type (such as RTS for REORG TABLESPACE), *nn* = job number, and *yyy* = step number.

&CONDSTEP
 An eight-character step name variable used to check the condition code of the previous utility step.

&REGION
 The region size for the job card.

&SSID
 The Db2 subsystem ID.

&DB2CNTFL
 The DB2PARMS control file, this name is obtained from the startup CLIST.

&CLTFMID
 The client product FMID. This variable resolves to DAJ for Db2 Automation Expert.

User exits for rearranging jobs, steps, or objects before job generation

The following user exits provided in the SDAJSAMP library of Db2 Automation Expert can be coded to help you rearrange the job, steps, or objects in the job before job generation. These sample exits provide a framework for coding your own user exit to accomplish the desired tasks.

The user exit is passed an array with elements representing the job numbers, step numbers, and objects included in the job generation. The Build Jobs Display offers a good reference of the elements passed in the array. You may view the Build Jobs Display by running a build online and specifying Y in the View job summary option on the Messages Generated for *job_profile* panel.

Assembler exit sample programs

DAJUXPRE
 Specify this module in the Pre-Generation User Exit Name field on the Generation Options window. This member is an assembler stub that runs through the array, checking for a particular job, job step,

and object. There are additional details in the comment section to aid in understanding the array elements.

DAJ$UXPR
> The DSECT used to map the parameters passed to the user exit and to map the array elements. Within each object element, there may be object statistics that can be used as the programmer needs. The statistics available to the user exit depend upon the exceptions that were selected in the exception profile.

C exit sample programs

DAJUAPRE
> Specify this module in the Pre-Generation User Exit Name field on the Generation Options window. This member is an assembler stub that calls the C program.

DAJUCPRE
> C exit program skeleton; this program runs through the array, checking for a particular job, job step, and object.

DAJUHPRE
> C header file required by DAJUCPRE. Maps the parameters passed to the user exit and to map the array elements.

Each element in the array has a set of sequence numbers that together composes a sort key. Upon returning from the user exit, the objects in the array are sorted, effectively reordering the jobs, steps, and objects. The following sequence numbers may be altered by the user exit:

Table 61. Symbol names in user exits		
Description	**Symbol (Assembler)**	**Symbol (C)**
Job sequence	PREGEN_JOB_SEQ	pregen_job_seq
Step sequence	PREGEN_STEP_SEQ	pregen_step_seq
Object sequence	PREGEN_OBJ_SEQ	pregen_obj_seq
Object sequence 2 (provided to allow an object to be inserted between two existing objects)	PREGEN_OBJ_SEQ2	pregen_obj_seq2

Tips for coding the exits
These exits could be coded in a number of ways to manipulate the array containing the job sequence number, step sequence number, and object sequence number(s). For example, to move all partitions of a certain table space to the same job for a REORG TABLESPACE, the following logic could be used:

1. Start at the beginning of the array.

2. Look for a REORG TABLESPACE step. Refer to the DSECT for the appropriate symbol and value.

   a. When found, save the job and step sequence numbers.

   b. For each object in step, save the object sequence number, database and table space names.

3. Look ahead in the rest of array for a subsequent REORG TS step with a different job sequence number.

   a. If found, look for objects that match the database/table space saved in step 2.

   b. If a match is found, move the saved job/step/object sequence numbers into the current element, and place a unique sequence number in PREGEN_OBJ_SEQ2 field.

Using the pre-generation user exit
To execute a pre-generation user exit, enter the exit load module name in the Pre-Generation User Exit Name field on the Generation Options panel. The load module specified must reside in a load library that is allocated by the Db2 Automation Expert CLIST.

Calculations used for maximum potential size of an object for exception processing

This topic lists (by object type) the calculations for the maximum potential size of an object. The calculations are used in exception processing when processing the conditions PERCENT_MAXALLOC and PERCENT_MAXUSED.

Non-partitioned table spaces

Table 62. Maximum size calculations for non-partitioned table spaces	
If:	**Max size used by Db2 Automation Expert**
Space is a LOB	DSSIZE x 256 potential data sets
Space is a LOB and DSSIZE not specified	64 GB x 256 potential data sets
All other non-partitioned table spaces	64 GB

Partitioned table spaces

Table 63. Maximum size calculations for partitioned table spaces				
If:	**And:**	**And:**	**And:**	
DSSIZE specified when space was created	Space is a PBG	-	-	MAXPARTITIONS value x DSSIZE = maxsize in GB
	All other partitioned TS	-	-	DSSIZE

