

12.1

*IBM Db2 Object Comparison Tool for  
z/OS  
User's Guide*



**2021-03-25 edition**

This edition applies to IBM® Db2® Object Comparison Tool for z/OS®12.1(product number 5655-DC2) and to all subsequent releases and modifications until otherwise indicated in new editions.

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## About this information

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This information describes how to use IBM DB2® Object Comparison Tool for z/OS.

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

- Customize your Db2 Object Comparison Tool environment.
- Compare sets of IBM DB2 objects by using Db2 Object Comparison Tool
- Generate reports and jobs by using Db2 Object Comparison Tool

Always check the DB2 Tools Product publications page for the most current version of this publication:

<http://www.ibm.com/software/data/db2imstools/db2tools-library.html>



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# Chapter 1. Db2 Object Comparison Tool overview

IBM Db2 Object Comparison Tool for z/OS (also referred to as Object Comparison Tool) compares existing Db2 for z/OS objects from different sources and reports the differences. Object Comparison Tool can subsequently synchronize these sources by making the relevant changes to the objects.

**Important:** The End of Marketing (EOM) date for IBM Db2 Object Comparison Tool for z/OS 12.1 was announced on 9/19/2019. (See [Software withdrawal: IBM Z platform selected programs - Some replacements available - United States](#)) Therefore, it is no longer available in the ShopZ catalog as a separate product that you can order. However, Object Comparison Tool is included in the following solution packs:

- IBM Db2 Administration Solution Pack for z/OS, 3.1 (5697-ASP)
- IBM Db2 Change Management Solution Pack for z/OS, 1.1 (5655-CH1)

You can order either of these solution packs in ShopZ.

Object Comparison Tool is a required prerequisite for using the Change Management function of IBM Db2 Administration Tool for z/OS.

Specifically, Db2 Object Comparison Tool can help you with the following goals:

## **Keep your production system a mirror image of your test and development systems**

New applications, changes to existing applications, or mistakes can cause Db2 objects in one system to have different attributes from objects in other systems. Object Comparison Tool can find differences between objects (and dependent objects) in a Db2 catalog on one system and a Db2 catalog on a different system. This tool can then generate batch jobs to synchronize the catalogs.

## **Compare objects with different names**

Often, production objects and test objects use different naming conventions. You can account for these naming differences by using a feature in Object Comparison Tool called *masks*. With masks, object names can be translated before a comparison. Therefore, a test object can be matched to the corresponding production object for comparison. For example, if you want to compare all tables that begin with TEST to all tables that begin with PROD, you can define a mask that tells Db2 Object Comparison Tool to translate table names TEST\* to PROD\* for the comparison. (In this example, the asterisk is a wild card character.)

## **Ignore specific properties when comparing objects**

You might not want your test objects to be exactly the same as your production objects. Object Comparison Tool can handle these intentional differences when comparing objects. You can specify that the tool ignore certain attributes, such as the number of partitions in a table space or the storage group for a database. To do so, you can use the *ignore fields* feature of Object Comparison Tool.

## **Produce reports about the object comparison**

Depending on the reporting options, Object Comparison Tool produces a variety of reports to show the differences between the objects.

## **Apply any changes to the target objects**

Object Comparison Tool can generate jobs that apply any requested changes to the target objects. To request such jobs, use the *generate apply jobs* function. Alternatively, you can request that these changes be generated to a work statement list (WSL) that you can subsequently use to apply changes to the target objects. WSLs make it easy to propagate changes to remote sites.

## **Track changes**

Changes can be imported into the Change Management Database to help you manage the process of recording and tracking the changes that you make to your objects.

## **Undo implemented changes**

If you made changes and need to revert to the original state of the objects, Object Comparison Tool can revert those changes for you. The *undo capability* of the tool can restore application objects to a previous version.

Db2 Object Comparison Tool provides a walk-through option that can guide you through the process of creating a job to compare Db2 objects. This end-to-end framework guides you through the options that you need to specify.

Db2 Object Comparison Tool runs as an extension to IBM Db2 Administration Tool for z/OS. You invoke Db2 Object Comparison Tool from the Db2 Administration Tool main menu panel. The Db2 Object Comparison Tool ISPF full-screen interface uses Db2 Administration Tool functions to display panels and run SQL statements. ISPF help panels are available. Enter HELP or press PF1 to display a help panel.

### **Related information**

[IBM DB2 Administration Tool for z/OS](#)

## **Solutions for managing changes**

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IBM solutions help IT organizations maximize the return on their investment in Db2 for z/OS and IMS databases while staying on top of some of today's toughest IT challenges. Db2 Object Comparison Tool contributes to the solution by providing an easy-to-use way to manage changes.

When you rely on Db2 for z/OS as your production database for business-critical information, you typically have a duplicate system for testing and development. But keeping these two systems as mirror images can be challenging because new applications, application modifications, or errors can trigger changes in the attributes of Db2 objects in one system, but possibly not in the other.

Db2 Object Comparison Tool simplifies the process of comparing objects and their dependents from different sources and then synchronizing the sources so that you can keep your production databases consistent with testing and development databases.

This tool is designed with an easy-to-use ISPF interface that lets you manage and process Db2 objects and organize them for better system throughput.

A DBA who is responsible for managing changes should consider the following questions:

- Do you need a simpler way to manage changes?
- Could your team benefit from working together to build changes by managing information that is stored in a single database?
- Could your team benefit from being able to track the history of changes from a list and organize them for better system throughput and maximum convenience?
- Would automating routine database administration tasks improve overall productivity?

The following tools, when used in conjunction with Db2 Object Comparison Tool, help provide a complete solution to your Db2 administration needs:

- Db2 Administration Tool provides a comprehensive set of functions that help Db2 personnel manage their Db2 environments efficiently and effectively.
- Db2 Automation Tool for z/OS allows database administrators to focus more on optimizing their databases, automating maintenance tasks, and providing statistical history reports for trend analysis and forecasting.
- Db2 High Performance Unload for z/OS is a Db2 utility for unloading Db2 tables from either a table space or a backup.
- Db2 Table Editor for z/OS quickly and easily accesses, updates, and deletes data across multiple Db2 database platforms, including the IBM Informix® Dynamic Server.
- Db2 Utilities Suite for z/OS is at the core of managing Db2 for z/OS. The utilities help you to minimize downtime associated with routine Db2 data maintenance while ensuring the highest degree of data integrity.

## The comparison process

Db2 Object Comparison Tool compares Db2 objects (and dependent objects) and reports the differences. Object Comparison Tool can then generate jobs to modify the objects to eliminate these differences.

The two sets of Db2 objects that are compared are called *source* and *target* objects. A *source object* is an object as you want it defined. A *target object* is an object that you want to match the source object.

When you select the source and target objects to compare, Object Comparison Tool extracts definitions of the objects and places them in a sequential data set called a *version file*. A version file is an internal representation of a set of objects and represents a snapshot at a particular point in time. Two separate version files are created, one for the source object and one for the target object. These version files are created before the objects are compared.

You specify the definition source that you want Object Comparison Tool to use to create the version files. Object Comparison Tool can use any of the following sources for object definitions:

### DDL file

A file that contains data definition language (DDL), such as a SPUFI file. When the definition source is DDL, Db2 Object Comparison Tool processes everything in the DDL file. Objects are not selected based on type or name. If you are comparing DDL and your DDL has a table, only that table is used.

### Db2 catalog

An extract of information from the Db2 catalog for one or more databases, table spaces, or tables and all the dependent objects. When the definition source is a Db2 catalog, Object Comparison Tool includes all dependent objects, such as views and indexes, in the comparison. These dependent objects are included regardless of whether you specify objects at the database level, the table space level, or the table level.

### Version file

A version file that was created during a previous comparison. If a version file is used as the source of the comparison, a new version file is not created.

Using Object Comparison Tool, you can do any of the following comparisons:

Source of the definition for the source object	Source of the definition for the target object
Db2 catalog	Db2 catalog
DDL file	DDL file
Version file	Version file
DDL file	Db2 catalog
DDL file	Db2 catalog with objects that are automatically selected based on the source specification

After the source and target version files are created, Object Comparison Tool compares them and creates a difference file or *changes file*. Object Comparison Tool then generates reports that show the differences between the objects and optionally generates DDL to apply any changes to the target object. After reviewing the report, you can direct the generated DDL for the target object to apply jobs. Apply jobs can be stored in a work statement list (WSL) or a partitioned data set (PDS) and then propagated to several remote sites. This process allows for changes in a test environment to be easily migrated to the development or production environment.

### Related concepts

[“Db2 Object Comparison Tool components and processes” on page 4](#)

Db2 Object Comparison Tool compares objects by reading the Db2 catalog or DDL files. Object Comparison Tool produces comparison reports and then optionally generate either JCL jobs or work statement list (WSL) tasks with changes for the target objects.

**Related information**

[Work statement lists \(IBM DB2 Administration Tool for z/OS\)](#)

## Db2 Object Comparison Tool components and processes

Db2 Object Comparison Tool compares objects by reading the Db2 catalog or DDL files. Object Comparison Tool produces comparison reports and then optionally generate either JCL jobs or work statement list (WSL) tasks with changes for the target objects.

The following figure shows the detailed flow of processes in Db2 Object Comparison Tool:

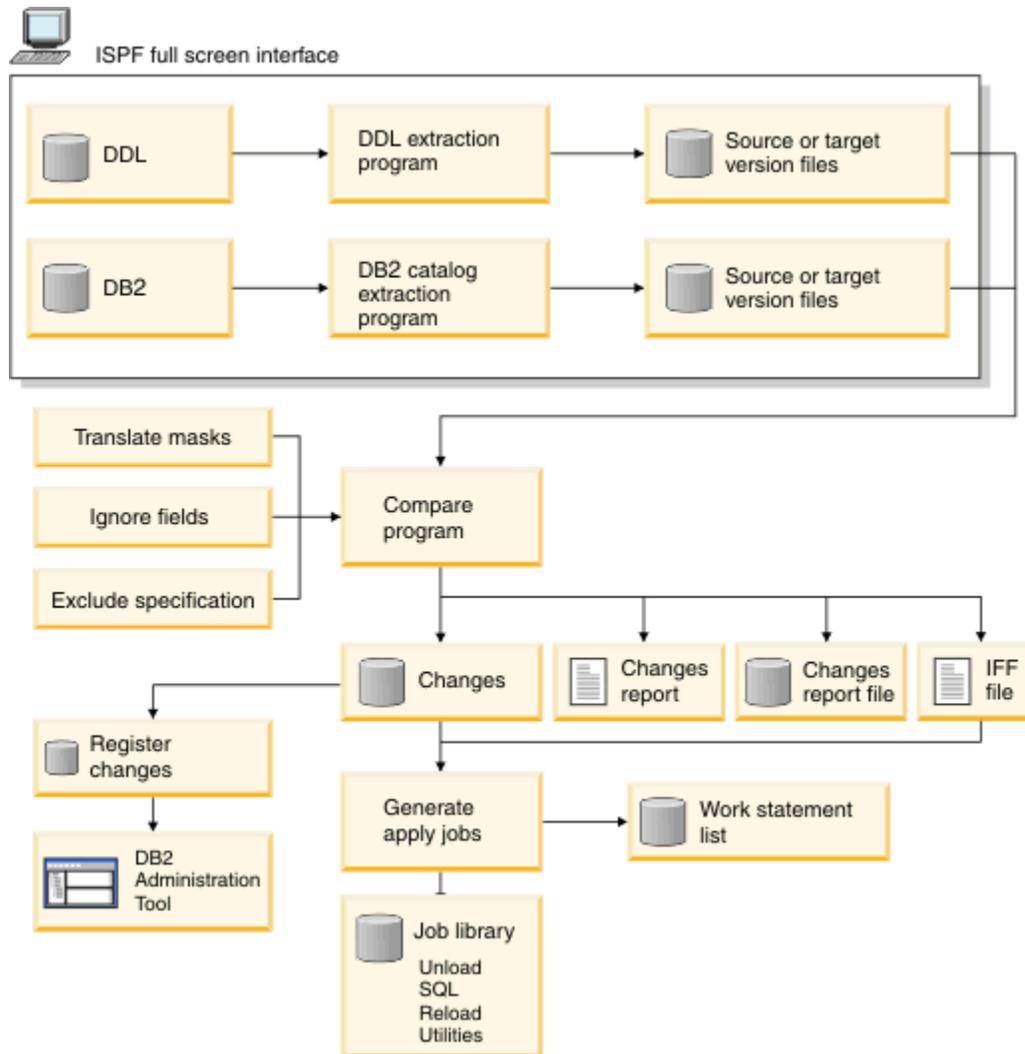


Figure 1. Db2 Object Comparison Tool processes and components

This figure includes the following processes and components:

**DDL extraction program**

This program reads object definitions from DDL files into a version file.

**Db2 catalog extraction program**

This program reads object definitions from the catalog into a version file.

### **Compare program**

This program compares two version files, produces a report to describe any differences, and generates the information that is needed to apply changes to the target object. This program accounts for any specified masks, ignore fields, or exclude specifications when doing the comparison.

### **Program to register the changes**

This program registers the changes in the Change Management database in Db2 Administration Tool, where you can then analyze and run the job.

### **Function to generate apply jobs**

This function performs one of the following operations:

- Creates the UNLOAD, DROP, CREATE, ALTER, and LOAD jobs that are necessary to apply the changes to the target object.
- Creates WSL tasks to apply the necessary changes to the target object.

### **Related concepts**

[“The comparison process” on page 3](#)

Db2 Object Comparison Tool compares Db2 objects (and dependent objects) and reports the differences. Object Comparison Tool can then generate jobs to modify the objects to eliminate these differences.

## **Db2 Object Comparison Tool terminology**

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Db2 Object Comparison Tool uses several terms that are unique to the product.

### **Alternate form of syntax**

Another acceptable syntax for a statement.

Certain functions in Object Comparison Tool and Db2 Administration Tool (Db2 Admin Tool) support or produce statements that are used by Db2 for z/OS or by these two products. IBM might provide an alternate statement or alternate form for clauses in statements. IBM might identify one as the preferred syntax while still supporting the alternate form.

Object Comparison Tool and Db2 Admin Tool might use preferred or alternate forms of syntax. If the statement produced is accepted by the products or by Db2, the statement is considered valid. When necessary to produce an accepted statement, the products convert to the newer syntax. However, the products might retain older syntax even if Db2 considers the newer syntax the preferred syntax. This situation might be the case even if no possible use of the older syntax is needed. The use of older syntax might persist until IBM no longer supports it.

### **Changes file**

The file that Object Comparison Tool creates when the source and target objects are compared. This file is used by Object Comparison Tool to generate a report of the differences between the objects. This file is also used by the generate apply jobs function.

This file contains the following items:

- DROP, CREATE, and ALTER statements
- UNLOAD requests
- Table space information records, which allow the generate apply jobs function to determine the size of the UNLOAD jobs

The name of a typical changes file might be NBRON.PQ76055N.CHANGES.

### **Exclude**

A specified object or authorization to exclude from input to the compare process.

### **Exclude Specification**

A specification that lists objects that you want to exclude from the compare process.

### **Interchange File Format (IFF) file**

A file that is produced by the compare program. This file and the changes file are used by Object Comparison Tool to generate the apply jobs.

**Ignore change**

A specified change to an object that you want to ignore.

**Ignore change specification**

A specification that identifies changes that you want ignored during the comparison process. You can select the changes that you want ignored from a saved comparison report. Object changes that you specify as ignored are reported, but no SQL statements are generated for the changes.

**Ignore fields**

Fields that Object Comparison Tool ignores when comparing Db2 catalog records.

**Source**

The structure of the objects as you want them to look. For example, the source can be the structure of objects in a development environment. A source can be DDL, a version file, or the Db2 catalog.

**Suppress DROP of objects**

An option that prevents dropping objects that exist in the target but not in the source.

By default, Object Comparison Tool drops objects from the target that are not in the source. For example, if the source contains only object A, but the target contains both objects A and B, Object Comparison Tool drops object B. This behavior is the default.

To change this default behavior, set the **Suppress DROP of objects** option to Yes. Generally, you should set this option to Yes if your source is a subset of the target and you want to avoid possible dropped objects. For example, if you specify DDL as the source and a database in the Db2 catalog as the target, your catalog contains many tables other than the one table that you are changing. Because all of the additional tables are not in the source, those tables are dropped unless you specify Suppress DROP of objects =Yes.

**Target**

The destination for the changes. For example, the target can be a production system. The target is where the differences from the source can be applied to make the target the same as the source. The target can be an explicit specification of DDL, a version file, or the Db2 catalog, or an implicit selection of objects based on the source.

In the situation where you want to change the structure of your production system to match the structure of your development system, the development system is considered the source and the production system is considered the target. In another scenario, you might want to simply identify the differences between two sets of objects, without applying any changes. In this case the source and target represent two different sets of objects that are being compared.

**Translation mask**

A functionality that allows a match to be found when the source and target objects use different naming conventions. Before Object Comparison Tool compares Db2 catalog record fields, masks are applied to owner and name fields.

**Version file**

An internal representation of a set of objects. Object Comparison Tool creates a version file for each source and target and then uses those files to perform a comparison.

A version file is a variable-length data set that contains all the information that was extracted about the Db2 objects. The version file contains a header record and all the Db2 catalog records that represent the objects. The records in a version file are prefixed with information that allows the compare process to sort the records but also keep multiple records for the same object together.

Version files can be saved for subsequent comparison operations. You can also use them to restore application objects to a previous version (undo) or compare a new version with several production versions (clones) of the objects.

## Db2 Object Comparison Tool scenarios

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The following common scenarios illustrate how to use Db2 Object Comparison Tool.

### Scenario: Comparing a Db2 development catalog to a Db2 production catalog

When you make changes on your development system, such as creating a new table or view or changing an existing table, you might want to eventually make those same changes on your production system. To do so, you can use Db2 Object Comparison Tool to compare your development catalog to your production catalog. Then, Object Comparison Tool can make changes in the production catalog so that the objects in both catalogs are the same.

#### Procedure

To compare a Db2 development catalog to a Db2 production catalog:

1. Specify the source (your development catalog):

- a) On the **DB2 Object Comparison Tool Menu (GOCMENU)** panel, select option **1 - Specify compare source (new)**, and press Enter.

**Tip:** Issue the PANELID command so that you can see the name of the panel in the upper left-hand corner.

- b) On the **Specify Compare Source (GOC1)** panel, select option **2 - Source is from the DB2 catalog**, and press Enter.

- c) On the **Specify DB2 Source Catalog Extract (GOC12)** panel, complete the following fields:

#### Data set name

The name of the data set that you want to use for the version file for the source, such as >devdb.v23.D080319. (Version files are created as part of the compare process. These files store information about the objects to be compared.)

#### Tips:

- Save all of your version files for future comparisons and the ability to undo changes at a later time if needed.
- Plan a naming convention to help keep track of the version files and easily find them. One possible naming convention is to include the date, as in the preceding example (>D080319).

#### Description

A description of the source, such as >development database.

**Tip:** For this scenario, the description is simple. When you are doing your own comparisons, assign descriptive names to your version files so that you can easily find them, and include the date that they were created. For example:

```
Accounting V9 R10 M08 2019-04-01
```

- d) Select option **1 - Source is databases from the DB2 catalog**, and press Enter.

- e) On the **Specify Source DB2 Databases (GOC1D)** panel, use the I line command to insert a line.

- f) On the **Compare Add Databases (GOC1DA)** panel, specify the source database or databases by entering a partial database name and pressing Enter.

For example, if you enter AGBL in the **Partial database name** field, all databases that begin with AGBL are displayed.

- g) On the **Compare Add Databases (GOC1DD)** panel, use the S line command to select the specific databases that you want to compare.

- h) Exit back to the **DB2 Object Comparison Tool Menu (GOCMENU)** panel. Notice that the **Specification Status:** next to option **1** is now **Database extract specified**.

2. Specify the target (your production catalog):

- a) Select option **2 - Specify compare target (old)**, and press Enter.
- b) On the **Specify Compare Target (GOC1)** panel, select option **2 - Target is from the DB2 catalog**, and press Enter.
- c) On the **Specify DB2 Target Catalog Extract (GOC12)** panel, complete the following fields:
  - Data set name**  
The name of the data set to use for the version file for the target, such as `proddb.v23.D080311`.
  - Description**  
A description of the target, such as `production database scenario`.
- d) Select option **1 - Target is databases from the DB2 catalog**, and press Enter.
- e) On the **Specify Target DB2 Databases (GOC1D)** panel, use the **I** line command to insert a line.
- f) On the **Compare Add Databases (GOC1DA)** panel, specify the database that contains the target by entering a partial database name (such as `DGWD`) and a location name (such as `STLEC1`), and press Enter.
- g) On the **Compare Add Databases (GOC1DD)** panel, use the **S** line command to select the target database or databases that you want to compare with the source.
- h) Exit back to the **DB2 Object Comparison Tool Menu (GOCMENU)** panel. Notice that the **Specification Status:** next to option **2** is now **Database extract specified**.

3. Specify any compare masks:

Often, the names of objects in your development system are not the same as the names in your production system. Even if the names are the same, the owner IDs might be different. You can use compare masks to account for these differences. Db2 Object Comparison Tool can then match the appropriate objects for the comparison, even if the names are different.

- a) On the **DB2 Object Comparison Tool Menu (GOCMENU)** panel, select option **3 - Specify Compare Masks**, and press Enter.
- b) On the **Specify Compare Masks (GOC3)** panel, complete the following fields, and press Enter:

**Mask DSN**

The name of the data set for the masks. If the data set does not exist, it is created.

**Edit Mask**

YES

This scenario shows you how to define masks in a data set. Alternatively, if Change Management is enabled, you can define masks in the Change Management repository.

- c) On the **Edit Compare Masks (GOCEDIT)** panel, insert a line for each mask.

For example, the following lines define name masks:

```
OWNER: ABC*, DEF*
DBNAME: *TDB, *PDBA
TSNAME: T*T, P*P
TBNAME: T*, P*
```

For information about mask definitions and syntax, see [“Translation masks” on page 183](#).

For example, `OWNER: ABC*, DEF*` specifies that all owner names of `ABC*` in the source are translated to `DEF*` for the comparison. (The asterisk is a wild card.) In this case, `ABCDBA` in the source matches `DEFDBA` in the target.

**Tip:** Usually, the compare process is iterative. You generate a compare job and then analyze the differences in the report to see what masks you need to create for the next run of the compare job.

- d) Issue the `SAVE` command
- e) Exit back to the **DB2 Object Comparison Tool Menu (GOCMENU)** panel. Notice that the **Specification Status:** next to option **3** is now **Mask specified**.

The next step that is listed on the **DB2 Object Comparison Tool Menu (GOCMENU) panel** is to specify ignore fields (option **4 - Specify ignores**). Ignore fields are characteristics that you want to be ignored during the comparison. For example, different buffer pool names in the source and target might be acceptable, and you do not want this difference to result in a change. At this point, assume that you do not know of any such differences that you want to ignore. So skip this step for now.

4. Generate and run a compare job:

- a) On the **DB2 Object Comparison Tool Menu (GOCMENU) panel**, select option **5 - Generate compare job**, and press Enter.
- b) On the **Generate Compare Jobs (GOC5) panel**, specify the following options, and press Enter:

**Worklist name**

TEST

**Suppress DROP of objects**

YES

**PDS for jobs**

TEST

**Prefix for data sets**

TEST

**Single compare job**

YES

**Member name**

COMPARE

Set all of the remaining options to NO, N, or blank.

Notice that for this first comparison, you are not requesting that any apply jobs be generated. Typically, you want to look at the comparison report first and make any changes before you generate apply jobs.

**Tip:** The settings for parameters are persistent; they remain at the settings that you specified previously.

- c) On the panel that displays the JCL job, make any changes to the JCL as needed. For example, you might need to change the JOB statement.
  - d) Type the sub command, and press Enter to submit the job.
  - e) Check that the job completed successfully.
5. Check the report to see the differences between the source and target:

- a) In the job output, look at the information under the line OBJECT COMPARISON REPORT.

This report shows the differences between the source and target objects. It lists the differences as changes that need to be made to the target so that it matches the source.

For this scenario, suppose that you notice the following items in the output:

```
Compare tablespace source (AGBLTDB.TBMT001T) and target (AGBLPDB.PBMT001P)
(A)Field CLOSE changed from NO to YES
(A)Field PRIQTY changed from 192 to 48
(A)Field USING changed from 'STOGROUP AGBLPSG' TO 'STOGROUP AGBLTSG'
Tablespace will be altered
```

The CLOSE attribute, PRIQTY attribute, and STOGROUP name are all listed as changed. The preceding lines in the output mean that the values are different in the source and target. However, in this case, suppose that you do not want to change the name of STOGROUP or the values of the CLOSE and PRIQTY attributes. Therefore, you need to set a mask for STOGROUP and ignore fields for CLOSE and PRIQTY and then run a comparison job again.

Suppose that you also notice in the report that objects are altered, dropped, and added:

```
Tablespace AGBLPDB.PBMT037P not found on source
Tablespace AGBLPDB.PBMT037P will be dropped
```

```
Tablespace AGBLPDB.PBMT0009P not found on target
Tablespace AGBLPDB.PBMT0009P will be added
```

```
Compare table source(DBA128.TBMT001_S_M_WORK) and target
(DBA128.PBMT001_S_M_WORK)
(A)Add primary key : CD_USER(CD_USER,NO_SEQ)
Tables have identical column lists
Table will be altered
```

For this scenario, assume that these changes are changes that you want to make to your production system.

6. Add the additional mask and ignore fields.

a) On the **DB2 Object Comparison Tool Menu (GOCMENU)** panel, select option **3 - Specify Compare Masks**, and press Enter.

The **Specify Compare Masks (GOC3)** panel should list the same data set name that you originally specified (in step “3” on page 8).

b) Make sure the **Edit Mask** field is still set to YES, and press Enter.

c) On the **Edit Compare Masks (GOCEDIT)** panel, add SGNAME: \*TSG,\*PSG.

(This mask accounts for the difference in the STOGROUP names AGBLPSG and AGBLTSG.)

d) Exit back to **DB2 Object Comparison Tool Menu (GOCMENU)** panel, select option **4 - Specify ignores**, and press Enter.

e) On the **Specify Compare Ignores (GOC4)** panel, specify the following values, and press Enter:

**Data Set Name**

The name of a data set for the ignore file, such as IGNORE . DATA

**Edit Ignore Fields Specification**

YES

f) On the **Specify Ignore Fields : Objects (GOCCI)** panel, use the **U** line command to update the SYSTABLESPACE object, and press Enter.

g) In the **Specify Ignore Fields for object (GOCCIF)** panel, use the **S** line command to select CLOSERULE and PQTY.

Ignore fields are specified according to columns in the Db2 catalog. In this case, you want to ignore the CLOSE and PRIQTY attributes of the table space. Those values are captured in the CLOSERULE and PQTY columns of SYSIBM.SYSTABLESPACE. Therefore, CLOSERULE and PQTY need to be selected.

h) Press PF3 to exit.

On the **Specify Ignore Fields : Objects (GOCCI)** panel, CLOSERULE and PQTY are listed in the **Ignore Fields** column for SYSTABLESPACE.

i) Exit back to the **DB2 Object Comparison Tool Menu (GOCMENU)** panel.

Notice that the **Specification Status:** next to option **4** is now **Ignore fields specified**.

7. Generate another compare job with the new mask and ignore fields:

Db2 Object Comparison Tool created version files during the first comparison operation. You can now use these version files instead of choosing the objects from the catalog. Because version files are compressed to save space, using them can save you both time and CPU.

a) On the **DB2 Object Comparison Tool Menu (GOCMENU)** panel, select option **1 - Specify compare source (new)**, and press Enter.

- b) This time, on the **Specify Compare Source (GOC1) panel**, specify option **3 - Source is from a compare version file**, and press Enter.
  - c) On the **Specify Source Compare Version File (GOC13) panel**, specify the name of the data set that contains the version file for the source, and press Enter.  
This data set name is the one you specified in step “1” on page 7.
  - d) On the **DB2 Object Comparison Tool Menu (GOCMENU) panel**, select option **2 - Specify compare target (old)**, and press Enter.
  - e) This time, on the **Specify Compare Target (GOC1) panel**, select option **3 - Target is from a compare version file**, and press Enter.
  - f) On the **Specify Target Compare Version File (GOC13) panel**, specify the name of the data set that contains the version file for the target, and press Enter.  
This data set name is the one you specified in step “2” on page 7.  
  
After you press Enter, notice that on the **DB2 Object Comparison Tool Menu (GOCMENU) panel**, the **Specification Status:** next to options **1** and **2** is now **Ignore fields specified**.
  - g) Select option **5 - Generate compare job**, press Enter, and complete the steps that you did before to generate and run the job.
  - h) Check the report output.  
You should see the mask and ignore fields that you specified.
8. Apply the changes to synchronize your production and development systems:
- a) On the **DB2 Object Comparison Tool Menu (GOCMENU) panel**, select option **5 - Generate compare job** again, and press Enter.
  - b) This time, on the **Generate Compare Jobs (GOC5) panel**, set the **Generate Apply Job** field to Yes and set any other fields as needed, and press Enter.
  - c) If the **Change Management Prompt (ADB2CMRO) panel** opens, specify NO.  
(For this scenario, assume that you are not using Change Management.)
  - d) On the **Specify Data Set Name for Apply Jobs (GOC5AJ) panel**, enter the name of a data set where you want the apply jobs generated.
  - e) On the ISPF edit panel, edit the generated comparison job as needed, and submit the job.
  - f) Check the output to confirm that the job completed successfully.
  - g) Run the generated apply job to make the changes to your production catalog.

## Scenario: Undoing changes that were made in a catalog-to-catalog comparison

Suppose that you used Object Comparison Tool to compare two Db2 catalogs and then apply changes to the target catalog so that it matches the source catalog. Later, you decide that you do not want those changes. Db2 Object Comparison Tool can undo those changes for you.

### Before you begin

To undo the changes, you need the version files from the catalog-to-catalog comparison.

### About this task

Assume that you want to undo the changes that you made in “Scenario: Comparing a Db2 development catalog to a Db2 production catalog” on page 7 and restore the target (the production catalog) to the state that it was in prior to the comparison.

**Important:** Any data that is added between the time that the compare synchronization is done (step “3” on page 12) and the time that the undo changes process is done (step “4” on page 13) might be lost.

## Procedure

To undo changes that were made in a catalog-to-catalog comparison:

1. Specify the compare source.

In this scenario, the source is the version file for the target in the original comparison. This version file represents the production catalog prior to the changes.

- a) On the **DB2 Object Comparison Tool Menu (GOCMENU)** panel, select option **1 - Specify compare source (new)**.
- b) On the **Specify Compare Source (GOC1)** panel, specify option **3 - Source is from a compare version file**.
- c) On the **Specify Source Compare Version File (GOC13)** panel, specify the name of the data set that contains the version file, and press Enter.

(This data set name is the name that you specified in step “2” on page 7 in [“Scenario: Comparing a Db2 development catalog to a Db2 production catalog”](#) on page 7.)

On the **DB2 Object Comparison Tool Menu (GOCMENU)** panel, notice that the **Specification Status:** next to option **1** is now **Compare version file specified**.

2. Specify the compare target.

In this scenario, you want Object Comparison Tool to determine the target objects from the current production catalog based on the source version file.

- a) On the **DB2 Object Comparison Tool Menu (GOCMENU)** panel, select option **2 - Specify compare target (old)**.
- b) On the **Specify Compare Target (GOC1)** panel, select option **4 - Target is from the DB2 catalog and objects are automatically selected**.
- c) On the **Specify Target DB2 Location (GOC14)** panel, enter the following information, and press Enter:

- The location of your production subsystem.
- The name of a data set to use for the target version file. If the data set does not already exist, it is created.

On the **DB2 Object Comparison Tool Menu (GOCMENU)** panel, notice that the **Specification Status:** next to option **2** is now **Automatic (DB2 catalog extract)**.

For this scenario, do not specify any masks or ignore fields.

3. Generate the compare job:

- a) On the **DB2 Object Comparison Tool Menu (GOCMENU)** panel, select option **5 - Generate compare job**.
- b) On the **Generate Compare Jobs (GOC5)** panel, specify the following options, and press Enter:

**Worklist name**

TEST

**Suppress DROP of objects**

YES

**PDS for jobs**

TEST

**Prefix for data sets**

TEST

**Single compare job**

YES

**Member name**

COMPARE

Set all the remaining options to NO or N.

- c) On the ISPF edit panel, edit the generated compare job as needed, and submit the job.
  - d) Check the output to confirm that the job completed successfully.
  - e) Check the compare report to make sure that the expected changes are listed.
4. Generate the apply job to undo the changes that you made previously in the catalog-to-catalog comparison:
- a) On the **DB2 Object Comparison Tool Menu (GOCMENU) panel**, select option **5 - Generate compare job**.
  - b) On the **Generate Compare Jobs (GOC5) panel**, specify the following additional options, and press Enter:
    - Generate apply jobs**  
YES
    - Generate one job**  
YES
    - Member prefix**  
APPLY
    - Content of apply job(s)**  
ALL
    - Unload method**  
U
    - IDENTITY START value**  
ORIGINAL
    - Run REORG/REBUILD**  
A
  - c) If the **Change Management Prompt (ADB2CMRO) panel** opens, specify NO.  
(For this scenario, assume that you are not using Change Management.)
  - d) On the **Specify Data Set Name for Apply Jobs (GOC5AJ) panel**, enter the name of the data set where you want the apply job generated.
  - e) On the ISPF edit panel, edit the generated compare job as needed, and submit the job.
  - f) Check the output to confirm that the job completed successfully.
  - g) Run the generated apply job to restore the production catalog to the state before the changes were made.

## Scenario: Comparing DDL to a catalog

Comparing DDL to a catalog is a common use of Db2 Object Comparison Tool.

### About this task

Say you want to generate DDL to change a table on your test system. For example, you might add a column in the middle or at the end of the table. You will generate DDL that shows how the table will look after the change. The DDL contains only the table you want to change. The only thing in the DDL is the CREATE TABLE statement, and it matches an existing table.

Although your table might have an index, a foreign key that is tied to a parent, or other elements, they are not changed because, they are not included in the source DDL.

You will not be adding masks, and the target will be selected automatically. Db2 Object Comparison Tool determines how to change the table. If no table currently exists, Db2 Object Comparison Tool will create the table. If a table does currently exist, Db2 Object Comparison Tool will use the version file and will not go back to the catalog.

Db2 Object Comparison Tool will determine how to change the table. Db2 Object Comparison Tool might have to DROP, re-create, or ALTER a table, depending on the changes that need to be made. Db2 Object

Comparison Tool will restore objects and dependencies (such as an index). If the table needs to be dropped and re-created, Db2 Object Comparison Tool will also re-create objects that have been dropped as a result of dropping the table. The table data will be unloaded and, after the object definitions have been applied, reloaded back into the table.

To compare the DDL (the source) and the DB2 catalog (the target):

## Procedure

1. Specify the source object definitions to be compared.
  - a) On the **GOCMENU main menu** panel, select **Option 1 - Specify compare source (new)**.
  - b) On the **GOC1 Specify Compare Source** panel, select **Option 1 - Source is from a DDL file**.
  - c) On the **GOC11** panel, specify the name of the DDL data set.
2. Specify the target objects to which the DDL source will be compared and applied.
  - a) On the **GOCMENU main menu** panel, select **Option 2 - Specify compare target (old)**.
  - b) On the **GOC1 Specify Compare Target** panel, select **Option 4 - Target is from the DB2 catalog and objects are automatically selected**.
3. On the **GOCMENU main menu** panel, select **5 - Generate compare job**. Use the following settings.
  - Worklist name - TEST
  - Suppress DROP of objects - YES
  - Suppress DROP of columns - NO
  - Suppress adding columns - NO
  - Run Validate - N
  - Change reporting options - NO
  - PDS for batch jobs - TEST
  - Prefix for data sets - TEST
  - Generate online - NO
  - Generate apply jobs - NO
  - Generate one job - YESSet all the of the remaining options to NO or N.
4. Run the compare job and check the comparison report.
5. Make any corrections necessary, and generate the compare job again and recheck the comparison report.
6. Apply the changes to finish comparing DDL to a catalog, and change the table in the target.
  - a) On the **GOC5 Generate Compare Jobs** panel, under Options, set **Generate Apply Job = Yes**.
  - b) Run the work statement list to make the actual changes. For more information, see [“Running a work statement list” on page 137](#).

## What to do next

You have compared DDL to a catalog, and changed the table in the target.

## Scenario: Copying objects

You can use Db2 Object Comparison Tool to copy objects. For example, you might want to copy objects in your production environment to a test environment.

### About this task

For this scenario, assume that you created a new database, PRODDb, in your production environment and you want to copy the objects in that database to your test environment, in database TESTDB.

## Procedure

To copy PRODDb objects to TESTDB, on a different subsystem:

1. Specify the source object definitions to be compared:
  - a) On the **DB2 Object Comparison Tool Menu (GOCMENU)** panel, select **Option 1 Specify compare source (new)**, and press Enter.
  - b) On the **Specify Compare Source (GOC1)** panel, select **2 - Source is from the DB2 catalog**, and press Enter.
  - c) On the **Specify DB2 Source Catalog Extract (GOC12)** panel, specify the following information:
    - In the **Data set name** field, enter the data set name for the version file. Include the date as part of the name. For example: proddb.v23.D080311
    - In the **Description** field, enter a description of the source. For example: production database
  - d) Select **1 - Source is databases from the DB2 catalog**, and press Enter.
  - e) On the **Specify Source DB2 Databases (GOC1D)** panel, specify the **I** line command to insert a database to the list.
  - f) On the **Compare Add Databases (GOC1DA)** panel, specify a partial data set name and the location name (for example STLEC1) to identify the data set that you want to copy, and press Enter.
  - g) On the **Compare Add Databases (GOC1DD)** panel, use the **S** line command to select the database that you want to copy.
  - h) Exit back to the **DB2 Object Comparison Tool Menu (GOCMENU)** panel. Notice that the **Specification Status:** next to option **1** is now **Database extract specified**.

2. Specify the target objects:

- a) On the **DB2 Object Comparison Tool Menu (GOCMENU)** panel, select **Option 2 Specify compare target (old)**, and press Enter.
- b) On the **Specify Compare Target (GOC1)** panel, select **4 Target is from the DB2 catalog and the objects are automatically selected**, and press Enter.

In this scenario, you are choosing automatic selection, because these objects might already exist in the target.

- c) On the **Specify Target DB2 Location (GOC14)** panel, enter the following information, and press Enter:
  - The location of your production subsystem.
  - The name of a data set to use for the target version file. If the data set does not already exist, it is created.

On the **DB2 Object Comparison Tool Menu (GOCMENU)** panel, notice that the **Specification Status:** next to option **2** is now **Automatic (DB2 catalog extract)**.

3. Specify the masks:

If naming differences exist between objects in the test database and objects in the production database, use masks to account for these naming differences. For example, owner, table name, or table space names might be different.

- a) On the **DB2 Object Comparison Tool Menu (GOCMENU)** panel, select **Option 3, Specify Compare Masks**, and press Enter.
- b) On the **Specify Compare Masks (GOC3)** panel, complete the following fields, and press Enter:

**Mask DSN**

The name of the data set for the masks. If the data set does not exist, it is created.

**Edit Mask**

YES

This scenario shows you how to define masks in a data set. Alternatively, if Change Management is enabled, you can define masks in the Change Management repository.

- c) On the **Edit Compare Masks (GOCEDIT) panel**, specify the masks that you want to use.

When you specify masks, make sure that the first value is the name in the production database and the second value is the name that you want used in the test database. For example:

```
Keyword: name in Source (production) ,name in Target (test)
```

Also consider that you might want to overwrite some values, such as the COMPRESS attribute.

For help in defining masks and overwriting values, see [“Translation masks” on page 183](#) and [Mask definition syntax \(IBM DB2 Administration Tool for z/OS\)](#).

- d) Exit back to the **DB2 Object Comparison Tool Menu (GOCMENU) panel**. Notice that the **Specification Status:** next to option **3** is now **Mask specified**.

4. Specify fields to ignore:

You probably do not want to build test objects exactly the same as production objects. For example, you might want to ignore fields for buffer pools, PRIQTY, or SECQTY.

- a) On the **DB2 Object Comparison Tool Menu (GOCMENU) panel**, select **4 - Specify fields to ignore**.  
b) On the **Specify Compare Ignores (GOC4) panel**, complete the following fields, and press Enter:

**Data Set Name**

The name of the data set for the ignores. If the data set does not exist, it is created.

**Edit Ignore Fields Specification**

YES

This scenario shows you how to define ignores in a data set. Alternatively, if Change Management is enabled, you can define ignores in the Change Management repository.

- c) On the **Specify Ignore Fields : Objects (GOCCI) panel**, specify the **U** line command for SYSTABLESPACE.  
d) On the **Specify Ignore Fields for object (GOCCIF) panel**, specify the **S** line command for BPOOL, PQTY, and SECQTYI. Press Enter after each selection.  
The **Action** column indicates that the field is selected.  
e) Press PF3 to return to the **Specify Ignore Fields : Objects (GOCCI) panel**. Notice that the **Ignore Fields** column for SYSTABLESPACE lists BPOOL, PQTY, SECQTYI.  
f) Exit back to the **DB2 Object Comparison Tool Menu (GOCMENU) panel**. Notice that the **Specification Status:** next to option **4** is now **Ignore fields specified**.

5. Generate compare jobs:

- a) On the **DB2 Object Comparison Tool Menu (GOCMENU) panel**, select **5 - Generate compare job**, and press Enter.  
b) On the **Generate Compare Jobs (GOC5) panel**, specify the following values, and press Enter:

**Worklist name:** TEST

**Scope Warning Messages:** YES

**PDF for batch jobs:** TEST

**Prefix for data sets:** TEST

**Generate one job:** YES

Set all the remaining options to NO or N or the default.

- c) If the **Change Management Prompt (ADB2CMRO) panel** opens, specify NO.  
(For this scenario, assume that you are not using Change Management.)  
d) On the **Specify Data Set Name for Apply Jobs (GOC5AJ) panel**, enter the name of a data set where you want the apply jobs generated.  
e) Edit the generated JCL job as needed and submit it to run the comparison.  
f) Check that the job completed successfully.

6. Check the comparison report.

In the job output, look at the information under the line OBJECT COMPARISON REPORT. (For help in evaluating the output, see [“Scenario: Comparing a Db2 development catalog to a Db2 production catalog”](#) on page 7.)

7. Correct any problems with the job by changing the masks and ignore fields. Then, regenerate and re-run the comparison job. Repeat this process until the object comparison report contains the differences that you want apply to the target.
8. Regenerate the comparison job and an apply job:
  - a) On the **DB2 Object Comparison Tool Menu (GOCMENU)** panel, select **5 - Generate compare job**, and press Enter.
  - b) On the **Generate Compare Jobs (GOC5)** panel, set the **Generate apply jobs** field to Yes. When you generate the apply job, if you are modeling a complete set of new objects based on the original objects, data is not loaded or unloaded. No objects are dropped or altered. You are creating the objects, but not populating any data.
  - c) Press Enter and complete the steps, as described in step [“5”](#) on page 16, to run the comparison job.
9. Run the generated apply job to create the new TESTDB objects.