Table 63. Maximum size calculations for partitioned table spaces (continued)				
If:	**And:**	**And:**	**And:**	
DSSIZE not specified when space was created	If the LARGE keyword was specified when space was created	-	-	4 GB
	No LARGE keyword was specified	Space has <16 parts	-	4 GB
		Space has 17-32 parts	-	2 GB
		Space has 33-64 parts	-	1 GB
		Space has > 64 parts and is on V9 or later	Space has 65-256 parts (V9 or later)	4 GB
			Space has > 256 parts (v9 or later)	Maxsize = table space page size, but KB replaced with GB. For example: if page size = 32 KB, then maxsize = 32 GB.
		Space has > 64 parts and is on V8	Space has 65-254 parts (V8)	4 GB
			Space has > 254 parts (V8)	Maxsize = table space page size, but KB replaced with GB. For example: if page size = 32 KB, then maxsize = 32 GB.

Non-partitioned index spaces

Table 64. Maximum size calculations for non-partitioned index spaces		
If:	**And:**	**Max size used by Db2 Automation Expert**
PIECESIZE specified when index was created	-	PIECESIZE x 32 potential data sets
No PIECESIZE specified when index was created	If the index is an auxiliary IX	4 GB default PIECESIZE x 256 potential data sets = 1 TB
	If DSSIZE was defined on the TS when created	4 GB default PIECESIZE x 32 potential data sets = 128 GB
	If the LARGE keyword was specified when space was created	4 GB default PIECESIZE x 32 potential data sets = 128 GB
	All other cases	64 GB

Partitioned index spaces

				Max size used by Db2 Automation Expert
If:	**And:**	**And:**	**And:**	
PIECESIZE was specified when index was created	-	-	-	PIECESIZE
No PIECESIZE specified when index was created	If the LARGE keyword was specified when table space was created	-	-	4 GB
	No LARGE keyword was specified when table space was created	Space has <16 parts	-	4 GB
		Space has 17-32 parts	-	2 GB
		Space has 33-64 parts	-	1 GB
		Space has > 64 parts and is on V9 or later	Space has 65-256 parts (V9 or later)	4 GB
			Space has > 256 parts (v9 or later)	Maxsize = index space page size, but KB replaced with GB. For example: if page size = 32 KB, then maxsize = 32 GB.
		Space has > 64 parts and is on V8	Space has 65-254 parts (V8)	4 GB
			Space has > 254 parts (V8)	4 GB

Table 65. Maximum size calculations for partitioned index spaces

Product usage considerations

This topic provides some general considerations for using Db2 Automation Expert.

Wildcard use in selection fields

You can use wildcards when selecting or listing objects, profiles, and execution reports in Db2 Automation Expert.

Allowed characters
The wildcard characters allowed are:

- The asterisk (*) or the percent sign (%) represents a string of zero or more characters.
- The underscore (_) specifies a single character.

Examples
```
___DB* (3 underscores, DB and asterisk)
```

would return a list of objects with 'DB' in the 4th and 5th position, such as AAADB, and D01DB.

```
*DB or %DB (asterisk or percent sign and DB)
```

would return a list of objects with 'DB' in any position, such as AAADB and D01DB, but also would return objects like ADB and DH0010DB.

The SSID selection function

On the Db2 Automation Expert main menu and the **System Parameters** panels, you can enter **?** in the **SSID** field to get a list of valid Db2 subsystems that exist in the active Db2 control data set.

To access this panel, enter **?** in the **SSID** field and press Enter. The **SSID Selection** panel is displayed, as shown in the following figure:

```
FECSLST ----------------          SSID Selection        ----- 2023/10/16  13:52:16
Option  ===>                                                  Scroll ===> CSR

Select with S line command or just place cursor and press ENTER; To Exit: PF3
--------------------------------------------------------------------------------
                                              Row 1 of 8                  CPOS
Cmd SSID Status
    SS01 Active
    SS02 Active
    SS03 Active
    SS04 Inactive
    SS05 Active
    TS01 Active
    TS02 Inactive
    VS01 Inactive
**************************** Bottom of Data **********************************
```

Figure 275. **SSID Selection** *panel*

This panel list all Db2 subsystems that have been defined in the Db2 control data set, which is configured in the System Parameters section of Db2 Automation Expert setup. Next to each SSID is the subsystem's current status. To select a subsystem, enter **S** next to the SSID and press Enter. To cancel, press PF3.

Primary commands

Db2 Automation Expert supports a number of primary commands that enable you to find information, navigate panels, modify the display of data, and print information.

FIND *abc*
    Finds a unique string within a panel of data where *abc* is the string for which you are searching. If the specified string is found, the cursor moves to the first position of the found string. If the specified string is not found a message displays to indicate that is the case. You should be as specific as possible when using the **FIND** command to ensure the correct return.

    The **FIND** command can be issued with the following keywords:

    NEXT
        Finds the next instance of the search string.

    PREV
        Finds the previous instance of the search string.

    FIRST
        Finds the first instance of the search string.

    LAST
        Finds the last instance of the search string.

    ALL
        Finds all instances of the search string.

    The syntax is:

```
FIND <string> <keyword>
```

OR

```
FIND <keyword> <string>
```

where *<string>* is the text you want to find and *<keyword>* is a valid keyword for the **FIND** command (NEXT, PREV, FIRST, LAST, or ALL).

If none of the these keywords is explicitly specified, the default behavior is for the next instance of the search term to be found. If a keyword is the only parameter, it is treated as a search string. Two keyword parameters can coexist as long as one of them is identified by surrounding quotes as the search string. Otherwise, the occurrence of multiple instances of keywords causes an error.

Examples:

To find the first instance of the word "apple", issue the command:

```
FIND apple FIRST
```

To find the next instance of the word "apple":

```
FIND apple
```

To find the last instance of the word "apple":

```
FIND apple LAST
```

To find all instances of the word "apple":

```
FIND apple ALL
```

To find all instances of the word "all", use single quotes to distinguish the search term from the keyword:

```
FIND 'all' ALL
```

Or:

```
FIND ALL 'all'
```

FORM
Reformats the display of a selected line item on a report panel such that each column becomes a row and values display in list format. To use the **FORM** command, type **FORM** in the option line, place your cursor on the line item of interest, and press Enter. The data for the selected line item will be displayed in list format showing column names and their associated values.

Notes:

1. To return to the original view from **FORM** view, press PF3.
2. CSETUP functions are not accessible when in **FORM** view. Exit **FORM** view to access CSETUP functionality.

NROW *n*
Displays the report for a subsequent row of interest where *n* is the number of rows (after to the currently displayed row) that you want to scroll forward (when viewing reports in **FORM** view). The default value of *n* is 1.

Note: The **NROW** command is only valid when viewing a report in FORM view.

PROW *n*
Displays the report for a previous row of interest where *n* is the number of rows (prior to the currently displayed row) that you want to scroll back (when viewing reports in FORM view). The default value of *n* is 1.

Note: The **PROW** command is only valid when viewing a report in **FORM** view.

PRINTX

The **PRINTX** command takes a screen shot of a report and sends it to an output queue. The default output destination is the default output queue for your site. For example, if your site's default output class is configured to send output to the hold queue, the **PRINTX** command sends the currently displayed report to the hold queue. You can then view the output using SDSF.

You can change the output class designation for the PRINTX command by entering **PRINTX S** in the command line and pressing Enter. The following panel is displayed:

Figure 276. PRINTX Setup panel

```
SETUP ------------------------  PRINTX Setup --------------  2010/02/25 14:27:15
Command ==> _____

Specify new output class and press ENTER
    or
press END to cancel.

If new output class is blank, default output class is used.

Current Output Class ==> DEFAULT OUTPUT MESSAGE CLASS
New Output Class     ==> _
```

Enter the desired output class in the **New Output Class** field and press Enter. The new output class is saved across sessions and remains in effect unless you change it. For appropriate output classes available at your site, check with your systems programmer. To change the class back to the default output message class, blank out the value in the **New Output Class** field.

For a snapshot of the current display (print screen), the ISPF Print command can be used. The ISPF Print command writes output to the ISPF LIST data set. See the *ISPF User's Guide* (SC34-4822, SC34-4823) for more information about ISPF Print.

SORT *column_number direction*

Sorts data (on panels of scrollable or tabular data) by column where *column_number* is the number of the column by which you want to sort and *direction* can be either **A** (to sort data in ascending order) or **D** (to sort data in descending order).

You can refer to columns only by the column number (not the column name). Column numbers are not displayed on the panel. The CMD column is column 1 and columns to the right are incremented sequentially.

Data can be sorted in ascending (A) or descending (D) order. To specify sort order, append the A or D to the end of the SORT command. The default is ascending (A). For example, to sort column 2 in descending order, type:

```
SORT 2 D
```

in the command line and press Enter. Data will be sorted by column 2 in descending order.

Column display functions

Column display functions (**CSETUP** functions) enable you to rearrange report columns, change the width of individual columns, and control the vertical ordering of columns.

CSETUP functionality enables you to:

- Rearrange report columns horizontally using the **CFIX** and **CORDER** options.
- Change the width of individual columns using the **CSIZE** option.
- Control the vertical ordering of columns using the **CSORT** option.

Additional column display functions enable you to:

- Scroll horizontally between columns, in both left and right directions.