## Scenario: Converting partitioned table spaces to partition-by-range universal table spaces

You can use Db2 Object Comparison Tool to change a group of partitioned table spaces to partition-by-range (PBR) universal table spaces (UTS) without having to alter each table space individually.

### About this task

This process does not generate batch jobs. However, you can modify existing compare batch jobs to perform a similar function. The key is to create a mask that overwrites the SEGSIZE value of the table spaces.

This scenario assumes that the partitioned table spaces use table-controlled partitioning. If your partitioned table spaces uses index-controlled partitioning, you must convert them to use table controlled-partitioning before following the steps in this scenario. See [Converting table spaces to use table-controlled partitioning \(Db2 12 for z/OS documentation\)](#).

### Procedure

To change partitioned table spaces to partition-by-range universal table spaces:

1. Specify the compare source.

The source of the comparison operation can be a database, which includes all table spaces in that database, or a specified list of table spaces. This scenario specifies the source as a database that contains the partitioned table spaces.

- a) On the **DB2 Object Comparison Tool Menu (GOCMENU)** panel, select option **1 - Specify compare source (new)** and press Enter.
- b) On the **Specify Compare Source (GOC1)** panel, select option **2 - Source is from the DB2 catalog** and press Enter.
- c) On the **Specify DB2 Source Catalog Extract (GOC12)** panel, in the **Data set name** field, specify the name of the data set for the version file for the source.
- d) Select option **1 - Source is databases from the DB2 catalog** and press Enter.
- e) On the **Specify Source DB2 Databases (GOC1D)** panel, use the **I** line command to insert a line in the database list.
- f) On the **Compare Add Databases (GOC1DA)** panel, specify the source database by entering a partial database name and pressing Enter.

- g) On the **Compare Add Databases (GOC1DD) panel**, use **S** line command to select the database that you want to use as the compare source.
2. Specify the compare target.

In this case, you want the database to be compared to itself, so you need to specify that the target objects are to be automatically selected.

- a) Exit back to the **DB2 Object Comparison Tool Menu (GOCMENU) panel** and select option **2 - Specify compare target (old)**.
- b) On the **Specify Compare Target (GOC1) panel**, select option **4 - Target is from the DB2 catalog and the objects are automatically selected based on the selected source objects** and press Enter.
- c) On the **Specify Target DB2 Location (GOC14) panel**, complete the following fields and press Enter:
- Specify location name:**  
The location of the Db2 subsystem.
- Data set name**  
The name of the data set for the version file for the target. If the data set does not exist, it is created.

3. Create a mask to overwrite the SEGSIZE value of the table spaces.

- a) Exit back to the **DB2 Object Comparison Tool Menu (GOCMENU) panel** and select option **3 - Specify Compare Masks**.
- b) On the **Specify Compare Masks (GOC3) panel**, complete the following fields:

**Mask DSN**

The name of the data set for the masks. If the data set does not exist, it is created.

**Edit Mask**

YES

- c) On the **Edit Compare Masks (GOCEDIT) panel**, insert a line to create a mask to overwrite the SEGSIZE value. For example:

```
SEGSIZE:*,64
```

This line specifies that Db2 Object Comparison Tool is to find all table spaces in the compare scope that match this mask specification (for example, a table space named TS01) and change the value of its SEGSIZE to 64.

4. Generate and run the compare job:

- a) Exit back to the **DB2 Object Comparison Tool Menu (GOCMENU) panel** and select option **5 - Generate compare job**.
- b) On the **Generate Compare Jobs (GOC5) panel**, specify the appropriate options, including the following settings, and press Enter.

**Suppress DROP of objects**

YES

**Generate apply jobs**

NO

**Run REORG/REBUILD**

A

- c) From the panel that displays the generated JCL job, submit the job and check that it runs successfully.

5. Check the object comparison report.

The report shows that the only change to the affected table spaces is the one that was specified by the mask: the ALTER SEGSIZE operation. Additionally, it confirms that the table space changed from partitioned to partition-by-range.

**Example message in report:**

```
>ADB3320W :SEGSIZE was masked from 0 to 64 for table space DB5772.TS5772. The value might change the
table space type.
Compare tablespace source(Q79A.Q79A0100) and target(DB5772.TS5772)
(A)Tablespace change from partitioned to partition-by-range
(A)Field SEGSIZE changed from 0 to 64
Tablespace will be altered
```

6. Apply these changes or use Change Management to implement the changes.

As a result, any partitioned table space in the database is now a PBR UTS.

## Product documentation and updates

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The documentation for Object Comparison Tool is regularly updated with information about new features and any corrections. The frequency of updates varies but can be as often as weekly.

The Object Comparison Tool documentation is available in the following two formats:

### Topics in IBM Knowledge Center

Although these topics are not dated, you can assume that they include the latest information available.

You can find IBM Db2 Object Comparison Tool for z/OS in IBM Knowledge Center at [https://www.ibm.com/support/knowledgecenter/SSAUVH\\_12.1.0/topics/gochome.html](https://www.ibm.com/support/knowledgecenter/SSAUVH_12.1.0/topics/gochome.html)

### PDF format

The PDF is titled "IBM Db2 Object Comparison Tool for z/OS User's Guide." The date when the PDF was created is listed at the bottom of page 2, near the copyright information.

The latest copy of the PDF is always posted at [https://www.ibm.com/support/knowledgecenter/SSAUVH\\_12.1.0/gocugl10.pdf](https://www.ibm.com/support/knowledgecenter/SSAUVH_12.1.0/gocugl10.pdf).

Both of these formats contain the same information and are updated at the same time.

### Revision marks for changed content

Revisions for the following types of content changes are marked like this sentence, with black bars in the left margin:

- Technical revisions that reflect changed externals that are introduced by the new release or by maintenance after the general availability of this release.
- Technical clarifications in response to customer and internal feedback.

Editorial and organizational changes that do not affect the technical meaning of the content are generally not marked.

### How to send your comments

Your feedback is important in helping to provide accurate and high-quality information. If you have any comments about this information or any other IBM product documentation, send your comments to [ibmkc@us.ibm.com](mailto:ibmkc@us.ibm.com).

## Accessibility features

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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 Object Comparison Tool

Before you start to customize Db2 Object Comparison Tool, determine all of the customization values that you need to specify during the customization process, and familiarize yourself with all of the 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
<b>Tools Customizer basics</b>		
Prior to beginning the customization process, familiarize yourself with Tools Customizer terminology and data sets, and other basic information about Tools Customizer.	<a href="#">“Tools Customizer terminology and data sets” on page 215</a>	
<b>Software requirements</b>		
Verify that your environment meets the minimum software requirements. To install and use Db2 Object Comparison Tool, your environment must be running a supported version of the z/OS operating system, of DB2 for z/OS, and of DB2 Administration Tool for z/OS.	<a href="#">“Verify that your environment meets software requirements” on page 23</a>	
<b>SMP/E installation</b>		
Verify that Db2 Object Comparison Tool has been installed correctly. Db2 Object Comparison Tool is installed by using standard SMP/E processing.	<a href="#">“Verify that Db2 Object Comparison Tool has been installed successfully” on page 23</a>	
Verify that Tools Customizer for z/OS has been installed correctly. Tools Customizer for z/OS is installed by using standard SMP/E processing.	<a href="#">“Verify that Tools Customizer has been installed successfully” on page 24</a>	
<b>Upgrading to newer versions or modes of DB2</b>		
No action is required when you migrate from one release or mode of DB2 to another DB2 release or mode. For example, no action is required when you migrate from DB2 V9.1 compatibility mode to DB2 V9.1 new-function mode. No action is required when you upgrade DB2 releases for Db2 Object Comparison Tool because the product relies on DB2 Administration Tool to access DB2.	None.	
<b>Gather data set names</b>		

Task	Link to detailed instructions	Status
<p>During the customization process, you must specify names for the following types of data sets:</p> <ul style="list-style-type: none"> <li>• Tools Customizer</li> <li>• Db2 Object Comparison Tool</li> </ul>	<p><a href="#">“Worksheets: Gathering required data set names” on page 24</a></p>	
<b>Gather parameter values</b>		
<p>During the customization process, you must specify parameter values for Db2 Object Comparison Tool, for DB2, and for your LPAR.</p>	<p><a href="#">“Worksheets: Gathering parameter values for Tools Customizer” on page 24</a></p>	
<b>Customize Db2 Object Comparison Tool</b>		
<p>Start Tools Customizer by running a REXX EXEC from the ISPF Command Shell panel.</p>	<p><a href="#">“Starting Tools Customizer” on page 32</a></p>	
<p>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.</p>	<p><a href="#">“Modifying Tools Customizer user settings” on page 34</a></p>	
<p>Complete the steps in the appropriate customization roadmap based on the type of customization that you are performing.</p>		
<p><b>Customizing Db2 Object Comparison Tool for the first time</b></p> <p>Follow this roadmap if you do not have a customized version of Db2 Object Comparison Tool, and you need to customize it for the first time.</p>	<p><a href="#">“Roadmap: Customizing Db2 Object Comparison Tool for the first time” on page 39</a></p>	
<p><b>Recustomizing Db2 Object Comparison Tool</b></p> <p>Follow this roadmap if you have a customized version of Db2 Object Comparison Tool but you want to change one or more parameter values.</p>	<p><a href="#">“Roadmap: Recustomizing Db2 Object Comparison Tool” on page 40</a></p>	
<p>Some customization options require you to manually complete additional tasks after you have used Tools Customizer. If you generated jobs in Tools Customizer that correspond to the following customization options, complete the additional tasks before you submit the jobs. In some cases, an optional task can be completed either by using Tools Customizer or by manually completing tasks without using Tools Customizer.</p>		
<b>Edit the ADBL CLIST</b>		
<p>Before you can use Db2 Object Comparison Tool, you must allocate the libraries to your ISPF session.</p>	<p><a href="#">“Optional: Prepare ADBL CLIST” on page 53</a></p>	
<b>Optional: Edit the GOCFB2VB job</b>		
<p>If necessary, edit this job to specify the correct ADB and GOC SAMP data sets.</p>	<p><a href="#">“Optional: Editing the GOCFB2VB job” on page 54</a></p>	

Task	Link to detailed instructions	Status
<b>Optional: Customize JCL</b>		
If necessary, customize the Db2 Object Comparison Tool JCL to adhere to your installation standards.	<a href="#">“Optional: Customizing JCL ” on page 55</a>	
<b>Optional: Conform DB2 Administration Tool data set names</b>		
Align the DB2 Administration Tool data set names with your local data set naming conventions.	<a href="#">“Optional: Conforming DB2 Administration Tool data set names” on page 56</a>	
<b>Performance considerations</b>		
Understand the factors that can influence Db2 Object Comparison Tool performance.	<a href="#">“Performance considerations ” on page 57</a>	
<b>Optional: Making Object Comparison Tool available from DB2 Administration Tool</b>		
You can make the DB2 Object Comparison Tool available from DB2 Admin as part of the DB2 Admin customization process. You can also customize the DB2 Object Comparison Tool separately from the customization of DB2 Admin.  Follow the customization steps in <i>IBM DB2 Administration Tool for z/OS User's Guide and Reference</i> .	None.	

## 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

Ensure that you are using z/OS 1.12 (5694-A01) or later.

Ensure that you are using one of the following supported versions of DB2 for z/OS:

- DB2 V10 (5605-DB2)
- DB2 Value Unit Edition 10.1 (5697-P31)
- DB2 V11 (5615-DB2)
- DB2 Value Unit Edition 11.1 (5697-P43)
- DB2 12 (5650-DB2)
- DB2 Value Unit Edition 12.1 (5770-AF3)

Ensure that you are running IBM DB2 Administration Tool for z/OS 12.1 (5655-DT2).

### Verify that Db2 Object Comparison Tool has been installed successfully

See the Program Directory for IBM Db2 Object Comparison Tool for z/OS, GI13-4643 for installation instructions.

To verify the installation was completed correctly, specify the following command on any DB2 Administration Tool panel: `PANEL GOCMENU`. The DB2 Object Comparison Tool menu (GOCMENU) should

be displayed. If it does not display, the installation was not successful and you will need to reinstall Db2 Object Comparison Tool.

**Important:** Because Db2 Object Comparison Tool keeps a large amount of information in memory, it is recommended that a minimum region of 16 MB of memory is used in batch, and 32 MB when running in TSO. In all cases, ensure that the specified region is not being limited via the IEFUSI installation exit. When a large number of objects is processed (more than 1000), additional region is recommended. In addition, more memory is necessary if you suppress object dropping when generating the job because objects are kept resident to process this option. If you are processing extremely large sets of objects (more than 10000), it is recommended that the starting region be at 128 MB. If LE storage failures occur, increase region parameters before assuming that a problem exists. It is recommended to increase memory in 32 MB increments.

## Verify that Tools Customizer has been installed successfully

Tools Customizer for z/OS is a component of IBM Tools Base for z/OS (5655-V93), which is available free of charge. Tools Customizer for z/OS provides a standard approach to customizing IBM DB2 for z/OS Tools.

See the Program Directory for IBM Tools Base for z/OS, GI10-8819 for installation instructions.

## Worksheets: Gathering required data set names

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

### Data set names for Tools Customizer

Identify and record the following Tools Customizer data set names:

Data set name	Description	Special requirements	Your data set name
SCCQEXEC	EXEC library for Tools Customizer	None.	
SCCQDENU	Metadata library for Tools Customizer	None.	
SCCQLOAD	Executable load module library for Tools Customizer	None.	
SCCQMENU	ISPF messages for Tools Customizer	None.	
SCCQPENU	ISPF panels for Tools Customizer	None.	
SCCQSAMP	Sample members for Tools Customizer	None.	
SCCQTENU	Table library for Tools Customizer	None.	

## Worksheets: Gathering parameter values for Tools Customizer

During the customization process, you will need to provide parameter values for the product that you are customizing, 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 Tools Customizer.

## Settings for Tools Customizer

### Description

Use the following worksheet to identify and record the values for Tools Customizer settings. During the customization process, you will enter these values on the **Tools Customizer Settings** panel (CCQPSET).

For more information about the parameters in this section, see [“Data sets that Tools Customizer uses during customization”](#) on page 218

<b>Product Customization Settings</b>		
<b>Parameter</b>	<b>Sample or default value</b>	<b>Your value</b>
<b>Customization library qualifier</b> The high-level qualifier that is used as the prefix for the customization library.	DB2TOOL.PRODUCT.CUST	
<b>Use DB2 group attach</b> Determines the value that is used in the CONNECT statements in the generated customization jobs.	YES	
<b>Tools Customizer Library Settings</b>		
<b>Metadata library</b> The name of the data set that contains the metadata that is used to display the DB2 and LPAR parameters.	DB2TOOL.CCQ110.SCCQDENU	
<b>Discover output data set</b> The name of the data set in which the output from the a product or a component Discover EXEC is stored.	DB2TOOL.CCQ110.DISCOVER	
<b>Data store data set</b> The name of the data set where Tools Customizer stores information about product or component, LPAR, and DB2 parameter values.	DB2TOOL.CCQ110.DATASTOR	
<b>Use DB2 group attach</b> Determines the value that is used in the CONNECT statements in the generated customization jobs.	YES	
<b>User Job Card Settings for Customization Jobs</b>		
The job card information to be inserted into the generated jobs for customizing a product or component.	The job statement information from the ISPF Batch Selection panel.	

## Metadata library for Db2 Object Comparison Tool

### Description

Use the following worksheet to identify and record the value of the metadata library for Db2 Object Comparison Tool. During the customization process, you will enter this value on the **Specify the Metadata Library** panel (CCQPHLQ).

Parameter	Sample or default value	Your value
<b>Metadata library</b> The name of the Db2 Object Comparison Tool metadata library.	<i>high_level_qualifier.SGOCDENU</i>	

## 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 Object Comparison Tool metadata data set.

<b>Product metadata library</b> This value is the library that you specified on the <b>Specify the Product to Customize</b> 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 <b>Specify the Metadata Library</b> panel (CCQPHLQ).
<b>LPAR</b> The <b>LPAR</b> field displays the LPAR on which you are customizing Db2 Object Comparison Tool.	No	This value is provided by Tools Customizer.
<b>Product name</b> This value displays the product that is being customized. In this example, Db2 Object Comparison Tool 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.
<b>Version</b> The <b>Version</b> field displays the version, release and maintenance of the product you are customizing in the format <i>Vn.Rn.nn</i> .	No	This value is provided by the product metadata file.
<b>Product customization library</b> This value displays the name of the data set in which the generated library customization jobs will be stored.	No	This value is derived from the user-specified customization library qualifier on the <b>Tools Customizer Settings</b> panel (CCQPSET).

## Task: Create the VB CLIST and EXEC libraries

### Description

If you use CLIST and EXEC libraries that are variable blocked, create VB versions of these libraries. The data set names of the new VB libraries are the same as the FB libraries, but are suffixed with .VB.

This take is optional.

**Jobs generated**

GOCFB2VB. This job is based on the GOCFB2VB template and is in the *job\_sequence\_numberFB2VDB2\_entry\_ID* member.

**Required authority**

The user ID that runs the GOCFB2VB job must have SYSADM or equivalent authority.

Step or parameter	Required ?	Default value	Your value
<b>Create the VB libraries</b> Copy the fixed-block libraries to variable-blocked libraries.	Yes	Selected	
<b>DB2 Object Comparison high-level qualifier</b> The high-level qualifier of the DB2 Object Comparison Tool data sets for the product customization step.	Yes	GOCC10	
<b>Fixed to variable blocked VOLSER</b> The volume_serial used for copying fixed-block libraries to variable-blocked libraries. This is not necessary for SMS (System Managed Storage).	Yes	No default	
<b>Fixed to variable blocked UNIT</b> The UNIT name used for copying fixed-block libraries to variable-blocked libraries. This is not necessary for SMS (System Managed Storage).	Yes	STD	
<b>DB2 Admin customization high-level qualifier</b> The high-level qualifier of the DB2 Admin Tool data sets, one of which contains the EXEC (ADBFVB) which performs the conversion.	Yes	ADBC10	



---

## Chapter 3. Customizing DB2 Object Comparison Tool

When you customize the DB2 Administration Tool, you can also enable the Db2 Object Comparison Tool for immediate use. At that time, if you choose not to enable the Db2 Object Comparison Tool, you can later customize the tool separately.

Many of the customization tasks are optional.

**Prerequisite:** Before you can customize the Db2 Object Comparison Tool, you must have installed the product by using the instructions in the Program Directory.

### Related concepts

[“Optional: Prepare ADBL CLIST” on page 53](#)

The ADBL CLIST in the SADBCLST library is provided for running DB2 Admin or DB2 Object Compare.

### Related tasks

[“Optional: Editing the GOCFB2VB job” on page 54](#)

The GOCFB2VB job creates variable-blocked (VB) versions of the DB2 Admin and Object Comparison CLIST and EXEC libraries. You might need to edit the job to specify the correct ADB and GOC SAMP datasets.

[“Optional: Customizing JCL ” on page 55](#)

You might need to customize the Db2 Object Comparison Tool JCL to adhere to your installation standards. Most other skeletons will not require configuration. If necessary, you can configure the JCL that is used by Db2 Object Comparison Tool to run DB2 utilities and other DB2 functions by modifying the skeletons in the SADBCLIB and SGOCSLIB libraries.

[“Optional: Conforming DB2 Administration Tool data set names” on page 56](#)

You can align DB2 Administration Tool data set names with your local data set naming conventions.

[“Optional: Making Object Comparison Tool available from DB2 Administration Tool” on page 58](#)

You can make the DB2 Object Comparison Tool available from DB2 Admin as part of the DB2 Admin customization process. You can also customize the Object Comparison Tool separately from the customization of DB2 Admin.

---

## 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 Object Comparison Tool.

### Best Practice: SMP/E and runtime libraries maintenance strategy for Tools Customizer

Tools Customizer creates relationships between the values for the Product Parameters, LPAR Parameters, and Db2 Subsystem Parameters for each Tools Customizer enabled product. Determining the correct maintenance strategy for your Tools Customizer runtime libraries, after SMP/E processing, can reduce problems working with Tools Customizer and the enabled products through their life cycles.

Tools Customizer has very specific requirements for data set names:

- Only one DATASTOR data set exists per LPAR
- The product metadata library data set names do not change during the life of that release of the Tools Customizer enabled product.

The DATASTOR data set is the repository for all the information that Tools Customizer requires to generate customization JCL for enabled products.

When you update and save the Tools Customizer Settings panel (CCQPSET), as described in [“Modifying Tools Customizer user settings” on page 34](#), the name of the DATASTOR data set is saved in the ISPF

profile. This allows Tools Customizer to know the active DATASTOR data set when the TSO user id logs in and starts the Tools Customizer EXEC.

## Maintenance scenarios

IBM expects maintenance to be applied to libraries which are then used by Tools Customizer. In practice, different customer shops distribute SMP/E APPLY maintenance in different ways.

The following scenarios explains some considerations and alternatives for determining your maintenance strategy. The one overriding objective is to preserve and maintain the same data set names for the Tools Customizer instance.

### Apply SMP/E maintenance to the same data sets (using the SMP/E APPLY command):

If you apply SMP/E maintenance (using the SMP/E APPLY command) using the same data set names with each maintenance cycle, you can either use these target libraries as your Tools Customizer runtime libraries or you can copy the SMP/E target data sets to the runtime libraries that are used by Tools Customizer to customize enabled products.

Tools Customizer assumes that if the product metadata library (\*DENU) has the same name, this metadata library is for the same release of the enabled product. For example, assume that you customize Db2 Log Analysis Tool v3.3 and name the metadata library SYS2 . DB2TOOL . SALADENU, with no indication of the version or release. You then upgrade to Db2 Log Analysis Tool v3.4 and employ the same naming convention, SYS2 . DB2TOOL . SALADENU. Tools Customizer will assume that you are continuing to work with Db2 Log Analysis Tool v3.3 and will report v3.3 on panels and continue to use the same v3.3 Customization Library data set.

A more sustainable approach to naming the data sets is to include a product version, release identifier, or other distinguishing qualifier in the name of the metadata library, so that Tools Customizer can determine the new product release when you upgrade. For example, using metadata library names that include a product version, release identifier, or other distinguishing qualifier, similar to the following, can make product maintenance and upgrades easier:

- DB2TOOL . R330 . SALADENU for Db2 Log Analysis Tool v3.3
- DB2TOOL . R340 . SALADENU for Db2 Log Analysis Tool v3.4

### Apply SMP/E maintenance to new data sets (using the SMP/E APPLY command):

If you apply SMP/E maintenance (using the SMP/E APPLY command) to new data sets rather than to the same data sets, the next time you open the product metadata library, Tools Customizer will return a data set error that indicates that the library name is being used by another product or component.

For example, assume that you name the Db2 High Performance Unload for z/OS target metadata libraries to reflect the date of an upgrade or to reflect a specific RSU, as follows:

- To reflect a specific upgrade date (August 2014):
  - DB2TOOL . PTF420 . SINZDBRM . D201408
  - DB2TOOL . PTF420 . SINZDENU . D201408
  - DB2TOOL . PTF420 . SINZLOAD . D201408
- To reflect a specific RSU (RSU 1406):
  - DB2TOOL . PTF420 . SINZDBRM . RSU1406
  - DB2TOOL . PTF420 . SINZDENU . RSU1406
  - DB2TOOL . PTF420 . SINZLOAD . RSU1406

Using either of these naming conventions, the next time you start the Tools Customizer EXEC, it will return a data set error.

To handle this type of SMP/E maintenance processing, you can do either of the following:

- Define aliases (using ALIAS control statements) to reference the appropriate libraries for Tools Customizer processing.

- Copy the SMP/E libraries to a set of runtime libraries that are specifically for Tools Customizer processing.

**Define aliases (using ALIAS control statements) to reference the appropriate libraries for Tools Customizer processing:**

Defining aliases (using ALIAS control statements) for the SMP/E created new product data set names is likely the best strategy when planning for Tools Customizer.

If you are setting up Tools Customizer for the first time, consider specifying the product library data set names with an indicator that these data sets will be used for Tools Customizer processing. For example, use data set names similar to the following names:

- TCZ.PTF420.SINZDBRM
- TCZ.PTF420.SINZDENU
- TCZ.PTF420.SINZLOAD

After applying maintenance using SMP/E, which creates new product library data sets, you should define aliases (using ALIAS control statements) for the new data set names to the data set names that Tools Customizer originally processed. For example, the following maintenance data sets have aliases defined to the original data sets:

- DB2TOOL.PTF420.SINZDBRM.RSU1406 --> TCZ.PTF420.SINZDBRM
- DB2TOOL.PTF420.SINZDENU.RSU1406 --> TCZ.PTF420.SINZDENU
- DB2TOOL.PTF420.SINZLOAD.RSU1406 --> TCZ.PTF420.SINZLOAD

You will need to define an alias (using ALIAS control statements) to each of the following IBM-distributed Tools Customizer data sets:

- SCCQDENU
- SCCQEXEC
- SCCQLOAD
- SCCQMENU
- SCCQPENU
- SCCQSAMP
- SCCQTENU

If you have already set up Tools Customizer and customized the product, you will have to define aliases (using ALIAS control statements) for the newly created data set names to the data sets that were specified when the product was originally customized using Tools Customizer.

After defining the aliases, you should be able to run Tools Customizer successfully.

**Note:** Only define aliases for IBM-distributed SMP/E libraries.

**Restriction:** Do not define an alias for any Tools Customizer created data sets, like the following three data sets on the Tools Customizer Settings panel (CCQPSET):

- Customization library qualifier
- Discover output data set
- Data store data set

Do not define an alias for any data sets that you create on behalf of a product, for example the Db2 High Performance Unload for z/OS parameter library (INFPLIB).

**Copy the SMP/E libraries to a set of runtime libraries that are specifically for Tools Customizer processing:**

If you are setting up Tools Customizer for the first time, consider specifying the product library data set names with an indicator that these data sets will be used for Tools Customizer processing. For example, use data set names similar to the following names:

- TCZ.R420.SINZDBRM

- TCZ.R420.SINZDENU
- TCZ.R420.SINZLOAD

After applying maintenance using SMP/E, which creates new product library data sets, you should copy the new data sets to the data sets that Tools Customizer originally processed. For example, copy the following maintenance data sets to the original data sets:

- DB2T00L.PTF420.SINZDBRM.RSU1406 --> TCZ.R420.SINZDBRM
- DB2T00L.PTF420.SINZDENU.RSU1406 --> TCZ.R420.SINZDENU
- DB2T00L.PTF420.SINZLOAD.RSU1406 --> TCZ.R420.SINZLOAD

You will need to copy each of the following IBM-distributed Tools Customizer data sets:

- SCCQDENU
- SCCQEXEC
- SCCQLOAD
- SCCQMENU
- SCCQPENU
- SCCQSAMP
- SCCQTENU

If you have already set up Tools Customizer and customized the product, you will have to copy the newly created data sets to the data sets that were specified when the product was originally customized using Tools Customizer).

After copying the SMP/E data sets to the Tools Customizer instance libraries, you should be able to run Tools Customizer successfully.

**Note:** Only copy IBM-distributed SMP/E libraries.

**Restriction:** Do not copy any Tools Customizer created data sets, like the following three data sets on the Tools Customizer Settings panel (CCQPSET):

- Customization library qualifier
- Discover output data set
- Data store data set

Do not copy any data sets that you create on behalf of a product, for example the Db2 High Performance Unload for z/OS parameter library (INFPLIB).

### **Related tasks**

[Modifying Tools Customizer user settings](#)

Before you can customize a product or a component with Tools Customizer, you must review the settings that Tools Customizer uses.

### **Related information**

[The SMP/E APPLY command](#)

[Alias processing: SMP/E for z/OS Commands](#)

## **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

- Optional: Change the placeholder for the high-level qualifier in the REXX EXEC:
  - Find the EXEC library data set for Tools Customizer. The name of the data set is *high\_level\_qualifier.SCCQEXEC*.
  - 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.

- Run the REXX EXEC (CCQTCZ):
  - From the **ISPF Primary Option Menu**, select option 6.  
The **ISPF Command Shell** panel is displayed.
  - 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 Object Comparison Tool.

## Modifying Tools Customizer user settings

Before you can customize Db2 Object Comparison Tool 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 Object Comparison Tool 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.DATAST01
  Volume serial . . . . .

User Job Card Settings for Customization Jobs

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

Figure 2. 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 Object Comparison Tool 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 1. 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 <sup>1</sup>
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 2. 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

SSID	GrpAttch	Value of the Use DB2 group attach field	Value that is used in the CONNECT statements
--	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 Object Comparison Tool 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 Object Comparison Tool or to change parameter settings.

### Related concepts

[Customizing Db2 Object Comparison Tool](#)

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

## 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 users 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 3. 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.

## Sorting and filtering columns

You can sort data in Tools Customizer columns by up to two columns. You can also filter the data in columns to display only the data that matches the filter criteria that you specify.

### About this task

Sorting and filtering is available only on the **Customizer Workplace** panel, the **Finish Product Customization** panel, the **Associate DB2 Entry for Product** panel, and the **Copy Associated DB2 Entry** panel.

### Procedure

The following instructions describe how to sort and filter data in Tools Customizer columns:

- To sort data in Tools Customizer columns, issue the SORT command.

On the SORT command, specify up to two column names followed by the sort order: A for ascending or D for descending. If you don't specify a sort order, the default sort order is used, which can change depending on the column type.

For example, the following command sorts the column entries by SSID in ascending order, and then by GrpAttch in descending order within SSID.

```
COMMAND ==>> SORT SSID A GrpAttch D
```

You cannot specify the **Cmd** column on the SORT command.

- To filter data in Tools Customizer columns, overwrite the asterisk (\*) under the column names with the filtering arguments for those columns.

For example, to filter SSIDs that start with DB, overwrite the \*\ under the **SSID** column with DB or DB\*. When you press Enter, all the SSIDS that meet that criteria, such as DB01 and DB02, are displayed.

A filter argument in the form DB\* means that only the characters up to the asterisk are considered. When you specify an asterisk in the last nonblank position of the argument, asterisks embedded in the argument are treated as data.

## Customizing Db2 Object Comparison Tool

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

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

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

Environment description	Roadmap
You do not have a customized version of Db2 Object Comparison Tool, and you need to customize it for the first time.	<a href="#">“Roadmap: Customizing Db2 Object Comparison Tool for the first time” on page 39</a>

Table 3. Customization roadmaps (continued)

Environment description	Roadmap
You have a customized version of of Db2 Object Comparison Tool, but you want to change one or more parameter values.	<a href="#">“Roadmap: Recustomizing Db2 Object Comparison Tool” on page 40</a>

## Roadmap: Customizing Db2 Object Comparison Tool for the first time

This roadmap lists and describes the steps that are required to customize Db2 Object Comparison Tool for the first time.

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 Object Comparison Tool for the first time.

Table 4. Steps for customizing Db2 Object Comparison Tool 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 <i>hlq.SGOCDENU</i> .	<a href="#">“Specifying the metadata library for the product to customize” on page 41</a>
2	Create new Db2 entries and associate them with Db2 Object Comparison Tool.	<a href="#">“Creating and associating Db2 entries” on page 42</a>
3	Define the required parameters.	<a href="#">“Defining parameters” on page 44</a>
4	Generate the customization jobs for the product or for the Db2 entries on which Db2 Object Comparison Tool is ready to be customized.	<a href="#">“Generating customization jobs” on page 46</a>
5	Submit the generated customization jobs.	<a href="#">“Submitting customization jobs” on page 47</a>

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

Table 5. Administrative tasks

Description	Instructions
Browse the different types of parameters.	<a href="#">“Browsing parameters” on page 49</a>
Copy an existing Db2 entry to the list of Db2 entries on which Db2 Object Comparison Tool can be customized.	<a href="#">“Copying Db2 entries” on page 49</a>
Remove one or more Db2 entries from the associated list.	<a href="#">“Removing Db2 entries” on page 50</a>
Delete one or more Db2 entries from the master list.	<a href="#">“Deleting Db2 entries” on page 51</a>

Table 5. Administrative tasks (continued)

Description	Instructions
Display a list of customization jobs that have been previously generated.	<a href="#">“Displaying customization jobs” on page 51</a>
Maintain the customization jobs in the customization library.	<a href="#">“Maintaining customization jobs” on page 52</a>

## Roadmap: Recustomizing Db2 Object Comparison Tool

This roadmap lists and describes the steps to change parameter values and regenerate customization jobs for Db2 Object Comparison Tool 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 Object Comparison Tool.

**Tip:** Use a new customization library every time that you apply maintenance and regenerate all the Tools Customizer jobs (by using the GENERATEALL command). For example, append a date as show in the following example:

```
Customization lib: RSTEST.AOC.$RS01$.ADB1210.D200716
```

This practice provides a backup and allows you to compare the jobs to a previous customization by using ISPF option 3.12.

Table 6. Required steps for recustomizing Db2 Object Comparison Tool

Step	Description	Instructions
1	Specify the product metadata library for the product that you want to recustomize. The name of this library is <i>hlq.SGOCDENU</i> .	<a href="#">“Specifying the metadata library for the product to customize” on page 41</a>
2	Edit the specific tasks, steps, or parameters that need to be changed.	<a href="#">“Defining Db2 Object Comparison Tool parameters” on page 45</a>
3	Generate the customization jobs for the product or for the Db2 entries on which Db2 Object Comparison Tool is ready to be customized.	<a href="#">“Generating customization jobs” on page 46</a>
4	Submit the new generated customization jobs.	<a href="#">“Submitting customization jobs” on page 47</a>

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.	<a href="#">“Browsing parameters” on page 49</a>
Copy an existing Db2 entry to the list of Db2 entries on which Db2 Object Comparison Tool can be customized.	<a href="#">“Copying Db2 entries” on page 49</a>
Remove one or more Db2 entries from the associated list.	<a href="#">“Removing Db2 entries” on page 50</a>
Delete one or more Db2 entries from the master list.	<a href="#">“Deleting Db2 entries” on page 51</a>
Display a list of customization jobs that have been previously generated.	<a href="#">“Displaying customization jobs” on page 51</a>
Maintain the customization jobs in the customization library.	<a href="#">“Maintaining customization jobs” on page 52</a>

## 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 Object Comparison Tool. This information controls what is displayed on the **Product Parameters** panel, the **LPAR Parameters** panel, and the **DB2 Parameters** panel.

After Db2 Object Comparison Tool has been SMP/E installed, the default name of the product metadata library is *high\_level\_qualifier.SGOCDENU*, 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 ==>> PAGE

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 . DMT00L.GOCA2MPE.SGOCDENU

Name              Version  Metadata
Library

=>
=>
=>
=>

```

Figure 4. 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 Object Comparison Tool 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 Object Comparison Tool 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 Object Comparison Tool for the first time

Do not run the Db2 Object Comparison Tool 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 Object Comparison Tool parameters.

### Customizing Db2 Object Comparison Tool from a previous or current customization

Press Enter to run the Db2 Object Comparison Tool Discover EXEC. The **Discover Customized Product Information** panel is displayed. Specify the required information for running the EXEC.

## Creating and associating Db2 entries

You can create new Db2 entries and associate them with Db2 Object Comparison Tool.

### 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 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 *Inn* 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 Object Comparison Tool, 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 Object Comparison Tool.

## 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 Object Comparison Tool, you must define Db2 Object Comparison Tool parameters.

### About this task

You must define the Db2 Object Comparison Tool parameters first for the following reasons:

- If you ran the Db2 Object Comparison Tool 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 Object Comparison Tool, 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 Object Comparison Tool parameters

Db2 Object Comparison Tool parameters are specific to Db2 Object Comparison Tool.

### About this task

If you ran the Db2 Object Comparison Tool 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 Object Comparison Tool parameters, a note labeled **Important** will display the correct sequence on this panel.

```
CCQPPRD          Product Parameters: DB2 Object Comparison      21:56:02
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 : TS5776.TCZ.CUST.B1.$RS22$.GOC1210

Create Variable Block CLIST and EXEC libraries

Customize
DB2 Object Comparison hlq . . . . . : GOCC10
Fixed to variable blocked VOLSER . . . :
Fixed to variable blocked UNIT . . . . :
DB2 Admin Tool hlq . . . . . : ADBC10
```

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.

## Generating customization jobs

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

**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 Object Comparison Tool 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 Object Comparison Tool.

### 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 2 of 2
Command ===>                           Scroll ===> PAGE

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 .: CCQTCZ.SYSADM.CUST.$3090$.GOC1020

Cmd Member   New SSID GrpAttch Template Date       Description
-----
  A0FB2VB   YES --   --          GOCFB2VB 2013/01/10 Copy the FB libraries to the
VB
----- End of customized jobs -----
```

Figure 9. 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 Object Comparison Tool assigns the template name.

### ***DB2\_entry\_ID***

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

For example, the XYZBNDDB2\_entry\_ID\_1 and XYZBNDDB2\_entry\_ID\_2 jobs are generated from the XYZBNDGR template, and the XYZ4DB2\_entry\_ID\_1 and XYZ4DB2\_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 Object Comparison Tool 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 Object Comparison Tool is customized, and the **Customizer Workplace** panel is displayed. The status is Customized for the Db2 entries on which Db2 Object Comparison Tool 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 Object Comparison Tool.

## 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 *Inn* 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 Object Comparison Tool 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 Object Comparison Tool 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

Tools Customizer supports customizations on only the local LPAR. However, you can propagate customizations to additional LPARs.

### About this task

In a multiple-LPAR environment, Tools Customizer identifies the LPAR to which you are logged on and uses this LPAR name for several parameter settings, including the data store. Therefore, you can use the Tools Customizer data store to customize only that LPAR.

### Procedure

To customize products that run against Db2 subsystems on multiple LPARs, use one of the following methods:

- **Customize a single Db2 subsystem or data sharing group and copy the customization jobs to each LPAR**

- a) Customize one Db2 subsystem or member.

For example, you might customize member DB1S in group DBGS in your sandbox environment.

- b) If you are using data sharing, propagate that customization to the other members in the group:

- a. Copy the customization jobs to the other members.

For example, copy the jobs for DB1S to member DB2S.

- b. Edit the jobs as needed for the subsystem and LPAR.

For example, replace the member names. Depending on your environment, you might also need to replace data set names. You can use a REXX exec to do this customization.

- c. Run those jobs.

Some jobs do not need to be run on every member in a group. Some jobs only need to run once per LPAR or Sysplex. To determine where a job needs to be run, look at the job listings on the **Finish Product Customization panel (CCQPCST)**. Depending on the values of the **SSID** and **GrpAttch** columns, take the following actions for each job:

<i>Table 8.</i>			
<b>SSID column value</b>	<b>GrpAttch column value</b>	<b>Action</b>	<b>Comments</b>
--	--	Run once per LPAR	None
--	A group name	Run once per group	None
A member name	A group name	Run once per member in the group	None
An SSID	--	Run once	This entry is for a stand-alone Db2 subsystem.

c) Copy the jobs from the initial customized subsystem or member to all of your other subsystems or groups. Then, edit those jobs, preferably with a REXX exec, and run them.

For example, copy the jobs for DB1S in group DBGS to the members DB1D and DB2D in your development group DBGD, edit those jobs as needed, and run them. Then, copy the jobs for DB1S to the members DB1T and DB2T in your test group DBGT, edit those jobs, and run them. Continue until all groups are customized.

- **Generate customization jobs for each Db2 subsystem and copy those jobs to the appropriate LPARs**

- a) Associate all Db2 entries in one instance of Tools Customizer on one LPAR, regardless of the LPARs on which the Db2 subsystem resides.
- b) Generate customization jobs for each Db2 entry.
- c) Copy the generated customization jobs to the LPAR to run against the specific Db2 entries. You might need to edit these customization jobs for specific LPARs. For example, you might need to edit the data set names. (Otherwise, you generally do not need to make manual changes to the jobs that are customized by Tools Customizer.)

## Optional: Prepare ADBL CLIST

The ADBL CLIST in the SADBCLST library is provided for running DB2 Admin or DB2 Object Compare.

The ADBL CLIST brings up the DB2 Admin Main Menu. By using the PANEL(GOCMENU) parameter, you may instead bring up the DB2 Object Compare main menu.

You can start the ADBL CLIST from any ISPF panel or from the ISPF command processor panel (usually ISPF option 6). You can add the % prefix to the beginning of the CLIST name to ensure that TSO/E only searches the CLIST libraries.

Before you can use Db2 Object Comparison Tool, you must first allocate the libraries to your ISPF session. Three methods are available to allocate libraries.

Choose one of the following three methods that is most appropriate for your installation to allocate the libraries to your ISPF session:

- Use the PRODADD and LIBAPRE parameters on the ADBL CLIST to specify the unique library names for Db2 Object Comparison Tool libraries. If you are currently using the ADBL CLIST to LIBDEF (allocate) the Administration Tool ISPF libraries, you should also use the ADBL CLIST to LIBDEF Db2 Object Comparison Tool libraries, as shown in the following example:

```
TSO %ADBL PRODADD(GOCB10) LIBAPRE(SGOC)
```

- If your installation copied the DB2 Administration Tool ISPF libraries to a set of libraries that are allocated before you start ISPF, you can copy Db2 Object Comparison Tool ISPF libraries into these same libraries, or you can allocate additional ISPF data sets.
- If you have a personal set of ISPF libraries, you can copy the Db2 Object Comparison Tool ISPF libraries to these data sets. To verify that you have allocated (performed a LIBDEF) the correct ISPF libraries, you

can use the ISPF command ISPLIBD. You can also use the TSO ALTLIB DISPLAY command to verify the CLIST and EXEC library allocations.

A compare job can be run either in batch or online. Compare jobs that run online require access to the DSNHDECP module and access is available only if the DB2 libraries are set up properly. If the DB2 load library data set does not exist in the system LINKLIST, the data set must be added to the STEPLIB of the TSO logon procedure. If the DB2 load library data set does not exist in the system LINKLIST or in the STEPLIB, the following error is returned in the compare output when an online compare is run:

```
Unable to load DB2 DECP module: rc = 8. Compare function is terminated.
```

## Optional: Editing the GOCFB2VB job

The GOCFB2VB job creates variable-blocked (VB) versions of the DB2 Admin and Object Comparison CLIST and EXEC libraries. You might need to edit the job to specify the correct ADB and GOC SAMP datasets.

### Before you begin

The Tools Customizer has generated the GOCFB2VB job.

### About this task

Open the GOCFB2VB job in the ISPF editor.

### Procedure

1. Edit the job step that creates the VB version of the CLIST library.

Here is an example of a job step.

```
//*****  
//*  
//CLIST EXEC PGM=IKJEFT01,  
// PARM=('%ADBFVBV GOCC10.SGOCCLST' ,  
// 'GOCC10.SGOCCLST.VB')  
//SYSEXEC DD DISP=SHR,DSN=ADBC10.SADBSAMP  
//SYSTSPRT DD SYSOUT=*  
//SYSTSIN DD DUMMY  
//SYSPRINT DD SYSOUT=*  
//SYSIN DD DISP=SHR,  
// DSN=ADBC10.SADBSAMP(ADBIEVBV)  
//MEMBERS DD *  
*  
//*
```

- a) Specify the low-level qualifier.