- Scroll horizontally within a single report column while other report columns remain stationary on the screen.
- Insert column numbers above each display column.
- Generate a ruler at the top of the report columns beneath the headings.
- Display an entire row-column data element.

The customizations, or views, you configure using **CFIX**, **CORDER**, **CSIZE**, and **CSORT** can be saved across sessions.

The following syntax restrictions apply to the use of **CSETUP** functionality:

- Underlined text indicates the minimum acceptable abbreviation for each keyword.
- Variables are shown in italicized lowercase type.
- Keyword options are separated by vertical lines (|).

Accessing the CSETUP Primary Option Menu

The **CSETUP** primary option menu enables you to access the various **CSETUP** options and configure column display functions according to your display needs.

About this task
The **CSETUP** command uses the following syntax:

CSETUP
    Launches the **CSETUP Primary Option Menu**.

To access and use the **CSETUP Primary Option Menu**:

Procedure

1. On any dynamic display (for example, the **Objects Profile Display** panel, the **Utilities Profile Display** panel, or the **Jobs Profile Display** panel), type **CSETUP** (or **CSET**) in the Option line and press Enter.

    The **Setup Primary Option Menu** displays as shown in the following figure:

```
SETUP ------------------ Setup Primary Option Menu ------- YYYY/MM/DD HH:MM:SS
Command ==>
                                                    Temporary View


1  CFIX       Select columns to be fixed on the left side of the report
2  CORDER     Modify the horizontal placement of unfixed columns
3  CSIZE      Customize the size of columns
4  CSORT      Select columns to sort
5  CRESET     Reset column values
6  CREMOVE    Remove all customizations, including original defaults
7  PVIEW      Permanent View (toggle between temporary and permanent)



HELP          Setup Tutorial
```

Figure 277. Setup Primary Option Menu panel

2. Type the number corresponding to the option you want to access in the Command line and press Enter. The following options are available on the **Setup Primary Option Menu**:

    CFIX
        Option 1, **CFIX**, enables you to fix and unfix columns.

    CORDER
        Option 2, **CORDER**, enables you to reposition columns.

    CSIZE
        Option 3, **CSIZE**, enables you to change the displayed width of columns.

CSORT

> Option 4, **CSORT**, enables you to select one or more columns for sorting and thus modify the order of the rows displayed.

CRESET

> Option 5, **CRESET**, enables you to reset all customizations.

CREMOVE

> Option 6, **CREMOVE**, enables you to remove all customizations.

PVIEW

> Option 7, **PVIEW**, enables you to toggle between permanent view and temporary view.

Note: You can also directly invoke each **CSETUP** option by typing the corresponding command (for example, **CFIX**, **CORDER**, **CSIZE**, **CSORT**, **CRESET**, **CREMOVE**, or **PVIEW**) in the option line on any dynamic display and pressing Enter.

Fixing a column

The CFIX option enables you to fix and unfix columns. A fixed column is always located at the far left side of the display.

About this task

It does not shift horizontally (as unfixed columns do) when scrolling to the left or right. INNER COLUMN SCROLLING and CEXPAND may be used on a fixed column if the column is narrower than its maximum width. Certain columns may be permanently fixed in the report and cannot be unfixed by the user. Such a column has a fix status of P (permanently fixed).

A column cannot be fixed if it is larger than the available display area. There are also restrictions for fixing columns related to the size requirements of other columns.

To fix a column:

Procedure

1. Type **CFIX** in the option line on any display panel and press Enter.

   The **Define Fixed Columns** panel displays as shown in the following figure:

```
CFIX ------------------ Define Fixed Columns -------------- YYYY/MM/DD HH:MM:SS
Option  ===>                                                   Scroll ===> PAGE
-----------------------------------------------------------------     +>
                                                             ROW 1 OF 9

Column Function ===> 1 (1-Fix/Unfix, 2-Order, 3-Size, 4-Sort)
Permanent View  ===> Y (Y-Perm, N-Temp)  Reset View ===> N (Y,N)

Device_Width  :  80
Old_Fixed_Width:  37      Old_Unfixed_Width:  43
New_Fixed_Width:          New_Unfixed_Width:
------------------------------------------------------------------------------

Cmd New Old Len Column_Name
P   P   P     5 CMD
P   P   P    32 NAME
_            10 CREATOR
_             5 UPDT
_            32 DESCRIPTION
_            10 LAST_USER

Enter: Process selections; PF3: Exit and save; CAN: Exit without save
Line Cmds: F Fix U Unfix
```

Figure 278. Define Fixed Columns panel

The following fields appear on the **Define Fixed Columns** panel:

Column Function
    Enables you to jump to any of the CSET functions by typing in the appropriate number. The number corresponding to the current option displays in this field.