In this example, if SGOCCLST is not the low-level qualifier, type the correct one.

The job creates the GOCC10.*low-level-qualifier*.VB dataset, where *low-level qualifier* is the low-level qualifier that you specify.

2. Edit the job step that creates the VB version of the EXEC library.

Here is an example of a job step.

```

//*****
//*
//EXEC EXEC PGM=IKJEFT01,
// PARM=('%ADBFVBV GOCC10.SGOCEXEC ',
// 'GOCC10.SGOCEXEC.VB')
//SYSEXEC DD DISP=SHR,DSN=ADBC10.SADBSAMP
//SYSTSPRT DD SYSOUT=*
//SYSTSIN DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSIN DD DISP=SHR,
// DSN=ADBC10.SADBSAMP(ADBIEBVB)
//MEMBERS DD *
*
//*

```

a) Specify the low-level qualifier.

In this example, if SGOCEXEC is not the low-level qualifier, type the correct one.

The job creates the GOCC10.*low-level-qualifier*.VB dataset, where *low-level qualifier* is the low-level qualifier that you specify.

3. Save the file.

## What to do next

Submit the job.

## Optional: Customizing JCL

You might need to customize the Db2 Object Comparison Tool JCL to adhere to your installation standards. Most other skeletons will not require configuration. If necessary, you can configure the JCL that is used by Db2 Object Comparison Tool to run DB2 utilities and other DB2 functions by modifying the skeletons in the SADBSLIB and SGOCSLIB libraries.

### About this task

Because member ADBAPY uses ISPF batch for its generated apply job, its skeleton might require more extensive configuration than the other skeletons.

Members of SADBSLIB that might require configuration are:

#### **ADBAPY**

Generate apply job/step (uses ISPF batch)

#### **ADBDCMD**

Execute DB2 commands

#### **ADBEDDL**

Execute DDL files (DROP, CREATE, ALTER)

#### **ADBTCHK**

Generate check data job/step

#### **ADBTHPU**

Generate High Performance Unload job/step

#### **ADBTIMC**

Generate image copy job/step

#### **ADBTREL**

Generate (RE)LOAD job/step

#### **ADBTREO**

Generate REORG job/step

#### **ADBTREN**

Generate RUNSTATS job/step

#### **ADBTUNL**

Generate UNLOAD job/step

**ADBS27AC**

Generate convert job/step

Members of SGOCSLIB that might require configuration are:

**GOCCMP**

Generate compare job/step

**GOCDDB2**

Generate extractions from DB2 catalog for source or target

**GOCDL**

Generate extractions from DDL for source or target

## Optional: Conforming DB2 Administration Tool data set names

---

You can align DB2 Administration Tool data set names with your local data set naming conventions.

### About this task

To align data sets, use the following steps:

1. Modify the ADB2UCUS skeleton that resides in the ISPSLIB library.

When you subsequently run SMP/E to receive and apply SMP/E usermod ADBU002, the updated ISPF JCL skeletons are added to the SADBSLIB library.

2. For testing purposes, copy the ADB2UCUS skeleton to a private skeleton library and make your changes.

This private skeleton library must be allocated first in the ISPSLIB concatenation (using the USERADD parameter of the ADBL CLIST).

3. After testing is complete, use an SMP/E USERMOD to update the DB2 Admin Tool product libraries.

A sample SMP/E USERMOD is provided in member ADBU002 in the SADBSSAMP library. Instructions for completing this step are provided in sample job ADBU002.

You can use the following variables (only a partial list). A complete list is located in SLIB member ADB2UCUT.

**Variable:**

Description:

**&AJDATE**

Julian date (YYDDD)

**&AJDAY**

Julian day (DDD)

**&AYEAR4**

4-digit year (YYYY)

**&AGDATE**

Gregorian date (YYMMDD)

**&ANMON**

Numeric month (MM)

**&ADAY**

Day (DD)

**&AYEAR**

2-digit year (YY)

**&ACMON**

3-character month (XXX)

**&ATIME**

Time (HHMMSS)

**&ATIME7**

Time with tenths of seconds (HHMMSST)

**&ATIME4**

Time without seconds (HHMM)

**&AHOUR**

Hour (HH)

**&AMIN**

Minute (MM)

**&ASEC**

Seconds (SS)

All lines that might require configuration are preceded by SET statements which are indicated by )SET.

**Restrictions:**

- When modifying data set names, be sure that no data set names run beyond column 71 in the ADB2UCUS data set. Any characters beyond column 71 are truncated.
- Data set names, including the periods, cannot be greater than 44 bytes in length. Be sure that generated data set names are not longer than 44 bytes.

**Example**

This example demonstrates several different types of changes to the variable ASYCPY1.

The variable ASYCPY1 is shipped as:

```
)SET ASYCPY1 = &PREFIX..&DB2SYS..IC.&DBNAME..&NAME(+1)
```

To change the high-level qualifier from the current TSO PREFIX to MYHLQ, specify:

```
)SET ASYCPY1 = MYHLQ.&DB2SYS..IC.&DBNAME..&NAME(+1) /* CHANGE HLQ TO FIXED STRING
```

To change the second-level qualifier from the DB2 subsystem ID to TEST, specify:

```
)SET ASYCPY1 = &PREFIX..TEST.IC.&DBNAME..&NAME(+1) /* CHANGE SUBSYSTEM TO 'TEST'
```

To insert a high-level qualifier of MYHLQ in front of the current TSO PREFIX and to remove the DB2 database name, specify:

```
)SET ASYCPY1 = MYHLQ.&PREFIX..&DB2SYS..IC.&NAME(+1) /* CHANGE HLQ TO FIXED STRING,
/* INCLUDE PREFIX, REMOVE DBNAME
```

To use sequential data sets rather than a GDG data set, specify a data set name that contains date and time values to generate unique data set names:

```
)SET ASYCPY1 = &PREFIX..IC.&DBNAME..&NAME..D&AJDATE..T&ATIME
```

## Performance considerations

---

The performance of DB2 Object Comparison Tool can be impacted by several factors.

For optimal performance, avoid these situations:

- Large lists of translation masks
- Comparisons of many objects (especially many views)
- A large number of changes

## Optional: Making Object Comparison Tool available from DB2 Administration Tool

---

You can make the DB2 Object Comparison Tool available from DB2 Admin as part of the DB2 Admin customization process. You can also customize the Object Comparison Tool separately from the customization of DB2 Admin.

### **About this task**

Follow the steps in the *IBM DB2 Administration Tool for z/OS User's Guide and Reference*, Chapter 2, *Starting and preparing Tools Customizer for use*.

## Chapter 4. Comparing Db2 objects

Db2 Object Comparison Tool walks you through the options for comparing Db2 objects. Then, based on those options, the tool generates comparison batch jobs that you can save and reuse.

### Before you begin

Make sure that the **Get DB2 ZPARM** field (the GETDB2ZP parameter) on the **DB2 Admin Defaults (ADB2P2) panel** is set to YES. This option enables Object Comparison Tool to get Db2 subsystem parameter values by calling the stored procedure ADMIN\_INFO\_SYSPARM. These values are needed so that Object Comparison Tool can write a version file for each object that is being compared. *Version files* are snapshots of an object at a particular time and include the object definition.

If you plan to request that Object Comparison Tool also generate apply jobs, make sure that you are connected to the target Db2 subsystem. This prerequisite ensures that the apply jobs use the correct libraries. If you are connected to a different Db2 subsystem, you must manually update the apply jobs to use the correct Db2 libraries. *Apply jobs* are jobs that apply to the target any changes that are found during the comparison.

### Procedure

To compare Db2 objects:

1. On the **DB2 Administration Menu (ADB2) panel**, specify option C to open the Object Comparison Tool:

```
Compare ----- DB2 Object Comparison Tool Menu ----- 09:38
Option ==>                                     Specification Status:

          Specification Status:
1 - Specify compare source (new)                Incomplete
2 - Specify compare target (old)                Incomplete
3 - Specify compare masks                       None specified
4 - Specify ignores                             Using defaults
5 - Generate compare job                        Not generated

W - Walk through steps 1 - 5 in sequence
V - Generate job to extract version file from source only

R - Reset all
RS - Reset source
RT - Reset target

S - Save dialog
M - Manage/Restore dialog
MC- MultiCompare
MR- Manage saved compare results
```

Figure 10. **DB2 Object Comparison Tool Menu (GOCMENU) panel**

2. On the **DB2 Object Comparison Tool Menu (GOCMENU) panel**, specify options for the comparison by completing one of the following actions:

#### Action

##### Complete options 1 through 5

#### Description

Select options 1 through 4 to specify attributes of the Db2 objects to compare. Then use option 5 to specify the parameters to use for the batch compare job. You must specify a source and at least one target object before using option 5 to generate a job.

The **Status** field indicates the selections that you have made. Press PF1 to display online help for the menu.

**Action****Specify the W option****Description**

Specify the W option to proceed directly to each step in options 1 through 5 in succession without returning to the **DB2 Object Comparison Tool Menu (GOCMENU) panel** and selecting the next option manually. When using the W option, the final panel for the current option contains a Continue command that you can use to display the next panel in the sequence.

3. Run the generated batch job.

## DB2 Object Comparison Tool Menu options

---

Use the DB2 Object Comparison Tool Menu options to specify the criteria for the comparison that you want to run.

The DB2 Object Comparison Tool Menu options are:

**1 - Specify compare source (new)**

Select this option to begin specifying the DB2 source objects to be compared.

[“Specifying source object definitions to be compared” on page 62](#) describes these panels.

**2 - Specify compare target (old)**

Select this option to begin specifying the DB2 target objects to be compared.

[“Specifying target objects to be compared” on page 88](#) describes the panels that are associated with this task.

**3 - Specify compare masks**

Select this option to specify that names and qualifiers are to be translated by using masks before the comparison is performed.

[“Specifying compare masks” on page 90](#) describes the panels that are associated with this task.

**4 - Specify fields to ignore**

Select this option to specify that certain fields should be ignored when the comparison is performed.

[“Specifying compare ignore fields” on page 98](#) describes the panels that are associated with this task.

**5 - Generate compare job**

Select this option to generate the batch compare job.

[“Generating a compare batch job” on page 105](#) describes these panels.

**W - Walk through steps 1 – 5 in sequence**

Select this option to proceed directly to each step in succession without returning to the DB2 Object Comparison Tool Menu and selecting them individually. See [Chapter 4, “Comparing Db2 objects,” on page 59](#) for more information about this process.

**V - Generate job to extract version file from source only**

Select this option to generate a batch job that creates a version file from the source only. The version file can be used for subsequent compare operations, using this version as the source or target. This option can be used to:

- Create a version file on one system
- Transfer the version file to another system
- Generate a compare job on the other system

**R - Reset status**

Select this option to clear the Status fields and enter your specifications again.

**S - Save dialog**

Select this option to store the current selections for later retrieval and subsequent reuse. Refer to [“Saving dialogs” on page 139](#) for information about how to save a dialog.

**M - Manage/Restore dialog**

Select this option to retrieve, rename, or delete a previously saved dialog. Refer to [“Managing and restoring dialogs” on page 140](#) for information about how to use the Manage and Restore dialog functions.

**MC - MultiCompare**

Select this option to compare one or more saved dialogs. Refer to [“Comparing multiple sources and targets” on page 141](#) for information about comparing multiple objects.

**MR - Manage saved compare results**

Select this option to manage and view the saved compare results.

## The Version File Conversion utility

---

Use the Version File Conversion utility to convert a file from one version to the highest level of Db2 that is supported by the current version of DB2 Admin tool and DB2 Object Comparison Tool.

Each version of the Db2 Admin Tool tool and Db2 Object Comparison Tool establishes a range of supported version file levels. The Version File Conversion utility converts a version file within the established range to the current level before it is processed. In contrast, if an unconverted version file that is within the established range is passed to Db2 Object Comparison Tool, the tool can process the version file but requires more conversion time. The Version File Conversion utility also converts the version file catalog records to the highest level of Db2 that is supported by the current version of Db2 Admin Tool tool and Db2 Object Comparison Tool. The original version file is unchanged by Db2 Object Comparison Tool.

If the version file is within the supported range, the Version File Conversion Tool can permanently upgrade the file to the current supported level. A converted version file can be used by Db2 Object Comparison Tool immediately, saving the time that the conversion would require.

The Version File Conversion tool is started using a batch job. Sample JCL is provided in the SAMP library ADBVFCO member. The JCL must be tailored to your installation before use.

The tool can be used to convert version files that are stored in sequential data sets, PDS data sets, and PDSE data sets. It can also convert base versions that are stored using Db2 Admin Tool Tool.

Input to the Version File Conversion Tool is specified using the VFLIST DD statement. For a sequential to sequential data set conversion, specify the existing version file with the VFOLD keyword and the new version file with the VFNEW keyword. For example:

```
VFOLD='C386799.DT27760.C.VERSION(SOURCE00)', VFNEW='C386799.DT27760.C.SOURCE00';
VFOLD='Z9.ORDER.VERSION(MAY29)', 'Z9.ORDER.VERSION(JUNE17)';
```

The sequential data sets named must be allocated and cataloged first. If VFOLD or VFNEW are PDS data sets, then the member names must be included. The VFNEW PDS member name can be a new name; however, the VFOLD and VFNEW cannot have the same name. The data set must not contain any sequence numbers in columns 72 - 80.

You can convert a base version file in one of two ways: VOWNER and VNAME or by VID. Change Management option 4.1 lists all base version files that are stored in Db2 Admin Tool. VOWNER, VNAME, and VID are three of the fields that are listed for each base version. A base version file can be described by VOWNER='owner\_name', VNAME='version\_file\_name'; or by VID=nnn. The converted base version replaces the original version only if no errors are detected.

A base version file can be converted and stored in a sequential, PDS, or PDSE data set. To convert a file, specify the base version file using VOWNER and VNAME or VID and specify the output data set using VFNEW. DB2 Object Comparison Tool converts the base version file to the current level and writes it to the data set specified by VFNEW. The original base version file remains unchanged.

The Version File Conversion tool processes each version file sequentially. If an error is detected, an error message is issued and processing is halted for the version file in error. The next version file is then processed.

## Specifying source object definitions to be compared

The first step in defining the attributes of the DB2 objects to compare is to specify if the source object is from a DDL file, from the DB2 catalog, or from a compare version file. Use the **Specify Compare Source** panel to define these attributes.

### About this task

Use the following steps to specify the source object definitions:

1. Select option 1 from the DB2 Object Comparison Tool Menu to display the **Specify Compare Source** panel:

```
GOC1 re ----- Specify Compare Source ----- 17:01
Option ==> VS

  1 - Source is from a DDL file
  2 - Source is from the DB2 catalog
  3 - Source is from a compare version file

VS - Source is from the DB2 catalog and the objects are selected from
    a version scope

Exclude Specification:
Owner . . . . . > (Optional, default is ELACZ, ? to lookup)
Name . . . . . > (Required, ? to lookup)
Edit objects . . . . YES (Yes/No)
```

Figure 11. Specify Compare Source panel (GOC1)

2. Specify the source definition for the DB2 objects that will be used in the compare job that you are creating:
  - Select option 1 to specify that the definition of the source DB2 objects is from a DDL file, that is, a file that contains SQL CREATE statements.
 

[“Specifying that the source is a DDL file” on page 63](#) describes the panels that are associated with this option.
  - Select option 2 to specify that the definition of the source DB2 objects is from an extract from the DB2 catalog, that is, an extract of one or more databases, table spaces, or tables and all the dependent objects.
 

[“Specifying that the source is from an extract from the Db2 catalog” on page 80](#) describes the panels that are associated with this option.
  - Select option 3 to specify that the definition of the source of DB2 objects is from a previously created version file.
 

[“Specifying the input version file data set name” on page 79](#) describes the panels that are associated with this option.
  - Select option VS to specify that the source is from the DB2 catalog and the objects are selected from a version scope.
 

[“Specifying that the source is a version scope” on page 82](#) describes the panels that are associated with this option.
3. Enter the values for the subsequent panels and press Enter to return to the DB2 Object Comparison Tool Menu.

## Procedure

1. On the DB2 Object Comparison Tool Menu, specify option 1, and press Enter.

The **Specify Compare Source** panel is displayed, as shown in the following figure:

```

GOC1 re ----- Specify Compare Source ----- 17:01
Option ==> VS

  1 - Source is from a DDL file
  2 - Source is from the DB2 catalog
  3 - Source is from a compare version file

VS - Source is from the DB2 catalog and the objects are selected from
    a version scope

Exclude Specification:
Owner . . . . . > (Optional, default is ELACZ, ? to lookup)
Name . . . . . > (Required, ? to lookup)
Edit objects . . . . YES (Yes/No)
  
```

Figure 12. Specify Compare Source panel (GOC1)

2. Specify one of the following source definitions for the DB2 objects that will be used in the compare job that you are creating, and press Enter.

Option	Description
<b>1</b>	Specifies that the definition of the source DB2 objects is from a DDL file, that is, a file that contains SQL CREATE statements. For more information about the panels that are associated with this option, see <a href="#">“Specifying that the source is a DDL file” on page 63.</a>
<b>2</b>	Specifies that the definition of the source DB2 objects is from an extract from the DB2 catalog, that is, an extract of one or more databases, table spaces, or tables and all the dependent objects. For more information about the panels that are associated with this option, see <a href="#">“Specifying that the source is from an extract from the Db2 catalog” on page 80.</a>
<b>3</b>	Specifies that the definition of the source of DB2 objects is from a previously created version file. For more information about the panels that are associated with this option, see <a href="#">“Specifying the input version file data set name” on page 79.</a>
<b>VS</b>	Specifies that the source is from the DB2 catalog and the objects are selected from a version scope. For more information about the panels that are associated with this option, see <a href="#">“Specifying that the source is a version scope” on page 82.</a>

## Specifying that the source is a DDL file

Select the Specifying source DDL file definitions option to specify the data set name of the DDL file that contains the objects to compare, the data set name of the version file in which you want to put the definition of these objects, and an optional description of the objects that you are comparing.

## Procedure

1. On the **DB2 Object Comparison Tool Menu** panel, specify option 1, and press Enter.

The **Specify Compare Source** panel is displayed, as shown in the following figure:

```

GOC1 re ----- Specify Compare Source ----- 17:01
Option ==> VS

  1 - Source is from a DDL file
  2 - Source is from the DB2 catalog
  3 - Source is from a compare version file

VS - Source is from the DB2 catalog and the objects are selected from
    a version scope

Exclude Specification:
Owner . . . . . > (Optional, default is ELACZ, ? to lookup)
Name . . . . . > (Required, ? to lookup)
Edit objects . . . . YES (Yes/No)

```

Figure 13. Specify Compare Source panel (GOC1)

2. Specify option 1, and press Enter.

If Change Management is enabled on your system, the **Specify DDL File** panel is displayed, as shown in the following figure. If Change Management is not enabled, the **Owner** and **Name** fields are not available on this panel.

```

Compare ----- Specify DDL File -----
Option ==>

Specify input DDL file:                                     More: +
  DDL data set . .

Specify compare version file output:
  Version table entry:
  Owner . . . . . (? to look up)
  Name . . . . . (? to look up)
  Data set:
  Data set name .

Enter a description (optional):
  Description . .

-----
| ----- DB2 Object Compare Warning ----- |
| You have asked to generate a version file, but the source for these |
| objects is a DDL file. If this DDL does not include all dependent objects |
| and authorizations, any subsequent comparison with this version file |
| may lead to loss of these dependent objects. Press ENTER to continue |
| or END to stop this operation. |
| Please read this carefully |
| ----- |
-----

```

Figure 14. Specify Source DDL File panel (GOC11)

3. In the **DDL data set** field, specify the name of the data set that contains the SQL that defines the objects to compare.

The data set must contain valid SQL statements and must adhere to TSO naming conventions. The data set can be either of these types:

- A fixed-block sequential data set (RECFM=Fx, LRECL=80)
- A member of a partitioned data set with a logical record length of 80 (RECFM=Fx, LRECL=80)

The SQL statements that define the objects must be in columns 1-72 of the data set.

Elements of a DDL statement can span records in the data set. Column 1 of a record is considered to immediately follow column 72 of the previous record. This convention can be used for long names or long string constants.

4. Determine whether you are using change management, and complete the corresponding steps.

Option	Description
<p><b>You are using change management.</b></p>	<p>Specify values in the version table <b>Owner</b> and <b>Name</b> fields. To display the CM Versions panel (ADB2C41) from which you can select a version file from the Change Management database, specify a question mark (?) in the field.</p> <p><b>Important:</b> If you select the option to store the version file in the database, an additional step is created in the compare job to store the version file for both the source and target objects in the database. If both the database and the data set are specified, the information in the data set field is used to determine the output destination for the version file.</p> <p>For more information about change management, see the <i>IBM DB2 Administration Tool for z/OS User's Guide</i>.</p>
<p><b>You are not using change management.</b></p>	<p>Specify the name of the output data set for the version file in the <b>Data set name</b> field. The Db2 Object Comparison Tool DDL extract program extracts the definitions and puts them into this data set; this data set becomes input to the compare process. If an existing data set is specified, it is overwritten. The specified data set must be one of the following types:</p> <ul style="list-style-type: none"> <li>• A variable-block sequential data set</li> <li>• A member of a partitioned data set with a record length of 16K (RECFM=Vx , LRECL=16384)</li> </ul> <p>If the specified version data set does not exist, it is created.</p>

5. Optional: In the **Description** field, specify a description of the DB2 objects that you are comparing. The description is printed in the comparison report, is placed in the header record of the version file, and is used to describe the common properties of the DB2 objects. Any text that you enter is shown in the compare reports.
6. Press Enter.  
The **DB2 Object Comparison Menu** panel is displayed.

#### Related concepts

“Batch DDL file extraction program ” on page 145

The DDL file extraction program interprets a source file of DDL statements that define DB2 objects. The program generates an output file, called a *version file*, that contains records that are similar in format to those in the DB2 catalog that defines the same objects.

## Specifying that the source input is databases from the DB2 catalog

Use the Specify Source DB2 Databases panel to find and select the databases to use as input to the compare process.

### About this task

When you extract databases, the databases and all their dependent objects are extracted, which means that the databases, table spaces, tables, views, indexes, aliases, synonyms, and so forth are extracted.

If the level of the databases is too high, you can extract a table space from the DB2 catalog, and then the databases are not extracted. If you specify each table space, all dependent objects are extracted. The same is true for tables.

### Procedure

1. On the **DB2 Object Comparison Tool Menu** panel, specify option 1, and press Enter.  
The **Specify Compare Source** panel is displayed, as shown in the following figure:

```

GOC1 re ----- Specify Compare Source ----- 17:01
Option ==>

1 - Source is from a DDL file
2 - Source is from the DB2 catalog
3 - Source is from a compare version file

VS - Source is from the DB2 catalog and the objects are selected from
    a version scope

Exclude Specification:
Owner . . . . . > (Optional, default is ELACZ, ? to lookup)
Name . . . . . > (Required, ? to lookup)
Edit objects . . . . YES (Yes/No)

```

Figure 15. Specify Compare Source panel (GOC1)

2. Specify option 2, and press Enter.

If Change Management is enabled on your system, the **Specify DB2 Catalog Extract** panel is displayed, as shown in the following figure. If Change Management is not enabled, the **Owner** and **Name** fields are not available on this panel.

```

Compare ----- Specify DB2 Catalog Extract ----- 11:08
Option ==>

1 - Source is databases from the DB2 catalog
2 - Source is table spaces from the DB2 catalog
3 - Source is tables from the DB2 catalog
4 - Add schema objects to the DB2 Source catalog extract

Specify compare version file output:
Version table entry:
  Owner . . . . . (? to look up)
  Name . . . . . (? to look up)
Data set:
  Data set name . .

Enter a description (optional):
  Description . .

```

Figure 16. Specify DB2 Source Catalog Extract panel (GOC12)

3. Specify option 1, and press Enter.

The **Specify Source DB2 Databases** panel is displayed, as shown in the following figure.

```

Compare ----- Specify Source DB2 Databases ----- Row 1 of 4
Command ==>                                         Scroll ==> PAGE

Commands: RESET
Line commands:
  D - Delete I - Insert

Select Database  Location
      *          *
-----
*          *
  AB          STPLEX4A_DSN8
  ADBDB010    STPLEX4A_DSN8
  ADBCCHD     STPLEX4A_DSN8

```

Figure 17. Specify Source DB2 Databases panel (GOC1D)

The list of databases is empty the first time that this panel is displayed.

The row that contains . . . . . is used only for line commands.

To remove all objects from the list, issue the RESET command.

4. Specify values in the following fields:

**Database**

The name of the source DB2 database. Use the line commands that are shown on the panel to modify the list of objects.

**Location**

A unique location name for an accessible server.

**Restriction:** You cannot compare objects from different locations, so ensure that all selected objects are from the same location.

5. Choose one of the following options:

- Press PF3 to return to the DB2 Object Comparison Tool Menu.
- Specify a partial database name as a DB2 catalog search criteria for the databases to add to the compare process. To do so, issue the Insert line command (I), and press Enter. The **Compare Add Databases** panel is displayed, as shown in the following figure. If you choose this option, go to step 7.

```
Compare ----- DSN8 Compare Add Databases ----- 14:00
Option ==>

Enter the partial name of the database you want to add to the compare
operation:

Partial database name . . : DS%
Location name . . . . . :

Press enter to search for the database.
```

*Figure 18. DB2 Compare Add Database panel (GOC1DA)*

6. Specify values in the following fields, and press Enter.

**Partial database name**

A partial database name by using the wildcard character (%). When a wildcard is used, Db2 Object Comparison Tool searches the DB2 catalog for databases that match the partial name and any values in the place of the wildcard.

**Location name**

A unique location name for an accessible server. If you do not specify a location name, the location name of the current server is used.

The **Compare Add Databases** panel is displayed, as shown in the following figure. It contains the DB2 databases that match the partial database name specified in DB2 Compare Add Database panel.

```

Compare ----- DSN8 Compare Add Databases ----- Row 1 of 24
Command ==>                                         Scroll ==> PAGE

Valid line commands are:                            Location: STPLEX4A_DSN8
S - Select (add)

Select Database Action
      *          *
-----
S      DSG24D0G
      DSG24D0X
S      DSG24D1Z
      DSNAE71A
      DSNAE71P
      DSNATPDB
      DSNDB04
      DSNDB06
      DSNDB07
      DSNDFSM
      DSNRGFDB
      DSNRLST
      DSNRTSDB
      DSN8CDDB
      DSN8D71L
      DSN8TEMP

```

Figure 19. DB2 Compare Add Databases panel 1 (GOC1DD)

This panel contains the following columns:

**Database**

All of the databases that match the partial name you specified in the DB2 Add Database panel.

**Action**

The action that was performed for the corresponding database.

**Location**

Shows the unique location name for an accessible server. If you did not specify a location name, the location name of the current server was used.

7. In the **Select** column, specify S against the database that you want to add to the list of databases to be compared, or issue the ALL command to select all objects in the list, and press Enter.

The **Compare Add Databases** panel shows the result of any actions you took against the databases.

```

Compare ----- DB2 Compare Add Databases ----- Row 1 of 16
Command ==>                                         Scroll ==> PAGE

Valid line commands are:                            Location: STPLEX4A_DSN8
S - Select (add)

Select Database Action
      *          *
-----
*      DSG24D0G Added
      DSG24D0X
      DSG24D1Z Added
      DSNAE71A
      DSNAE71P
      DSNATPDB
      DSNDB04
      DSNDB06
      DSNDB07
      DSNDFSM
      DSNRGFDB
      DSNRLST
      DSNRTSDB
      DSN8CDDB
      DSN8D71L
      DSN8TEMP

```

Figure 20. DB2 Compare Add Databases panel 2 (GOC1DD)

In this case, databases DSG24D0G and DSG24D1Z were added to the list of databases to be compared.

### Related tasks

“Specifying that the source is from an extract from the Db2 catalog” on page 80

Use the Specify DB2 Source Catalog Extract panel to specify the Db2 catalog extract option, a version file output data set, and an optional description of the objects that you are comparing.

## Specifying that the source input is DB2 table spaces

Use the Specify Source DB2 Table Spaces panel to specify the source DB2 table spaces to be used as input to the compare process. The source objects are DB2 tables and all of their dependent objects.

### Procedure

1. On the **DB2 Object Comparison Tool Menu** panel, specify option 1, and press Enter.

The **Specify Compare Source** panel is displayed, as shown in the following figure:

```
GOC1 re ----- Specify Compare Source ----- 17:01
Option ==>

  1 - Source is from a DDL file
  2 - Source is from the DB2 catalog
  3 - Source is from a compare version file

VS - Source is from the DB2 catalog and the objects are selected from
    a version scope

Exclude Specification:
Owner . . . . . > (Optional, default is ELACZ, ? to lookup)
Name . . . . . > (Required, ? to lookup)
Edit objects . . . . YES (Yes/No)
```

Figure 21. Specify Compare Source panel (GOC1)

2. Specify option 2, and press Enter.

If Change Management is enabled on your system, the **Specify DB2 Catalog Extract** panel is displayed, as shown in the following figure. If Change Management is not enabled, the **Owner** and **Name** fields are not available on this panel.

```
Compare ----- Specify DB2 Catalog Extract ----- 11:08
Option ==>

  1 - Source is databases from the DB2 catalog
  2 - Source is table spaces from the DB2 catalog
  3 - Source is tables from the DB2 catalog
  4 - Add schema objects to the DB2 Source catalog extract

Specify compare version file output:
Version table entry:
Owner . . . . . (? to look up)
Name . . . . . (? to look up)
Data set:
Data set name . .

Enter a description (optional):
Description . .
```

Figure 22. Specify DB2 Source Catalog Extract panel (GOC12)

3. Determine whether you are using change management, and complete the corresponding steps.

Option	Description
<p><b>You are using change management.</b></p>	<p>Specify values in the version table <b>Owner</b> and <b>Name</b> fields. To display the CM Versions panel (ADB2C41) from which you can select a version file from the Change Management database, specify a question mark (?) in the field.</p> <p><b>Important:</b> If you select the option to store the version file in the database, an additional step is created in the compare job to store the version file for both the source and target objects in the database. If both the database and the data set are specified, the information in the data set field is used to determine the output destination for the version file.</p> <p>For more information about change management, see the <i>IBM DB2 Administration Tool for z/OS User's Guide</i>.</p>
<p><b>You are not using change management.</b></p>	<p>Specify the name of the output data set for the version file in the <b>Data set name</b> field. The compare DB2 Catalog extract program extracts the definitions and puts them into this data set; this data set becomes input to the compare process. If an existing data set is specified, it is overwritten. The specified data set must be one of the following types:</p> <ul style="list-style-type: none"> <li>• A variable-block sequential data set</li> <li>• A member of a partitioned data set with a record length of 16K (RECFM=Vx , LRECL=16384)</li> </ul> <p>If the specified version data set does not exist, it is created.</p>

4. Optional: In the **Description** field, specify a description of the DB2 objects that you are comparing. The description is printed in the comparison report, is placed in the header record of the version file, and is used to describe the common properties of the DB2 objects. Any text that you enter is shown in the compare reports.
5. Specify option 2, and press Enter.

The **Specify Source DB2 Table Spaces** panel is displayed, as shown in the following figure:

```

Compare ----- Specify Source DB2 Table Spaces ----- Row 1 of 1
Command ==>                                           Scroll ==> PAGE

Commands: RESET
Line commands:
D - Delete I - Insert

          Table
Select Database Space      Location
          *      *      *
-----
          .....

```

Figure 23. Specify Source DB2 Table Spaces panel (GOC1S)

The list of table spaces is empty the first time that you display the Specify Source DB2 Table Spaces panel.

The row that contains ..... is used only for line commands. Use the line commands shown on the panel to modify the list of objects.

To remove all objects from the list, issue the RESET command.

This panel contains the following columns:

**Select**

An input column that you use for line commands.

**Database**

The list of databases resulting from a query run from the **Compare Add Table Spaces** panel. For more information, see the following figure.

**Table Space**

The list table spaces resulting from a query run from the **Compare Add Table Spaces** panel. For more information, see the following figure.

**Location**

The corresponding database location name for an accessible server.

**Restriction:** You cannot compare objects from different locations, so ensure that all selected objects are from the same location.

- In the **Select** column, specify I, and press Enter.

The **Compare Add Table Spaces** panel is displayed, as shown in the following figure:

```
Compare ----- DSN8 Compare Add Table Spaces ----- 14:03
Option ==>

Enter the partial name of the table space you want to add to the compare
operation:

Partial database name . . : DS%
Partial table space name . : F%
Location name . . . . . :

Press Enter to search for the table spaces.
```

Figure 24. Compare Add Table Spaces panel (GOC1SA)

- Specify values in the following fields, and press Enter.

**Partial database name**

A partial database name by using the wildcard character (%). When a wildcard is used, Db2 Object Comparison Tool searches the DB2 catalog for databases that match the partial name and any values in the place of the wildcard.

**Partial table space name**

A partial table space name by using the wildcard character (%). When a wildcard is used, Db2 Object Comparison Tool searches the DB2 catalog for table spaces that match the partial name and any values in the place of the wildcard.

**Location name**

A unique location name for an accessible server. If you do not specify a location name, the location name of the current server is used.

The **Compare Add Table Spaces** panel is displayed, as shown in the following figure. It shows the table spaces that match the partial table space name (F%) that you specified on the preceding panel.

```

Compare ----- DSN8 Compare Add Table Spaces ----- Row 1 of 11
Command ==>                                         Scroll ==> PAGE

Valid line commands are:                               Location: STPLEX4A_DSN8
S - Select (add)

Select Database Table Space Action
----- * * * -----
DSNDB04 FACTLEVE
DSNDB04 FEDEXP
DSNDB04 FEDTEST
DSNDB04 FEST1234
DSNDB04 FIRSTTS1
DSNDB04 FLOAT
DSNDB04 FRED
DSNDB04 FRED2
DSNDB04 FSRCOR
DSNDB04 FSUM2
DSNDB04 FSUM4

```

Figure 25. Compare Add Table Spaces panel (GOC1SD)

This panel contains the following columns:

**Select**

An input column that you can use for line commands.

**Database**

All of the databases that match the partial name you specified in the DB2 Compare Add Database panel.

**Table Space**

All of the table spaces that match the partial name you specified in the DB2 Compare Add Database panel.

**Action**

The action that was performed for the corresponding database.

**Location**

The unique location name for an accessible server. If you did not specify a location name, the location name of the current server was used.

8. In the **Select** column that corresponds to the table space to add to the list of tables spaces to be compared, specify S, or issue the ALL command to select all objects in the list, and press Enter.

**Related tasks**

[“Specifying that the source is from an extract from the Db2 catalog” on page 80](#)

Use the Specify DB2 Source Catalog Extract panel to specify the Db2 catalog extract option, a version file output data set, and an optional description of the objects that you are comparing.

## Specifying that the source input is DB2 tables

Use the Specify Source DB2 Tables panel to specify the source DB2 tables to be used as input to the compare process.

**Procedure**

1. On the **DB2 Object Comparison Tool Menu** panel, specify option 1, and press Enter.

The **Specify Compare Source** panel is displayed, as shown in the following figure:

```

GOC1 re ----- Specify Compare Source ----- 17:01
Option ==>

 1 - Source is from a DDL file
 2 - Source is from the DB2 catalog
 3 - Source is from a compare version file

VS - Source is from the DB2 catalog and the objects are selected from
    a version scope

Exclude Specification:
Owner . . . . . > (Optional, default is ELACZ, ? to lookup)
Name . . . . . > (Required, ? to lookup)
Edit objects . . . . YES (Yes/No)

```

Figure 26. Specify Compare Source panel (GOC1)

2. Specify option 2, and press Enter.

If Change Management is enabled on your system, the **Specify DB2 Catalog Extract** panel is displayed, as shown in the following figure. If Change Management is not enabled, the **Owner** and **Name** fields are not available on this panel.

```

Compare ----- Specify DB2 Catalog Extract ----- 11:08
Option ==>

 1 - Source is databases from the DB2 catalog
 2 - Source is table spaces from the DB2 catalog
 3 - Source is tables from the DB2 catalog
 4 - Add schema objects to the DB2 Source catalog extract

Specify compare version file output:
Version table entry:
  Owner . . . . . (? to look up)
  Name . . . . . (? to look up)
Data set:
  Data set name . .

Enter a description (optional):
  Description . .

```

Figure 27. Specify DB2 Source Catalog Extract panel (GOC12)

3. Determine whether you are using change management, and complete the corresponding steps.

Option	Description
<b>You are using change management.</b>	<p>Specify values in the version table <b>Owner</b> and <b>Name</b> fields. To display the CM Versions panel (ADB2C41) from which you can select a version file from the Change Management database, specify a question mark (?) in the field.</p> <p><b>Important:</b> If you select the option to store the version file in the database, an additional step is created in the compare job to store the version file for both the source and target objects in the database. If both the database and the data set are specified, the information in the data set field is used to determine the output destination for the version file.</p> <p>For more information about change management, see the <i>IBM DB2 Administration Tool for z/OS User's Guide</i>.</p>
<b>You are not using change management.</b>	<p>Specify the name of the output data set for the version file in the <b>Data set name</b> field. The compare DB2 Catalog extract program extracts the definitions and puts them into this data set; this data set becomes input to the compare process. If an existing data set is specified, it is overwritten. The specified data set must be one of the following types:</p>

Option	Description
	<ul style="list-style-type: none"> <li>• A variable-block sequential data set</li> <li>• A member of a partitioned data set with a record length of 16K (RECFM=Vx , LRECL=16384)</li> </ul> <p>If the specified version data set does not exist, it is created.</p>

4. Optional: In the **Description** field, specify a description of the DB2 objects that you are comparing. The description is printed in the comparison report, is placed in the header record of the version file, and is used to describe the common properties of the DB2 objects. Any text that you enter is shown in the compare reports.
5. Specify option 3, and press Enter.

The **Specify Source DB2 Tables** panel is displayed, as shown in the following figure:

```

Compare ----- Specify Source DB2 Tables ----- Row 1 of 1
Command ==>                                         Scroll ==> PAGE

Commands: RESET
Line commands:
D - Delete I - Insert

Select Owner      Table Name      Location
   *              *                *
-----
.....

```

Figure 28. Specify Source DB2 Tables panel (GOC1T)

The list of tables is empty the first time that you display this panel.

The row that contains ..... is used only for line commands. Use the line commands that are shown on the panel to modify the list of objects.

To remove all objects from the list, issue the RESET command.

This panel contains the following columns:

**Select**

An input column that you use for line commands.

**Owner**

The list of database table owners resulting from a query run from the **Compare Add Tables** panel. See the following figure.

**Table Name**

The list of table names resulting from a query run from the **Compare Add Tables** panel. See the following figure.

**Location**

The corresponding database location name for an accessible server.

**Restriction:** You cannot compare objects from different locations, so ensure that all selected objects are from the same location.

6. In the **Select** column, specify I, and press Enter.

The **Compare Add Tables** panel is displayed, as shown in the following figure:

```

Compare ----- DSN8 Compare Add Tables ----- 14:05
Option ==>

Enter the partial owner and name of the table you want to add to the compare
operation:

  Partial table owner . . . : RAJESHR
  Partial table name . . . : MY%
  Location name . . . . . :

Press Enter to search for the tables.

```

Figure 29. Compare Add Tables panel 1 (GOC1TA)

7. Specify values in the following fields, and press Enter.

**Partial table owner**

A partial table owner by using the wildcard character (%). When a wildcard is used, Db2 Object Comparison Tool searches the DB2 catalog for tables that match the partial owner name and any values in the place of the wildcard

**Partial table name**

A partial table name by using the wildcard character (%). When a wildcard is used, Db2 Object Comparison Tool searches the DB2 catalog for tables that match the partial name and any values in the place of the wildcard.

**Location name**

A unique location name for an accessible server. If you do not specify a location name, the location name of the current server is used.

The **Compare Add Tables** panel is displayed, as shown in the following figure. It shows the DB2 tables that match the partial table name that you specified in the preceding panel.

```

Compare ----- DSN8 Compare Add Tables ----- Row 1 of 6
Command ==>                                     Scroll ==> PAGE

Valid line commands are:                          Location: STPLEX4A_DSN8
S - Select (add)

Select Owner      Table Name      Action
----- *----- *----- *-----
      RAJESHR     MYTEST
      RAJESHR     MYINVOICE
      RAJESHR     MYINV2
      RAJESHR     MYINV3
      RAJESHR     MYSPECS
      RAJESHR     MYSPECS1

```

Figure 30. Compare Add Tables panel (GOC1TD)

This panel contains the following columns:

**Select**

An input column that you can use for line commands.

**Owner**

All table owner names that match the partial name you specified in the Compare Add Tables panel.

### Table Name

All table names that match the partial name you specified in the Compare Add Tables panel.

### Action

The action that was performed for the corresponding database.

### Location

A unique location name for an accessible server. If the name was not specified, the location name of the current server is used.

8. In the **Select** column that corresponds to the table to add to the list of tables to be compared, specify S, or issue the ALL command to select all objects in the list, and press Enter.

### Related tasks

“Specifying that the source is from an extract from the Db2 catalog” on page 80

Use the Specify DB2 Source Catalog Extract panel to specify the Db2 catalog extract option, a version file output data set, and an optional description of the objects that you are comparing.

## Specifying the source input DB2 schema

Use the Specify Source DB2 Schema panel to specify schema-based objects to be extracted. Schema-based objects are user-defined functions, user-defined types, stored procedures, and sequences.

### About this task

**Requirement:** You must select schema-based objects from the same location as previously selected objects.

After the extraction is complete, you can add schema objects. You can extract user-defined functions, stored procedures, native SQL procedures, and distinct types. If you also have a trigger as a schema-defined object, it is extracted whenever you extract a table where a trigger is defined. Therefore, it is not necessary to define a trigger as a separate object.

You can choose this option separately or as an additional option combined with option 1, 2, or 3 or use it by itself.

### Procedure

1. On the **DB2 Object Comparison Tool Menu** panel, specify option 1, and press Enter.

The **Specify Compare Source** panel is displayed, as shown in the following figure:

```
GOC1 re ----- Specify Compare Source ----- 17:01
Option ==>

 1 - Source is from a DDL file
 2 - Source is from the DB2 catalog
 3 - Source is from a compare version file

VS - Source is from the DB2 catalog and the objects are selected from
    a version scope

Exclude Specification:
Owner . . . . . > (Optional, default is ELACZ, ? to lookup)
Name . . . . . > (Required, ? to lookup)
Edit objects . . . . YES (Yes/No)
```

Figure 31. Specify Compare Source panel (GOC1)

2. Specify option 2, and press Enter.

If Change Management is enabled on your system, the **Specify DB2 Catalog Extract** panel is displayed, as shown in the following figure. If Change Management is not enabled, the **Owner** and **Name** fields are not available on this panel.

```

Compare ----- Specify DB2 Catalog Extract ----- 11:08
Option ==>

  1 - Source is databases from the DB2 catalog
  2 - Source is table spaces from the DB2 catalog
  3 - Source is tables from the DB2 catalog
  4 - Add schema objects to the DB2 Source catalog extract

Specify compare version file output:
Version table entry:
  Owner . . .                (? to look up)
  Name . . .                 (? to look up)
Data set:
  Data set name . .

Enter a description (optional):
  Description . .