Permanent View
    Indicates whether the view you define is permanent or temporary. Valid values are:

- **Y**–View customizations are permanent.

- **N**–View customizations are temporary.

Reset View
    Resets all customizations.

Device_Width
    Shows the current display device size (screen width).

Old_Fixed_Width
    Shows the sum of the FIXED column widths prior to any changes in the current CFIX panel.

Old_Unfixed_Width
    Shows the UNFIXED area prior to any changes in the current CFIX panel. Old_Unfixed_Width = Device_Width - Old_Fixed_Width.

New_Fixed_Width
    Shows the sum of the FIXED column widths that will result if the FIX/UNIFIX changes are saved.

New_Unfixed_Width
    Shows the UNFIXED area that will result if the FIX/UNFIX changes are saved. New_Unfixed_Width = Device_Width - New_Fixed_Width.

Cmd
    Field where you specify line commands. Valid line commands are F (fix) and U (unfix).

New
    Displays the new CFIX view settings.

Old
    Displays the previous CFIX view settings.

Len
    Shows the length of the column.

Column_Name
    Shows the name of the column.

2. Type **F** in the **Cmd** field next to column(s) you want to fix.
3. Type **U** in the **Cmd** field next to column(s) you want to unfix.
4. Press Enter.

    The changed values display in the **New** column next to the corresponding column(s).
5. Press **PF3** to save changes and return to the display panel.

Repositioning columns

The **CORDER** option enables you to reposition report columns. If any columns are fixed, they are grouped together as the leftmost report columns. The unfixed columns are grouped together to the right of any fixed columns.

About this task

CORDER does not move a column out of its group. A fixed column cannot be relocated to the right of an unfixed column. Likewise, an unfixed column cannot be relocated to the left of a fixed column.

To reposition columns:

Procedure

1. Type **CORDER** in the option line on any display panel and press Enter.

   The **Define Column Display Order** panel displays as shown in the following figure:

```
CTCORD ---------------- Define Column Display Order -----  YYYY/MM/DD HH:MM:SS
Option  ===>                                                    Scroll ===> PAGE
----------------------------------------------------------------------  >
                                                              ROW 1 OF 9

Column Function ===> 2 (1-Fix/Unfix, 2-Order, 3-Size, 4-Sort)
Permanent View  ===> N (Y-Perm, N-Temp)  Reset View ===> N (Y,N)


Cmd Fix New Old Column_Name
___  P         1 CMD
___  P         2 NAME
___            3 CREATOR
___            4 UPDT
___            5 DESCRIPTION
___            6 LAST_USER
___            7 LAST_UPDATED
___            8 CRTD_USER
___            9 CREATED_USER
**************************** Bottom of Data *********************************

Enter: Process selections; PF3: Exit and save; CAN: Exit without save
Line Cmds: Specify number for column position
```

Figure 279. Define Column Display Order panel

The following fields appear on the **Define Column Display Order** panel:

Column Function
Enables you to jump to any of the CSET functions by typing in the appropriate number. The number corresponding to the current option displays in this field.

Permanent View
Indicates whether the view you define is permanent or temporary. Valid values are:

- **Y**–View customizations are permanent.
- **N**–View customizations are temporary.

Reset View
Resets all customizations.

Cmd
Field where you specify the number for column position.

Fix
Displays fixed columns. Valid values are:

- F–Indicates the column is fixed.
- P–Indicates the column is permanently fixed.

New
Displays the new CORDER view settings.

Old
Displays the previous CORDER view settings.

Column_Name
Shows the name of the column.

2. Type a number next to a column to specify its order.

3. Press Enter.

   The new column order numbers display in the **New** column next to each column.

4. Press **PF3** to return to the display panel.

Resizing columns

The CSIZE option enables you to change the displayed width of columns.

About this task

This function is primarily intended for non-numeric data where there are large blank areas in all (or most) rows in a given column. Although the displayed width may change, the underlying data does not change.

If a column's size is less than the column maximum, it is possible that some date is not displayed. INNER COLUMN SCROLLING and CEXPAND can be used to see data outside the display range of the resized column.

Note: If the minimum and maximum column widths are equal, the column cannot be resized.

To resize columns:

Procedure

1. Type **CSIZE** in the option line on any display panel and press Enter.

   The **Define Column Size** panel displays as shown in the following figure:

```
CSIZE -------------------- Define Column Size ------------- YYYY/MM/DD HH:MM:SS
Option  ===>                                                     Scroll ===> PAGE
--------------------------------------------------------------------   +>
                                                                  ROW 1 OF 9


Column Function ===> 3 (1-Fix/Unfix, 2-Order, 3-Size, 4-Sort)
Permanent View  ===> N (Y-Perm, N-Temp)  Reset View ===> N (Y,N)

Device_Width   :  80
Old_Fixed_Width:  37       Old_Unfixed_Width:  43
New_Fixed_Width:           New_Unfixed_Width:
-------------------------------------------------------------------------------

Cmd New Old Min Max Fix Column_Name
     5   5   5   5 P   CMD
    32  32  32  32 P   NAME
    10  10  10  10     CREATOR
     5   5   5   5     UPDT
    32  32  32  32     DESCRIPTION
    10  10  10  10     LAST_USER

Enter: Process selections; PF3: Exit and save; CAN: Exit without save
Line Cmds: Column size, between MIN and MAX
```

Figure 280. Define Column Size panel

The following fields appear on the **Define Column Size** panel:

Column Function
Enables you to jump to any of the CSET functions by typing in the appropriate number. The number corresponding to the current option displays in this field.

Permanent View
Indicate whether the view you define is permanent or temporary. Valid values are:

- **Y**–View customizations are permanent.

- **N**–View customizations are temporary.

Reset View
Resets all customizations.

Device_Width
Shows the current display device size (screen width).

Old_Fixed_Width
Shows the sum of the FIXED column widths.

Old_Unfixed_Width
　　Shows the UNFIXED area.

New_Fixed_Width
　　Shows the sum of the FIXED column widths.

New_Unfixed_Width
　　Shows the UNFIXED area.

Cmd
　　Field where you specify the number for column position.

New
　　Displays the new CSIZE view settings.

Old
　　Displays the previous CSIZE view settings.

Min
　　Displays the minimum column length.

　　Note: If the minimum and maximum column widths are equal, the column cannot be resized.

Max
　　Displays the maximum column length.

　　Note: If the minimum and maximum column widths are equal, the column cannot be resized.

Fix
　　Displays fixed columns. Valid values are:

　　　• **F**–Indicates the column is fixed.

　　　• **P**–Indicates the column is permanently fixed.

Column_Name
　　Shows the name of the column.

2. Type the desired column size in the **Cmd** field next to the column you want to resize.

   Note: The column size you specify must be between the Min and Max values shown for that column.

3. Press Enter.

   The new view criteria display in the **New** column.

4. Press **PF3** to return to the display panel.

Sort functionality

CSORT functionality enables you to select one or more columns for sorting and thus modify the order of the rows displayed on many product panels.

Columns are selected by sort priority and direction. Direction is either ascending (default) or descending. When more than one column is selected for sorting, the second column only differentiates when rows have matching data in the first column. Similarly, a third column only impacts the sort when data in both the first two columns are identical.

Defining sort columns
You can sort display data by columns. You can select up to nine columns for sorting.

About this task

A maximum of nine columns can be selected for sorting at one time. Internal requirements may create a smaller maximum. A message is issued if the maximum number of columns selected for sorting is exceeded.

Note: CSORT and **SORT** are synonymous.

Procedure

1. Type **CSORT** (or **SORT**) in the option line on any display panel and press Enter.

    The **Define Sort Columns** panel displays as shown in the following figure:

```
SORT  ------------------- Define Sort Columns ------------ YYYY/MM/DD HH:MM:SS
Option  ===>                                                Scroll ===> PAGE
---------------------------------------------------------------------    >
                                                            ROW 1 OF 9

Column Function ===> 4 (1-Fix/Unfix, 2-Order, 3-Size, 4-Sort)
Permanent View  ===> N (Y-Perm, N-Temp)  Reset View ===> N (Y,N)
Stop Sorting    ===> N (Y,N)


Cmd Dir New Old Column_Name
                CMD
                NAME
 _   _          CREATOR
 _   _          UPDT
 _   _          DESCRIPTION
 _   _          LAST_USER
 _   _          LAST_UPDATED
 _   _          CRTD_USER
 _   _          CREATED_USER

Enter: Process selections; PF3: Exit and save; CAN: Exit without save
Ord: 1-9 Dir: A Asc D Desc
```

Figure 281. Define Sort Columns panel

The following fields appear on the **Define Sort Columns** panel:

Column Function
Enables you to jump to any of the CSET functions by typing in the appropriate number. The number corresponding to the current option displays in this field.

Permanent View
Indicate whether the view you define is permanent or temporary. Valid values are:

- **Y**–View customizations are permanent.
- **N**–View customizations are temporary.

Stop Sorting
Indicates whether to stop sorting as specified. Valid values are:

- **Y**–Stop sorting.
- **N**–Continue sorting.

Cmd
Field where you specify the sort order.