```

Figure 32. Specify DB2 Source Catalog Extract panel (GOC12)

3. Determine whether you are using change management, and complete the corresponding steps.

Option	Description
<b>You are using change management.</b>	<p>Specify values in the version table <b>Owner</b> and <b>Name</b> fields. To display the CM Versions panel (ADB2C41) from which you can select a version file from the Change Management database, specify a question mark (?) in the field.</p> <p><b>Important:</b> If you select the option to store the version file in the database, an additional step is created in the compare job to store the version file for both the source and target objects in the database. If both the database and the data set are specified, the information in the data set field is used to determine the output destination for the version file.</p> <p>For more information about change management, see the <i>IBM DB2 Administration Tool for z/OS User's Guide</i>.</p>
<b>You are not using change management.</b>	<p>Specify the name of the output data set for the version file in the <b>Data set name</b> field. The compare DB2 Catalog extract program extracts the definitions and puts them into this data set; this data set becomes input to the compare process. If an existing data set is specified, it is overwritten. The specified data set must be one of the following types:</p> <ul style="list-style-type: none"> <li>• A variable-block sequential data set</li> <li>• A member of a partitioned data set with a record length of 16K (RECFM=Vx , LRECL=16384)</li> </ul> <p>If the specified version data set does not exist, it is created.</p>

4. Optional: In the **Description** field, specify a description of the DB2 objects that you are comparing.

The description is printed in the comparison report, is placed in the header record of the version file, and is used to describe the common properties of the DB2 objects. Any text that you enter is shown in the compare reports.

5. Specify option 4, and press Enter.

The **Specify Source DB2 Schema** panel is displayed, as shown in the following figure:

```

Compare ----- Specify Source DB2 Schema ----- Row 1 of 4
Command ==>                                         Scroll ==> PAGE

Commands: Reset
Line commands:
D - Delete I - Insert

      Schema
Select Name      Location
      *          *
-----
      .....

```

Figure 33. Specify Source DB2 Schema panel (GOC1C)

The list of schemas is empty the first time that you display this panel.

The row that contains ..... is used only for line commands. Use the line commands that are shown on the panel to modify the list of objects.

To remove all objects from the list, issue the RESET command.

This panel contains the following columns:

**Select**

An input column that you use for line commands.

**Schema Name**

The list of schema names resulting from a query run from the **Compare Add Table Spaces** panel.

**Location**

The corresponding database location name for an accessible server.

**Restriction:** You cannot compare objects from different locations, so ensure that all selected objects are from the same location.

6. In the **Select** column, specify I, and press Enter.

The **Compare Add Schema** panel is displayed, as shown in the following figure:

```

Compare ----- DSN8 Compare Add Schema ----- 14:08
Option ==>

Enter the partial name of the schema you want to add to the compare operation:

Partial schema name . . . : R%
Location name . . . . . :

Press Enter to search for the schema.

```

Figure 34. Compare Add DB2 Schema panel (GOC1CA)

7. Specify values in the following fields, and press Enter.

**Partial schema name**

A partial schema name by using the wildcard character (%). When a wildcard is used, Object Comparison Tool searches the DB2 catalog for databases that match the partial name and any values in the place of the wildcard.

### Location name

A unique location name for an accessible server. If you do not specify a location name, the location name of the current server is used.

8. in the **Select** column that corresponds to the schema that you want to add to the list of schemas to be compared, specify S, or issue the ALL command to select all objects in the list, and press Enter.

## Specifying the input version file data set name

Select the Specifying the input version file data set name option to specify the data set name of the version file that is to be used as input to the compare process (source or target).

### Procedure

1. On the **DB2 Object Comparison Tool Menu** panel, specify option 1, and press Enter.

The **Specify Compare Source** panel is displayed, as shown in the following figure:

```
GOC1 re ----- Specify Compare Source ----- 17:01
Option ==>

  1 - Source is from a DDL file
  2 - Source is from the DB2 catalog
  3 - Source is from a compare version file

VS - Source is from the DB2 catalog and the objects are selected from
    a version scope

Exclude Specification:
Owner . . . . . > (Optional, default is ELACZ, ? to lookup)
Name . . . . . > (Required, ? to lookup)
Edit objects . . . . YES (Yes/No)
```

Figure 35. Specify Compare Source panel (GOC1)

2. Specify option 3, and press Enter.

If Change Management is enabled on your system, the **Specify Source Compare Version File** panel is displayed, as shown in the following figure. If Change Management is not enabled, the **Owner** and **Name** fields are not available on this panel.

```
Compare ----- Specify Source Compare Version File -----
Command ==>

Specify compare version file (Source):
Version table entry:
  Owner . . . . . > (? to look up)
  Name . . . . . > (? to look up)

Data set:
Data set name . . .
```

Figure 36. Specify Source Compare Version File panel (GOC13)

3. Determine whether you are using change management, and complete the corresponding steps.

Option	Description
<b>You are using change management.</b>	Specify values in the version table <b>Owner</b> and <b>Name</b> fields. To display the CM Versions panel (ADB2C41) from which you can select a version file from the Change Management database, specify a question mark (?) in the field.  <b>Important:</b> If you select the option to store the version file in the database, an additional step is created in the compare job to store the version file for both the

Option	Description
	<p>source and target objects in the database. If both the database and the data set are specified, the information in the data set field is used to determine the output destination for the version file.</p> <p>For more information about change management, see the <i>IBM DB2 Administration Tool for z/OS User's Guide</i>.</p>
<p><b>You are not using change management.</b></p>	<p>Specify the name of the output data set for the version file in the <b>Data set name</b> field. The compare DB2 Catalog extract program extracts the definitions and puts them into this data set; this data set becomes input to the compare process. If an existing data set is specified, it is overwritten. The specified data set must be one of the following types:</p> <ul style="list-style-type: none"> <li>• A variable-block sequential data set</li> <li>• A member of a partitioned data set</li> </ul> <p>The data set must have a record length of 16K (RECFM=Vx, LRECL=16384). The records in this data set must be the output from running an extract of either a DDL file or objects in the DB2 catalog.</p> <p>If the specified version data set does not exist, it is created.</p>

4. Optional: In the **Description** field, specify a description of the DB2 objects that you are comparing. The description is printed in the comparison report, is placed in the header record of the version file, and is used to describe the common properties of the DB2 objects. Any text that you enter is shown in the compare reports.
5. Press Enter.  
Your input is processed, and the **DB2 Object Comparison Tool Menu** panel is displayed.

#### Related tasks

[“Specifying that the source is from an extract from the Db2 catalog” on page 80](#)

Use the Specify DB2 Source Catalog Extract panel to specify the Db2 catalog extract option, a version file output data set, and an optional description of the objects that you are comparing.

## Specifying that the source is from an extract from the Db2 catalog

Use the Specify DB2 Source Catalog Extract panel to specify the Db2 catalog extract option, a version file output data set, and an optional description of the objects that you are comparing.

### Procedure

1. On the **DB2 Object Comparison Tool Menu** panel, specify option 1, and press Enter.  
The **Specify Compare Source** panel is displayed, as shown in the following figure:

```

GOC1 re ----- Specify Compare Source ----- 17:01
Option ==>

 1 - Source is from a DDL file
 2 - Source is from the DB2 catalog
 3 - Source is from a compare version file

VS - Source is from the DB2 catalog and the objects are selected from
    a version scope

Exclude Specification:
Owner . . . . . > (Optional, default is ELACZ, ? to lookup)
Name . . . . . > (Required, ? to lookup)
Edit objects . . . . YES (Yes/No)

```

Figure 37. Specify Compare Source panel (GOC1)

2. Specify option 2, and press Enter.

If Change Management is enabled on your system, the **Specify DB2 Catalog Extract** panel is displayed, as shown in the following figure. If Change Management is not enabled, the **Owner** and **Name** fields are not available on this panel.

```

Compare ----- Specify DB2 Catalog Extract ----- 11:08
Option ==>

 1 - Source is databases from the DB2 catalog
 2 - Source is table spaces from the DB2 catalog
 3 - Source is tables from the DB2 catalog
 4 - Add schema objects to the DB2 Source catalog extract

Specify compare version file output:
Version table entry:
  Owner . . . . . (? to look up)
  Name . . . . . (? to look up)
Data set:
  Data set name . .

Enter a description (optional):
  Description . .

```

Figure 38. Specify DB2 Source Catalog Extract panel (GOC12)

3. Determine whether you are using change management, and complete the corresponding steps.

Option	Description
<b>You are using change management.</b>	<p>Specify values in the version table <b>Owner</b> and <b>Name</b> fields. To display the CM Versions panel (ADB2C41) from which you can select a version file from the Change Management database, specify a question mark (?) in the field.</p> <p><b>Important:</b> If you select the option to store the version file in the database, an additional step is created in the compare job to store the version file for both the source and target objects in the database. If both the database and the data set are specified, the information in the data set field is used to determine the output destination for the version file.</p> <p>For more information about change management, see the <i>IBM DB2 Administration Tool for z/OS User's Guide</i>.</p>
<b>You are not using change management.</b>	<p>Specify the name of the output data set for the version file in the <b>Data set name</b> field. The compare DB2 Catalog extract program extracts the definitions and puts them into this data set; this data set becomes input to the compare process. If an existing data set is specified, it is overwritten. The specified data set must be one of the following types:</p>

Option	Description
	<ul style="list-style-type: none"> <li>• A variable-block sequential data set</li> <li>• A member of a partitioned data set with a record length of 16K (RECFM=Vx , LRECL=16384)</li> </ul> <p>If the specified version data set does not exist, it is created.</p>

4. Optional: In the **Description** field, specify a description of the Db2 objects that you are comparing. The description is printed in the comparison report, is placed in the header record of the version file, and is used to describe the common properties of the Db2 objects. Any text that you enter is shown in the compare reports.

5. Specify one of the following options for the source:

Option	Description
<b>1</b>	Finds and selects the databases to use as input to the compare process. For more information, see <a href="#">“Specifying that the source input is databases from the DB2 catalog” on page 65.</a>
<b>2</b>	Finds and selects the table spaces to use as input to the compare process. For more information, see <a href="#">“Specifying that the source input is DB2 table spaces” on page 69.</a>
<b>3</b>	Finds and selects the tables to use as input to the compare process. For more information, see <a href="#">“Specifying that the source input is DB2 tables” on page 72.</a>
<b>4</b>	Extracts schema-based objects, such as user-defined functions, user-defined types, stored procedures, and sequences. For more information, see <a href="#">“Specifying the source input DB2 schema” on page 76.</a>

6. Press Enter.

The panel that corresponds to the source option that you selected is displayed.

### Related tasks

[“Specifying that the source input is databases from the DB2 catalog” on page 65](#)

Use the Specify Source DB2 Databases panel to find and select the databases to use as input to the compare process.

[“Specifying that the source input is DB2 table spaces” on page 69](#)

Use the Specify Source DB2 Table Spaces panel to specify the source DB2 table spaces to be used as input to the compare process. The source objects are DB2 tables and all of their dependent objects.

[“Specifying that the source input is DB2 tables” on page 72](#)

Use the Specify Source DB2 Tables panel to specify the source DB2 tables to be used as input to the compare process.

[“Specifying the input version file data set name” on page 79](#)

Select the Specifying the input version file data set name option to specify the data set name of the version file that is to be used as input to the compare process (source or target).

## Specifying that the source is a version scope

You can compare object types by defining a version scope for objects. A version scope can contain databases, table spaces, tables, indexes, views, stored procedures, triggers, and other objects.

### About this task

Version scopes are stored in change management tables. You must be set up with Change Management to use the version scope option. For more information about setting up Change Management, see the *IBM DB2 Administration Tool for z/OS User's Guide and Reference*.

## Procedure

1. On the **DB2 Object Comparison Tool Menu** panel, specify option 1, and press Enter. The **Specify Compare Source** panel is displayed, as shown in the following figure:

```
GOC1 re ----- Specify Compare Source ----- 17:01
Option ==>

  1 - Source is from a DDL file
  2 - Source is from the DB2 catalog
  3 - Source is from a compare version file

VS - Source is from the DB2 catalog and the objects are selected from
    a version scope

Exclude Specification:
Owner . . . . . > (Optional, default is ELACZ, ? to lookup)
Name . . . . . > (Required, ? to lookup)
Edit objects . . . . YES (Yes/No)
```

Figure 39. Specify Compare Source panel (GOC1)

2. Specify option VS, and press Enter.

If Change Management is enabled on your system, the **Specify Source Version Scope** panel is displayed, as shown in the following figure. If Change Management is not enabled, the **Owner** and **Name** fields are not available on this panel.

```
GOC1VS ----- Specify Source Version Scope -----
Command ==>

Specify version scope (Source):
Version Scope entry:
Owner . . . SMITHAJ > (? to look up)
Name . . . ? > (? to look up)
```

Figure 40. Specify Source Version Scope panel (GOC1VS)

**Important:** If you select the option to store the version file in the database, an additional step is created in the compare job to store the version file for both the source and target objects in the database. If both the database and the data set are specified, the information in the data set field is used to determine the output destination for the version file.

For more information about change management, see the *IBM DB2 Administration Tool for z/OS User's Guide*.

3. Specify values in the version table **Owner** and **Name** fields, and press Enter.

To display the CM Versions panel (ADB2C41) from which you can select a version file from the Change Management database, specify a question mark (?) in the field.

The **DB2 Object Comparison Tool Menu** panel is displayed, and the status is shown for the **Version scope specified (DB2 catalog)** field in the Status column.

```

GOCMENU ----- DB2 Object Comparison Tool Menu ----- 17:13
Option ==> 2

1 - Specify compare source (new)          Status:
2 - Specify compare target (old)         Version scope specified (DB2 catalog)
3 - Specify compare masks                Incomplete
4 - Specify fields to ignore             None specified
5 - Generate compare job                 Using defaults
                                         Not generated

W - Walk through steps 1 - 5 in sequence
V - Generate job to extract version file from source only

R - Reset all
RS - Reset source
RT - Reset target

S - Save dialog
M - Manage/Restore dialog
MC - MultiCompare

```

Figure 41. DB2 Object Comparison Tool Menu (GOCMENU)

### Related concepts

[“Batch compare program ” on page 153](#)

The batch compare program is run when you specify options on the **Generate Compare Jobs** panel and generate a compare batch job. This program compares two sets of DB2 objects, reports all differences, and writes all changes to a file. This file is used to generate updates to upgrade target objects to the level of source objects.

### Related tasks

[“Generating a compare batch job” on page 105](#)

A *compare batch job* is a JCL job that performs the requested comparison.

## Exclude objects from the compare process

You exclude objects from the compare process to be more selective about which object types participate or do not participate in the compare process of Db2 Object Comparison Tool.

### The exclude process

Use the **Exclude Specification** panel (ADBPC71) before you compare objects to create a list of objects that Db2 Object Comparison Tool will exclude from the source, target, or both. Specify the objects to be excluded by issuing the ESL line command and proceeding to the **Exclude Objects** panel (ADBPC7L).

**Restriction:** You cannot use the **Exclude Specification** panel when you are analyzing or running a change in Change Management.

You can set the duration for use of an exclude specification. After the date is passed, the exclude specification is eligible for deletion. You can change an auto-delete date by modifying the exclude specification.

The exclude specification on an object does not cascade to its dependent objects. You must list all objects to exclude. For example, the exclusion of a table does not mean that its dependent objects, such as index and view, are also excluded. Any objects to be excluded must be included in an exclude specification, except for history tables. If a temporal table is excluded, then its history table is also excluded. If the history table is specified in exclude specification, then both the temporal and history table are excluded. You can use the wildcard character (\*) when you are specifying object names.

You can edit or delete an exclude object. You can insert or repeat multiple rows by issuing the respective line command followed by the number of rows (up to 99) that you want to insert or repeat. For example, I4 will insert 4 new rows and R6 will repeat the selected row 6 times.

When you specify objects for exclusion, you can also specify authorizations to exclude. You can exclude authorizations independent from the object they are associated with. Authorizations that you select for

exclusion are entered into the exclude specification. When you use the DB2 Admin GEN function, the authorizations are excluded from DDL generation.

Db2 Object Comparison Tool does not add source authorizations to the target if the source authorization does not exist at the target. Instead, a warning is issued. If you exclude authorizations at the source, then no message is issued.

When comparing objects, if an object appears in the target only, the action is to drop the object. However, if the object is excluded, then it is not processed and the object is not dropped at the target. The object is retained. The same action occurs with authorizations. During the compare process, when you exclude an authorization, the authorization that already exists at the target is retained.

An implicit drop occurs when the action of dropping an object results in the drop of a dependent object. For example, you might want to be able to drop a table space, and as a result, also drop the table, index, and other objects dependent on the table space. On the **Generate Compare Jobs** panel (GOC5), you specify if objects can be dropped implicitly. If the option **Allow implicit drop of excluded objects** is specified as yes, then excluded objects can be dropped as needed and are re-created according to the target definition. If the option is NO, then if an excluded object needs to be dropped (perhaps because its parent object was dropped or because its dependent object was dropped), Db2 Object Comparison Tool stops processing the compare, and a severe message is issued.

## Objects you can exclude

To exclude an object, enter the two character code of the object type in the **Exclude Specification** panel. You can exclude objects for the following types:

- AL - Alias
- DB - Database
- DT - Distinct type
- FU - User-defined function
- GV - Global variable
- IX - Index
- RL - Referential constraint
- SC - Schema
- SG - Storage group
- SP - Stored procedure
- SQ - Sequence
- SY - Synonym
- TB - Table
- TG - Trigger
- TS - Table space
- VW - View

If an object type is schema, all UDFs, UDTs, Procedures, Triggers, and Sequences that are part of the schema are excluded. You can also exclude archive tables and archive-enabled tables. When an archive-enabled table is excluded, its corresponding archive table is also excluded, and vice versa. Similarly, when a temporal table is excluded, its history table is also excluded, and vice versa.

To exclude an authorization, specify the two-character code of the authorization type on the **Exclude Specification** panel. You can exclude authorizations for the following types:

- CA - Column authorizations
- TA - Table authorization
- VA - View authorization



## Creating exclude specifications with an initial compare

You create exclude specifications to omit objects from the compare process. You use DB2 Admin Tools to specify objects that you want to exclude from the compare process.

### About this task

Use the **Exclude Specification** panel (ADBPC71) to specify objects to exclude from sources and targets in the Db2 Object Comparison Tool. Excluded objects are treated as though they are not in the source or target. You might want to exclude objects so that Db2 Object Comparison Tool does not adjust processing based specified object.

The following task steps describe how to create exclude specifications from Db2 Object Comparison Tool. You can also create exclude specifications from Change Management.

### Procedure

1. On the DB2 Admin Main Menu, specify option c, and press Enter.  
The **DB2 Object Comparison tool** (GOCMENU) panel is displayed.
2. Select the option to Specify Compare Source or Specify Compare Target and select how you want to create a new exclude specification.

Option	Description
<b>Edit an existing exclude specification</b>	<ol style="list-style-type: none"><li>a. Specify Owner name or specification name. You can enter ? to look up a name from a list.</li><li>b. In the <b>Edit objects</b> field, specify YES.</li><li>c. Press Enter and in the CM - Exclude Specifications (ADBPC71) panel, enter the ESL line command next to a listed specification.</li><li>d. In the CM - Exclude Objects (ADBPC7L) panel, edit, insert, delete, or repeat lines and modify the object names and other information.</li><li>e. Exit and return to the <b>Specify Compare Source</b> or <b>Specify Compare Target</b> panel.</li></ol>
<b>Create a new exclude specification</b>	<ol style="list-style-type: none"><li>a. Type in an owner name and specification name.</li><li>b. In the <b>Edit objects</b> field, specify YES.</li><li>c. Press Enter. In the CM - Exclude Objects (ADBPC7L) panel, insert lines, and type in object names and other information.</li><li>d. Exit and return to the <b>Specify Compare Source</b> or <b>Specify Compare Target</b> panel.</li></ol>

## Creating exclude specifications from stored compare results

You can create exclude specifications by using the saved compare results. You can select objects that you want to include in the exclude specification and exclude from the compare process.

### About this task

Your saved compare results might include objects that you do not want to include in future compares. Use the Db2 Object Comparison Tool to find objects. You select objects to exclude from sources, targets or both, though use of the CM - Compare Results (ADBPCRS) panel.

### Procedure

1. On the DB2 Admin Main Menu, specify option c, and press Enter.  
The **DB2 Object Comparison Tool** (GOCMENU) panel is displayed.

2. Select option MR, and press Enter.
3. In the **Manage Compare Results** (ADBPCR) panel, select the saved compare result that you want to work in.  
The **Compare Results** (ADBPCRS) panel is displayed.
4. From the **Compare Results** (ADBPCRS) panel, type one of the following line commands in the **Select** column, next to a compare result.

Option	Description
<b>EX - Exclude line command</b>	The <b>Create Exclude Specification</b> (ADBPCEX) panel is displayed. You specify owner and name for the exclude specification.
<b>EXS - Exclude from source line command</b>	The <b>Exclude Option</b> (ADBPCL) panel is displayed. You see a list of source objects that are generated from the compare run. You can insert, delete, or repeat lines. You can enter object names and other information.
<b>EXT - Exclude from target line command</b>	The <b>Exclude Option</b> (ADBPCL) panel is displayed. You see a list of target objects that are generated from the compare run. You can insert, delete, or repeat lines. You can enter object names and other information.

```
ADBPCEX n ----- Create Exclude Specification ----- 14:53
Command ==>

Source Exclude Specification:
Owner . . . . . JSMITH > (Optional, default is JSMITH, ? to lookup)
Name . . . . . SRCIESPEC01 > (Required, ? to lookup)
Comment . . . . . >
Eligible for auto-delete . . . 30 (no of days, blank for no auto-delete)

Target Exclude Specification:
Owner . . . . . JSMITH > (Optional, default is JSMITH, ? to lookup)
Name . . . . . TGTIESPEC01 > (Required, ? to lookup)
Comment . . . . . >
Eligible for auto-delete . . . 30 (number of days, blank for no auto-delete)
```

Figure 43. Create Exclude Specification panel (ADBPCEX)

```
ADBPC7L n ----- Exclude Objects ----- Row 1 to 3 of 3
Command ==> Scroll ==> CSR

Exclude specification lines for "JSMITH"."SRCIESPEC01"
Commands: CANCEL
Line commands:
  D - Delete  E - Edit  I - Insert  R - Repeat
                Column/
                Constint  Grantee  Auth
Sel T  Qual   Name           *      *      *      *      *      *
*  *  *      *      *      *      *      *      *
----->----->----->----->----->----->
TB VNRG   TB23367
SA DB23367 TS23367B
SA DB23367 TS23367B
```

Figure 44. Exclude Option panel (ADBPC7L)

## Specifying target objects to be compared

The *target* is the object or objects that you want to compare to the source.

### Procedure

1. On the **DB2 Object Comparison Tool Menu (GOCMENU)** panel, specify option 2, and press Enter.
2. On the **Specify Compare Target (GOC1)** panel, specify a target for the comparison, and press Enter:

```

GOC1 re ----- Specify Compare Target ----- 17:15
Option ==>

1 - Target is from a DDL file
2 - Target is from the DB2 catalog
3 - Target is from a compare version file
4 - Target is from the DB2 catalog and the objects are automatically
   selected based on the selected source objects
VS - Target is from the DB2 catalog and the objects are selected from
    a version scope

Exclude Specification:
Owner . . . . . > (Optional, default is ELACZ, ? to lookup)
Name . . . . . > (Required, ? to lookup)
Edit objects . . . . YES (Yes/No)

```

You can specify one of the following targets:

Option	Description
<b>1</b>	The definition of the target Db2 objects is from a DDL file, which is a file that contains SQL CREATE statements.
<b>2</b>	The definition of the target Db2 objects is to be extracted from the Db2 catalog. The definition is extracted for one or more databases, table spaces, or tables and all the dependent objects.
<b>3</b>	The definition of the target Db2 objects is from a previously created version file.
<b>4</b>	The target Db2 objects are based on the Db2 objects that were selected for the source. Db2 Object Comparison Tool uses the source object names, in combination with masks and renames, to determine the target object names. Object Comparison Tool then extracts the target objects accordingly.  If you specify option 4 and the source is not a table space, objects that exist in the target only might be dropped. You can request that a warning message be issued for this situation by using the <b>Scope Warning Messages</b> option on the <b>Generate Compare Jobs (GOC5) panel</b> or the scope_warning CM batch parameter.
<b>VS</b>	Specifies that the target is from the Db2 catalog and the objects are selected from a version scope.

The process for specifying target objects in options 1 through 3 and option VS is the same as the process for specifying source objects.

If you select option 4, the **Specify Target DB2 Location (GOC14) panel** is displayed.

3. If **Specify Target DB2 Location (GOC14) panel** is displayed, specify the Db2 location name for the target and the name of the output data set for the version file:

```
Compare ----- Specify DB2 Location -----  
Option ==>
```

```
Specify location name: DB8A
```

```
Specify output compare version file:  
Version data set : VERLIB.NEW(V2)
```

```
Enter a description (optional):  
Description . . : APPLICATION V2
```

```
----- DB2 Object Compare Warning -----  
| Target objects will be automatically selected based on the objects you |  
| selected for the source. If the source version file does not include all |  
| dependent objects, any subsequent comparison with the target may lead to |  
| a loss of these dependent objects. To prevent a loss of objects, select |  
| "Suppress DROP of objects" when you generate the compare job(s). |  
| Press ENTER to continue or END to stop this operation. |  
| Please read this carefully |  
-----
```

The specified output data set must be one of the following types:

- A variable-block sequential data set
- A member of a partitioned data set with a record length of 16 KB (RECFM=Vx, LRECL=16384)

If an existing data set is specified, it is overwritten. If the data set does not exist, it is created.

Optionally, in the **Description** field, specify a description of the Db2 objects that you are comparing. The description is included in the comparison report and in the header record of the version file.

Object Comparison Tool determines the set of objects that are defined in the source version file and extracts the definitions of these objects from the Db2 catalog for the target.

### Related tasks

[“Specifying source object definitions to be compared” on page 62](#)

The first step in defining the attributes of the DB2 objects to compare is to specify if the source object is from a DDL file, from the DB2 catalog, or from a compare version file. Use the **Specify Compare Source** panel to define these attributes.

## Specifying compare masks

You can define a mask either in a data set or in a table in the Change Management repository. Storing masks in a data set makes copying mask files easy. Storing masks in a table makes them easy to share, manage, and recover.

### Before you begin

If you plan to define your masks in a table, Change Management must be enabled and the repository tables must be defined as part of the customization process of Db2 Administration Tool.

### About this task

Specifying compare masks is an optional step in the process of [comparing Db2 objects](#).

**Tip:** If you want to mask the schema and the owner, you must specify masks for both schema and owner, even if the values are the same.

### Procedure

To specify compare masks:

1. On the **DB2 Object Comparison Tool Menu (GOCMENU) panel**, specify option 3.
2. If you want to use a table in the Change Management repository for your masks, complete the following steps. Otherwise, if you want to use a data set for your masks, skip to step [“3” on page 92](#).

- a) On the **Specify Compare Masks (GOC3) panel**, specify an owner and name. This name identifies a row in the mask table in the Change Management database. That row contains (or will contain) the masks that you want to use for the comparison operation. You can specify either an existing name to identify an existing row in the mask table or a specify a new name to create a new row in the mask table.

**Tip:** If the **Owner** and **Name** fields are not displayed, Change Management is not enabled. Either enable it or use a data set for your masks (as described in step “3” on page 92).

```
GOC3 re ----- Specify Compare Masks -----
Option ==>

Mask Table Entry:
Owner . . MYID      >      (? to look up)
Name . . MYMASK    >      (? to look up)
Data Set:
Mask DSN . .
Options:
Edit Mask . . YES (Yes/No)
```

Figure 45. **Specify Compare Masks (GOC3) panel**

- b) In the **Edit Mask** field, specify whether you want to edit this set of masks, and press Enter. If the values that you specified in the **Owner** and **Name** fields do not identify an existing set of masks, you must specify YES.

One of the following panels is displayed:

- If you specified the name of an existing set of masks and NO for **Edit Mask**, the **DB2 Object Comparison Tool Menu (GOCMENU) panel** is displayed. Notice that for step 3 - **Specify compare masks**, the **Specification Status** field says **Mask specified**. You have completed specifying your compare masks. You can skip the rest of this procedure and continue the process of [comparing Db2 objects](#).
- If you specified the name of an existing set of masks and YES for **Edit Mask**, the **Mask Lines (ADB2C2L) panel** is displayed. Skip to step “2.f” on page 91.
- If you specified a new name for a set of masks, the **Insert Mask (ADB2C22) panel** is displayed:

```
ADB2C22 n ----- CM - Insert Mask ----- 12:25
Command ==>

Owner . . . MYID      >      (Optional, default is USERID)
Name . . . MYMASK    >      (Required, ? to look up)
Comment . . .                                     >
```

Figure 46. **Insert Mask (ADB2C22) panel**

- c) Optional: In the **comment** field, enter a description for this set of masks.
- d) Press Enter to insert a row into the Change Management repository table for this new set of masks.
- e) Press F3 to go to the **Mask Lines (ADB2C2L) panel** where you can define the masks.
- f) Insert and update lines as needed to define the masks that you want to use for the comparison.

For example, on the following panel, the TBNAME mask specifies that any table names of TB\_TEST are to be translated to TB\_PROD for the comparison. (This mask also affects the child masks SYNNAME, ALNAME, and VWNAME.)

For a complete list of mask names and syntax, see [Mask definition syntax \(IBM DB2 Administration Tool for z/OS\)](#).

```

ADB2C2L n ----- CM - Mask Lines ----- Row 1 to 1 of 1
Command ==>                                     Scroll ==> PAGE

Mask lines for mask "MYID"."MYMASK"
Commands: CANCEL
Line commands:
  I - Insert  D - Delete  R - Repeat  M - Move  A - After  B - Before

Sel Sequence Req Type          From          To          Oper.  T
-----* * * * *-----* * * * *-----* *
-
*          1      TBNAME      TB_TEST          TB_PROD          UPDATE
*          2      COLNAME      CELLNO          MOBILENO          UPDATE
*          3      SINGLECH          +
*          4      ALNAME      ALS+_TEST        ALS+_PROD
***** END OF DB2 DATA *****

```

Figure 47. Mask Lines (ADB2C2L) panel

g) Exit back to the **DB2 Object Comparison Tool Menu (GOCMENU)** panel. Notice that for step **3 - Specify compare masks**, the **Specification Status** field says **Mask specified**. You have completed specifying your compare masks. You can skip the rest of this procedure and continue the process of comparing Db2 objects.

3. If you want to use a data set for your masks:

a) On the **Specify Compare Masks (GOC3)** panel, in the **Mask DSN** field, specify the name of the data set.

You can specify an existing data set that already contains masks or a new data set that you want to use for masks. If the specified data set exists, it is reused. Otherwise, it is created.

The mask data set must adhere to TSO naming conventions and be one of the following types:

- A fixed-block sequential data set (RECFM=Fxx)
- A member of a partitioned data set with a record length of 80 (LRECL=80)

b) In the **Edit Mask** field, specify whether you want to edit the mask data set by using ISPF edit, and press Enter. If the data set is new or does not contain mask definitions, specify YES.

One of the following panels is displayed:

- If you specified NO for **Edit Mask**, the **DB2 Object Comparison Tool Menu (GOCMENU)** panel is displayed. Notice that for step **3 - Specify compare masks**, the **Specification Status** field says **Mask specified**. You have completed specifying your compare masks. You can skip the rest of this procedure and continue the process of comparing Db2 objects.
- If you specified YES for **Edit Mask**, the **Edit Compare Masks (GOCEDIT)** panel is displayed.

c) On the **Edit Compare Masks (GOCEDIT)** panel, add and change mask definitions as needed, and issue the SAVE command.

The following screen shows the **Edit Compare Masks (GOCEDIT)** panel. The message lines (identified by ==MSG) list the available translation mask names. These lines also show the hierarchy of the mask names.

For a complete list of mask names and syntax, see Mask definition syntax (IBM DB2 Administration Tool for z/OS).

```

***** ***** Top of Data *****
==MSG>
==MSG> Mask Syntax:
==MSG>   field:[qual<.name>:]inmask,outmask
==MSG> Fields (hierarchy):
==MSG>   SINGLECH
==MSG>   COLNAME
==MSG>   NAME
==MSG>     DBNAME,TSNAME,IXNAME,UDFNAME,CONSNAME,
==MSG>     UDTNAME,COLLNAME,PKGNAME,PGMNAME,PLNNAME
==MSG>     DBRMNAME,STPNAME,SFNAME,TGNAME,GRPNAME,
==MSG>     VCATNAME,GBPNAME,TCNAME,PMNAME,MKNAME
==MSG>     SEQNAME,GVNAME
==MSG>     TBNAME
==MSG>       SYNNAME,ALNAME,VWNAME
==MSG>     BPNAME
==MSG>       TSBPNAME,IXBPNAME
==MSG>     SGNAME
==MSG>       TSSGNAME,IXSGNAME
==MSG> AUTHID
==MSG>   SQLID
==MSG>   SCHEMA
==MSG>     IXSCHEMA,PMSHEMA,MKSCHEMA,SETPATHSC
==MSG>     TGSHEMA,UDTSHEMA,SEQSHEMA,STPSHEMA
==MSG>     UDFSHEMA,GVSHEMA
==MSG>     TBSHEMA
==MSG>     ALSHEMA,VWSHEMA,SYNSHEMA
==MSG> OWNER
==MSG>   DBOWNER,TSOWNER,IXOWNER,SGOWNER
==MSG>   PKGOWNER
==MSG>   TOWNER
==MSG> GRANTID
==MSG>   GRANTOR,GRANTEE
==MSG> ROLE
==MSG>   DBROLE,TSROLE,TBROLE,IXROLE
==MSG> XMLSCHID
==MSG> WLMENV
==MSG> LOCATION
==MSG>
==MSG> Overwrite Syntax:
==MSG>   Field:inmask,Overwrite_value
==MSG> Fields:           Overwrite values:
==MSG>   COMPRESS        YES,NO,REXX exit (table spaces and indexes)
==MSG>   TSCOMPRES       YES,NO,REXX exit (table spaces only)
==MSG>   IXCOMPRES       YES,NO,REXX exit (indexes only)
==MSG>   SEGSIZE         n (4-64 must be multiple of 4),REXX exit
==MSG>   TSDSSIZE        nG,REXX exit (table spaces only)
==MSG>   IXDSSIZE        nG,REXX exit (indexes only)

```

Figure 48. *Edit Compare Masks (GOCEDIT) panel, part 1*

```

==MSG> PRIQTY n,n%,REXX exit (table spaces and indexes)
==MSG> TSPRIQTY n,n%,REXX exit (table spaces only)
==MSG> IXPRIQTY n,n%,REXX exit (indexes only)
==MSG> SECQTY n,n%,REXX exit (table spaces and indexes)
==MSG> TSSECQTY n,n%,REXX exit (table spaces only)
==MSG> IXSECQTY n,n%,REXX exit (indexes only)
==MSG> DEFER YES,NO,REXX exit (indexes only)
==MSG> DEFINE YES,NO,REXX exit (table spaces and indexes)
==MSG> TSDEFINE YES,NO,REXX exit (table spaces only)
==MSG> IXDEFINE YES,NO,REXX exit (indexes only)
==MSG> HASHSPC nK,nM,nG,REXX exit
==MSG> TBINLOBL n,REXX exit (tables only)
==MSG> DTINLOBL n,REXX exit (distinct types only)
==MSG> AUDIT CHANGES,ALL,NONE,REXX exit (tables only)
==MSG> CLOSE YES,NO,REXX exit (table spaces and indexes)
==MSG> TSCLOSE YES,NO,REXX exit (table spaces only)
==MSG> IXCLOSE YES,NO,REXX exit (indexes only)
==MSG> TRACKMOD YES,NO,REXX exit (table spaces only)
==MSG> DCAPTURE NONE,CHANGES,REXX exit (tables only)
==MSG> FREEPG n,REXX exit (table spaces and indexes)
==MSG> TSFREEPG n,REXX exit (table spaces only)
==MSG> IXFREEPG n,REXX exit (indexes only)
==MSG> PCTFREE n,REXX exit (table spaces and indexes)
==MSG> TSPCTFREE n,REXX exit (table spaces only)
==MSG> IXPCTFREE n,REXX exit (indexes only)
==MSG> TSPCTFUPD n,REXX exit (table spaces only)
==MSG> LOCKMAX n,SYSTEM,REXX exit (table spaces only)
==MSG> ERASE YES,NO,REXX exit (table spaces and indexes)
==MSG> TSERASE YES,NO,REXX exit (table spaces only)
==MSG> IXERASE YES,NO,REXX exit (indexes only)
==MSG> RESONDROP YES,NO,REXX exit (tables only)
==MSG> EDITPROC string,REXX exit (tables only)
==MSG> VALIDPROC string,REXX exit (tables only)
==MSG> TSPARTS n,REXX exit (table spaces)
==MSG> LOGGED YES,NO,REXX exit (table spaces only)
==MSG> LOCKSIZE TABLE,TABLESPACE,PAGE,ROW,LOB,ANY,REXX exit
==MSG> (table space only)
==MSG> MAXROWS n,REXX exit (tables only)
==MSG> GBPCACH SYSTEM,CHANGED,ALL,NONE,REXX exit
==MSG> (table spaces and indexes)
==MSG> TSGBPCACH SYSTEM,CHANGED,ALL,NONE,REXX exit
==MSG> (table spaces only)
==MSG> IXGBPCACH SYSTEM,CHANGED,ALL,NONE,REXX exit
==MSG> (indexes only)
==MSG> VOLATILE YES,NO,REXX exit (tables only)
==MSG> APPEND YES,NO,REXX exit (tables only)
==MSG> PADDED YES,NO,REXX exit (indexes only)
==MSG> COPY YES,NO,REXX exit (indexes only)
==MSG> MEMCLUS YES,NO,REXX exit (table spaces only)
==MSG> FIELDPROC string,REXX exit (tables only)
==MSG> INSALGO n (0-2),REXX exit (table spaces only)
==MSG> SGKEYLABL string,REXX exit (stogroup only)
==MSG> TBKEYLABL string,REXX exit (tables only)

```

Figure 49. **Edit Compare Masks (GOCEDIT) panel, part 2**

```

==MSG>
==MSG> Verification mask Syntax:
==MSG> VER,Field:operand,value(,values),RC=x
==MSG> or
==MSG> VER,rexxFld:REXX(exitproc,parm1,parm2,...parmN)
==MSG> where:
==MSG> Field: Same fields used by overwrites
==MSG> RxxFld Can be one of three options:
==MSG> 1. same fields used by overwrites
==MSG> 2. special REXX only field, OBJNAME or TSPARTS
==MSG> 3. two char object type code listed below:
==MSG> code Object type Catalog record
==MSG> SG Storage group SYSSTOGRUP
==MSG> DB Database SYSDATABASE
==MSG> TS Table space SYSTABLESPACE
==MSG> TB Table SYSTABLES
==MSG> IX Index SYSINDEXES
==MSG> TG Trigger SYSTRIGGERS
==MSG> FK Foreign Key SYSRELS
==MSG> PK Primary key SYSTABCONST
==MSG>
==MSG> CK Check Constraint SYSCHECKS
==MSG> UQ Unique COnstraint SYSTABCONST
==MSG> TYPE = U
==MSG> DT Data type SYSDATATYPES
==MSG> FU Function SYSROUTINES
==MSG> SP Procedure SYSROUTINES
==MSG> SQ Sequence SYSSEQUENCES
==MSG> SY Synonyms SYSSYNONYMS
==MSG> AL Alias SYSTABLES
==MSG> VW View SYSVIEWS
==MSG> GV Global variable SYSVARIABLES
==MSG> TP Table part SYSTABLEPART
==MSG> IP Index part SYSINDEXPART
==MSG> FL Fields SYSFIELDS
==MSG>
==MSG> Operand: EQ - Equal
==MSG> NE - Not equal
==MSG> GT - Greater than
==MSG> LT - Less than
==MSG> LIST - list of values
==MSG> RANGE - range of values from two input values
==MSG> value: same values as overwrite values
==MSG> RC=: return code if expression is not met
==MSG> x: return code value - 0,4,8,12

```

Figure 50. *Edit Compare Masks (GOCEDIT) panel, part 3*

```

==MSG> Notes:
==MSG> - n is a integer value
==MSG> - n% is the integer percentage of the current attribute value
==MSG> - REXX exit takes format of REXX(myexit,val1,val2..valn) where
==MSG> valn is the name of DB2 catalog field (such as DBNAME) or
==MSG> a variable with numeric/string value (such as BPOOL= 'BP1').
==MSG> + in col 72 indicates continuation of REXX exit on next line
==MSG> - To support/migrate DB2V8 masking input,OWNER,TBOWNER and
==MSG> IXOWNER will mask both owner and schema fields.SCHEMA,
==MSG> TBSHEMA and IXSCHEMA will be applied to schema fields only.
==MSG> - For DB2 synonyms, apply DB2 APAR PM42910 in DB2 V9 NFM and
==MSG> above and then use schema as the qualifier. SYNOWNER is
==MSG> migrated into SYNSHEMA. Use SYNSHEMA instead of SYNOWNER.
==MSG> - SINGLECH format is SINGLECH:<character>Y,<escape character>
==MSG> where the single character in mask specification represents
==MSG> any character at that position. If the specified escape
==MSG> character precedes the specified single character, then the
==MSG> single character is treated as literal.
==MSG> - The view, alias and synonym masks (both name and
==MSG> schema/owner) will only apply to the CREATE statement for
==MSG> these objects (e.g. VWNAME only valid for CREATE VIEW).
==MSG> All other usages of these names and schemas are vague and
==MSG> can refer also to table names and schemas. These other
==MSG> usages can only be masked by TBNAME for name and TBSHEMA
==MSG> for schema; therefore, it is recommended to use both VWNAME
==MSG> and TBNAME if view names are being changed for both CREATE
==MSG> VIEW statement and SQL that uses this view.
==MSG> - Use caution when specifying mask field SEGSIZE. This mask
==MSG> field might cause changes to the table space type. For
==MSG> example, specifying the SEGSIZE mask might convert a
==MSG> partitioned table space to a range-partitioned universal
==MSG> table space (UTS). If a table in a UTS has a partitioned
==MSG> index and the partitioned index needs to be recreated, DB2
==MSG> might generate SQLCODE=-662 during execution.
==MSG> - The following masks can not have the object-specific
==MSG> qualifiers listed in the mask syntax:
==MSG> NAME, SCHEMA, SETPATHSC, DBNAME, COLLNAME, SFNAME, GRANTID,
==MSG> GRANTOR, GRANTEE, ROLE, DBROLE, TSROLE, TBROLE, IXROLE,
==MSG> GBPNAME, TCNAME, XMLSCHID, AUTHID, SQLID, SGNAME, OWNER,
==MSG> OWNER, BPNAME, PLNNAME and SINGLECH.
==MSG> - Verification mask checks attributes using expression given
==MSG> and if the expression is false, return code of value given
==MSG> will be issued. If return code is greater than 4,
==MSG> processing will fail after all objects are processed and
==MSG> error messages will be in VALOUT file.
==MSG> - OBJNAME is a special verification mask type that only is
==MSG> allowed with REXX exec syntax. OBJNAME will provide three
==MSG> arguments to REXX exec, object type, object name and object
==MSG> schema.
==MSG> - CK mask will not be triggered for DB2 generated checks like
==MSG> DB2_GENERATED_CHECK_CONSTRAINT_FOR_SYSTEM_TIME and
==MSG> DB2_GENERATED_CHECK_CONSTRAINT_FOR_BUSINESS_TIME
==MSG> - Masks should start in column 1.

```

Figure 51. **Edit Compare Masks (GOCEDIT) panel, part 4**

```

==MSG> Mask examples:
==MSG> OWNER:ABC*,DEF*
==MSG> NAME:PRE*,NPRE*
==MSG> XMLSCHID:P01,P02
==MSG> WLMENV:WLM33,WLM44
==MSG> LOCATION:LOC3*,LOCT*
==MSG> SETPATHSC:SYSIBM,SYSFUN
==MSG> SINGLECH:_
==MSG> SINGLECH:_,+
==MSG>
==MSG> Object-specific mask examples:
==MSG> TBSHEMA:CREATOR1.TB2:CREATOR1,NEW_CRE1
==MSG> IXNAME:IXOWN*.IX3*:IX3*,IX4*
==MSG> IXBPNAME:IXOWN1.INDX2:BP1,BP3
==MSG>
==MSG> Overwrite examples:
==MSG> COMPRESS:MYDB*.MYTS*,YES
==MSG> SEGSIIZE:MYDB*.MYTS*,8
==MSG> DSSIZE:MYDB*.MYTS*,4G
==MSG> PRIQTY:*.*,REXX(MYPRIQTY,DBNAME='MYDBTEST')
==MSG> TSPRIQTY:MYDB*.MYTS*,30
==MSG> IXPRIQTY:MYCR*.MYIX*,25%
==MSG> IXSECQTY:MYCR*.MYIX*,REXX(MYSECQTY,IXNAME,IXCREATOR,PCT=20%)
==MSG> DEFER:USER001.*IXNAME,NO
==MSG> DEFINE:DBNAME*. *TSPC,REXX(MYDEFINE,DEFINE='YES')
==MSG> HASHSPC:TBCREATOR.MYTBNAME,100M
==MSG> TBINLOBL:TBCREATOR.MYTBNAME.COLNAME,16000
==MSG> DTINLOBL:DTCRE*.DTNAME*,16000
==MSG> IXCLOSE:MYCR*.MYIX*,NO
==MSG> AUDIT:MYDB*.MYTB*,CHANGES
==MSG> TRACKMOD:MYDB*.MYTS*,NO
==MSG> DCAPTURE:TBCRE*.MYTB*,NONE
==MSG> FREEPG:ABC*.DEF*,6
==MSG> IXPCTFREE:IXSCH1.IXNAME1,9
==MSG> LOCKMAX:DBTEST2.TSTEST2,SYSTEM
==MSG> TSERASE:DBTEST1.TSTEST1,NO
==MSG> RESONDRP:TBCRE*.MYTB*,NO
==MSG> TSPCTFUPD:DB1.TS1,25
==MSG> INSALGO:DB1.TS1,2
==MSG> SGKEYLABL:SG1,DB2SYS.KEY01
==MSG> TBKEYLABL:TBCRE*.MYTB*,DB2SYS.KEY02
==MSG>
==MSG> Verification mask examples:
==MSG> VER,COMPRESS:EQ,YES,RC=4
==MSG> VER,EDITPROC:NE,PROC1,RC=8
==MSG> VER,TSPARTS:LT,65,RC=8
==MSG> VER,PCTFREE:GT,20,RC=8
==MSG> VER,SEGSIZE:LIST,4,8,12,RC=8
==MSG> VER,PCTFREE:RANGE,0,5,RC=4
==MSG> VER,OBJNAME:REXX(OBJTST)
==MSG> VER,SEGSIZE:REXX(SEGTST,MYSEGSZ)
==MSG> VER,MEMCLUS:EQ,NO,RC=8
==MSG> VER,FIELDPROC:NE,FLDPROC1,RC=8
==MSG> VER,IXCOMPRES:EQ,YES,RC=4
==MSG> VER,TSCOMPRES:REXX(COMPTST,DBNAME,NAME,COMPRESS)
==MSG> VER,TSPCTFUPD:RANGE,10,20,RC=8
==MSG> VER,INSALGO:RANGE,0,2,RC=8
==MSG> VER,TBKEYLABL:NE,DB2SYS.KEY02,RC=8
==MSG>
==MSG> Verification object type mask examples:
==MSG> VER,IX:REXX(VERIX,TBCREATOR,TBNAME,NAME)
==MSG> VER,DB:REXX(VERDB,NAME,CREATOR,BPOOL)
==MSG>
==MSG> Syntax for info about renamed objects/columns:
==MSG> renameobj:old-name,new-name
==MSG> RENAMECOL:table-name.old-colname,new-colname
==MSG> (+ in col 72 indicates continuation on next line col 1)
==MSG> renameobj:
==MSG> RENAMEDB, RENAMETS, RENAMETB, RENAMEIX,
==MSG> RENAMEGV
==MSG> Examples:
==MSG> RENAMETB:OLDOWNER.OLDNAME,NEWOWNER.NEWNAME
==MSG> RENAMECOL:OWNER.MYTB.OLDCOLNAME,NEWCOLNAME
==MSG>
***** Bottom of Data *****

```

Figure 52. *Edit Compare Masks (GOCEDIT) panel, part 5*

- d) When you are done making changes, exit back to the **DB2 Object Comparison Tool Menu (GOCMENU) panel**. Notice that for step 3 - **Specify compare masks**, the **Specification Status** field says **Mask specified**.

### Related concepts

“Translation masks” on page 183

In Object Comparison Tool, you can use translation masks to account for differences in naming conventions between source and target objects when doing a comparison. You can also use masks to overwrite values for object attributes.

### Related reference

“Db2 catalog records and associated masks” on page 190

Masks are applied to information in the Db2 catalog before objects are compared or before the reverse engineering function (GEN) generates DDL.

### Related information

[Masks \(IBM DB2 Administration Tool for z/OS\)](#)

## Specifying compare ignore fields

Specify compare ignore fields when you want to ignore some fields when comparing DB2 catalog records. Use ignore fields when there are differences in source and target objects, but you don't want the compare process to change them.

### About this task

Use the following steps to specify the name of the data set that contains the ignore fields and to indicate whether you want to modify that data set:

1. Select option 4 on the DB2 Object Comparison Tool Menu to display the Specify Compare Ignore Fields panel. If Change Management is enabled on your system, the Specify Compare Ignore Fields panel, as shown in the following figure, is displayed. If Change Management is not enabled, only the Ignore data set and Edit Ignores fields appear on the panel.

```

Compare ----- Specify Compare Ignores -----
Option ==>

Ignore Fields Specification:
Owner . . . . . > (? to look up)
Name . . . . . > (? to look up)
Data Set:
  Data Set Name . .
Options:
  Edit Ignore Fields Specification . . . NO (Yes/No)

Ignore Changes Specification:
Owner . . . . . > (? to look up)
Name . . . . . > (? to look up)
Edit Ignore Changes Specification . . . NO (Yes/No)
Display using a saved compare result . . NO (Yes/No)
  Saved Compare Results:
    Owner . . . . . > (? to look up)
    Name . . . . . > (? to look up)

```

Figure 53. Specify Compare Ignores panel (GOC4)

Refer to “Managing changes to DB2 objects” in *IBM DB2 Administration Tool for z/OS User's Guide and Reference* for additional information about using ignore fields and the Specify Compare Ignore Fields panel when Change Management is enabled.

Complete the Ignore Changes Specification section of the panel if you want to ignore object changes.

2. If you are using Change Management, specify the ignore table owner and name. Use the question mark (?) to look up an existing version file.



**Attention:** If both the ignore table entry and the data set are specified, the information in the data set field is used to determine the output destination for the version file.

3. Specify if you want to edit the ignore fields in the Edit Ignores field and press Enter. If you specify No, the Object Comparison Tool main menu is displayed. If you specify an existing ignore field and Yes to edit, the Specify Ignore Fields: Objects panel is displayed. If you specify Yes and have created a new ignore field to store in the Change Management database, the following figure is displayed:

```
DB2 Admin ----- Create Ignore Specification ----- 12:25
Command ==>

Owner . . . MYID      >  (Optional, default is USERID)
Name  . . . MYIGNORE >  (Required, ? to look up)
Comment . . .                               >
```

*Figure 54. Insert Ignore panel (ADB2C22)*

4. Optionally, enter a comment in the comment field.
5. Press Enter to execute the INSERT statement. A confirmation message is displayed.
6. Press Enter again to display the Specify Ignores Field: Objects panel.
7. Alternatively, if you are not using Change Management, specify the name of the data set that contains the ignore fields to be used during the compare process. The data set must contain ignore fields, must adhere to TSO naming conventions, and be one of the following types:
  - A fixed-block sequential data set
  - A member of a partitioned data set with a logical record length of 80 (RECFM=Fx, LRECL=80)The input must be in columns 1-72 of the ignore data set.
8. Specify whether you want to modify (add or delete fields) the data set and press Enter. If you specify Yes, the Specify Ignore Fields: Objects panel is displayed:

```

Compare ----- Specify Ignore Fields: Objects ----- Row 1 of 17
Command ==>                                           Scroll ==> PAGE

Valid line commands are:
U - Update Ignore Fields

Select Object          Ignore Fields          Qualifier Name
*                    *
-----
GENERIC                None
SYSCHECKS              None
SYSCOLUMNS           COLTYPE, LENGTH, SCALE, DEFAULT, DEFAULTVALUE
SYSDATABASE            CREATOR, STGROUP, BPOOL, INDEXBP
SYSDATATYPES          None
SYSFIELDS              None
SYSINDEXES             None
SYSINDEXPART          PQTY, SQTY, SECQTYI
SYSKEYS                None
SYSPARMS               None
SYSRELS                None
SYSROUTINES            None
SYSSEQUENCES           None
SYSSTOGROUP            VCATNAME
SYSTABLEPART           PQTY, SQTY, SECQTYI
SYSTABLES              STATUS, LABEL          SYSADM   LRC*87
SYSTABLES              LABEL, CHECKRID       SYSADM   LRC*88
SYSTABLES              AUDITING
SYSTABLESPACE          None
SYSTRIGGERS            None
SYSVIEWS                None
SYSVOLUMES             VOLID

```

Figure 55. Specify Ignore Fields: Objects panel (GOCCI)

The Specify Ignore Fields: Objects panel shows the objects and the fields within the objects, if any, that are to be ignored. Several objects have ignore fields defined. For example, for the object SYSDATABASE, the fields CREATOR, STGROUP, BPOOL, and INDEXBP are to be ignored.

The Specify Ignore Fields: Objects panel contains the following fields:

**Object**

This field contains the names of the DB2 catalog tables that describe (part of) the object.

**Ignore Fields**

This field contains the fields to ignore for this DB2 catalog table.

**Qualifier**

The qualifier of the specific object(s) to be ignored.

**Name**

The object name of the specific object(s) to be ignored.

- Issue the U (update) command to modify the ignore fields. The Select Ignore Fields panel for the selected object, is displayed:

```

GOCCIF ----- Select Ignore Fields for SYSINDEXPART ----- Row 1 to 18 of 22

Valid line commands are:
  S - Select (add) field  U - Un-select  R - Repeat row

Select Fields          Action  Qualifier Name
  *                   *      *          *
-----> ----->
AVGKEYLEN
CREATEDTS
DSNUM
EXTENTS
FREEPAGE
GBPCACHE
INDEXTYPE
LEAFFAR
LEAFNEAR
LIMITKEY
OLDEST_VERSION
PARTITION
PCTFREE
PQTY
PSEUDO_DEL_ENTRIES
RBA_FORMAT
SECQTYI
SPACEF

```

Figure 56. Select Ignore Fields panel (GOCCIF)

10. Select the fields that are to be ignored and press Enter. You can narrow down which objects you want to ignore by specifying *qualifier.name* with wildcards in any field. To apply multiple *qualifier.name* combinations to a field, issue the R line command to create additional rows of that field.

**Note:** You can only modify the qualifier and name of a field when that row is selected.

11. Press PF3 to return to the DB2 Object Comparison Tool Menu.

### Related concepts

[“Ignore fields” on page 186](#)

By using ignore fields, you can compare DB2 catalog records while ignoring some fields. Ignore fields are used in situations where you are aware of differences between source and target objects, but you do not want these changes to be recognized and cause a change.

## Creating ignore changes specifications

You can create ignore changes specifications by using the saved compare results. You can select objects changes that you want to include in the ignore changes specification and ignore during the compare process.

### About this task

Your saved compare results might include objects changes that you do not want. Object changes that you specify as ignore are reported but no SQL statement is generated for the change. Only changes that report difference between source object and target object can be ignored. Added and dropped objects can be excluded from compare processing but not ignored.

When you select object changes to be ignored be careful. Many objects and fields in the DB2 catalog records are interdependent. When one change is ignored, another change might be invalid if it is not also ignored. For example, if change to the number of table space partitions is ignored, then other object changes related to partitioning need to be ignored. In this case, changes to the number of partitions in the table, and adding or deleting limit key must also be ignored. LOB columns and LOB objects are another example of interdependencies. If you add a LOB column to a table is ignored, then adding an explicit auxiliary table for the column must also be ignored and its explicit LOB table space and index be excluded from compare. You must specify each object change that you want ignored. Related object changes are not automatically ignored.

Ignore changes for tables, global variables, indexes, and user-defined distinct types (UDT) are supported. Temporal and history tables, materialized query tables (MQT), and hash organization changes cannot be selected to be ignored.

## Procedure

1. From the DB2 Admin Main Menu, specify option C.  
The **DB2 Object Comparison tool** (GOCMENU) panel is displayed.
2. Select the option MR - Managed saved compare results.
3. In the **Manage Saved Compare Results** (ADBPMCR) panel, select the saved compare result that you want to work in.  
The **Manage Saved Compare Results** (ADBPCR) panel is displayed.
4. In the **Manage Saved Compare Results** (ADBPCR) panel, type the RPT command.  
The **Compare Report** (ADBPCRR) panel is displayed.
5. In the **Compare Report** (ADBPCRR) panel, type the I - Ignore change line command in the Select column, next to compare changes that you want ignored in subsequent change processing.

```

ADBPCRR ----- DSNAP Compare Report ----- 08:22
Command ==>                                     Scroll ==> PAGE

Compare analysis report for "OWN1"."NEW1"
Commands: CONTINUE IGNOREALL RESETALL
Line commands:
  I - Ignore change R - Reset

Sel S Report

----->
  Compare database source(DB23367) and target(DB23367)
    No changes to database

  Compare tablespace source(DB23367.TS23367A) and target(DB23367.TS23367A)
    (A)Field BUFFERPOOL changed from BP0 to BP1
    Tablespace will be altered

  Tablespace DB23367.TS23367B not found on target
  New Tablespace DB23367.TS23367B will be added
  Authorizations for Tablespace DB23367.TS23367B will be copied from
source

  Compare table source(VNDRG.TB23367) and target(VNDRG.TB23367)
  Column LAHMANID
I   (A)Type changed from VARCHAR(12) to VARCHAR(20)
   (D)Nulls/default changed from NOT NULL to WITH DEFAULT NULL
  Column DATE_YYYY
I   (A)Type changed from SMALLINT to INTEGER
   (D)Column TEAM_NAME added
  Table VNDRG.TB23367 will be dropped
  Table will be recreated
  Table data will not be converted
  Not eligible for FORMAT INTERNAL processing

  Compare index source(VNDRG.IX23367) and target(VNDRG.IX23367)
  Index VNDRG.IX23367 will be dropped by dropping the table
  Index will be recreated because the base table will be dropped and recreated

```

Figure 57. Compare Report panel (ADBPCRR)

When you press the Enter key, the status column for an object type that is selected for ignore is updated to 'I'.

6. While still in the **Compare Report** (ADBPCRR) panel, type the CONTINUE command.  
The **Create Ignore Specification** (ADB2C22) panel is displayed.
7. In the **Create Ignore Specification** (ADB2C22) panel, type in an owner name and specification name.

You now have a specification that you can reference when you run your compare process. To modify the contents of the ignore change specification, you must work in Db2 Object Comparison Tool and select the option MR - Managed saved compare results.

## Managing ignore changes specifications

You manage lists of object changes that are ignored during the compare process by maintaining ignore changes specifications.

### About this task

Ignore changes for tables, global variables, indexes, and user-defined distinct types (UDT) are supported. Temporal and history tables, materialized query tables (MQT), and hash organization changes cannot be selected to be ignored.

### Procedure

1. From the DB2 Admin Main Menu, specify option C.  
The **DB2 Object Comparison tool** (GOCMENU) panel is displayed.
2. Select option 4 - Specify ignores.  
The **Specify Compare Ignores** (GOC4) is displayed.

```
Compare ----- Specify Compare Ignores -----
Option ==>

Ignore Fields Specification:
Owner . . . . . > (? to look up)
Name . . . . . > (? to look up)
Data Set:
  Data Set Name . .
Options:
  Edit Ignore Fields Specification . . . NO (Yes/No)

Ignore Changes Specification:
Owner . . . . . OWN1 > (? to look up)
Name . . . . . NEW1 > (? to look up)
Edit Ignore Changes Specification . . . YES (Yes/No)
Display using a saved compare result . . NO (Yes/No)
Saved Compare Results:
  Owner . . . . . OWN1 > (? to look up)
  Name . . . . . ISPEC01 > (? to look up)
```

Figure 58. Specify Compare Ignores panel (GOC4)

3. In the **Edit Ignore Changes Specification** field, specify YES.  
The **Ignored Changes List** (ADBPCICL) is displayed.

```
ADBPCICL ----- Ignored Changes List ----- Row 1 to 14 of 30
Command ==> Scroll ==> PAGE

Ignored changes for "OWN1"."ISPEC01"
Line commands:
D - Delete

Sel T Target Target Attribute Additional Info
Qual Name
----->----->----->----->
      DB23367 TS23367A BUFFERPOOL
TB VNRG TB23367 Data type LAHMANID
TB VNRG TB23367 Data type DATE_YYYY
```

Figure 59. Ignored Changes List (ADBPCICL)

You can add object changes by using the wildcard character (\*), or delete an object change that is listed. You add a new object type and name in the blank line that is located below the column headings and before the listed change objects. When you add an object change, you must specify the object type.

When you add an object change, all changes to the object are ignored. Using the wildcard character (\*) in the Target Qualifier or Target Name column forces all changes for objects that match what you specify to be ignored. Ignored changes are not applied to the target objects. For example, if you specify new\* to be ignored, then objects that met the wildcard specification new\* are still processed. However, all changes to all objects that met the wildcard specification are ignored.

If the Target Qualifier or Target Name are left blank, an asterisk (\*) is substituted. If the qualifier or name does not include a wildcard character, then the wildcard character (\*) is appended to the qualifier or name.

To modify the contents of the ignore change specification, you must work in Db2 Object Comparison Tool and select the option MR - Managed saved compare results.

## Managing ignore specifications through Change Management

You use DB2 Admin Tools to specify object changes that you want ignored during the compare process.

### Procedure

1. From the DB2 Admin Main Menu, specify option CM.  
The **Change Management (CM)** (ADB2C) panel is displayed.
2. Select option 8 - Manage ignore changes specifications.  
The **Manage Ignore Changes Specifications** (ADBPC8) panel is displayed.

```
ADBPC8 in ----- Manage Ignore Changes Specifications ----- 14:49
Option ==>

      1 - Display ignore changes specifications                DB2 System: DSNA
                                                                DB2 SQL ID: OWN1

Enter display selection criteria (Using a LIKE operator, criteria not saved):
Owner . . . . . OWN1      >                               Created by . .      >
Name . . . . .           >                               Altered by . .     >
Created within                                     Exclude ID . . . .
Altered within
Eligible for auto-delete:
  Within . . .
  Next . . . .
```

Figure 60. Manage Ignore Changes Specifications panel (ADBPC8)

3. Specify the owner name and name for the ignore changes specification.
4. Optional: You can refine a search for ignore changes specifications, by using search criteria fields.
5. Select Option 1 - Display ignore changes specifications.  
The **Ignore Changes Specifications** (ADBPC81) panel is displayed.

```

ADBPC81 n ----- Ignore Changes Specifications ----- Row 1 to 33 of 33
Command ==>                                         Scroll ==> CSR

Line commands:
U - Update  DEL - Delete  ICL - Ignored Changes List
I - Details on ignore specification

Sel Owner      Name                                     Eligible for
-----
OWN1           ICSPEC01                                     auto-delete  Comment
OWN1           ICSPEC02                                     2012-12-31

```

Figure 61. Ignore Changes Specifications panel (ADBPC81)

From the **Ignore Changes Specifications** (ADBPC81) panel, you can use line commands to view more detail, modify, or delete ignore changes specifications.

To modify the contents of the ignore change specification, you must work in Db2 Object Comparison Tool and select the option MR - Managed saved compare results.

## Generating a compare batch job

A *compare batch job* is a JCL job that performs the requested comparison.

### Before you begin

Before you can generate a compare job, you must first specify a source and target for the comparison. You can tell whether the source and target are specified by looking at the **Specification Status** column on the **DB2 Object Comparison Tool Menu (GOCMENU)** panel.

### Procedure

To generate a compare batch job:

1. On the **DB2 Object Comparison Tool Menu (GOCMENU)** panel, specify option 5, and press Enter.
2. On the **Generate Compare Jobs (GOC5)** panel, specify a value for each option, and press Enter.

If you want to save the compare results, in the **Save compare results** field, specify YES. You can use the saved compare results to analyze data about the comparison or to increase the efficiency of subsequent comparisons. The saved compare results contain information about objects that were part of the comparison, including detected differences, changes to make, and how those changes are to be implemented.

**Restriction:** You can save the compare results for only tables, indexes, global variables, and distinct data types.

For information about each option on this panel, see [“Compare job options” on page 115](#).

```

GOC5 ----- Generate Compare Jobs -----
Command ==>

Specify the following for DB2 Object Comparison Tool:

Worklist information:
  Worklist name . . . . . PQ76055N (also used as middle qualifier in DSNs)

Compare options:
  Suppress DROP of objects . No      (Yes/No)
  Suppress DROP of columns . No      (Yes/No)
  Suppress adding columns . . No      (Yes/No)
  Run SQLID . . . . .                (Blank, an SQLID, or <NONE>)
  Run Validate. . . . . V            (Validate, None)
  Object Grantor . . . . .           (Blank or an SQLID)
  Allow implicit DROP of
    excluded objects . . . . N        (Yes/No)
  Enable auth-switching . . . YES     (Yes/No)
  Disable REORG optimization YES     (Yes/No)
  Scope Warning Messages . . YES     (Yes/No)

Change reporting options . . Yes      (Yes/No)
Save compare results . . . . Yes     (Yes/No)

Data set information:
  PDS for batch jobs . . . . CMP.PQ76055N
  Prefix for data sets . . . NBRON
  Changes file data set name.
  Member name . . . . .              (if Changes file is an existing PDS)

Options:
  Generate online . . . . . Yes       (Yes/No)
  Single compare job . . . . No       (Yes/No)
  Member name . . . . . COMPARE      (default COMPARE)
  Allow deferred restart . . No       (Yes/No)
  Generate apply jobs . . . . Yes     (Yes, No, or (Delta) Change)
  Generate one job. . . . . Yes      (Yes, No, or (Per) Process)
  Member prefix . . . . . APPLY      (default APPLY)
  As work statement list . Yes        (Yes/No to append to work stmt list)
  Use customized util opts. Yes       (Yes/No)
  Unload Method . . . . . P          (Unload, Parallel unload, HPU)
  Generate templates. . . . No        (Yes/No)
  Stop on conversion error. NO        (Yes/No)
  Use DEFER YES . . . . . YES        (Yes/No)
  Allow rotate parts . . . . YES      (Yes/No)
  Retain GENERATED ALWAYS:
    For ROWID . . . . . YES          (Yes/No)
    For ROW CHANGE TIMESTAMP. YES     (Yes/No)
  Retain START and RESTART
  values:
    For sequence object . . . .       (Yes/No)
    IDENTITY START value . . . ORIGINAL (Original,
  Computed)
    Mask ignored fields . . . . NO     (Yes/No)

  Optional jobs after Reload or Alter:
    Run CHECK DATA . . . . . Yes     (Yes/No)
    Take an image copy . . . R        (after: Reload/Alter/Both/None)
    Run REORG/REBUILD . . . M        (Mandatory, All relevant, None)
    Run RUNSTATS . . . . . R         (after: Reload/Alter/Both/Min/None)
    Run REBIND . . . . . M           (Mandatory, All relevant,
  None)

BP - Change batch job parameters
TU - Specify TEMPLATE usage
UO - Customize utility options
CO - Change options common to change functions

```

Figure 62. **Generate Compare Jobs (GOC5) panel**

3. If the **Save Compare Results (ADB2C22) panel** is displayed (because you specified that you want to save the compare results), specify a name for the comparison, and press Enter:

```

ADB2C22 n -----Save Compare Results ----- 08:22
Command ==>

Owner . . . OWN1      > (Optional, default is VNDRG, ? to lookup)
Name . . . NEW1      > (Required, ? to lookup)
Comment . . MY FIRST COMPARE RESULT                                     >

Eligible for auto-delete . . 30 (number of days, blank for no auto-delete)

```

4. Edit the generated JCL job as needed and submit it to run the comparison.

The Object Comparison Tool parameters that are included in the generated JCL job correspond to the following panel options:

Parameter in the JCL job	Panel	Corresponding option
ACCLOCKMODE	<b>Options for Change Functions (ADB2PCO) panel</b>	<b>Load accelerated tables lock mode</b> (See “ <a href="#">CO - Change options common to change functions</a> ” on page 132.)
ALTPART	<b>Generate Compare Jobs (GOC5) panel</b>	<a href="#">Allow rotate parts</a>
APPCONT	<b>Generate Compare Jobs (GOC5) panel</b>	<a href="#">“Content of apply job(s)” on page 126</a>
AUTHSQL	<b>ALTER - Build Analyze and Apply Job (ADBPALT) panel</b>	<b>Authorization Switch ID</b>
AUTHSW	<b>Generate Compare Jobs (GOC5) panel</b>	<a href="#">“Enable auth-switching” on page 117</a>
CMDDL	None	None CMDDL does not correspond to a panel option. CMDDL specifies whether to comment out the ADMIN ALTER IMPLICIT statements.
CMDELTA	<b>Generate Compare Jobs (GOC5) panel</b>	<a href="#">Generate Apply Job = Change</a>
CMRACT	<b>Generate Compare Jobs (GOC5) panel</b>	<a href="#">“Save compare results” on page 119</a>
CMRADEL	<b>Save Compare Results (ADB2C22) panel</b>	<b>Eligible for auto-delete</b>
CMPRCOMM	<b>Save Compare Results (ADB2C22) panel</b>	<b>Comment</b>
CMPRNAME	<b>Save Compare Results (ADB2C22) panel</b>	<b>Name</b>
CMPROWN	<b>Save Compare Results (ADB2C22) panel</b>	<b>Owner</b>

Parameter in the JCL job	Panel	Corresponding option
DACVE	Generate Compare Jobs (GOC5) panel	<a href="#">“Stop on conversion error ” on page 127</a>
DISOPTRE	Generate Compare Jobs (GOC5) panel	<a href="#">“Disable REORG optimization” on page 117</a>
DROPEXOBJ	Generate Compare Jobs (GOC5) panel	<a href="#">“Allow implicit drop of excluded objects ” on page 117</a>
ENACCAT	Options for Change Functions (ADB2PCO) panel	<b>Restore acceleration of tables</b> (See <a href="#">“ CO - Change options common to change functions” on page 132.</a> )
ENREPAT	Options for Change Functions (ADB2PCO) panel	<b>Restore replication of tables</b> (See <a href="#">“ CO - Change options common to change functions” on page 132.</a> )
GRANTORD	Options for Change Functions (ADB2PCO) panel	<b>Table GRANT processing order</b> (See <a href="#">“ CO - Change options common to change functions” on page 132.</a> )
GRTSQLID	Generate Compare Jobs (GOC5) panel	<a href="#">“Object Grantor” on page 116</a>
ICSPECNAME	Specify Compare Ignores (GOC4) panel	<b>Ignore Changes Specification: Name</b> (See <a href="#">“Managing ignore changes specifications” on page 103.</a> )
ICSPECOWN	Specify Compare Ignores (GOC4) panel	<b>Ignore Changes Specification: Owner</b> (See <a href="#">“Managing ignore changes specifications” on page 103.</a> )
IDENTSVL	Generate Compare Jobs (GOC5) panel	<a href="#">“IDENTITY START value” on page 128</a>
KEEPCOL	Generate Compare Jobs (GOC5) panel	<a href="#">“Suppress DROP of columns” on page 116</a>
KEEPTGT	Generate Compare Jobs (GOC5) panel	<a href="#">“Suppress DROP of objects” on page 116</a>
MASKIGN	Generate Compare Jobs (GOC5) panel	<a href="#">“Mask ignored fields” on page 128</a>
NONNEWCOL	Generate Compare Jobs (GOC5) panel	<a href="#">“Suppress adding columns” on page 116</a>
PBR2TOPBR	Options for Change Functions (ADB2PCO) panel	<b>Allow PBR2 to PBR changes</b> (See <a href="#">“ CO - Change options common to change functions” on page 132.</a> )
PROCORD	Options for Change Functions (ADB2PCO) panel	<b>Object Processing order</b> (See <a href="#">“ CO - Change options common to change functions” on page 132.</a> )
REBINDA	Generate Compare Jobs (GOC5) panel	<a href="#">Run REBIND = All relevant</a>
REBINDM	Generate Compare Jobs (GOC5) panel	<a href="#">Run REBIND = Mandatory</a>

Parameter in the JCL job	Panel	Corresponding option
REBINDN	<b>Generate Compare Jobs (GOC5) panel</b>	Run REBIND = <a href="#">None</a>
RECOVER	<b>Generate Analyze Job (ADB2C11A) panel</b>	<b>Data to recover</b> (This parameter is for Change Management use only. See <a href="#">Analyzing a change (IBM DB2 Administration Tool for z/OS).</a> )
RECREAT	<b>Options for Change Functions (ADB2PCO) panel</b>	<b>Recreate accelerated tables</b> (See <a href="#">“CO - Change options common to change functions”</a> on page 132.)
RELOADAT	<b>Options for Change Functions (ADB2PCO) panel</b>	<b>Reload accelerated tables</b> (See <a href="#">“CO - Change options common to change functions”</a> on page 132.)
REMOVEAT	<b>Options for Change Functions (ADB2PCO) panel</b>	<b>Remove deleted accelerated tables</b> (See <a href="#">“CO - Change options common to change functions”</a> on page 132.)
REORGA	<b>Generate Compare Jobs (GOC5) panel</b>	Run REORG/REBUILD = <a href="#">All relevant</a>
REORGM	<b>Generate Compare Jobs (GOC5) panel</b>	Run REORG/REBUILD = <a href="#">Mandatory</a>
REPALL	<b>Specify Compare Reporting Options (GOC5RO) panel</b>	All possible reporting options are set to yes, except REPCHG. See <a href="#">“Change reporting options:”</a> on page 117 on <b>Generate Compare Jobs (GOC5) panel</b>
REPCHG	<b>Specify Compare Reporting Options (GOC5RO) panel</b>	<a href="#">“Only changed objects”</a> on page 118
REPCONV	<b>Specify Compare Reporting Options (GOC5RO) panel</b>	<a href="#">“Conversion report”</a> on page 118
REPCOUNT	<b>Specify Compare Reporting Options (GOC5RO) panel</b>	<a href="#">“Object count report”</a> on page 118
REPIGALL	<b>Specify Compare Reporting Options (GOC5RO) panel</b>	All <a href="#">Ignore fields</a> reporting options are set to yes.
REPIGOSI	<b>Specify Compare Reporting Options (GOC5RO) panel</b>	<a href="#">Ignore fields: Object Specific</a>
REPIGSYS	<b>Specify Compare Reporting Options (GOC5RO) panel</b>	<a href="#">Ignore fields: System generated</a>
REPIGUSR	<b>Specify Compare Reporting Options (GOC5RO) panel</b>	<a href="#">Ignore fields: User specified</a>
REPMASK	<b>Specify Compare Reporting Options (GOC5RO) panel</b>	<a href="#">“Translation masks”</a> on page 118

Parameter in the JCL job	Panel	Corresponding option
REPSUM	<b>Specify Compare Reporting Options (GOC5RO) panel</b>	<a href="#">“Summary report” on page 118</a>
RIDALWYS	<b>Generate Compare Jobs (GOC5) panel</b>	Retain <a href="#">GENERATED ALWAYS: For ROWID</a>
RPTEXOBS	<b>CM - Manage Exclude Specifications (ADBPC7) panel</b>	Excluded objects (See <a href="#">“Creating or managing exclude specifications through Change Management” on page 86.</a> )
RPTEXSPEC	<b>CM - Manage Exclude Specifications (ADBPC7) panel</b>	Exclude specifications (See <a href="#">“Creating or managing exclude specifications through Change Management” on page 86.</a> )
SCOPEWARN	<b>Generate Compare Jobs (GOC5) panel</b>	<a href="#">“Scope Warning Messages” on page 117</a>
SEQSRVL	<b>Generate Compare Jobs (GOC5) panel</b>	Retain <a href="#">START and RESTART values for sequence object</a>
SRCIESPECNAME	<b>Specify Compare Source (GOC1) panel</b>	<b>Exclude Specification: Name</b> (See <a href="#">“Specifying source object definitions to be compared” on page 62.</a> )
SRCIESPECOWN	<b>Specify Compare Source (GOC1) panel</b>	<b>Exclude Specification: Owner</b> (See <a href="#">“Specifying source object definitions to be compared” on page 62.</a> )
TGTIESPECNAME	<b>Specify Compare Target (GOC1) panel</b>	<b>Exclude Specification: Name</b> (See <a href="#">“Specifying target objects to be compared” on page 88.</a> )
TGTIESPECOWN	<b>Specify Compare Target (GOC1) panel</b>	<b>Exclude Specification: Owner</b> (See <a href="#">“Specifying target objects to be compared” on page 88.</a> )
TMSALWYS	<b>Generate Compare Jobs (GOC5) panel</b>	Retain <a href="#">GENERATED ALWAYS: For ROW CHANGE</a>
UNLDALTB	<b>Options for Change Functions (ADB2PCO) panel</b>	<b>Unload Altered tables</b> (See <a href="#">“CO - Change options common to change functions” on page 132.</a> )

## Managing saved compare results

You can view and modify characteristics of a saved compare results.

### Procedure

To manage saved compare results:

1. On the **DB2 Administration Menu (ADB2) panel**, specify option C, and press Enter.
2. On the **DB2 Object Comparison Tool Menu (GOCMENU) panel**, specify MR, and press Enter.
3. On the **Manage Saved Compare Results (ADBPMCR) panel**, specify the criteria for the saved compare results that you want to view or modify:

```

ADBPMCR ----- Manage Saved Compare Results ----- 16:36
Option ==>

Compare results information:
Owner . . . . . >
Name . . . . . NEW* >

Enter additional selection criteria:
Created within . . . 2012 - 2013
Altered within . . .
Eligible for auto-delete:
Within . . .
Next . . .

```

4. On the **Manage Saved Compare Results (ADBPCR)** panel, use line commands to view more detail, modify, or delete saved compare results:

- To view the results of a particular compare operation, specify the S line command next to the row for the compare operation, and press Enter:

```

ADBPCR ----- Manage Saved Compare Results -----Row 1 to 14 of 30
Command ==> Scroll ==> PAGE
Line commands:
U - Update DEL - Delete S - Show summary I - Details on results
RPT - Compare Report

Sel Owner      Name                               Eligible for Comment
-----> auto-delete
S  OWN1        NEW1                               2012-12-31  My first compare result
   OWN2        NEW2
   OWN3        NEW3
   OWN4        NEW4
   OWN5        NEW5
   OWN6        NEW6
   OWN7        NEW7

```

The **Compare Results (ADBPCRS)** panel shows the summary of that compare operation:

```

ADBPCRS ----- Compare Results ----- Row 1 to 14 of 30
Command ==> Scroll ==> PAGE

Compare results for "OWN1"."NEW1"
Commands: RPT VERSION SRCEX TGTEX SHOWSOURCE AUTH
Line commands:
EX - Exclude EXS - Exclude from source EXT - Exclude from target
EXA - Exclude Authorizations EXC Exclude Constraints

Sel  0      Target      Target      Additional Info      Compare      I
    * *      Schema      Name                               * *
----->-----
      DB          DB23367
      TS DB23367    TS23367A
      TS
      TB VNDRG     TB23367
      IX VNDRG     IX23367
      RL VNDRG     TCHILD          TGTFPARENT
                                Dropped/createdY
                                Dropped/created

```

This panel includes the following columns:

#### Sel

Input field where you enter one of the line commands that are listed on the panel.

#### Object

The type of object that was compared as part of compare run. The following object types are valid:

- AL - Alias
- AR - Auxiliary table

- CL - Clone table
- DB - Database
- DT - User defined type
- FU - Function
- GV - Global variable
- IX - Index
- MK - Column mask
- PK - Rebind package
- PL - Rebind plan
- PM - Row permission
- RL - Referential constraint
- SC - Schema
- SG - Storage group
- SP - Stored procedure
- SQ - Sequence
- SY - Synonym
- TB - Table
- TG - Trigger
- TS - Table space
- VW - View

**Target Schema**

The target object owner.

**Target Name**

The target object name.

**Additional Information**

Referential constraint name if the change is updating a referential constraint.

**Compare Action**

The type of change being performed for the object.

**Implicit**

Indicates an implicit drop or implicit drop and recreate.

If you enter the command **SHOWSOURCE**, the source object associated with the target is displayed in the **Additional Information** column.

If you enter the command **VERSION**, the following fields are available on the panel:

**Version**

Instead of a Compare Action column, a Version column is displayed. The Version column shows the version number of native stored procedures and PL/SQL functions.

**Active version**

Instead of an I column, you see an A column. The A column indicates an active version of specific native stored procedures and PL/SQL functions.

- To view a report for a particular compare operation, specify the RPT line command next to the row for the compare operation, and press Enter.

The **Compare Report** (ADBPCRR) panel is displayed.

```

ADBPCRR ----- Compare Report ----- 08:22
Command ==>                               Scroll ==> PAGE

Compare report for "OWN1"."NEW1"

  Compare database source(DB23367) and target(DB23367)
    No changes to database

  Compare tablespace source(DB23367.TS23367A) and target(DB23367.TS23367A)
    (A)Field BUFFERPOOL changed from BP0 to BP1
    Tablespace will be altered

  Tablespace DB23367.TS23367B not found on target
  New Tablespace DB23367.TS23367B will be added
  Authorizations for Tablespace DB23367.TS23367B will be copied from
source

  Compare table source(VNDRG.TB23367) and target(VNDRG.TB23367)
  Column LAHMANID
    (A)Type changed from VARCHAR(12) to VARCHAR(20)
    (D)Nulls/default changed from NOT NULL to WITH DEFAULT NULL
  Column DATE_YYYY
    A)Type changed from SMALLINT to INTEGER
    (D)Column TEAM_NAME added
  Table VNDRG.TB23367 will be dropped
  Table will be recreated
  Table data will not be converted
  Not eligible for FORMAT INTERNAL processing

  Compare index source(VNDRG.IX23367) and target(VNDRG.IX23367)
  Index VNDRG.IX23367 will be dropped by dropping the table
  Index will be recreated because the base table will be dropped and recreated

```

Figure 63. Compare Report panel (ADBPCRR)

## Making compare changes through Change Management

Registering changes in Change Management simplifies the process of recording and tracking the changes that you make to your Db2 objects.

### Before you begin

Change Management must be enabled on the system and be either optional or required for your SQL ID. You enable Change Management by customizing the DB2 Admin Tool. For more information, see the "Customizing DB2 Admin" chapter in the *DB2 Administration Tool User's Guide*.

You can register the change on multiple target locations. In addition, you can specify an optional target profile as you register the multi-target change.

### Procedure

1. Specify the options for your comparison as you normally would by using the following steps:
  - a) Specify the source objects to be compared.
  - b) Specify the target objects to be compared.
  - c) Specify compare masks.
  - d) Specify fields to ignore.
  - e) Specify options for the compare job, ensuring that you specify Yes to have Apply jobs generated.
    - If Change Management is mandatory for your SQL ID, the CM - Register Options panel is displayed.
    - If Change Management is optional for your SQL ID, the following panel is displayed:

```

Compare ----- Generate Compare Jobs -----
Option ==>

Specify the following for DB2 Object Comparison Tool:

Worklist information:
Worklist name . . . . . PQ76055N (also used as middle qualifier in DSNs)
Co -----
| DB2 Admin ----- DSN8 Change Management Prompt ----- 09:17 |
| Change Management is optional for SQLID:  VNDRJP                |
Ch Do you wish to use Change Management for this function:      (Yes/No)
Da -----

```

Figure 64. Change Management prompt (ADB2CMRO)

2. Specify Yes to process the compare change through Change Management.

If you specify No, the job is generated with the Apply step and the changes are not registered in the Change Management database.

The **CM - Register Options** panel is displayed:

```

ADB2CRO n ----- CM - Register Options ----- 11:27
Command ==>

Commands: CONTINUE                                DB2 System: DB2X
                                                DB2 SQL ID: J148286

Specify the following values to register a change:

Owner . . . . . J148286                > (Optional, Default is J148286)
Name . . . . . change1                  >
Comment . . . . .                       >
Multi-target change . YES                (Yes/No, Default is No)
  Target name . . . . DB2X_FILE          > (Optional, ? to lookup)
  Group name . . . . .                   > (Optional, ? to lookup)

Replace existing change . .              ('/' to replace, Default is BLANK)

Specify the owner and name values to use for this change (? to lookup):
                                Owner      Name
Ignore . . . . .                   >
Mask . . . . .                       >

```

Figure 65. CM - Register Options panel (ADB2CRO)

3. Specify the following information in the **CM - Register Options** panel and issue the CONTINUE command.

- a) Specify an owner and a name for the change. The default owner is the current SQL ID. The name of the change cannot contain an apostrophe (or single quotation mark).
- b) Specify YES to register the change on multiple target locations. Optionally, specify a target profile.
- c) Optionally, specify a comment for the change, whether to replace existing changes, an ignore for the change, and a mask for the change.

The change is registered as a normal change.