Dir
Specifies the lexicographic order for the column. Valid values are:

- **A**–(Default) Values are listed in ascending order, smallest to largest.
- **D**–Values are listed in descending order, largest to smallest.

New
Displays the new CSORT view settings.

Old
Displays the previous CSORT view settings.

Column_Name
Shows the name of the column.

2. Type **A** or **D** in the **Cmd** field next to the columns on which you want to base your sort.
3. Press Enter. The new sort preferences are displayed in the **New** column.
4. Press **PF3** to return to the display panel.

Fast-path SORT command

The SORT command can be used as a primary (fast-path) command by typing the appropriate SORT syntax in the Option line of any report panel and pressing Enter.

The functionality supports both single and multi-column sorting and enables users to specify sort order (ascending or descending) for each column in the sort.

Syntax for single-column sorting

The syntax for single-column sorting is as follows:

SORT column_identifier dir

Where *column_identifier* is either the **column name** or the **relative column number** and *dir* is the direction in which to sort the column data. Valid values for *dir* are:

asc
(Default) Sorts data in ascending order.

desc
Sorts data in descending order.

Notes:

1. There must be a space between the *column_identifier* and its *dir* (if used).

2. The relative column number for a column is determined based on the column's placement when visible on the screen. Thus, relative column numbers are only available for columns currently visible on the screen. Relative column numbers are determined by counting the displayed columns from left to right, with the leftmost visible column being assigned the number '1' and each successive column (reading left to right) being assigned a relative column number that is incremented by 1. Hint: To quickly determine the column number, use the **CNUM** command to toggle on the column numbers for each display column.

3. You can sort on a column that is not displayed if you use the column name (instead of the relative column number) as the column_identifier in the SORT syntax.

Multi-column sorting

The syntax for multi-column sorting is as follows:

SORT *column_identifier dir column_identifier dir*

Where *column_identifier* is either the column name or the relative column number and *dir* is an optional indication of the direction in which to sort the column data. Valid values for *dir* are:

asc
(Default) Sorts data in ascending order.

desc
Sorts data in descending order.

The *column_identifier* and *dir* values must all be separated by spaces. The maximum number of columns that can be sorted at once is 9.

Usage examples

For a report display that has three columns, all of which display on the screen:

Column 1: Name

Column 2 Creator

Column 3: Status

The following examples show how you can sort these columns:

SORT NAME

Sorts display data in ascending order based on the value in the **Name** column (when no dir value is specified, the default sort order is ascending, thus **SORT NAME** and **SORT NAME A** are synonymous).

SORT NAME D

Sorts display data in descending order based on the value in the **Name** column.

SORT NAME DESC

Sorts display data in descending order based on the value in the **Name** column.

SORT NAME A CREATOR D

Sorts display data first in ascending order based on the value in the **Name** column and then sorts data in descending order based on the value in the **Creator** column.

SORT NAME ASC CREATOR DESC

Sorts display data first in ascending order based on the value in the **Name** column and then sorts data in descending order based on the value in the **Creator** column.

SORT 1 A

Sorts display data in ascending order based on the value in the **Name** column.

SORT 1 A CREATOR D

Sorts display data first in ascending order based on the value in the **Name** column and then sorts data in descending order based on the value in the **Creator** column.

SORT 3 2 1

Sorts the display data first in ascending order based on the value in the **Status** column, then in ascending order based on the value in the **Creator** column, and finally in ascending order based on the value in the Name column.

Note:

When you specify a column name using any of the above formats, you may enclose it in single quotes, double quotes, or be without any quotes. For example, the following are equivalent:

```
SORT  NAME  D
```

```
SORT  'NAME'  D
```

```
SORT  "NAME"  D
```

Resetting CSET customizations

The **CRESET** option enables you to reset all customizations.

About this task

After **CRESET** is issued, all fixed columns are unfixed (except for any permanently fixed columns), all selected sort columns are deselected and sorting is disabled, all column sizes are set to the initial values or maximum values if no suggested value previously existed, and original column locations are restored.

Procedure

1. To issue the **CRESET** option, access the **Setup Primary Option Menu** by typing **CSET** in the option line of any report display and pressing Enter.

   The **Setup Primary Option Menu** displays.

2. Type **5** in the command line and press **Enter**.

   CRESET is issued and all fixed columns are unfixed (except for any permanently fixed columns), all selected sort columns are deselected and sorting is disabled, all column sizes are set to the initial values or maximum values if no suggested value previously existed, and original column locations are restored.

3. Alternatively, you can issue the **CRESET** command as a primary command using the following syntax:

> **CRESET**
>> Resets all customizations (unfixes fixed columns, deselects selected sort columns, sorting disabled, column sizes set to initial values, original column locations restored).