The **Specify Register Mode** panel is displayed to specify the action to be taken if pending changes are found when processing the changes from this compare job.

```

Compare ----- Generate Compare Jobs -----
Option ==>

Specify the following for DB2 Object Comparison Tool:

Worklist information:
Worklist name . . . . . PQ76055N (also used as middle qualifier in DSNs)
Co ----- Specify Register Mode ----- 09:23
|
| Compare ----- Specify Register Mode ----- 09:23
| Pending changes action . . . (Cancel, Prereq, Supersede)
|
Ch
Da
-----

```

Figure 66. Specify Register Mode (GOC5RM)

- Specify one of the following actions to take for any pending changes to the objects on the target system that are affected by this change:

**Cancel**

Do not register the change if there are pending changes.

**Prereq**

Make the pending changes for the affected objects prerequisite changes for this change.

**Supersede**

Make this change a prerequisite change for the pending changes.

The change to apply the compare changes is registered.

- After the change is registered, use DB2 Administration Tool to analyze the change and then run the change to apply the changes from the comparison.

**Related tasks**

[“Specifying source object definitions to be compared” on page 62](#)

The first step in defining the attributes of the DB2 objects to compare is to specify if the source object is from a DDL file, from the DB2 catalog, or from a compare version file. Use the **Specify Compare Source** panel to define these attributes.

[“Specifying target objects to be compared” on page 88](#)

The *target* is the object or objects that you want to compare to the source.

[“Specifying compare masks” on page 90](#)

You can define a mask either in a data set or in a table in the Change Management repository. Storing masks in a data set makes copying mask files easy. Storing masks in a table makes them easy to share, manage, and recover.

[“Specifying compare ignore fields” on page 98](#)

Specify compare ignore fields when you want to ignore some fields when comparing DB2 catalog records. Use ignore fields when there are differences in source and target objects, but you don't want the compare process to change them.

## Compare job options

When you generate a compare batch job, you can specify a number of options to control the behavior of the comparison operation and job. These options are listed on the **Generate Compare Jobs (GOC5) panel**.

Specifying these options is a part of [“Generating a compare batch job” on page 105](#).

**Worklist information:**

**Worklist name**

Specify the name of the work statement list to use.

This name is also used as the middle qualifier in the names of the work data sets that are created for the job. The prefix for these work data sets is the value in the **Prefix for data sets** field in the **Data set information** section of this panel. The complete data set name is the **Prefix for data sets** value, the **Worklist name** value, and a name that indicates the purpose of the data set. For example, for the changes file, the complete name might be NBRON.PQ76055N.CHANGES.

The **Worklist name** value is also used as a name for the Db2 Administration Tool SQL or DDL executor, which has a checkpoint facility. The **Worklist name** value is used as a key to the checkpoint table. Use a unique name for each comparison that you run.

#### **Related information:**

[Work statement lists \(IBM DB2 Administration Tool for z/OS\)](#)

### **Compare options:**

#### **Suppress DROP of objects**

Specify whether the compare process is to drop objects that are in the target, but not in the source. Specify Yes to prevent the compare process from dropping any target objects.

Regardless of the value that you set for this option, Object Comparison Tool replaces all relationships between a parent and a child if a foreign key is specified in the source. To delete a foreign key, both the parent and the child must be present in the source (without a foreign key).

Also, if DROP statements are part of the source DDL, objects are dropped regardless of the value specified for this option.

Object Comparison Tool drops all explicit LOB objects from the target if they are not specified on the source. However, if the base table associated with the LOB objects is kept because **Suppress DROP of objects** is set to Yes, all of the LOB objects are kept.

#### **Suppress DROP of columns**

Specify whether the compare process is to drop columns that are in the target tables but not in the source table. Specify Yes to prevent the compare process from dropping any columns.

#### **Suppress adding columns**

Specify whether the compare process is to add columns to the target. Specify Yes to prevent columns in the source from being added to the target. This option is useful if you have extra columns on your source that you do not want added to your target.

#### **Run SQLID**

Specify a valid SQL ID to use when creating, dropping, or altering objects. This ID is typically an administrative SQL ID whose only privileges are to create objects.

If a value is specified, this SQL ID becomes the owner of the databases and table spaces. If the specified SQL ID is different from the current owner, the databases and table spaces (and all dependent objects) are dropped and recreated to change the owner.

If you enter <NONE>, a SET CURRENT SQLID statement is not generated in the DDL.

If you leave this field blank, a SET CURRENT SQLID statement is generated in the DDL before each object that is created. Where possible, the SQL ID that was originally used to create the object is used in the SET statement.

#### **Object Grantor**

Specify an SQL ID to use in SET CURRENT SQLID statements that precede GRANT statements.

If an SQL ID is specified for this option, but the **Run SQLID** option is set to <NONE>, no SET CURRENT SQLID statements are generated to precede GRANT statements.

#### **Run Validate**

Specify whether to perform consistency checking. Consistency checking verifies that for all of the primary objects in the source DDL, any dependent objects exist. These dependent objects must exist in the source DDL or the target catalog.

When you specify V or Va1idate, the following checking is performed:

- The table space in a CREATE TABLE statement exists.
- The table in a CREATE INDEX statement exists.
- The child and parent tables in referential constraints exist.
- If the index in a CREATE INDEX statement is a clustering index, a clustering index does not already exist.
- For primary index and unique index changes, matching keys for primary keys and unique keys exist.
- For primary key and unique key changes, matching indexes for primary keys and unique keys exist.
- The number of index partitions matches the number of table space partitions.

Object Comparison Tool also checks that the dependent objects exist if the following statements are generated:

- CREATE TRIGGER
- CREATE VIEW
- CREATE MQT
- CREATE INDEX
- ADD FOREIGN KEY

When you request consistency checking, a consistency checks report (ADB2WVL) is generated. If a check fails, a message is written to the report with a return code of 8.

**Note:** For native stored procedures, even if validation is successful, the existence of the object in the native stored procedure body cannot be known at procedure run time (or during procedure call).

#### **Allow implicit drop of excluded objects**

Specify whether excluded objects can be dropped implicitly.

If you specify Yes, excluded objects can be dropped if needed and are then recreated according to the target definition. If you specify No and an excluded object needs to be dropped, an error message is displayed and the compare fails. No is the default.

#### **Enable auth-switching**

Specify whether to generate DDL that is used by the authorization switching feature. *Authorization switching* enables you to execute DDL and DCL under the authority of another user.

This field is visible only if the authorization switching facility is enabled for the subsystem during the customization process.

#### **Disable REORG optimization**

Specify whether you want to disable REORG optimization. REORG optimization reduces the number of REORG utility statements that are issued, and thus the number of times that your system halts. The default value is No.

#### **Scope Warning Messages**

Specify whether to issue a warning message in the case where the target of an object comparison operation is automatically selected, and the source is not a table space. This message warns that objects that exist only in the target might be dropped.

If you specify Yes, message ADB7353 is issued for this situation. This message is issued regardless of the value of the **Suppress DROP of objects** option.

### **Change reporting options:**

#### **Change reporting options**

Specify whether you want to change the options for reports.

If you specify Yes, the **Specify Compare Reporting Options (GOC5RO) panel** is displayed after you press Enter. You can specify reporting options on this panel:

```
GOC5 re ----- Generate Compare Jobs -----
Option ==>
```

Specify the following for DB2 Object Comparison Tool:

Worklist information:

```
Worklist name . . . . . : AAAAAAAA (also used as middle qualifier in DSNs)
```

```
Co ----- Specify Compare Reporting Options ----- 12:18
|
| Report options for Compare:
| Only changed objects . . . Yes      (Yes/No)
| Ignore fields:
| Ch   User specified . . . . . Yes    (Yes/No)
|     System generated . . . . . Yes  (Yes/No)
|     Object Specific . . . . . Yes   (Yes/No)
|
| Da   Translation masks . . . . . Yes  (Yes/No)
|     Summary report . . . . . Yes    (Yes/No)
| Op   Object count report . . . . . Yes (Yes/No)
|     Conversion report . . . . . YES  (Yes/No)
|-----|
```

### Only changed objects

Specify whether the detailed report is to include only those objects that have changed.

### Ignore fields:

#### User specified

Specify whether the report is to include the names of user-specified ignore fields.

#### System generated

Specify whether the report is to include the names of system ignore fields.

#### Object Specific

Specify whether the report is to include the names of fields that are ignored for specific objects.

### Related information:

[“Ignore fields” on page 186](#)

### Translation masks

Specify whether the report is to include the translation masks that are used by the compare job.

### Related information:

[“Translation masks” on page 183](#)

### Summary report

Specify whether the report is to include a summary, which consists of one line per object.

### Object count report

Specify whether the report is to include statistics of compared and changed objects.

### Conversion report

Specify whether to report expected conversion problems for tables when a change is run.

The following example shows the corresponding strings for the parameters that are passed to step T03COMP PGM=GOC2CMP if you specify YES for the fields on panel GOC5RO. Specifying Yes for both **User specified** and **System generated** results in REPIGALL being used as the parameter.



If you specify No, a batch job is generated. You can submit this batch job later to perform the compare process in the background. The default value is No.

When the compare process is run in batch, messages are placed in the SYSPRINT data set. You can override this output data set by using the TU command to define the ADBWORK template. If you do not specify Yes for the **Generate templates** option and define ADBWORK, the default data set name, *prefix.wsl.SYSPRINT*, is used.

**Restriction:** This **Generate online** function is not available when comparing multiple sources and targets.

**Related information:**

[“Running a work statement list” on page 137](#)

[“TU - Specify TEMPLATE usage” on page 131](#)

**Single compare job**

Specify whether all job steps are to be executed in one job.

Use separate jobs to run the source extraction on a system other than the target system.

If you specify No, up to four jobs are generated for the following actions:

- Extract the source if the source is DDL or the Db2 catalog
- Extract the target if the target is DDL or the Db2 catalog
- Compare the source and target
- If **Generate apply jobs** is set to Yes, generate apply jobs or register job when Change Management is enabled

If you specify Yes, you must specify a member name in the **Member name** field.

**Member name**

If you requested a single job, specify the name of the member where the compare job is to be generated. The default is COMPARE.

**Allow deferred restart**

Specify whether the generated compare job is to support deferred step restart. You can specify one of the following values:

**YES**

Generated compare JCL will not include backward references to previous steps so that deferred step restart is possible. This option is ignored if Generate online is YES or Single compare job is NO.

**NO**

Generated compare JCL will include backward references when allocating temporary data sets. Therefore, deferred restart is not possible without changing these backward references. NO is the default.

**Related information:**

[Backward references \(z/OS documentation\)](#)

**Generate apply jobs**

Specify whether to generate jobs to apply the changes that were found during the comparison to the target objects.

Instead of generating apply jobs, Object Comparison Tool can also generate a work statement list or register a change in the Change Management database on the target subsystem. You can then use the apply jobs, work statement list, or change to apply changes to the target object. This process is shown in [Figure 1 on page 4](#).

The **Generate apply jobs** function uses the following input:

- The changes file from the compare operation, which contains the following information:
  - The DROP, CREATE, and ALTER statements

- The UNLOAD requests
- Table space information records, which allow Object Comparison Tool to determine the size of the UNLOAD requests

**Restriction:** Do not attempt to import a CHANGES file that is generated by a normal comparison job into Change Management as a change. Doing so can lead to loss of data when the change is run.

- The shared variables file, which contains the variables that were specified in the panels.

You can specify one of the following values:

**Yes**

Generate apply jobs.

If you request the generation of apply jobs, run the Object Comparison Tool dialog connected to the target Db2 subsystem to pick up the correct libraries for use in the apply jobs. Alternatively, if the Object Comparison Tool dialog is run on a different Db2 system, you must manually update the apply jobs to use the correct Db2 libraries.

When you specify Yes, you also have the option to create a work statement list, use the utility options, select the unload method, and generate templates.

**No**

Do not generate jobs to apply the changes.

**Change**

Generate a delta change in the CHANGES file that can later be imported to Change Management. (The CMDELTA parameter for GOC2CMP). No apply jobs or work statement list is generated.

If you specify Change, the compare process is said to run in *CMDELTA mode*.

The **Generate apply jobs** function runs as an EXEC (ADBGAJOB) in a TSO/ISPF batch job and uses ISPF skeletons to generate the apply jobs or work statement list.

If you request an apply job where the source or target are from DDL input, they must include all dependent objects. Otherwise, the loss of objects or authorizations can result. In this case, Object Comparison Tool issues the following warning message, which gives you the option to continue or to end the operation:

```

Compare ----- Generate Compare Jobs -----
Option ==>

Specify the following for DB2 Object Comparison Tool:
                                                    More:  +
Worklist information:
  Worklist name . . . . . : PQ76055N (also used as middle qualifier in DSNs)
----- DB2 Object Compare Warning -----
| You have asked to generate apply jobs, but the source and / or target |
| objects are not being extracted from the DB2 catalog. If your extracts |
| do not include all dependent objects and authorizations, this may     |
| lead to the loss of these objects and/or authorizations.              |
| Press ENTER to continue or END to stop this operation.                |
| F1=HELP    F2=SPLIT   F3=END    F4=RETURN   F5=RFIND   F6=RCHANGE   |
| F7=UP      F8=DOWN    F9=SWAP   F10=LEFT   F11=RIGHT  |
-----
| Please read this carefully | YSDA Serial (tape) device : No (Yes/No)

```

**Generate one job**

Specify whether to generate a single apply job.

**Restriction:** The **Generate one job** option does not apply when **As work statement list** is set to Yes.

You can specify one of the following values:

**Yes**

A single apply job is generated. If the number of steps exceeds a maximum limit of 255, more than one job is generated.

If you specify Yes, specify a value in the **Member prefix** field.

**No**

Multiple jobs are generated. Specifically, Object Comparison Tool produces the following apply jobs:

**T10Unnnn**

UNLOAD jobs, which contain the following steps:

- Step 1 issues a Db2 command to place the table space in read-only status.
- Step 2 deletes the SYSREC and SYSPUNCH data sets, if they already exist.
- Step 3 unloads the given table.
- Additional steps create Db2 LOAD utility control statements for the unloaded data.

The generated UNLOAD jobs can be run in parallel. The space parameter for the SYSREC data set in step 3 is derived from the RUNSTATS statistics in the catalog and from the high-used-RBA value of the data set from the table space. If the target version files are not created from a Db2 catalog, evaluate and possibly correct, the space parameter, because no space data is available and default sizes are used.

**Note:** Version files that are created outside the scope of the Db2 catalog, such as those created from DDL, do not represent the same information that is found in the Db2 catalog.

**T20DROP**

DROP job. This job includes statements that need to be executed before objects are created. It can include DROP, RENAME, and ALTER statements. This job contains DD statements that reference all unload data sets to ensure that all UNLOAD jobs have run before the objects are dropped.

**T30CREAT**

CREATE job. This job creates the objects and their authorizations. It can also contain ALTER SQL statements.

If an inline utility needs to be run between DDL statements, the T30CREAT job is split into multiple jobs, named T30Cnnnn.

**T40STOP**

STOP job. This job stops page sets. It can contain other SQL and utility statements.

**T50ALTER**

ALTER job. This job can contain CREATE and ALTER SQL statements.

If an inline utility needs to be run between DDL statements, the T50ALTER job is split into multiple jobs, named T50Annnn.

**T60START/T61START**

START jobs. These jobs start page sets. The T61START job is for clone objects.

**T70Rnnnn**

RELOAD jobs.

**T71Rnnnn**

REORG jobs. These REORG jobs remove REORG-pending conditions. All REORG statements are combined into a single job if SHRLEVEL CHANGE is specified and the mapping table name is provided.

**T72REBLD**

REBUILD jobs.

**T8ROnnnn**

REORG jobs. These REORG jobs fully implement the effects of the changes (for example, space parameter changes). All REORG statements are combined into a single job if SHRLEVEL CHANGE is specified and the mapping table name is provided.

**T81REBLD**

REBUILD job. This job rebuilds indexes.

**T85REFR**

REFRESH job. This job refreshes tables.

**T89POSTI**

Jobs to grant authorizations on tables and to reload accelerators.

**T90RB**

Rebind jobs.

**Utilities**

After the LOAD jobs have run, optional jobs are created to run CHECK (T71CHECK), COPY (T73IMC), and RUNSTATS (T87RUNST). You can run these jobs in parallel.

**(Per) Process**

One job is created per process. For example, all UNLOAD jobs are merged into one job for each process. However, if the number of steps in an UNLOAD, reload, or REORG job (T10U0001, T70R0001, or T80R0001) exceed a maximum of 255, a second job corresponding to each process (T10U0002, T70R0002, or T80R0002) is generated accordingly.

The following jobs are created:

**T10U0001**

UNLOAD job.

**T20DROP**

DROP job.

**T30CREAT**

CREATE job.

**T40STOP**

STOP job.

**T50ALTER**

Alter job.

**T60START**

START job.

**T70R0001**

Reload job.

**T89POSTI**

Table GRANTs and reload accelerator job.

**T71R0001**

REORG job.

**T72REBLD**

REBUILD job.

**T73CHECK**

CHECK job.

**T74IMC**

IMAGECOPY job.

**T80R0001**

REORG job.

**T81B0001**

REBUILD job.

## T87RUNST

RUNSTATS job.

### Member prefix

Specify a prefix to use for the member name or names for the apply job. The default is APPLY.

If the number of steps for the apply job exceed the limit of 255, more than one job is generated. For example, if **Member prefix** is APPLY, the member names are APPLY001, APPLY002 and so on.

**Member prefix** does not apply if you specify No or process for **Generate one job**.

### As work statement list

Specify whether to put the *apply changes* (those changes that are generated when you set **Generate apply jobs** to Yes) in a work statement list. You can either append to or replace the work statement list.

You can specify one of the following values for this option:

#### Yes

If the work statement list (provided in the **Worklist name** option) already exists, the **Specify Work Statement List Data Set (ADB2WLDA)** panel prompts you for the data set name. On this panel, you can also indicate whether you want to append to or replace the work statement list and whether you want to build a batch job to run the work statement list.

```
Compare ----- Generate Compare Jobs -----
Option ==>

Specify the following for DB2 Object Comparison Tool:

Worklist information:
Worklist name . . . . . : PQ76055N (also used as middle qualifier in DSNs)
Co -----
| DB2 Admin----- Specify Work Statement List Data Set ----- 12:18
| Existing Worklist
|
| Work stmt list dsn . . . WLIST.WSL
Ch| Work stmt list name . . . WLIST
|
Da| Existing name action . . . (Append or Replace)
| Build JCL to run work stmt list . . . (Yes/No)
Op -----
```

**Restriction:** The replace capability is not supported if you are using the MultiCompare function to compare more than one saved dialog. If you are using MultiCompare, work statement lists are automatically appended. To replace work statement lists for more than one dialog, you must run the comparisons individually.

If you are appending to an existing work statement list, the **Specify Work Statement List (ADB27WLD)** panel prompts you to specify a different middle qualifier to avoid reusing data sets:

```

Compare ----- Generate Compare Jobs -----
Option ==>

Specify the following for DB2 Object Comparison Tool:

Worklist information:
Worklist name . . . . . : PQ76055N (also used as middle qualifier in DSNs)
Co -----
| DB2 Admin ----- Specify Work Statement List -----
| Existing Worklist
|
| Appending to an existing WSL may generate duplicate dataset names.
Ch| To avoid this, please specify a new middle qualifier.
Da| Middle Qualifier . . . . D5787
| -----

```

If the work statement list (provided in the **Worklist name** option) does not exist, the **Specify Work Statement List Data Set (GOC5WL)** panel is displayed:

```

Compare ----- Generate Compare Jobs -----
Option ==>

Specify the following for DB2 Object Comparison Tool:

Worklist information:
Worklist name . . . . . : PQ76055N (also used as middle qualifier in DSNs)
Co -----
| Compare ----- Specify Work Statement List Data Set ----- 13:48
| Enter/verify the following:
| Work stmt list dsn . .
Ch| Build JCL to run work stmt list          (Yes/No)
Da| -----

```

If you specify Yes for **Build JCL to run work stmt list**, the **Specify Job Parameters (ADB2W1R)** panel prompts you to specify the job library partitioned data set (PDS) and member prefix:

```

ADB2W1R ----- Specify Job Parameters ----- 09:08

Enter/verify the following:
Generate one job ==> NO          (Yes,No or Per Process)
Job library PDS  ==>
Member prefix   ==> RLS1       (Prefix, max 6 chars)
Jobname = member? ==>
(Yes/No)

```

**No**

The apply jobs are generated in a separate data set. The **Specify Data Set Name for Apply Jobs (GOC5AJ)** panel prompts you for that data set name. If the data set does not exist, it is created.

```

Compare ----- Generate Compare Jobs -----
Option ==>

Specify the following for DB2 Object Comparison Tool:

Worklist information:
Worklist name . . . . . : PQ76055N (also used as middle qualifier in DSNs)
-----
Co | Compare ----- Specify Data Set Name for Apply Jobs ----- 12:18 |
   | Enter/verify the following: |
   | Data Set Name ==> APPLY.DEF1045 |
Ch | |
Da | ----- |

```

### Use customized util opts

Specify whether you want to use the options that you set for the COPY, CHECK DATA, MODIFY, REBUILD, REORG, RUNSTATS, UNLOAD, and LOAD utilities on the Db2 Administration Tool panels. If you specify Yes, utility jobs and work statement lists are generated based on the utility definitions that you specified. Otherwise, the default utility options are used.

### Related information:

[“UO - Change utility options” on page 132](#)

### Content of apply job(s)

Specify whether to generate only changes to database objects.

You can specify one of the following values for this option:

#### All

Generate all jobs and processes to reload the data.

#### DDL

Generate only DDL. Object Comparison Tool does not generate UNLOAD statements, LOAD statements or other utilities except for rebind and REORG operations that are needed to apply the pending definition changes and remove any restrictive states. These operations are necessary to allow the subsequent statements to be successful.

When DDL is specified, any data conversion errors are ignored and no conversion report is generated.

### Unload method

Specify the method that you want to use to unload data.

You can specify one of the following values for this option:

#### Unload

Use the Db2 UNLOAD utility.

#### Parallel unload

Use the Db2 UNLOAD utility with parallel processing.

Parallel unload cannot be used in the following situations:

- A limit key change
- A change in number of partitions
- The use of an identity column in the partitioning key

If Db2 Object Comparison Tool determines that the operation is not eligible for a parallel unload, it uses Unload instead.

If the operation is eligible for a parallel unload, a template is used to allocate the unload data sets.

## HPU

Use Db2 High Performance Unload for z/OS to unload the data. Db2 High Performance Unload for z/OS must be available.

If Parallel unload and HPU are not valid options for the current unload, Object Comparison Tool automatically uses the UNLOAD utility.

## Generate templates

Specify whether you want the compare process to generate templates for data sets.

If you specify Yes, templates are generated for non-utility data sets with the definitions that you specified in Db2 Administration Tool.

If you specify No, the values for the **Prefix for data sets** and **Worklist name** options are used.

If the **Take an image copy** or **Run REORG** options are set to Yes, the utility templates are used.

## Related information:

[“TU - Specify TEMPLATE usage” on page 131](#)

[LISTDEFs and TEMPLATES \(IBM DB2 Administration Tool for z/OS\)](#)

## Stop on conversion error

Specify whether you want the compare process to stop if a conversion error occurs.

If you specify Yes and a conversion error occurs, the APPLY job is not generated, and an error message similar to the following message is displayed:

```
Compare table source(aaaaaa.bbbbb) and target(aaaaaa.bbbbb)
Column COLNAME
Conversion not supported for Col COLNAME (TIME to INTEGER)
(D)Type changed from TIME to INTEGER
(E)This type change is not supported
Tables have identical column lists
Table aaaaaa.bbbbb will be dropped
Table will be recreated
Table data conversion jobstep will not be generated
Conversion will fail because of datatype mismatch
Run stopped because conversion(s) not supported
```

## Use DEFER YES

Specify whether to use DEFER YES clauses on any eligible CREATE INDEX statements.

If you specify Yes, DEFER YES is used for eligible indexes. However, any user-defined masks for the DEFER attribute take precedence over the value of this option.

## Allow rotate parts

Specify whether to generate the ROTATE PARTITION statement or the ALTER PARTITION statement when the condition for a rotation is met.

### Yes

Generate the ROTATE PARTITION statement. Data from the rotating partitions is unloaded before the rotation. You can discard this data or to load it back into the new partitions.

### No

Generate the ALTER PARTITION statement and a REORG statement for the affected partitions. For the **Run REORG/REBUILD** option, specify either **Mandatory** or **All Relevant** to generate the REORG statements. Data from the rotating partitions is loaded back into the table so that you do not have to manually perform the reload. Logical and physical partitions are preserved.

If your table is not partitioned, specify Yes.

## Retain GENERATED ALWAYS:

### For ROWID

Specify whether to retain the GENERATED ALWAYS attribute for ROWID columns. Specify Yes or No.

### For ROW CHANGE TIMESTAMP

Specify whether to retain the GENERATED ALWAYS attribute for ROW CHANGE TIMESTAMP columns. Specify Yes or No.

## Retain START and RESTART values:

### For sequence object:

Specify whether to retain START and RESTART values for the sequences. Specify Yes or No.

If you specify No and ignores are specified for the START or RESTART fields, the ignored fields are not changed. If you specify No and ignores are not specified for the START and RESTART fields, the values on the target are changed according to the source.

## IDENTITY START value

Specify the value to use for the identity column when the table is re-created.

You can specify one of the following values for this option:

### Original

Use the START value for the identity column from the Db2 catalog.

### Computed

Compute the START value based upon the identity attributes of the column.

The computed value is based on the existing identity column attributes, such as MAXASSIGNED and the current cache size, at the time that the DDL is produced. Any changes made after the creation of the DDL, to either the identity values or to the data, are not reflected in the DDL and make the DDL obsolete. Object Comparison Tool does not locate an unassigned value from the existing data, and ultimately a new RESTART value might need to be provided based upon the underlying data and the application needs.

## Mask ignored fields

Specify whether to apply masked values to ignored fields for newly added objects if the field has been masked and ignored.

If you specify No, the original values from the source are applied. No is the default.

This option is not applicable to ignore files that are provided in the **CM Register Options (ADB2CRO) panel**.

## Optional jobs after Reload or Alter:

### Run CHECK DATA

Specify whether to generate a CHECK DATA utility job for all table spaces that are affected by the LOAD utility jobs that are generated by Db2 Object Comparison Tool to reload the data.

**Recommendation:** Specify Yes if LOAD uses ENFORCE NO.

### Take an image copy

Specify whether to generate COPY utility jobs.

You can specify one of the following values for this option:

#### Reload

Generate a COPY utility job for all tables that are affected by the generated LOAD utility jobs to reload the data.

#### Alter

Generate a COPY utility job for all table spaces, tables, and indexes that are altered with generated ALTER statements.

#### Both

Generate a COPY utility job for all tables that are affected by the LOAD utility job and all altered table spaces, tables, and index objects.

#### None

Do not generate any COPY utility jobs.

## Run REORG/REBUILD

Specify whether to generate REORG TABLESPACE utility jobs and REBUILD INDEX utility jobs, if needed. These jobs are run after applying the changes from an object comparison to make the target system operational.

You can specify one of the following values for this option:

### Mandatory

Generate all REORG and REBUILD jobs that are needed to remove any REORG-pending and REBUILD-pending states and make the data available.

### All relevant

Generate all REORG and REBUILD jobs that are needed to fully implement the changes. For example, changing PRIQTY is registered when the table space is altered, but the new value is not used until the table space is reorganized.

### None

Do not generate any REORG and REBUILD jobs. This option is not valid if you specified No for **Allow rotate parts**.

## Run RUNSTATS

Specify whether to generate RUNSTATS utility jobs.

You can specify one of the following values for this option:

### Reload

Generate a RUNSTATS utility job for all tables that are affected by the generated LOAD utility jobs to reload the data.

### Alter

Generate a RUNSTATS utility job for all table spaces, tables, and indexes that are altered with generated ALTER statements.

### Both

Generates a RUNSTATS utility job for all tables that are affected by the LOAD utility job and all altered table spaces, tables, and index objects.

### Minimum

Generate RUNSTATS utility jobs for the following conditions:

- If a table space is dropped and recreated, generate RUNSTATS statements for the tables and indexes.
- If a table is dropped and recreated, generate RUNSTATS statements for only the indexes and not the table.
- If an index is created, recreated, or has columns added, generate RUNSTATS statements for the index.
- If the index is created with DEFER YES and REBUILD is generated, the RUNSTATS operation is performed after the REBUILD operation.

### None

Do not generate any RUNSTATS utility jobs.

## Run REBIND

Specify whether to generate a job to rebind the plans and packages that are affected by the changes from an object comparison.

### Mandatory

Generate a REBIND job for only those plans and packages that were invalidated by the changes.

### All relevant

Generate a REBIND job for all plans and packages that were affected by the changes, including those plans and packages that were invalidated.

### None

Do not generate a REBIND job.

## Commands

You can enter the following commands on the command line:

### BP - Change batch job parameters

Allows you to change the parameters for batch utility jobs, such as the job card and space parameters.

When you specify the BP command and press Enter, the **Batch Job Utility Parameters (ADB2UPA) panel** opens:

```
DB2 Admin ----- DSN8 Batch Job Utility Parameters ----- 11:02
Command ==>

Generate Job Card . ==>      (Yes/No)                DB2 System: DSN8
Job cards:                  DB2 SQL ID: JS4678S
====> //JD4678SD JOB , 'DB2 UTILITY',
====> //                REGION=8M,NOTIFY=USER1,
====> //                MSGCLASS=X,
====>
====>
Generate Job CLASS ==> YES  (Yes/No)                JOB CLASS . . . . . ==>

JOBPARM:
====>
====>
====>
====>
CM Batch EXEC statement parameters:
Add SSID parameter . . YES  (Yes/No)
Add PLAN parameter . . YES  (Yes/No)
Additional parameters to add to CM Batch JCL EXEC statement:
====>
====>
====>
ADBTEP2:
Restart . . . . . (Yes/No)
Maxerrors . . . . . 88 (-1 to 99)
BindError . . . . . IGNORE (MAXE, Save or Ignore)
Log DIAG . . . . . YES (Yes/No)
AutoCheck . . . . . YES (Yes/No)
LOAD Summary Report YES (Yes/No)
Auto Rebuild . . . . . YES (Yes/No)
Auto Reorg . . . . . YES (Yes/No)
Advisory Auto Rebuild YES (Yes/No)
Advisory Auto Reorg YES (Yes/No)
LOB/XML IC Unload . . U (Error, Use base data)
Missing IC Unload . . U (Error, Use base data)
Spanned . . . . . (Yes/No)
DB2 Pending Changes options:
Check at DROP . . . NO (Yes/No)

Space parameters:
Unit name          ==> SYSDA
Space unit . . . . ==> TRK (BLK, TRK, CYL or 4096-32760)
Max Primary . . . . ==> 65535 (In above units or 99999999 or blank)
                                     In KB: 3145680
Max DASD . . . . . ==> 65535 (In above units. Allocations beyond this
                                     are sent to tape) In KB: 3145680
Tape Unit . . . . . ==> TAPE (Unit for tape if size is greater
                                     than Max DASD)
Default space allocation if unable to calculate:
Primary alloc . . . ==> 30 (in above units)
Secondary alloc . . ==> 30 (in above units)

Function-specific parameters:
Unload pct . . . . ==> 0 (0-99 - % increase for converted data set)
```

### Related information:

[Changing batch job utility parameters - Batch Job Utility Parameters panel \(ADB2UPA\) \(IBM DB2 Administration Tool for z/OS\)](#)

## TU - Specify TEMPLATE usage

Allows you to modify templates for the data sets that are allocated and used by Db2 Object Comparison Tool.

When you specify the TU command and press Enter, the **Specify UTILITY TEMPLATE Usage (ADB25TU3)** panel opens:

```
ADB25TU3          DC1A Specify UTILITY TEMPLATE Usage          11:58
Command ==>>

Line commands:
T - Toggle Use On/Off   C - Clear data   ? - Choose Template for the Keyword
E - Edit Template
Template type           ==>> OC          (UTIL, ALT, MIG, RES, OC)
Generate template statements ==>> NO    (Yes/No)
Sel Keyword           Use Template Comment
-----
                                                                More:      +
GOCALTR
GOCCREA
GOCDROP
GOCRBND
GOCIFFN
GOCSHVR
GOCCHNG
```

From this panel, you can modify the templates for data sets. The default work data sets and descriptions are shown in the following table:

Table 9. Work data set descriptions

Template keyword	Default data set	Description
GOCALTR	<i>prefix.worklist.DDL.ALTER</i>	Primarily ALTER statements
GOCCREA	<i>prefix.worklist.DDL.CREATE</i>	Primarily CREATE statements
GOCDROP	<i>prefix.worklist.DDL.DROP</i>	Primarily DROP statements
GOCRBND	<i>prefix.worklist.CMD.REBIND</i>	REBIND control statements
GOCIFFN	<i>prefix.worklist.IFF</i>	Internal version file
GOCSHVR	<i>prefix.worklist.SHRVARS</i>	ISPF variables
GOCCHNG	<i>prefix.worklist.CHANGES</i>	Changes from compare

You can specify the following variables in templates:

- The following functional variables:

### &GOCPRE

The prefix for data sets, which you specify on the **Generate Compare Jobs (GOC5)** panel (Figure 62 on page 106).

### &GOCWLN

The statement work list name, which you specify on the **Generate Compare Jobs (GOC5)** panel (Figure 62 on page 106).

- The date and time variables that are supported for the Db2 TEMPLATE utility.
- &USERID

### Related information:

[Associating TEMPLATES with data sets - Specify UTILITY TEMPLATE Usage panel \(ADB25TU3\) \(IBM DB2 Administration Tool for z/OS\)](#)

[Syntax and options of the TEMPLATE control statement \(Db2 12 for z/OS documentation\)](#)

## UO - Change utility options

Allows you to specify options for Db2 utilities.

When you specify the UO command and press Enter, the **Change Utilities Options (ADB2UOPS) panel** opens where you can select the Db2 utility for which you want to change the options:

```
ADB2UOPS ----- DC1A Change Utilities Options ----- 11:15
Select one of the following, then press Enter.

  C - Image copy
  KD - Check data
  M - Modify
  O - Reorg tablespace
  OI - Reorg index
  RB - Rebuild index
  R - Runstats tablespace
  U - Unload
  L - Load

Option
====>
```

When you press Enter, the **Specify Utility Options panel** for the utility opens and you can enter the options that you want. Press Enter to save your selections.

**Restriction:** Some utility options are not available for utility jobs that are built by Db2 Object Comparison Tool.

For Db2 Object Comparison Tool to generate utilities with the options that you specified, on the **Generate Compare Jobs (GOC5) panel** ([Figure 62 on page 106](#)), you must set the **Use utility options** to Yes. The options that you select are retained and used for any subsequent jobs where **Use utility options** is set to Yes.

### Related information:

[Db2 Admin utilities \(IBM DB2 Administration Tool for z/OS\)](#)

## CO - Change options common to change functions

Allows you to review and change options that are common to change functions in Db2 Administration Tool and Db2 Object Comparison Tool.

When you specify the CO command and press Enter, the **Options for Change Functions (ADB2PCO) panel** opens:

```

ADB2PCO n                               Options for Change Functions                               19:13
Command ==>>

DB2 System: DB1A

Recreate accelerated tables . . . . . YES (Yes/No. Default is Yes)
Restore replication of tables . . . . . YES (Yes/No. Default is Yes)
Reload accelerated tables . . . . . YES (Yes/No. Default is Yes)
Restore acceleration of tables . . . . . YES (Yes/No. Default is Yes)
Remove deleted accelerated tables . . YES (Yes/No. Default is Yes)

Load accelerated tables lock mode . . . . . (Default is TABLESET)
Unload altered tables . . . . . YES (Yes/No.
Default is NO if no recovery
Required to be YES if recovery)

Enable WSL authorization switching . . NO (Yes/No. Default is No)
Object processing order . . . . . H (T - Object type, H - DB hierarchy.
Default is H)
Statement validation exit name . . . . . _____ (Name of EXEC used to validate
statements in WSL Validate)
Allow PBR2 to PBR changes . . . . . NO (Yes/No. Default is No)
DB2 release number . . . . . _____ (Use VVRM format)
DB2 function level . . . . . 502 (E.g. 100, 500, 501, 5nn)
Table GRANT processing order . . . . . C (C - CREATE prefix for GRANT
P - POSTUTIL prefix for GRANT
Default is C )

```

## Implicit LOB and XML table support

The Db2 Admin Tool ALT and MIG functions, and Db2 Object Comparison Tool support changes to implicit LOB and XML table spaces.

The Db2 Admin Tool ALT and MIG functions and Db2 Object Comparison Tool generate multiple image copies when there are implicit LOB or XML table spaces defined for the tables. Generating multiple image copies requires that either a SYSCOPY TEMPLATE is defined and used for the operations, or that the default is used. If no template is provided, this default is used:

```
DSN(&US. .&SSID. .&DB. .&SN. .&UQ)
```

For clones, this default is used:

```
DSN(&US. .&SSID. .&DB. .&SN. .CLONE. &UQ)
```

## Enable authorization switching

Enabling *authorization switching* will generate DDL that is used by the authorization switching feature.

Authorization switching enables you to execute DDL and DCL under the authority of another user.

## Generating a compare batch job for a multi-target import

A *multi-target import* is when you import changes from a compare job to objects on multiple target environments. When you generate a batch job for this import, register the change so that the Change Management function can later import the change to objects on multiple target environments.

### Before you begin

Before you can generate a compare job, you must first specify a [source](#) and [target](#) for the comparison. You can tell whether the source and target are specified by looking at the **Specification Status** column on the **DB2 Object Comparison Tool Menu (GOCMENU) panel**.

### Procedure

To generate a compare batch job for a multi-target import:

1. On the **DB2 Object Comparison Tool Menu (GOCMENU) panel**, specify option 5, and press Enter.

2. On the **Generate Compare Jobs (GOC5)** panel, specify values for the options. Specify No for **Generate Online**. Press Enter.

```

GOC5 ----- Generate Compare Jobs -----
Command ==>

Specify the following for DB2 Object Comparison Tool:

Worklist information:
  Worklist name . . . . . D24555  (also used as middle qualifier in DSNs)

Compare options:
  Suppress DROP of objects . No      (Yes/No)
  Suppress DROP of columns . No      (Yes/No)
  Suppress adding columns . No      (Yes/No)
  Run SQLID . . . . .          (Blank, an SQLID, or <NONE>)
  Run Validate. . . . . N          (Validate, None)
  Object Grantor . . . . .      (Blank or an SQLID)
  Allow implicit DROP of
    excluded objects . . . No      (Yes/No)
  Enable auth-switching . . . YES    (Yes/No)
  Disable REORG optimization YES    (Yes/No)
  Scope Warning Messages . . YES    (Yes/No)

Change reporting options . . Yes     (Yes/No)
Save compare results . . . . Yes    (Yes/No)

Data set information:
  PDS for batch jobs . . . . D24555.JCL
  Prefix for data sets . . . GXRON.D24555
  Changes file data set name      (leave blank for default)
  Member name . . . . . COMPARE (if Changes file is an existing PDS)

Options:
  Generate online . . . . . No      (Yes/No)
  Single compare job . . . . . No   (Yes/No)
  Member name . . . . . COMPARE    (default COMPARE)
  Allow deferred restart . . No     (Yes/No)
  Generate apply jobs . . . . . Yes (Yes, No, or (Delta) Change)
  Generate one job. . . . . Yes    (Yes, No, or (Per) Process)
  Member prefix . . . . . APPLY    (default APPLY)
  As work statement list . Yes     (Yes/No to append to work stmt list)
  Use customized util opts. Yes    (Yes/No)
  Unload Method . . . . . P        (Unload, Parallel unload, HPU)
  Generate templates. . . . . No   (Yes/No)
  Stop on conversion error. NO     (Yes/No)
  Use DEFER YES . . . . . YES     (Yes/No)
  Allow rotate parts . . . . . YES  (Yes/No)
  Retain GENERATED ALWAYS:
    For ROWID . . . . . YES        (Yes/No)
    For ROW CHANGE TIMESTAMP. YES  (Yes/No)
  Retain sequence:
    START and RESTART values. NO   (Yes/No)
  IDENTITY START value . . . ORIGINAL (Original, Computed)
  Mask ignored fields. . . . . NO  (Yes/No)

  Optional jobs after Reload or Alter:
    Run CHECK DATA . . . . . Yes   (Yes/No)
    Take an image copy . . . R      (after: Reload/Alter/Both/None)
    Run REORG/REBUILD . . . M      (Mandatory, All relevant, None)
    Run RUNSTATS . . . . . R       (after: Reload/Alter/Both/None)
    Run REBIND . . . . . M         (Mandatory, All relevant,
None)

  BP - Change batch job parameters
  TU - Specify TEMPLATE usage
  UO - Customize utility options
  CO - Change options common to change
functions

```

3. On the **Change Management Prompt (ADB2CMRO)** panel, specify YES.
4. On the **CM Register Options (ADB2CRO)** panel, in the **Multi-target change** field, specify Yes:

```

ADB2CRO n ----- CM - Register Options ----- 16:25
Command ==>

Commands: CONTINUE                                DB2 System: DB2X
                                                DB2 SQL ID: GX090

Specify the following values to register a change:

Owner . . . . . GX090                > (Optional, Default is GX090)
Name . . . . . TEST2                  >
Comment . . . . .                      >
Multi-target change . YES              (Yes/No, Default is NO)
  Target name . . . . PSVTEST          > (Optional, ? to lookup)
  Group name . . . . .                 > (Optional, ? to lookup)

Replace existing change . .             ('/' to replace, Default is BLANK)

Specify the owner and name values to use for this change (? to lookup):
                                Owner      Name
Ignore . . . . .                 >
Mask . . . . .                   >

```

5. Issue the Continue command, and press Enter.
6. If the **Insert a Target (ADBPC911)** panel opens, complete the fields to add a target. For help on defining targets for Change Management, see [Setting up the targets \(IBM DB2 Administration Tool for z/OS\)](#).
7. On the **Associate Targets (ADBPCMT)** panel, issue the NEXT command to build and show the compare job.

```

DB2 Admin ----- CM - Associate Targets ----- Row 1 to 1 of 1
Command ==>                                Scroll ==> CSR

Details for multi-target change: PEDRO.TEST1    DB2 System: DSNA
                                                DB2 SQL ID: PEDRO

Commands: NEXT

  Target
Sel Name      DB2 Location  Change  Change  Status
  *           *            *       *       *
----->----->----->----->----->----->----->----->
  PSVTEST    DBAD
***** END OF DB2 DATA *****

```

## Specifying masks for a multi-target import

When you import changes from a compare job to objects on multiple target environments, you can specify masks for the compare job on the following panels:

### GOC3

Specify masking on this panel if your compare source and target object use different naming conventions.

### ADB2CRO

Specify masking on this panel if your multi-target change to uses different naming conventions than your compare target.

### ADBPCMTU

Specify masking on this panel if your multiple target systems use different naming conventions than your multi-target change.

The masking you specify on one panel will not override the masking you specify on another panel. All instances of specified masking are applied.

## Updating an associated target

You can manage targets and update any associated targets details.

### About this task

To update a target:

### Procedure

1. Specify 5, Generate compare job on the **Object Comparison Tool Menu**.
2. Specify any value on the **Generate Compare Jobs** panel and press Enter.
3. Specify Yes on the **Change Management Prompt** panel to indicate that you wish to use Change Management.
4. Specify CONTINUE on the **Register Options** panel.  
If the Multi-target change field is set to YES, panel ADBPCMT is displayed. If NO is specified, the compare job is built immediately.
5. Specify the U line command next to the target you wish to update.

The **Update Associated Target** panel is displayed, as shown in the following figure:

```
ADBPCMTU n ----- CM - Update Associated Target ----- 10:05
Command ==>

Press Enter to confirm changes.

Name . . . . . : PSVTEST
DB2 location . . . . . : DBAD
Target Defaults:
  Mask owner . . . . . : USER02
  Mask name . . . . . : MASKUSR2 >
Target Overrides:
  Change owner . . . . . PSV01 >
  Change name. . . . . TEST2 >
  Mask owner . . . . . USER02 >
  Mask name . . . . . MASKUSR2 >
```

Figure 68. CM - Update Associated Target panel (ADBPCMTU)

6. Specify the override values for associated target change owner, associated target change name, target mask owner & target mask name.

The Name, DB2 location, Mask owner, and Mask name are shown for reference but cannot be updated.

#### Name

The name of the target profile.

#### DB2 location

The location of the DB2 system.

#### Mask owner

The owner of the default mask.

#### Mask name

The name of the default mask.

#### Change owner

The Owner of the change on the target system. If left blank, the field defaults to the DB2 authorization ID when the change is registered on the target system.

#### Change name

The name of the change on the target system. If left blank, the field defaults to `AUTO:timestamp'` when the change is registered on the target system.

#### Mask owner

The owner of the mask associated with the change.

### Mask name

The name of the mask.

7. Press Enter to process the update.

When the Enter key is pressed, the changes are saved for use in the next step and the panel is dismissed, returning to panel ADBPCMT. The Change Owner and Change Name will have the values that were entered in panel ADBPCMTU. If PF3 is pressed, the values are not saved.

## Running a work statement list

When you generate a work statement list by specifying options on the Generate compare jobs panel, the statements are placed in the specified work statement list library. You must then access the DB2 Administration Tool Manage work statement list function to run the work statement list.

### About this task

Refer to *IBM DB2 Administration Tool for z/OS User's Guide and Reference* for additional information about the DB2 Administration Tool Manage work statement list function.

When no UNLOAD, RELOAD, or REORG operations are required, or when a single UNLOAD, a single RELOAD, or a single REORG operation is required, only a single job is generated for the work statement list.

When multiple UNLOAD, RELOAD, or REORG operations are required, and you want to generate a single apply job for all operations rather than a separate job for each operation, you must specify that a single apply job be generated in the Manage work statement lists function in the DB2 Administration Tool.

**Note:** The SYSREC TEMPLATE statement in the LOAD step is used when you select HPU for the unload process. Because it is not known if HPU will be used as the unload method before the work statement list is run in the DB2 Administration Tool, the template might seem to be unneeded when the work statement list is generated. However, the SYSREC template statement is used if you select HPU as the unload process when you build the job on the DB2 Administration Tool.

To generate single or multiple apply jobs for all operations:

1. Access the DB2 Administration Tool Manage work statement lists function.
2. Specify the work statement list DSN and the work statement list name.

The Work Statement List Library panel (ADB2W1) is displayed.

3. Specify the option to use to run the work statement list. Issue the command Options. In the **Work statement list options** pane, in the **Run execution mode** field, enter online or batch.

You are returned to the previous panel. You can then issue the Run command.

The HPU Prompt panel (ADB2WHPU) is displayed.

4. Specify if you want to use High Performance Unload as the unload method and press Enter.

The Specify Job Parameters panel is displayed.

```
DB2 Admin ----- Specify Job Parameters ----- 12:30
Enter/verify the following:
Generate one job   ===>   (Yes/No)
Job library PDS   ===>
Member prefix     ===>   (Prefix of members, max  chars)
Jobname = member? ===>   (Yes/No)
```

Figure 69. Specify Job Parameters (ADB2W1R)

5. Specify whether you want to generate one job by entering Yes or No in the Generate one job field.

- a. If you specify Yes, a single batch job is generated from the work statement list that combines all the processes. The remaining fields on the panel are not used.

Table GRANT statements are generated by Object Compare after tables, related indexes, and foreign keys are created, and after all rows are reloaded.

- b. If you specify No, enter the library name in the Job library PDS field, the member prefix name in the Member prefix field, and specify whether the jobname is the same as the member name in the Jobname = member? field.

**Restriction:** The maximum allowable prefix length is seven characters. When naming the member prefix, the number of characters that is required by the system to represent multiple jobs determines how many characters you can use to name the prefix. The max chars field is populated dynamically with the number of characters that are available after the number of jobs is established. For example, running 57 jobs uses two of the seven allowable characters (01, 02...57), which leaves five characters for you to use for the prefix name. Therefore, the number five is populated in the max chars field.

When you specify job parameters while you are building a batch job to run the work statement list, the member prefix length is limited to a maximum of four characters. For more information about building a batch job to run the work statement list, refer to the description of the [As work statement list](#) field.

The process generates multiple jobs and saves them in the Job library PDS named in the Specify Job Parameters panel, [Figure 69 on page 137](#).

You must submit these jobs in the sequence that they are presented in the following table. You provide the member prefix on the Specify Job Parameters panel. The remaining job name is generated based on the number of jobs being run. The examples used in the table reflect a batch that exceeds 100 jobs.

Job details	Job action
<p><i>prefixU001</i>  <i>prefixU002</i>            ....            ....  <i>prefixUnnn</i></p>	<p>One job is created for each UNLOAD operation.</p>
<p><i>prefix2</i></p>	<p>One job is created for all DROP, CREATE, and ALTER operations.</p>
<p><i>prefixL001</i>  <i>prefixL002</i>            ....            ....  <i>prefixLnnn</i></p>	<p>One job is created for each RELOAD operation.</p>
<p><i>prefix3</i></p>	<p>One job is created for all utilities except REORG.</p>

Table 10. Work statement list submission sequence for multiple operations. The following table shows examples of different jobs and what action is taken. (continued)

Job details	Job action
<pre>prefixR001 prefixR002 .... .... prefixRnnn</pre>	One job is created for each REORG operation.

### Related reference

“Compare job options” on page 115

When you generate a compare batch job, you can specify a number of options to control the behavior of the comparison operation and job. These options are listed on the **Generate Compare Jobs (GOC5) panel**.

## Saving dialogs

In Object Comparison Tool, you can save the current batch job selections, including the options on the **Generate Compare Jobs (GOC5) panel** and its subordinate panels, for later retrieval. These selections are referred to as a *dialog*.

### Procedure

To save a dialog:

1. On the **DB2 Object Comparison Tool Menu (GOCMENU) panel**, specify option **S**, and press Enter.
2. On the **Save Dialog (ADB2SDS) panel**, specify the following information, and press Enter to save the dialog:

```
ADB2SDS ----- Save Dialog ----- 10:35
Enter/verify the following:
Prefix      ==> NBRON.ADMIN.SAVEDLGS.APAR.B37
Name        ==>
Description ==>
```

#### Prefix

Specify a unique qualified name for a collection of saved dialogs. This name is used as a prefix for one or more data sets in which saved dialogs are stored.

#### Name

Specify a name that identifies the dialog within the collection of dialogs that is identified by the prefix. If you use a duplicate dialog name within the prefix, the existing dialog is replaced. Otherwise, a new member is created.

#### Description

Optionally, enter a description of the dialog.

### What to do next

If you later want to retrieve this dialog, follow the steps in [“Managing and restoring dialogs” on page 140](#).

## Managing and restoring dialogs

Use the Manage/Restore Dialogs panel to restore, rename, and delete previously saved dialogs.

### About this task

To access a saved dialog:

1. Specify M to display the Saved Dialogs panel:

```
Compare ----- Saved Dialogs ----- 14:05
Option ==>

Enter the prefix for saved dialog data sets:
Prefix ==> NBRON.ADMIN.SAVEDLGS.APAR.B37
```

Figure 70. Saved Dialogs panel (GOCMC1)

2. Enter the prefix for the saved dialog data set and press Enter.

The Manage/Restore Dialogs panel is displayed, which lists all the saved dialogs in the selected prefix:

```
DB2 Admin ----- Manage/Restore Dialogs ----- Row 1 of 2
Command ==>                                         Scroll ==> PAGE

Line commands: S - Select D - Delete R - Rename

S Name      Description                               Created    Id
*           *                               *          *
-----
TEST01     SOURCE IS DDL W/ADD.COLUMN                   2003/07/09 NBRON
PREVTEST   DDL&DB2 W/STOGRROUP                          2003/09/09 NBRON
```

Figure 71. Manage/Restore Dialogs panel (ADB2SDM)

3. Enter the line command that corresponds to the function you want to perform. The following line commands are available:

#### S

Select a dialog to restore. Enter S in the line command field to restore the selections for the corresponding dialog. You can immediately run the batch job.

#### D

Delete a dialog. Enter D in the line command field to delete the corresponding dialog.

#### R

Rename a dialog. Enter the new dialog name in the Member Rename dialog box that is displayed when you issue the R command. Press Enter to confirm the rename.

4. Press Enter to initiate the command.

## Comparing multiple sources and targets

Use the MultiCompare option to compare one or more saved dialogs.

### About this task

The following exceptions apply when processing multiple compare jobs:

- If the Single compare job option is Yes and the number of steps in the job exceeds 255, the member name is truncated if it exceeds six characters to allow the addition of a numeric suffix.
- If the Single Compare job option is No, the member name is truncated if it exceeds five characters to allow the addition of a numeric suffix to indicate the compare job for each target.
- The As work statement list option must be set to Yes for MultiCompare.
- The option to replace work statement lists is not supported when generating apply jobs. Work statement lists are automatically appended. To replace work statement lists for more than one dialog, you must run the jobs individually.
- The work statement list name is derived as Work List Namennn, where nnn uniquely identifies the work statement list for each target.
- Generating a work statement list online is not supported with MultiCompare. When the Generate Compare Jobs panel is displayed when specifying options during the MultiCompare process, the generate online option field value is automatically set to No.

To compare one or more saved dialogs:

1. Specify option MC on the Object Comparison Tool menu panel.

The Saved Dialogs panel is displayed:

```
Compare ----- Saved Dialogs ----- 14:05
Option ==>

Enter the prefix for saved dialog data sets:
Prefix ==> RAJESHR.ADMIN.SAVEDLGS
```

Figure 72. Saved Dialogs panel (GOCMC1)

2. Enter the prefix of the data set where the dialogs are saved and press Enter.

The Manage Dialogs MultiCompare panel is displayed, which contains a list of saved dialogs:

```
Compare ----- Manage Dialogs MultiCompare -----
Command ==>                               Scroll ==> PAGE

Commands:  RUN  RUNALL

Line commands:  S - Select      D - Delete      I - Interpret
                RL - Repeat/change location  Rnn - Repeat 'nn' times
                MS - Modify Source           MT - Modify Target
                IC - Include in Compare      XC - eXclude from Compare

S   Name      Location      Description Created      Id      I Status
----->-----
TARGET1 STPLEX4A_DSN8      AQ238S1 ON  2004/08/13 RAJESHR  Y Incomplete
```

Figure 73. Manage Dialogs MultiCompare (GOCMC)

The following fields are available:

#### S

Issue a line command in the S field that corresponds to the dialog.

**Name**

The name of the dialog.

**Location**

The location where the target points if DB2.

**Description**

The description of the saved dialog.

**Created**

The date the dialog was created.

**Id**

The user ID of the person who created the dialog.

**I (Indicator)**

Indicates (Y or N) if the dialog is to be included in the compare when the RUN or RUNALL commands are issued. This field is set by using the IC and XC commands.

**Status**

Indicates the status of the dialog. An Incomplete status means that not all source and target definitions are provided for that dialog and the dialog will not be included in the compare even if the indicator is set to Y.

3. Select the dialogs that you want to compare and issue one of the following commands:

**RUN**

Issue the RUN command to run the compare process for all dialogs selected using the IC line command.

**RUNALL**

Issue the RUNALL command to run the compare process for all the dialogs except those excluded using the XC line command.

**Attention:** RUN and RUNALL will fail if any of the dialogs have an incomplete status.

The MultiCompare Select panel is displayed when the RUN or RUNALL command is issued:

```
Compare -----MultiCompare/Select Dialog ----- 14:18
Selecting this option enables the compare process to use the source of the
following dialog to be compared against all the targets selected.

Compare one source to multiple targets? ==>      (Yes/No)
Dialog Name                               ==> <Dialog Name>
```

*Figure 74. MultiCompare/Select (GOC2MCMC)*

4. Specify whether you want to compare one source to multiple targets.

To compare one source to multiple targets, type Y and the dialog name that contains the source to be used, and press Enter. The source details of the selected dialogs are used in each compare process instead of the source in the saved dialog.

To compare using the source and target that are defined in each saved dialog, enter N. The current source details that are specified for each of the selected dialogs are used. The Generate Compare Jobs panel is displayed.

Set the values to use for running this compare job. Refer to [“Compare job options” on page 115](#) for definitions of the options available on the Generate Compare Jobs panel.

5. Enter the line command that corresponds to the function that you want to perform.

In addition to Select and Delete, the following line commands are available:

**I - Interpret**

Displays the Interpret Dialog panel which contains the source and target details for the corresponding dialog:

```

Compare ----- Interpret Dialog ----- Row 1 to 11 of 11
                                           Scroll ==> PAGE

-----
Type                                     Name
-----
Mask data set                           None specified
Ignore data set                          Using defaults
Source Version data set                  D3410.VER.DSN
Location                                 STPLEX4A_DSN7
Table space                              VNRJPDDB.VNRJPTS
Table space                              AHXFLWDB.AHX3UJWU
Table space                              ADBD4BAS.ADBS4BAS
Table space                              ADBDCH3.ADBSCH3
Target Version data set                  D3410.TGT.VER
Location                                 STPLEX4A_DSN7
Table space                              VNRJPDDB.CQ289TS

```

Figure 75. Interpret Dialog (GOCMI) panel

This panel indicates whether the source or target is a DDL or DB2 catalog. If the source or target is a DB2 catalog, this command lists all objects in the catalog and their type.

**RL - Repeat/change location**

Use the RL command to replicate a dialog and change the location of the target. Issue the RL in the Select field that corresponds to the dialog to copy and press Enter. The Distributed DB2 Systems panel is displayed:

```

DB2 Admin ----- Distributed DB2 Systems -----
Command ==>                                           Scroll ==> PAGE

Select by typing '+'
Select the location you wish to use:                   DB2 System: DSN8
                                                         DB2 SQL ID: RAJESHR

Line commands:
  S - Use DDF to access remote catalog  C0 - Connect to remote subsystem
  DIS - Display threads for remote system

Select Location
-----
STPLEX4A_DSN7
SQLVM6
STLEC1

```

Figure 76. Distributed DB2 Systems panel (ADB2DDF)

The Distributed DB2 Systems panel displays the remote DB2 subsystems that are available from the DB2 subsystem that you are currently on. Select the new location or locations for the dialog by entering a plus sign (+) in the Select field. You can select multiple locations at one time. When you press End, the Repeat Dialog/Change location panel is displayed, which contains the new dialog with the new location:

```

Compare----- Repeat Dialog/Change Location --- Row 1 to 1 of 1
Command ==>                                     Scroll ==> PAGE

Commands: CONTINUE

Specify output compare version file:
Data set prefix: J148286.OC                    (Prefix of target version files)
Data set suffix: TGTVF                          (Optional suffix)

S Target Location Dialog Dialog Description
* * *
-----
  STPLEX4A_DSN8 TEST1

```

Figure 77. Repeat Dialog/Change Location (GOCMCL)

You can select and edit the dialog name and description. When you are finished with the edits, issue the Continue command to return to the Manage Dialogs/MultiCompare panel.

### Rnn - Repeat nn times

Use the *Rnn* command to replicate a dialog multiple times. The Repeat Dialog/Change location panel is displayed which contains the replicated dialogs when this command is invoked. You can edit the dialog target location, name, and description. When you are finished with your edits, issue the Continue command to return to the Manage Dialogs/MultiCompare panel.

### MS - Modify Source

Use this command to access the Specify Compare Source panel, [Figure 11 on page 62](#), to modify the source details.

### MT - Modify Target

Use this command to access the **Specify Compare Target (GOC1) panel**, to modify the target details.

### IC - Include in Compare

Selects a dialog to include in the compare process. Upon selection, the Indicator field is set to Y. Dialog status must be *Complete* for it to be included in the compare process or an error will occur.

### XC - Exclude from Compare

Selects a dialog to exclude from the compare process when the RUNALL command is issued. You can also use this command to reverse the IC command and change the indicator field from Y to N.

### Related tasks

[“Specifying source object definitions to be compared” on page 62](#)

The first step in defining the attributes of the DB2 objects to compare is to specify if the source object is from a DDL file, from the DB2 catalog, or from a compare version file. Use the **Specify Compare Source** panel to define these attributes.

[“Specifying target objects to be compared” on page 88](#)

The *target* is the object or objects that you want to compare to the source.

---

## Chapter 5. Batch DDL file extraction program

The DDL file extraction program interprets a source file of DDL statements that define DB2 objects. The program generates an output file, called a *version file*, that contains records that are similar in format to those in the DB2 catalog that defines the same objects.

To effectively compare the input DDL objects to different versions of the same objects, you can use the version file as input to the batch Compare program.

**Restriction:** Version files are compressed internally and should not be created with DFSMS compression because GEN and the DDL reader opens them for update, which is not allowed for DFSMS compressed data sets. DB2 Administration Tool or Db2 Object Comparison Tool jobs will receive S213-C8 abends if the version file data sets are defined with DFSMS compression.

The batch DDL file extraction program is run and a report is produced when you set source DDL file definitions on the Specify Source DDL panel ([Figure 14 on page 64](#)) and run a compare job.

The source of the DDL statements can be:

- A sequential file that contains SQL statements
- An extract from a DB2 catalog of some set of DB2 objects and dependencies

### Related concepts

[“Db2 Object Comparison Tool components and processes” on page 4](#)

Db2 Object Comparison Tool compares objects by reading the Db2 catalog or DDL files. Object Comparison Tool produces comparison reports and then optionally generate either JCL jobs or work statement list (WSL) tasks with changes for the target objects.

[“Batch compare program ” on page 153](#)

The batch compare program is run when you specify options on the **Generate Compare Jobs** panel and generate a compare batch job. This program compares two sets of DB2 objects, reports all differences, and writes all changes to a file. This file is used to generate updates to upgrade target objects to the level of source objects.

### Related tasks

[“Specifying that the source is a DDL file” on page 63](#)

Select the Specifying source DDL file definitions option to specify the data set name of the DDL file that contains the objects to compare, the data set name of the version file in which you want to put the definition of these objects, and an optional description of the objects that you are comparing.

### Related reference

[“Supported SQL statements ” on page 145](#)

The DDL file extraction program supports a subset of the SQL statements that are supported by DB2 for z/OS.

[“Batch DDL file extraction program report format ” on page 148](#)

The report that the batch DDL file extraction program produces begins with a header and the IBM copyright statement. The copyright statement is followed by a line that indicates the version of Db2 startup parameters that are used when the extraction program is processing statements from the input stream.

---

## Supported SQL statements

The DDL file extraction program supports a subset of the SQL statements that are supported by DB2 for z/OS.

DDL statements that are submitted for processing by the DDL file extraction program must be in the format that is supported by SPUFI or DSNTEP2:

- Input must be in columns 1-72.

- Phrases can span records. For example, column 1 of an input record immediately follows column 72 of the previous record.
- Comments can be included and are indicated by two consecutive dashes (--).
- The generated statement terminator was ? (question mark) for releases earlier than Db2 Admin Tool Version 11.1 and is the ` (grave accent) for Db2 Admin Tool Version 11.1 and later releases.

**Restriction:** The DDL reader does not communicate with DB2. Therefore, the DDL reader is unable to acquire defaults that are established by the customer for table space buffer pool, compression and index buffer pool, and pad index. The defaults that are used are those used before DB2 9.

The following SQL statements are supported:

- ALTER DATABASE
- ALTER FUNCTION
- ALTER INDEX
- ALTER PROCEDURE
- ALTER SEQUENCE
- xALTER STOGROUP
- ALTER TABLE

**Restriction:** ALTER TABLE ROTATE PARTITION restrictions are:

- The maximum number of ALTER TABLE statements that can be processed to rotate partitions is  $n-1$ , where  $n$  is the number of partitions.
- If a rotate has taken place and if new partitions have also been added, the rotate will not be detected.
- If a rotate has taken place and alter of limitkeys has also been done, the rotate might not be detected.

**Restriction:** Constraint names are not compared (and differences not reported) because constraint names can be explicitly specified or, if they are not explicitly specified, be generated by Db2. If the constraint names are generated by DB2, the constraint names could be different between source and target, even if the DDL for the object might be the same for source and target.

**Restriction:** The ALTER statement is not supported for auxiliary tables.

- ALTER TABLESPACE
- COMMENT ON

**Restriction:** The COMMENT ON statement is not supported for auxiliary tables.

- COMMIT
- CREATE ALIAS
- CREATE AUX TABLE
- CREATE DATABASE
- CREATE DISTINCT TYPE
- CREATE FUNCTION
- CREATE INDEX
- CREATE PROCEDURE
- CREATE SEQUENCE
- CREATE STOGROUP
- CREATE SYNONYM
- CREATE TABLE

**Restriction:** The LIKE form of CREATE TABLE is not supported.

**Restriction:** Constraint names are not compared (and differences not reported) because constraint names can be explicitly specified or, if they are not explicitly specified, be generated by Db2. If the

constraint names are generated by Db2, the constraint names could be different between source and target, even if the DDL for the object might be the same for source and target.

- CREATE TABLESPACE
- CREATE TRIGGER
- CREATE VARIABLE

If a dependent object such as a procedure (native stored procedure), PL/SQL function, Trigger, View, Column mask, or Row permission in the data set references a global variable, then the CREATE VARIABLE statement should be included in the DDL data set.

- CREATE VIEW
- DROP ALIAS
- DROP DATABASE
- DROP DISTINCT TYPE
- DROP INDEX
- DROP SEQUENCE
- DROP SPECIFIC FUNCTION
- DROP STORED PROCEDURE
- DROP SYNONYM
- DROP TABLE
- DROP TABLESPACE
- DROP TRIGGER
- DROP VARIABLE
- DROP VIEW
- GRANT collection privileges
- GRANT database privileges
- GRANT distinct type or JAR privileges

**Restriction:** The GRANT USAGE ON JAR statement is not supported in change management, or in the DB2 Object Comparison Tool.

- GRANT function or procedure privileges
- GRANT package privileges
- GRANT plan privileges
- GRANT schema privileges
- GRANT sequence privileges
- GRANT system privileges
- GRANT table or view privileges
- GRANT use privileges
- GRANT variables
- LABEL ON

**Restriction:** For objects that exist on both the source and the target, Db2 Object Comparison Tool compares and reports the authorization differences, but does not propagate the differences from the source to the target. Db2 Object Comparison Tool does not propagate the differences in order to avoid corrupting the target authorizations. During the apply job, the GRANT statements from the source are ignored and the GRANT statements from the target are read.

**Restriction:** The LABEL ON statement is not supported for auxiliary tables.

- RENAME INDEX

The DDL of the index must be included in the source DDL along with the RENAME INDEX statement.

**Restriction:** Rename of an implicit index is not supported.

- RENAME TABLE
- SET CURRENT PATH
- SET CURRENT SQLID

## Batch DDL file extraction program report format

The report that the batch DDL file extraction program produces begins with a header and the IBM copyright statement. The copyright statement is followed by a line that indicates the version of Db2 startup parameters that are used when the extraction program is processing statements from the input stream.

Next, if the first statement in the input stream is not a SET CURRENT SQLID statement, the program indicates the authorization ID under which the input statements are being processed. This authorization ID serves as the *owner* of objects that are created and as the default schema name when a schema name is required but not specified. The authorization ID remains in effect until it is changed by a subsequent SET CURRENT SQLID statement.

Finally, a statistical summary of the process is produced that indicates the number of:

- DDL input records in the input stream
- Unique DDL statements within those records
- Catalog records written to an intermediate data set
- Catalog records written to the final output data set

The following figure shows sample output.

```
>-----
GOC2DTC - Create Version File from DDL File                               2006-06-09 18:57
-----

      DB2 Object Comparison Tool
      5697-L40 (C) Copyright IBM Corporation 2001, 2007.
      All rights reserved. Licensed materials - property of IBM.
      US Government Users Restricted Rights - Use, duplication or disclosure
      restricted by GSA ADP schedule contract with IBM Corp.

Using DB2 DECP Version 8(new function mode) startup parameters for SSID DSN8
Processing under auth_id of current task, VNDR230, until changed by SET CURRENT SQLID statement.

-----
GOC2DTC - Create Version File from DDL File                               2006-06-09 18:57
-----

GOC2DTC - Summary
      Number of DDL input records           :    369
      Number of DDL statements              :     41
      Number of Catalog records intermediate :     59
      Number of Catalog records written     :     59

GOC2DTC - Successful completion
```

Figure 78. CREATE VERSION report from DDL file

---

## Chapter 6. Batch Db2 catalog extraction program

The batch Db2 catalog extraction report is produced when you set target DDL file definitions on the Specify Compare Target panel and run a compare job.

This report is generated by using the Db2 Administration Tool ADB2GEN program. Refer to *IBM DB2 Administration Tool for z/OS User's Guide and Reference* for additional information about the ADB2GEN program.

The use of ADB2GEN in the compare process is controlled by two program parameters, which are set in the JCL:

- WRTCAT (write catalog records, in other words, create a version file).

**Restriction:** Version files are compressed internally and should not be created with DFSMS compression because GEN and the DDL reader opens them for update, which is not allowed for DFSMS compressed data sets. DB2 Administration Tool or Db2 Object Comparison Tool jobs will receive S213-C8 abends if the version file data sets are defined with DFSMS compression.

**Restriction:** If LOB objects are involved, a new version file layout is created. This new version file is not compatible with old version files containing LOBs. The old version files with LOBs must be regenerated.

- NOGEN (do not create DDL for extracted objects)

You specify options and object extract requests in exactly the same manner as in ADB2GEN. However, when you extract objects for Db2 Object Comparison Tool, you generate all parameter and request input by using the ISPF panels.

### Related tasks

[“Specifying target objects to be compared” on page 88](#)

The *target* is the object or objects that you want to compare to the source.

### Related reference

[“Batch DB2 catalog extraction program report” on page 149](#)

The report that the batch DB2 catalog extraction program produces begins with a header and the IBM copyright statement. The copyright statement is followed by a line that indicates the version of DB2 startup parameters that are used when the extraction program is processing statements from the input stream.

---

## Batch DB2 catalog extraction program report

The report that the batch DB2 catalog extraction program produces begins with a header and the IBM copyright statement. The copyright statement is followed by a line that indicates the version of DB2 startup parameters that are used when the extraction program is processing statements from the input stream.

The report contains four parts:

- Header and IBM copyright statement
- DB2 system ID and version, followed by a summary of the parameters
- A summary of object extract requests and related messages
- A count of the number of catalog records written

The following figure shows sample output.

```

>-----
ADB2GEN - Create DDL from catalog info                                2006-06-09 18:57
-----
Database 2 Administration Tool
5697-L90 (C) Copyright IBM Corporation 1998, 2006.
All rights reserved. Licensed materials - property of IBM.
US Government Users Restricted Rights - Use, duplication or disclosure
restricted by GSA ADP schedule contract with IBM Corp.
-----
ADB2GEN - Create DDL from catalog info                                2006-06-09 18:57
-----
Input prepared by Sqliid VNDR230 on DSN8 (DB2 version 810) for use on DB2 version 810 system
Object definitions extracted from DSN8 (DB2 version 810)

Parameters for this run :

Create Database(s)      : No   Create Tablespace(s)   : Yes   Create Table(s)       : Yes
Create View(s)         : Yes   Create Index(es)      : Yes   Create Synonym(s)    : Yes
Create Alias(es)      : Yes   Create Label(s)       : Yes   Create Comment(s)    : Yes
Create Triggers        : Yes   Create Foreign key(s) : Yes   also for refs not gen'd : Yes
Create User def. Types : No   Create Functions      : No   Create Stored Procedures: No
Create Sequences       : No

Copy Stogroup Grant(s) : Yes
Copy Database Grant(s) : Yes   Copy Tablespace Grant(s): Yes   Copy Table Grant(s)      : Yes
Copy View Grant(s)     : Yes   Copy authorisations on referenced schema(s) : No
Copy U.def type Grant(s): No   Copy Function Grant(s)  : No   Copy Procedure Grant(s) : No
Copy Sequence Grant(s) : No

Insert COMMIT statement after every definition
RE will generate all parameters even if they take default values
-----
ADB2GEN - Create DDL from catalog info  TABLESPACE TTT8S81D FROM CAT  2006-06-09 18:57
-----

Generating DDL for Tablespace DSN8S81D In Database TTT8D81A

-----
ADB2GEN - Create DDL from catalog info  TABLESPACE TTT8S81D FROM CAT  2006-06-09 18:57
-----

ADB2GEN - Summary of catalog records written

Number of catalog records written      :      118

ADB2GEN - Ended normally

```

Figure 79. CREATE VERSION report from DB2 catalog

ADB2GEN gets the DECIMAL=COMMA/PERIOD (and other DB2 parameters) from a DSNHDECP module which ADB2GEN looks for in the STEPLIB data sets. The values that ADB2GEN finds in this module might not match what DB2 is currently using, or match the values that were used to store data in catalog rows; if the modules don't match, ADB2GEN might produce incorrect DDL.

You can determine the DSNHDECP parameters that ADB2GEN is using by referring to the DSNHDECP parameter section of the ADB2GEN output listing. An example is highlighted in the following figure.

>-----  
ADB2GEN - Create DDL from catalog info 2006-11-29 13:50  
-----

Database 2 Administration Tool  
5697-L90 (C) Copyright IBM Corporation 1998, 2006.  
All rights reserved. Licensed materials - property of IBM.  
US Government Users Restricted Rights - Use, duplication or disclosure  
restricted by GSA ADP schedule contract with IBM Corp.

-----  
ADB2GEN - Create DDL from catalog info 2006-11-29 13:50  
-----

Input prepared by Sqliid SINNOTT on DB8A (DB2 version 810) for use on DB2 version 810 system  
Object definitions extracted from DB8A (DB2 version 810)

**DB2 DSNHDECP values for this run :**

<b>DB2 Version, Release and Mod Level</b>	<b>: 810</b>	<b>Default CCSID for EBCDIC SBCS</b>	<b>: 00037</b>
<b>Decimal point option</b>	<b>: '.'</b>	<b>Default CCSID for EBCDIC Mixed</b>	<b>: 00002</b>
<b>Subsystem ID</b>	<b>: DB8A</b>	<b>Default CCSID for EBCDIC DBCS</b>	<b>: 00002</b>
<b>Graphic for DBCS data</b>	<b>: No</b>	<b>Default CCSID for ASCII SBCS</b>	<b>: 00437</b>
<b>Date format</b>	<b>: ISO</b>	<b>Default CCSID for ASCII Mixed</b>	<b>: 00002</b>
<b>Time format</b>	<b>: ISO</b>	<b>Default CCSID for ASCII DBCS</b>	<b>: 00002</b>
<b>Default encoding scheme</b>	<b>: EBCDIC</b>	<b>Default CCSID for UNICODE SBCS</b>	<b>: 00367</b>
<b>DB2 Version 8 New Function Mode</b>	<b>: Yes</b>	<b>Default CCSID for UNICODE Mixed</b>	<b>: 01208</b>
		<b>Default CCSID for UNICODE DBCS</b>	<b>: 01200</b>

Parameters for this run :

Create Database(s)	: Yes	Create Tablespace(s)	: Yes	Create Table(s)	: Yes
Create View(s)	: Yes	Create Index(es)	: No	Create Synonym(s)	: No
Create Alias(es)	: No	Create Label(s)	: No	Create Comment(s)	: No
Create Triggers	: No	Create Foreign key(s)	: No	also for refs not gen'd	: No
Create User def. Types	: No	Create Functions	: No	Create Stored Procedures	: No
Create Sequences	: No				
Copy Stogroup Grant(s)	: Yes				
Copy Database Grant(s)	: Yes	Copy Tablespace Grant(s)	: Yes	Copy Table Grant(s)	: No
Copy View Grant(s)	: No	Copy authorisations on referenced schema(s)			: No
Copy U.def type Grant(s)	: No	Copy Function Grant(s)	: No	Copy Procedure Grant(s)	: No
Copy Sequence Grant(s)	: No				

Insert COMMIT statement after every definition  
RE will generate all parameters even if they take default values

-----  
ADB2GEN - Create DDL from catalog info 2006-11-29 13:50  
-----

Figure 80. DSNHDECP values



---

## Chapter 7. Batch compare program

The batch compare program is run when you specify options on the **Generate Compare Jobs** panel and generate a compare batch job. This program compares two sets of DB2 objects, reports all differences, and writes all changes to a file. This file is used to generate updates to upgrade target objects to the level of source objects.

Refer to [“Generating a compare batch job” on page 105](#) for more information about setting batch compare options.

The batch compare program processes two version files, one that represents the (new) source version of the objects to be compared and one that represents the (old) target version.

The batch compare program performs the following tasks:

- Applies any masks to the prefix of the source version file
- Sorts the two version files
- Compares the two version files, applying masks to all relevant names and authorization IDs before comparison and ignoring any differences that are specified in the ignore file

In addition, you can create a list of objects to be excluded from a compare process by using exclude specification. The list can be created manually or based on results from a compare results stored in a DB2 table. Refer to [“Exclude objects from the compare process” on page 84](#) for more information about creating and using Exclude Specification.

Refer to [Chapter 9, “Batch compare report format ,” on page 167](#) for batch compare report examples.

### Related concepts

[“Db2 Object Comparison Tool components and processes” on page 4](#)

Db2 Object Comparison Tool compares objects by reading the Db2 catalog or DDL files. Object Comparison Tool produces comparison reports and then optionally generate either JCL jobs or work statement list (WSL) tasks with changes for the target objects.

[“Batch DDL file extraction program ” on page 145](#)

The DDL file extraction program interprets a source file of DDL statements that define DB2 objects. The program generates an output file, called a *version file*, that contains records that are similar in format to those in the DB2 catalog that defines the same objects.

### Related tasks

[“Generating a compare batch job” on page 105](#)

A *compare batch job* is a JCL job that performs the requested comparison.

[“Specifying that the source is a version scope” on page 82](#)

You can compare object types by defining a version scope for objects. A version scope can contain databases, table spaces, tables, indexes, views, stored procedures, triggers, and other objects.

### Related reference

[“Batch compare report format ” on page 167](#)

The batch compare program produces a report that contains data based on the change reporting options selected on the Generate Compare Jobs panel.

---

## Compare version files

Db2 Object Comparison Tool operates on sorted version files. The version file record prefix is the sort key. Masks are applied to the prefix of the source version file before the file is sorted. The result is that objects in the source and target version files are in the same sequence.

The following results can occur when the batch compare program attempts to match object names:

- An object was not found in the source version file.

In this case, the object is registered for deletion unless the option to keep target objects was specified through the Suppress DROP of objects field in the **Generate Compare Jobs** panel, [Figure 62 on page 106](#).

- An object was not found in the target version file.

In this case, the object definition is saved to create the new object at a later stage. Masks are applied to the relevant fields before the object definition DDL is built.

- An object was found in the source and target version files.

In this case, masks are applied to the source version Db2 catalog records that describe the source object.

The objects are compared; only fields for which ignore has not been specified (explicitly or by default) are included. The possible results of the comparison are:

- Objects are identical
- Upgrade can be performed by altering the target object
- Upgrade requires drop and re-create of the target object

The differences are reported, and the actions that are required to upgrade the target version to the source version (if any) are written to the CHANGES file for use at a later stage.

## Special considerations for comparing DB2 objects

---

You can perform most comparisons field by field, comparing the catalog records that represent the objects. However, special considerations are needed in some situations.

These situations are described in the following sections:

- [“Constraint names” on page 154](#)
- [“DROP statements in the source DDL” on page 155](#)
- [“Functions” on page 155](#)
- [“Implicit and explicit objects” on page 155](#)
- [“Materialized query tables” on page 155](#)
- [“Native SQL procedures” on page 156](#)
- [“Object authorizations” on page 156](#)
- [“Online schema evolution” on page 156](#)
- [“Partitioned tables” on page 156](#)
- [“Renamed objects” on page 157](#)
- [“Special considerations for comparing DB2 objects” on page 154](#)
- [“Table columns” on page 158](#)
- [“Table drop/re-create without data conversion” on page 158](#)
- [Table 12 on page 159](#)
- [“Triggers” on page 159](#)
- [“Views” on page 159](#)
- [“ALIAS for SEQUENCE not supported” on page 160](#)

### Constraint names

Constraint names are not compared (and differences not reported) because constraint names can be explicitly specified or, if they are not explicitly specified, be generated by Db2. If the constraint names are generated by Db2, the constraint names could be different between source and target, even if the DDL for the object might be the same for source and target.

Differences in constraint name are not compared because this would cause unnecessary drop and recreate of constraints that are logically correct. Dropping and recreating constraints would put the table space in CHECK PENDING, that is, out of service. Since there are no real differences between objects, just differences in the constraint names, it might not be necessary to put the table space out of service.

## DROP statements in the source DDL

All DROP statements in the source DDL are copied to the DDL that is produced during the compare process. The effect of the drop statements is the same as dropping the objects on the target before running the compare job. Data from the dropped tables is saved by generated unload utilities making it possible for you to recover data from the dropped tables manually. In addition, the corresponding RUNSTATS, IMAGECOPY, and CHECK DATA utilities are not generated even if they are requested on the **Generate Compare Jobs** panel, [Figure 62 on page 106](#).

All implicitly dropped objects are found when the target catalog is available. However, if the target catalog is specified in the DDL, the DROP impact might be incorrectly reported. Data in the dropped objects that is missing from the DROP impact report is not saved by generated unload utilities. It is important that you save the dropped objects if at least one DROP statement is in the source DDL and the target catalog is unavailable. DROP statements in the target DDL are ignored. The statement sequence CREATE/DROP for the same object is invalid, the result is unpredictable.

## Functions

Functions are compared based on the function signature, meaning that the function-specific name is treated as an attribute of the function, and a comparison is performed. If specific names are different, the target function definition is upgraded with the source-specific name. If you do not want the function definition upgraded, SYSROUTINES.SPECIFICNAME should be ignored.

If SQL PL functions, including non-inline SQL scalar function and SQL table function, are included in the compared objects, use the compare option **Bypass SQL PL functions** to control how Db2 Object Comparison Tool should process the objects. When the **Bypass SQL PL functions** option is specified as NO and when the non-inline SQL scalar functions or the SQL table functions are detected, Db2 Object Comparison Tool terminates processing. Otherwise, Db2 Object Comparison Tool skips the non-inline SQL scalar functions and the SQL table functions. Db2 Object Comparison Tool then continues processing the other objects and generates the APPLY job or work statement list.

**Note:** Examine the APPLY job or work statement list to verify that the content is complete.

## Implicit and explicit objects

Db2 Object Comparison Tool compares implicit objects from the source with implicit objects from the target and explicit objects from source with explicit objects from target. All objects from DDL source are explicit objects. If no explicit counterparts are found on the target, those objects are processed as new explicit objects which need to be added to the target. If no explicit counterparts for explicit target objects are found on the source, those objects are dropped from target.

## Materialized query tables

Comparisons involving materialized query tables (MQTs) do not compare columns. Instead, only the table type is compared.

For example:

1. If the target is defined as:

```
CREATE TABLE <schema>.<mqt_name> AS (  
  SELECT * FROM SYSIBM.SYSDUMMY1 )  
DATA INITIALLY DEFERRED REFRESH DEFERRED IN <dbname>.<ts_name>;
```

2. And the source is a same-named, different columned table (it does not matter if the source had 20 more columns):

```
CREATE TABLE <schema>.<table_name> (AAAAAAD CHAR(2))
IN <dbname>.<ts_name>;
```

### 3. The compare output shows:

```
SDSF OUTPUT DISPLAY XXXXXXX Jnnnnnnn DSID 110 LINE 49 COLUMNS 02- 81
COMMAND INPUT ==> SCROLL ==> CSR
Compare table source(<schema>.<mqt_name>) and target(<schema>.<tb_name>)
(A)Table type changed from Materialized Query Table to normal table
Table will be altered

G0C2CMP - Ended normally
```

### 4. And the result is:

```
--#ADMIN PROCESS CREATE
ALTER TABLE <schema>.<mqt_name>
DROP MATERIALIZED QUERY ;
COMMIT ;
```

## Native SQL procedures

Db2 Object Comparison Tool compares active and inactive versions of a native SQL procedure by comparing the options and the native SQL procedure bodies. The native SQL procedure bodies are compared the same way as the trigger bodies are compared.

## Object authorizations

DB2 Object Comparison Tool handles object authorizations differently, depending on the object location:

- For objects that exist on both the source and the target, Db2 Object Comparison Tool compares and reports the authorization differences, but does not propagate the differences from the source to the target. Db2 Object Comparison Tool does not propagate the differences in order to avoid corrupting the target authorizations. During the apply job, the GRANT statements from the source are ignored and the GRANT statements from the target are read.
- For objects that exist only on the source and that are added to the target during the apply job, the source authorization is applied to the target objects.

## Online schema evolution

The following DB2 8 online schema evolution functionality is not exploited by Db2 Object Comparison Tool. This means that none of the related ALTER statements are generated when applying these types of changes:

- Alter of Identity column attributes.
- Add partitioning key. This function is intended for adding partitioning information for a table in a partitioned table space if the definition of the table is incomplete.

## Partitioned tables

Tables in partitioned table spaces can be dropped only by dropping the table space. If a table in a partitioned table space has changes that require the table to be dropped and re-created, the partitioned table space is dropped and re-created as well, even if the table space comparison shows no differences.

Db2 Object Comparison Tool can accept differences in the number of partitions by ignoring the field SYSTABLESPACE.PARTITIONS. In this case, no comparisons are performed at a partition level, and all partition characteristics are taken from the target.

If the table space is not part of the comparison (that is, the comparison is performed at the table level), the following conditions apply when a partitioned table needs to be dropped and re-created:

- If the target is a DDL file, the table space cannot be dropped and re-created because the table space definition is not available.

- If the target contains tables from the DB2 catalog, the table space definition from the catalog is stored in the version file. Unless otherwise indicated, the fact that a table is partitioned is derived from the stored table space definition. In any other case, the table space definition is used only for the purpose of re-creating the table space.

## Pending Changes

Pending changes are included in version files created from catalog records. No pending changes can be included in version files from DDL. Pending changes are merged into the changed objects before the objects are compared. If pending changes are ignored, the source and target pending changes will not be merged into the changed objects. If the source DDL contains an ALTER with DROP PENDING CHANGES, the ALTER will be passed to the target and pending changes in the target version file will be ignored.