Note: CRESET differs from **CREMOVE** in that **CREMOVE** sets all column sizes to their maximum values ignoring any initial, suggested sizes.

Removing CSET customizations

The **CREMOVE** option enables you to remove all customizations.

About this task

After you issue the **CREMOVE** command, all fixed columns are unfixed (except for those that are permanently fixed), all selected sort columns are deselected and sorting is disabled, all column sizes are set to their maximum values, and original column locations are restored.

Procedure

1. To issue the **CREMOVE** option, access the **Setup Primary Option Menu** by typing **CSET** in the option line of any report display and pressing Enter.

   The **Setup Primary Option Menu** displays.
2. Type **6** in the Command line and press Enter.

   The **CREMOVE** command is issued.
3. Alternatively, you can issue the **CREMOVE** command as a primary command using the following syntax:

   > **CREMOVE**
   >> Removes all customizations (unfixes fixed columns, deselects selected sort columns, sorting disabled, column sizes set to maximum values, original column locations restored).

   Note: CREMOVE differs from **CRESET** in that **CREMOVE** sets all column sizes to their maximum values ignoring any initial, suggested sizes.

Column scroll

Column scrolling enables you to scroll horizontally between columns, in both left and right directions.

Use the following commands when viewing any dynamic display panel to scroll horizontally between columns:

CRIGHT *n*
  Enables you to scroll the left side of the display window *n* report columns to the right.

CLEFT *n*
  Enables you to scroll the left side of the display window *n* report columns to the left.

Inner column scroll

Inner column scroll enables you to scroll horizontally within a single report column while other report columns remain stationary on the screen.

Inner column scrolling may be useful for columns that have been shortened using the **CSIZE** functionality. Use the following commands when viewing any dynamic display panel to scroll horizontally within a single report column:

ICRIGHT
  Enables you to scroll to the right within one report column while the other report columns remain stationary.

ICLEFT
  Enables you to scroll to the left within one report column while the other report columns remain stationary.

Column numbers

Column numbers can be inserted above each display column.

The inserted column numbers are relative to the leftmost display column. Use the following command to invoke column numbering:

<u>CNUM</u>
Enables you to toggle on/off the column numbers above each display column.

Notes:

1. The leftmost displayed column is always numbered one (1) regardless of how far to the right you scroll.

2. You can use column numbers when issuing the **SORT** fast-path command.

3. Column numbers are not removed by **CRESET** nor **CREMOVE**. To remove column numbers, reissue the **CNUM** command.

Ruler display

The **COLS** command enables you to generate a ruler at the top of the report columns beneath the headings.

This ruler tracks the current position within the column. The < > symbols indicate whether there is additional column data to the left or right of the displayed data. For example:

```
<-5----2----5->
```

In this example, positions 13 through 28 are displayed. There is data both to the left and right of the currently displayed area.

The **COLS** command can be issued by itself, as a toggle switch, or with one parameter (ON|OFF). The syntax is as follows:

<u>COLS</u> (ON|OFF)
Enables you to generate a ruler at the top of the report columns to track the current position within the column.

Expanding columns

The **CEXPAND** command enables you to display an entire row-column data element.

About this task

This command can be useful in instances when the **CSIZE** command has reduced a column to a width that is too narrow to display all data. Expanding columns using the **CEXPAND** command provides you with an alternative to inner column scrolling.

Procedure

To invoke CEXPAND, place the cursor on a row-column element and issue the **CEXPAND** command. The cursor position determines the row-column that expands. The **CEXPAND** command can be issued by itself or with two parameters (row and column). The syntax is as follows:

<u>CEXPAND</u> (*row column*)
Enables you to display an entire row-column data element where *row* is the number of the row and *column* is the number of the column (non-heading lines only) that you want to expand.

Restrictions

The following restrictions apply to CSET options.

• Total fixed column sizes cannot exceed screen width.

- Total fixed column sizes must leave enough unfixed space for the minimum allowed size for all unfixed columns. If a column is not eligible to be re-sized, the column's minimum size requirement is the same as its maximum size. Minimum and maximum sizes for all columns are shown in the CSIZE display.
- If a column has been re-sized, then its current width is treated as its smallest allowable size. When a column is re-sized its current size must fit on the screen completely. For example, on an 80-byte screen with no fixed columns, a 128-byte column can only be re-sized to 80 bytes or less (assuming no conflicting minimum size associated with the column). If there were two 10-byte fixed columns, for a total fixed area size of 20-bytes, the 128-byte column would be limited to 60 bytes or its minimum allowed size, whichever was smaller.

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