## Renamed objects

When comparing objects, Db2 Object Comparison Tool will take into consideration if a database, table space, table, index, or column was renamed in the source system. You can inform Db2 Object Comparison Tool when a rename has occurred in the source system by using rename specifications. Enter rename specifications the same way that you enter compare masks. For more information about entering rename specifications, refer to [“Specifying compare masks” on page 90](#). When you specify that an object or column was renamed in the source, Db2 Object Comparison Tool compares the existing object in the target with the renamed object in the source. When the target object is updated, the data in the target system is preserved. For example, you have the following source and target objects:

```
Source = CREATE TABLE USERA.T2 (COLA, COLB, COLY, COLZ)
Target = CREATE TABLE USERA.T2 (COLA, COLB, COLY, COLZ)
```

If you rename the source table T2 to T1 and COLY to COLX, the source and target objects are now different.

```
Source = CREATE TABLE USERA.T1 (COLA, COLB, COLX, COLZ)
Target = CREATE TABLE USERA.T2 (COLA, COLB, COLY, COLZ)
```

Using the following RENAME specifications (refer to [“Specifying compare masks” on page 90](#) for syntax examples and supported object types), the table is renamed during the compare process to T1 and COLY is renamed to COLX:

```
RENAMETB:USERA.T2,USERA.T1
RENAMECOL:USERA.T1.COLY,COLX
```

**Note:** The new table name (T1) is referenced in the RENAMECOL statement because the RENAMETB statement occurs before the RENAMECOL statement. If the RENAMECOL statement was issued first, you would reference the original table name in the RENAMECOL statement.

The following steps are generated on the target system:

- Unload the table T2 data
- Drop table T2 and create table T1
- Load the COLY data from table T2 data into COLX in table T1

### Restrictions:

- It is not always possible for Db2 Object Comparison Tool to uniquely relate a column to a specific table because there is no connection to Db2 at the time the compare process is run (the object definitions also might originate from DDL). This situation occurs when a view references two tables and there is an unqualified reference to a column. Db2 Object Comparison Tool checks if a rename might be the reason for the difference and indicates this in the report. If there are differences, the final outcome is not affected and the view is changed accordingly.
- Renaming an implicit index is not supported.
- Renaming an auxiliary table is not supported.

## Table columns

Table columns are matched based on column name. If column positions are different, the table is dropped and re-created to reflect the source sequence of columns.

Column names that are not found in the source file are considered dropped and are removed from the target table unless suppress drop of columns is specified in the **Generate Compare Jobs** panel, [Figure 62](#) on page 106.

Column names that are not found in the target file are considered new and are added to the target table. If the source and target tables are identical except for one or more appended columns, the target table is altered to add the new columns if the column attributes are acceptable. Otherwise, the table is dropped and re-created.

For more information, see the *DB2 Universal Database for z/OS SQL Reference*.

## Table drop/re-create without data conversion

Under certain conditions Db2 Object Comparison Tool can determine that the step that occurs between the unload and load steps to convert the data is not necessary. Performance can improve when the conversion step is omitted from the batch job.

In general, Db2 Object Comparison Tool will not generate a conversion step when the following table modifications are made:

- The table is renamed.
- Columns in the table are:
  - Moved
  - Renamed
  - Deleted
  - Inserted with an attribute of WITH DEFAULT or NULLS
- Only the attributes of the column are changed.

The data types and lengths are changed according to the matrix in the following table:

*Table 11. Matrix for data type and length changes that do not require data conversion. The following table describes the matrix used by Db2 Object Comparison Tool to determine whether the data conversion step between unload and load can be skipped.*

From data type	To data type															
	SMALL INT	INT	DEC	FLOAT	CHAR	VAR CHAR	LVAR CHAR	DATE	TIME	TIME STAMP	RID	BIG INT	DEC FLOAT (16)	DEC FLOAT (34)	BIN ARY	VAR BIN ARY
SMALLINT	Y	Y	A	Y	-	-	-	-	-	-	-	Y	Y	Y	-	-
INT	-	Y	A	Y	-	-	-	-	-	-	-	Y	Y	Y	-	-
DEC	A	A	A	Y	-	-	-	-	-	-	-	Y	Y	Y	-	-
FLOAT(1-21)	-	-	-	Y	-	-	-	-	-	-	-	Y	Y	Y	-	-
FLOAT(22-53)	-	-	-	Y	-	-	-	-	-	-	-	Y	Y	Y	-	-
CHAR	A	A	A	-	Y	Y	Y	-	-	-	-	-	-	-	Y	-
VARCHAR	A	A	A	-	Y	Y	Y	-	-	-	-	-	-	-	-	Y
LVARCHAR	-	-	-	-	Y	Y	Y	-	-	-	-	-	-	-	-	-
DATE	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-
TIME	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-
TIMESTAMP	-	-	-	-	-	-	-	Y	Y	Y	-	-	-	-	-	-
RID	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-
BIGINT	Y	Y	Y	Y	-	-	-	-	-	-	-	Y	-	-	-	-
DECFLOAT(16)	Y	Y	Y	Y	-	-	-	-	-	-	-	-	Y	Y	-	-
DECFLOAT(34)	Y	Y	Y	Y	-	-	-	-	-	-	-	-	Y	Y	-	-
BINARY	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	Y	-
VARBINARY	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	Y

Table 11. Matrix for data type and length changes that do not require data conversion. The following table describes the matrix used by Db2 Object Comparison Tool to determine whether the data conversion step between unload and load can be skipped. (continued)

From data type	To data type															
	SMALL INT	INT	DEC	FLOAT	CHAR	VAR CHAR	LVAR CHAR	DATE	TIME	TIME STAMP	RID	BIG INT	DEC FLOAT (16)	DEC FLOAT (34)	BIN ARY	VAR BIN ARY

**Notes:**

- **Y = YES**, data conversion is always skipped.
- **A = ACTION**, data conversion is normally performed, with truncation, if necessary. If the new column can accommodate the data, data conversion is skipped for the following conversion types:
  - smallint to decimal
  - integer to decimal
  - decimal to smallint
  - decimal to integer
  - decimal to decimal

However, if the scale of the decimal type is changed, the data conversion is performed.

When the data conversion step is skipped, a converted unload data set is not created.

## Triggers

Triggers are represented as character strings that contain CREATE TRIGGER statements. To apply masks to the trigger definition, triggers are parsed and the language elements are identified. Masks are applied to the source trigger elements where masks are applicable, and the triggers are compared element by element.

The only exception to this process is that to successfully compare an unqualified name to a qualified name, the compare program attempts to determine implicit qualifiers for unqualified names. If the trigger has changed, the change is reported.

The sequence in which triggers are created is important because they are executed in the same sequence by DB2. To maintain the correct sequence, all triggers for a table are processed at the same time.

The manner in which the batch compare program processes triggers depends on the value that you entered in the Suppress DROP of target field in the **Generate Compare Jobs** panel, [Figure 62 on page 106](#). The following table provides more information.

Table 12. Trigger comparison process. The following table describes how different types of triggers are handled when the "Suppress DROP of target" field is set to No or Yes.

Suppress DROP of target objects No	Suppress DROP of target objects Yes
Source file sequence and contents are used.	Source file sequence and contents are used for all triggers in the source file.
Triggers are compared, one by one, based on the trigger name.	Triggers are compared, one by one, based on the trigger name.
If a trigger is not in the target file or if the compare finds a difference, the trigger is added or dropped and re-created. All subsequent triggers are dropped and, if applicable, re-created to maintain the correct sequence.	If a trigger is not in the target file or if the compare finds a difference, the trigger is added or dropped and re-created. All subsequent triggers are dropped and, if applicable, re-created to maintain the correct sequence.
Only triggers found in the target file are dropped.	To avoid violating the sequence of triggers in the source file, only triggers that are found in the target file appear in the first possible position. This approach maintains the original position of these triggers in the target file.

## Views

Views are represented as character strings that contain CREATE VIEW statements. To apply masks to the view definition, views are parsed and the language elements are identified. Masks are applied to the source view elements where masks are applicable, and the views are compared element by element.

The only exception to this process is that to successfully compare an unqualified name to a qualified name, the compare program attempts to determine implicit qualifiers for unqualified names. If the view changes, the change is reported and the view definition, changed or not, is stored.

When the batch compare program has processed all views, it analyzes two types of dependencies:

#### **View dropped**

A view is dropped if one of the base tables or views that is referred to was dropped. If a view is dropped, it is re-created regardless of whether it was changed.

#### **View dependent on another view**

The sequence in which views are created is important because a view can refer to another view. The stored view definitions are sequenced to take this into account.

This behavior means that CREATE VIEW statements do not necessarily appear in the sequence in which they were processed.

### **ALIAS for SEQUENCE not supported**

DB2 Version 11 supports creating ALIAS for SEQUENCE, however, ALIAS for SEQUENCE is not included in comparisons.

## **Changing or unloading tables with LOBs**

---

Compare scenarios involving LOB objects now have expanded capabilities to allow changing the objects.

Changes to objects with LOB columns was previously restricted or offered limited capability. Additionally, LOB column data was unloaded to the SYSREC data set, with limitations on the maximum record length allowed.

Objects with LOB columns can now be unloaded with base table data going to the SYSREC data set and the LOB column data going to the data set as directed by the LOB TEMPLATE. This capability requires that the apply job be built as a work statement list. See the *DB2 Administration Tool User's Guide and Reference for z/OS (SC19-3033-05)* for details on using the utility template to unload data from LOBs and to run a work statement list.

### **Condition codes**

When you run batch compare reports with LOBs, the following condition codes are issued by the GOC2CMP program:

- 0** Ended normally.
- 4** Warning issued. Please review output.
- >4** Error found. Please review output.

### **LOB restrictions**

There are limited LOB column changes for the Db2 Object Comparison Tool. The only possible conversions are:

```
CHAR, VARCHAR -> CLOB, BLOB  
GRAPHIC, VARGRAPHIC -> DBCLOB
```

The reverse sequence of LOB column to non-LOB column is not supported (for example CLOB to CHAR). Within the comparison report, one of the following messages can appear:

- (E) This type change is not supported.
- (W) This type change is not supported.

LOB column length reduction can cause a failure during compare as this is not supported. Within the comparison report, one of the following messages can appear:

(E) LOB column length is reduced. This is not supported by Db2 Object Comparison Tool. Manual action is required if you want to reduce the length of a LOB column.

(W) LOB column length is reduced. This is not supported by Db2 Object Comparison Tool.

(W) LOB column length will be reduced when recovering the change. Manual action will be required to recover data for this table.

Older version files containing tables with LOBs cannot be processed. The following message appears:

(E) The version files are generated by a previous version of the product. The version file must be re-created because the internal representation of auxiliary tables in version files has changed.

If the base table containing LOB column(s) is dropped and re-created, the explicit auxiliary table is re-created according to its source definition. Changes to the auxiliary table are not reported. Updates to the auxiliary table are ignored if the base table is not re-created.



---

## Chapter 8. Creating a Change Management batch job to run compare

The Db2 Admin Tool Change Management batch interface can be used to run Db2 Object Comparison Tool in batch to define or propagate a change that can be managed by Db2 Admin Tool Change Management.

In this mode of the batch interface compare is run to compare a source and a target. The compare report and a delta change file that describes the differences is generated.

When invoking the Change Management batch interface the following parameter must be specified to run compare: **action\_compare** = 'Y'

By default the generated delta change file is imported as a new registered changed and analyzed on the local system. The importing of the delta change file as a new change can be prevented by specifying the following Change Management batch parameter: **action\_import\_change** = 'N'

The Db2 Admin Tool Users Guide lists all of the batch interface parameters that can be used to customize the compare run.

---

### Specifying source objects to be compared

The type of compare source is specified using the **source\_type** parameter.

#### About this task

Refer to the definition of the **source\_type** parameter for the supported compare source types and the other parameters that can be used based on the type of source specified.

---

### Specifying target objects to be compared

The type of compare target is specified using the **target\_type** parameter.

#### About this task

Refer to the definition of the **target\_type** parameter for the supported compare target types and the other parameters that can be used based on the type of target specified.

---

### Specifying the compare masks

#### About this task

Using masks for compare is optional.

The masks to use can be specified in the following ways:

- Use the **compare\_mask\_dsn** parameter to specify the name of an existing data set that contains the compare masks.
- Use the **compare\_mask\_owner** and **compare\_mask\_name** parameters to specify an existing mask specification that is in the Change Management database.
- Pre-allocate the compare masks file with DD name of MASKS.

Use the **compare\_mask\_dsn** parameter or use of the **compare\_mask\_owner** and **compare\_mask\_name** parameters override the use of any pre-allocated compare masks file (MASKS DD).

Also, you cannot specify both the use of the **compare\_mask\_dsn** parameter and the use of **compare\_mask\_owner** and **compare\_mask\_name** parameters.

## Specifying compare ignore fields

---

### About this task

Using ignore fields for compare is optional. The ignore fields to use can be specified in the following ways:

- Use the **compare\_ignore\_fields\_dsn** parameter to specify the name of an existing data set that contains the compare ignore fields.
- Use the **compare\_ignore\_fields\_owner** and **compare\_ignore\_fields\_name** parameters to specify an existing ignore fields specification that is in the Change Management database.
- Preallocate compare ignore fields file with DD name of IGNORES.

The first two methods are specified, it overrides the use of any preallocated compare ignore fields file (IGNORES DD). Both of the first two methods cannot be specified.

## Specifying compare ignore changes

---

### About this task

Using ignore changes is optional. The **compare\_ignore\_changes\_owner** and **compare\_ignore\_changes\_name** parameters can be used to specify an existing ignore changes specification that is stored in the Change Management database.

## Specifying compare exclude

---

### About this task

Using exclude parameter is optional. You specify an existing exclude specification that is stored in the Change Management database. For compare source, use the parameters **source\_exclude\_owner** and **source\_exclude\_name** parameters. For compare target, use the parameters **target\_exclude\_owner** and **target\_exclude\_name** parameters.

## Comparing table pairs

---

You can compare regular tables with an archive-enabled and archive table pair. The following table shows the compare results for various sources and targets. B1 and B2 are regular tables that have corresponding archive and archive-enabled tables.

Source	Target	Expected result
None	Archive-enabled table (B1) and archive table (B2)	Archive-enabled table (B1) is dropped. Archive table (B2) will be dropped as a result of dropping the archive enabled table.
Table B1	Archive-enabled table (B1) and archive table (B2)	Table B1 is compared. ALTER TABLE B1 DISABLE ARCHIVE is generated.

<i>Table 13. Archive table compare results (continued)</i>		
<b>Source</b>	<b>Target</b>	<b>Expected result</b>
Table B2	Archive-enabled table (B1) and archive table (B2)	ALTER TABLE B1 DISABLE ARCHIVE is generated.  Table B1 is dropped.  Table B2 is compared.
Table B1 Table B2	Archive-enabled table (B1) and archive table (B2)	Table B1 and B2 are compared.  ALTER TABLE B1 DISABLE ARCHIVE is generated.
Archive-enabled table (B1) and archive table (B2)	None	Table B1 and B2 are added.  ALTER TABLE B1 ENABLE ARCHIVE USE B2 is generated.
Archive-enabled table (B1) and archive table (B2)	Table B1	Table B1 is compared.  Archive table (B2) is added.  ALTER TABLE B1 ENABLE ARCHIVE USE B2 is generated.
Archive-enabled table (B1) and archive table (B2)	Table B2	Table B1 is added.  Table B2 is compared.  ALTER TABLE B1 ENABLE ARCHIVE USE B2 is generated.
Archive-enabled table (B1) and archive table (B2)	Table B1 Table B2  (no archive relationship between these two tables)	Table B1 is compared.  Table B2 is compared.  ALTER TABLE B1 ENABLE ARCHIVE USE B2 is generated.

You can also compare temporal and history table pairs. The following table shows the compare results for various sources and targets. B1 and B2 are regular tables that have corresponding temporal and history tables.

<i>Table 14. Temporal-history table compare results</i>		
<b>Source</b>	<b>Target</b>	<b>Expected result</b>
None	Temporal table (B1) and history table (B2)	Temporal table (B1) is dropped.  History table (B2) will be dropped by dropping the history-enabled table.
Table B1	Temporal table (B1) and history table (B2)	Table B1 is compared.  ALTER TABLE TEMPORAL TABLE DROP VERSIONING is generated.

Table 14. Temporal-history table compare results (continued)

Source	Target	Expected result
Table B2	Temporal table (B1) and history table (B2)	ALTER TABLE B1 DROP VERSIONING is generated. Table B1 is dropped. Table B2 is compared.
Temporal table and history table (no temporal-history relationship between these two tables)	Temporal table (B1) and history table (B2)	Table B1 and B2 are compared. ALTER TABLE B1 DROP VERSIONING is generated.
Temporal table (B1) and history table (B2)	None	Table B1 and B2 are added. ALTER TABLE B1 ADD VERSIONING USE B2 is generated.
Temporal table (B1) and history table (B2)	Table B1	Table B1 is compared. History table (B2) is added. ALTER TABLE B1 ADD VERSIONING USE B2 is generated.
Temporal table (B1) and history table (B2)	Table B2	Table B1 is added. Table B2 is compared. ALTER TABLE B1 ADD VERSIONING USE B2 is generated.
Temporal table (B1) and history table (B2)	Table B2 Table B2 (no temporal-history relationship between these two tables)	Table B1 is compared Table B2 is compared. ALTER TABLE B1 ADD VERSIONING USE B2 is generated.

## Chapter 9. Batch compare report format

The batch compare program produces a report that contains data based on the change reporting options selected on the Generate Compare Jobs panel.

You can specify the specific information to be included in the report on the **Specify Compare Reporting Options** panel:

```
Compare ----- Generate Compare Jobs -----
Option ==>

Specify the following for DB2 Object Comparison Tool:

Worklist information:
Worklist name . . . . . : PQ76055N (also used as middle qualifier in DSNs)

-----
Co | Compare ----- Specify Compare Reporting Options ----- 12:18 |
   | Report options for Compare:                                     |
   | Only changed objects . . . : Yes          (Yes/No)           |
   | Ignore fields:                                                |
Ch |   User specified . . . . . : Yes          (Yes/No)           |
   |   Object specific . . . . . : Yes        (Yes/No)           |
   |   System generated . . . . . : Yes      (Yes/No)           |
Da |   Translation masks . . . . . : Yes      (Yes/No)           |
   |   Summary report . . . . . : Yes        (Yes/No)           |
   |   Object count report . . . . . : Yes    (Yes/No)           |
   |   Conversion report . . . . . : YES     (Yes/No)           |
Op |-----|
```

Figure 81. Generate Compare Jobs pop-up panel 1 (GOC5R0)

In addition, you can specify the report format on the **Change Options Common to Change Functions** panel (ADB2PCO).

- If you specify T for processing order, the batch report will display results for objects sorted by type. For example, a report generated from the T processing order might display all databases, followed by all table spaces, followed by all tables.
- If you specify H (default) for processing order, the batch report will display results for all the object types grouped by database. In this hierarchical format, each database will be followed by objects in that database. For example, table spaces in a database will follow the database, tables in a table space will follow the table space, and indexes over each table will follow the table.

**Important:** There are exceptions to this order. Temporal tables and history tables follow after all databases because they need to be processed after all table spaces are processed.

Four sample reports are shown in the following topics. The sample reports contain the following sections:

### Only changed objects

If you specify No for this option, the program produces a complete object comparison report containing all objects. If you specify Yes for this option, the report only contains the changed, deleted, dropped, and dropped/re-created objects.

The source and target version files are described at the top of the object comparison report. You can add free-form text when each version file is created through the ISPF full screen interface. This text is written to the report and is followed by:

- Input for the source and target for the extraction of the source and target objects.

If the objects were extracted from a DB2 catalog, this value is the DB2 subsystem ID. If the objects were extracted from a file with saved DDL statements, DDL\* is indicated.

- When the extract was performed.
- By whom the extract was performed.

UNKNOWN is shown if the user ID is not known.

If long names are used, authorization IDs or names can span lines. Object Comparison Tool will try not to split an authorization ID or a name if possible.

Information about the comparison comprises the remainder of this section. In the Compare DB2 objects sample report 2, for example, the first comparison involves source object RRR8D81A.DSN8S81D and target object TTT8D81A.DSN8S81D (a typical example of a comparison between a development and production system). The results of the comparison can include:

- Added objects

The objects that are not found in the target are reported as added objects. In this case, objects are added. For example, the report shows that a new view named VNDR230.VDEPTS is to be added.

- Dropped objects

The objects that are not found in the source are reported as dropped objects. In this case, objects are dropped. For example, the report shows that a new view named VNDR230.VASTRDE1 is to be dropped.

- Compared objects

For compared objects, a sequence of information is reported:

- Object identification

The object type and object names of source and target objects are listed. For example, the Compare DB2 objects sample report 2 shows that table space source RRR8D81A.DSN8S81D and target TTT8D81A.DSN8S81D are being compared. The object names might be different, as in this case, because they are shown with no masks applied.

- Differences

If differences are found, they are reported one by one. The report indicates how the upgrade will be performed:

- (A) means that ALTER object can be used.
- (D) means that the object will need to be dropped and re-created.

- Summary

This summarizes the action that will be taken to upgrade the object or an indication that no change to the object was detected.

Other messages that might be reported include the following:

- (E) Error message
- (W) Warning message
- (I) Informational message

Messages can contain return codes, which provide additional context based on your situation.

**Note:** The comparison process only writes a file of the changes that are necessary to upgrade target objects to match source objects. No actual changes are made. For information about implementing the changes, see [“Running a work statement list” on page 137](#).

### Ignore fields

This provides a listing of the ignore fields used. You can specify Yes or No in the user-specified and system generated fields to indicate if you want these types of ignore fields included in the report.

### Translation masks

This provides a listing of the translation masks used. Specify Yes or No to indicate if you want the report to include the translation masks used.

## Summary report

This provides a summary report that contains one line for each object that was compared and the result of the comparison. Specify Yes or No to indicate if you want to produce a Summary report. If long names are used, authorization IDs or names cannot be shown on a single line. In this case, the names are truncated. For long authorization IDs, the first eight characters are shown, followed by a > to indicate a long authorization ID. If an object name is long, the first 18 characters are shown, followed by a > to indicate a long name.

## Object count report

The count report shows how many objects were processed per object type. It groups all objects by the type and reports the number of objects on the source and on the target. The count report also lists the number of objects compared, added or not added (on source only), and dropped (if on target only). You can also see how many objects from the compared objects were altered and how many were dropped and recreated.

Specify Yes or No to indicate whether you want the report to include a comparison counts report.

The following different sample reports for comparing DB2 objects are provided:

- The Sample Batch Compare Report shown in the Compare DB2 objects sample report 1 shows all fields that were ignored.
- The Sample Batch Compare Report shown in Compare DB2 objects sample report 2 shows user-specified ignores and contains a section that provides a full comparison report.
- The Sample Batch Compare Report shown in Compare DB2 objects sample report 3 shows a subset of the report that shows where additional masks were specified. This report also contains a section that shows system-generated ignore fields and a section that shows only the objects that were changed, deleted, or dropped.
- The Sample Batch Compare Report shown in Compare DB2 objects sample report 4 shows a subset of the compare report in which LOB objects are converted from explicit to implicit.
- The Sample Batch Compare Report shown in Compare DB2 objects sample report 5 shows a subset of the compare report for which the comparison was run for one object type, rather than all object types.
- The sample summary conversion report shows truncations and conversions that will take place when the change runs.
- The list of possible conversion errors shows possible conversion errors that might occur due to truncation during conversion of data types.

**Tip:** If the report includes unexpected changes to bind options for trigger packages, you might need to rebind some packages. For detailed information, see [“Troubleshooting: The Compare report shows changes to bind options for trigger packages”](#) on page 222.

## Related concepts

[“Batch compare program ”](#) on page 153

The batch compare program is run when you specify options on the **Generate Compare Jobs** panel and generate a compare batch job. This program compares two sets of DB2 objects, reports all differences, and writes all changes to a file. This file is used to generate updates to upgrade target objects to the level of source objects.

## Related reference

[“Compare job options”](#) on page 115

When you generate a compare batch job, you can specify a number of options to control the behavior of the comparison operation and job. These options are listed on the **Generate Compare Jobs (GOC5) panel**.

## Compare Db2 objects sample report 1

---

The sample batch compare report shown in the following figure contains all sections of the batch compare report. The FIELDS IGNORED WHEN COMPARING SOURCE AND TARGET OBJECTS section shows all

fields that were ignored. The OBJECT COMPARISON REPORT section shows only the objects that were changed, added, or dropped.

```
scale="80"  
outputclass="nohighlight">
```

GOC2CMP - Compare DB2 Objects

2006-06-09 19:01

Database 2 Object Comparison Tool  
5697-L40 (C) Copyright IBM Corporation 2001, 2006.  
All rights reserved. Licensed materials - property of IBM.  
US Government Users Restricted Rights - Use, duplication or disclosure  
restricted by GSA ADP schedule contract with IBM Corp.

Parameters for this run:

Suppress DROP of objects : No  
Suppress DROP of columns : No  
Suppress adding columns : No

TRANSLATION MASKS  
=====

DBNAME : RRR8D81A , TTT8D81A

FIELDS IGNORED WHEN COMPARING SOURCE AND TARGET OBJECTS  
=====

SYSAUXRELS : AUXRELOBID(S), IBMREQD(S)  
SYSCHECKS : DBID(S), OBID(S), TIMESTAMP(S), RBA(S), IBMREQD(S)  
SYSCOLAUTH : TIMESTAMP(S), DATEGRANTED(S), TIMEGRANTED(S), IBMREQD(S),  
CONTOKEN(S), GRANTEDTS(S)  
SYSCOLUMNS : COLCARD(S), HIGH2KEY(S), LOW2KEY(S), IBMREQD(S), STATTIME(S),  
COLCARDF(S), CREATEDTS(S), ALTEREDTS(S)  
SYSDATABASE : DBID(S), IBMREQD(S), CREATEDBY(S), TIMESTAMP(S), CREATEDTS(S),  
ALTEREDTS(S), BPOOL(U), INDEXBP(U)  
SYSDATATYPES : CREATEDBY(S), DATATYPEID(S), CREATEDTS(S), IBMREQD(S)  
SYSDBAUTH : TIMESTAMP(S), DATEGRANTED(S), TIMEGRANTED(S), GRANTEETYPE(S),  
IBMREQD(S), GRANTEDTS(S)  
SYSFIELDS : IBMREQD(S)  
SYSFOREIGNKEYS : IBMREQD(S)  
SYSINDEXES : CLUSTERED(S), DBID(S), OBID(S), ISOBID(S), INDEXSPACE(S),  
FIRSTKEYCARD(S), FULLKEYCARD(S), NLEAF(S), NLEVELS(S),  
SPACE(S), IBMREQD(S), CLUSTERRATIO(S), CREATEDBY(S),  
IOFACTOR(S), PREFETCHFACTOR(S), STATTIME(S),  
FIRSTKEYCARDF(S), FULLKEYCARDF(S), CREATEDTS(S), ALTEREDTS(S),  
COPYLRNS(S), CLUSTERRATIOF(S), SPACEF(S), BPOOL(U)  
SYSINDEXPART : CARD(S), FAROFFPOS(S), LEAFDIST(S), NEAROFFPOS(S), IBMREQD(S),  
SPACE(S), STATTIME(S), FAROFFPOSF(S), NEAROFFPOSF(S),  
CARDF(S), ALTEREDTS(S), SPACEF(S), DSNUM(S), EXTENTS(S),  
PSEUDO\_DEL\_ENTRIES(S), LEAFNEAR(S), LEAFFAR(S), CREATEDTS(S),  
PQTY(U), SQTU(U), STORTYPE(U), STORNAME(U), VCATNAME(U),  
FREEPAGE(U), PCTFREE(U), SECQTYI(U)  
SYSKEYCOLUSE : IBMREQD(S)  
SYSKEYS : IBMREQD(S)  
SYSPACKDEP : IBMREQD(S)  
SYSPLANDEP : IBMREQD(S)  
SYSPARMS : ROUTINEID(S), DATATYPEID(S), CAST\_FUNCTION\_ID(S), IBMREQD(S)  
SYSRELS : IBMREQD(S), RELOBID1(S), RELOBID2(S), TIMESTAMP(S)  
SYSRESAUTH : TIMESTAMP(S), DATEGRANTED(S), TIMEGRANTED(S), IBMREQD(S),  
GRANTEDTS(S)  
SYSROUTINEAUTH : GRANTEDTS(S), IBMREQD(S)  
SYSROUTINES : CREATEDBY(S), ROUTINEID(S), CREATEDTS(S), ALTEREDTS(S),  
IBMREQD(S), PARM1(S), PARM2(S), PARM3(S), PARM4(S), PARM5(S),  
PARM6(S), PARM7(S), PARM8(S), PARM9(S), PARM10(S), PARM11(S),  
PARM12(S), PARM13(S), PARM14(S), PARM15(S), PARM16(S),  
PARM17(S), PARM18(S), PARM19(S), PARM20(S), PARM21(S),  
PARM22(S), PARM23(S), PARM24(S), PARM25(S), PARM26(S),  
PARM27(S), PARM28(S), PARM29(S), PARM30(S)  
SYSSCHEMAAUTH : GRANTEDTS(S), IBMREQD(S)  
SYSSEQUENCES : NAME(S), SEQUENCEID(S), CREATEDBY(S), CREATEDTS(S),  
ALTEREDTS(S), IBMREQD(S)  
SYSSEQUENCEAUTH : CONTOKEN(S), GRANTEDTS(S), IBMREQD(S)  
SYSSEQUENCESDEP : BSEQUENCEID(S), IBMREQD(S)  
SYSSTOGRUP : VPASSWORD(S), SPACE(S), SPCDATE(S), IBMREQD(S), CREATEDBY(S),

```

SYSSYNONYMS      : STATSTIME(S), CREATEDTS(S), ALTEREDTS(S), SPACEF(S)
SYSTABAUTH       : IBMREQD(S), CREATEDBY(S), CREATEDTS(S)
SYSTABCONST      : TIMESTAMP(S), DATEGRANTED(S), TIMEGRANTED(S), IBMREQD(S),
SYSTABLEPART     : GRANTEDTS(S)
SYSTABLEPART     : CREATEDTS(S), IBMREQD(S)
SYSTABLEPART     : CARD(S), FARINDREF(S), NEARINDREF(S), PERCACTIVE(S),
SYSTABLEPART     : PERCDROP(S), IBMREQD(S), CHECKRID(S), SPACE(S), PAGESAVE(S),
SYSTABLEPART     : STATSTIME(S), CHECKRID5B(S), EPOCH(S), CARDF(S), ALTEREDTS(S),
SYSTABLEPART     : SPACEF(S), DSNUM(S), EXTENTS(S), LIMITKEY_INTERNAL(S),
SYSTABLEPART     : CREATEDTS(S)
SYSTABLES        : DBID(S), OBID(S), CLUSTERRID(S), CARD(S), NPAGES(S),
SYSTABLES        : PCTPAGES(S), IBMREQD(S), PARENTS(S), CHILDREN(S), KEYOBID(S),
SYSTABLES        : CHECKRID(S), CREATEDBY(U), CREATEDTS(S), ALTEREDTS(S),
SYSTABLES        : RBA1(S), RBA2(S), PCTROWCOMP(S), STATSTIME(S), CARDF(S),
SYSTABLES        : CHECKRID5B(S), NPAGESF(S), SPACEF(S), AVGWLEN(S),
SYSTABLES        : RELCREATED(S)
SYSTABLESPACE    : DBID(S), OBID(S), PSID(S), NTABLES(S), NACTIVE(S), SPACE(S),
SYSTABLESPACE    : IBMREQD(S), ROOTNAME(S), ROOTCREATOR(U), CREATEDBY(S),
SYSTABLESPACE    : STATSTIME(S), CREATEDTS(S), ALTEREDTS(S), NACTIVEF(S),
SYSTABLESPACE    : SPACEF(S), BPOOL(U)
SYSTRIGGERS      : DBID(S), OBID(S), CREATEDBY(S), CREATEDTS(S), IBMREQD(S)
SYSVIEWDEP       : IBMREQD(S)
SYSVIEWS         : IBMREQD(S), RELCREATED(S), REFRESH_TIME(S), SIGNATURE(S)
SYSVOLUMES       : IBMREQD(S)

```

(S) System ignore. Set automatically by compare  
 Also set for fields only used by newer versions of DB2  
 (U) User ignore. Requested by user input  
 (U) is reported for fields that are both System and User ignores

-----  
 GOC2CMP - Compare DB2 Objects

2006-06-09 19:01  
 -----

OBJECT COMPARISON REPORT  
 =====

Only changed, added and deleted objects will be reported

Source: VIEW ADDED  
 Extracted from location \*FROM DDL FILE\* at 2006-06-09 18:57 by UNKNOWN

Target: TABLESPACE TTT8S81D FROM CAT  
 Extracted from DSN8 at 2006-06-09 18:57 by VNDR230

Target system is DB2 Release 810

View VNDR230.VDEPTS not found on target  
 New View VNDR230.VDEPTS will be added  
 Authorisations for View VNDR230.VDEPTS will be copied from source

COMPARISON SUMMARY REPORT  
 =====

Obtyp	Source Object	Target Object	Result	Object type
S	RRR8D81A.DSN8S81D	TTT8D81A.DSN8S81D	No change	Tablespace
T	VNDR230.DEPT	VNDR230.DEPT	No change	Table
X	VNDR230.XDEPT1	VNDR230.XDEPT1	No change	Index
X	VNDR230.XDEPT2	VNDR230.XDEPT2	No change	Index
X	VNDR230.XDEPT3	VNDR230.XDEPT3	No change	Index
R	RDD	RDD	No change	Relation
R	RDE	RDE	No change	Relation
V	VNDR230.VASTRDE1	VNDR230.VASTRDE1	No change	View
V	VNDR230.VASTRDE2	VNDR230.VASTRDE2	No change	View
V	VNDR230.VDEPMG1	VNDR230.VDEPMG1	No change	View
V	VNDR230.VDEPT	VNDR230.VDEPT	No change	View
V	VNDR230.VDEPTS		Added	View
V	VNDR230.VEMPDPT1	VNDR230.VEMPDPT1	No change	View
V	VNDR230.VHDEPT	VNDR230.VHDEPT	No change	View
V	VNDR230.VPHONE	VNDR230.VPHONE	No change	View

COMPARISON COUNTS REPORT  
 =====

Object type	On source	On target	Compared	Added	Dropped	Altered	Not Added
-------------	-----------	-----------	----------	-------	---------	---------	-----------



SYSINDEXES : BPOOL(U)  
SYSINDEXPART : PQTY(U), SQTY(U), STORTYPE(U), STORNAME(U), VCATNAME(U),  
FREEPAGE(U), PCTFREE(U), SECQTYI(U)  
SYSTABLEPART : PQTY(U), SQTY(U), STORTYPE(U), STORNAME(U), VCATNAME(U),  
FREEPAGE(U), PCTFREE(U), SECQTYI(U)  
SYSTABLESPACE : BPOOL(U), MAXROWS(U)

-----  
GOC2CMP - Compare DB2 Objects

2006-06-10 09:20  
-----

OBJECT COMPARISON REPORT  
=====

Source: VIEW ADDED, FULL REPORT  
Extracted from location \*FROM DDL FILE\* at 2006-06-10 09:16 by UNKNOWN

Target: TABLESPACE TTT8S81D FROM CATLG  
Extracted from DSN8 at 2006-06-10 09:16 by VNDR230

Target system is DB2 Release 810

Compare tablespace source(RRR8D81A.DSN8S81D) and target(TTT8D81A.DSN8S81D)

No changes to Tablespace

Grant(target): Grantor=VNDR230 Grantee:PUBLIC (Kept)

Compare table source(VNDR230.DEPT) and target(VNDR230.DEPT)

No changes to Table

Grant(target): Grantor=VNDR230 Grantee:PUBLIC\* (Kept)

Compare index source(VNDR230.XDEPT1) and target(VNDR230.XDEPT1)

No changes to Index

Compare index source(VNDR230.XDEPT2) and target(VNDR230.XDEPT2)

No changes to Index

Compare index source(VNDR230.XDEPT3) and target(VNDR230.XDEPT3)

No changes to Index

View VNDR230.VASTRDE1 not found on source

View VNDR230.VASTRDE1 will be dropped

View VNDR230.VASTRDE2 not found on source

View VNDR230.VASTRDE2 will be dropped

View VNDR230.VDEPMG1 not found on source

View VNDR230.VDEPMG1 will be dropped

Compare View source(VNDR230.VDEPT) and target(VNDR230.VDEPT)

No changes to View

Grant(target): Grantor=VNDR230 Grantee:PUBLIC\* (Kept)

View VNDR230.VDEPTS not found on target

New View VNDR230.VDEPTS will be added

Authorisations for View VNDR230.VDEPTS will be copied from source

View VNDR230.VEMPDPT1 not found on source

View VNDR230.VEMPDPT1 will be dropped

Compare View source(VNDR230.VHDEPT) and target(VNDR230.VHDEPT)

No changes to View

Grant(target): Grantor=VNDR230 Grantee:PUBLIC\* (Kept)

View VNDR230.VPHONE not found on source

View VNDR230.VPHONE will be dropped

Compare Referential Constraint source(RDD) and target(RDD)

No changes to Referential constraint

Compare Referential Constraint source(RDE) and target(RDE)

No changes to Referential constraint

COMPARISON SUMMARY REPORT  
=====

Obtyp	Source Object	Target Object	Result	Object type
S	RRR8D81A.DSN8S81D	TTT8D81A.DSN8S81D	No change	Tablespace
T	VNDR230.DEPT	VNDR230.DEPT	No change	Table
X	VNDR230.XDEPT1	VNDR230.XDEPT1	No change	Index
X	VNDR230.XDEPT2	VNDR230.XDEPT2	No change	Index
X	VNDR230.XDEPT3	VNDR230.XDEPT3	No change	Index
R	RDD	RDD	No change	Relation
R	RDE	RDE	No change	Relation
V		VNDR230.VASTRDE1	Dropped	View
V		VNDR230.VASTRDE2	Dropped	View
V		VNDR230.VDEPMG1	Dropped	View
V	VNDR230.VDEPT	VNDR230.VDEPT	No change	View
V	VNDR230.VDEPTS		Added	View
V		VNDR230.VEMPDPT1	Dropped	View
V	VNDR230.VHDEPT	VNDR230.VHDEPT	No change	View
V		VNDR230.VPHONE	Dropped	View

-----  
**COMPARISON COUNTS REPORT**  
=====

Object type	On source	On target	Compared	Added	Dropped	Altered	Not Added
Recreated							
Schemas	0	0	0	0	0	0	0
User Def Types	0	0	0	0	0	0	0
Sequences	0	0	0	0	0	0	0
Databases	0	0	0	0	0	0	0
Tablespaces	1	1	1	0	0	0	0
Tables	1	1	1	0	0	0	0
Indexes	3	3	3	0	0	0	0
Aliases	0	0	0	0	0	0	0
Storage groups	0	0	0	0	0	0	0
Synonyms	0	0	0	0	0	0	0
Functions	0	0	0	0	0	0	0
Stored procedures	0	0	0	0	0	0	0
Triggers	0	0	0	0	0	0	0
Views	3	7	2	1	5	0	0
Relations	2	2	2	0	0	0	0

## Compare Db2 objects sample report 3

The sample batch compare report in the following figure shows a subset of the compare report in which additional masks were specified. The **FIELDS IGNORED WHEN COMPARING SOURCE AND TARGET OBJECTS** section shows only system-generated ignore fields. The **OBJECT COMPARISON REPORT** section shows only the objects that were changed, added, or dropped.

```
scale="80">-----
-----
GOC2CMP - Compare DB2 Objects                               2006-06-10 10:00
-----

Database 2 Object Comparison Tool
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```

TRANSLATION MASKS

```
=====
OWNER      : AAA*                , BBB*
OWNER      : TESTSYS            , PRODOWN
GRANTEE    : TESTX              , PRODOWN
AUTHID     : VND0JK2            , VNDR230
TBNAME     : TAB1*              , XXTAB*
NAME       : VND0JK2            , VNDR230
DBNAME     : DB01               , PRODDB
DBNAME     : RRR8D81A           , TTT8D81A
SGNAME     : TESTG              , PRODG
BPNAME     : BP1                , BP4
TSBPNAME   : BP0                , BP1
IXBPNAME   : BP0                , BP2
```

Processed top down. First mask that fits a name of a given type will be used

```
BPNAME will cover TSBPNAME and IXBPNAME
SGNAME will cover TSSGNAME and IXSGNAME
NAME will cover all NAME types except COLNAME
AUTHID will cover SQLID, OWNER, SCHEMA and GRANTOR/GRANTEE
```

FIELDS IGNORED WHEN COMPARING SOURCE AND TARGET OBJECTS

Only system generated ignore fields are reported  
 System ignore fields also found in the user ignore input will not be reported

```
SYSAUXRELS : AUXRELOBID(S), IBMREQD(S)
SYSCHECKS  : DBID(S), OBID(S), TIMESTAMP(S), RBA(S), IBMREQD(S)
SYSCOLAUTH : TIMESTAMP(S), DATEGRANTED(S), TIMEGRANTED(S), IBMREQD(S),
             CONTOKEN(S), GRANTEDTS(S)
SYSCOLUMNS : COLCARD(S), HIGH2KEY(S), LOW2KEY(S), IBMREQD(S), STATTIME(S),
              COLCARDF(S), CREATEDTS(S), ALTEREDTS(S)
SYSDATABASE : DBID(S), IBMREQD(S), CREATEDBY(S), TIMESTAMP(S), CREATEDTS(S),
              ALTEREDTS(S)
SYSDATATYPES : CREATEDBY(S), DATATYPEID(S), CREATEDTS(S), IBMREQD(S)
SYSDBAUTH   : TIMESTAMP(S), DATEGRANTED(S), TIMEGRANTED(S), GRANTEETYPE(S),
              IBMREQD(S), GRANTEDTS(S)
SYSFIELDS   : IBMREQD(S)
SYSPRIMARYKEYS : IBMREQD(S)
SYSINDEXES  : CLUSTERED(S), DBID(S), OBID(S), ISOBID(S), INDEXSPACE(S),
              FIRSTKEYCARD(S), FULLKEYCARD(S), NLEAF(S), NLEVELS(S),
              SPACE(S), IBMREQD(S), CLUSTERRATIO(S), CREATEDBY(S),
              IOFACTOR(S), PREFETCHFACTOR(S), STATTIME(S),
              FIRSTKEYCARDF(S), FULLKEYCARDF(S), CREATEDTS(S), ALTEREDTS(S),
              COPYLRN(S), CLUSTERRATIOF(S), SPACEF(S)
SYSINDEXPART : CARD(S), FAROFFPOS(S), LEAFDIST(S), NEAROFFPOS(S), IBMREQD(S),
              SPACE(S), STATTIME(S), FAROFFPOSF(S), NEAROFFPOSF(S),
              CARDF(S), ALTEREDTS(S), SPACEF(S), DSNUM(S), EXTENTS(S),
              PSEUDO_DEL_ENTRIES(S), LEAFNEAR(S), LEAFFAR(S), CREATEDTS(S)
SYSKEYCOLUSE : IBMREQD(S)
SYSKEYS      : IBMREQD(S)
SYSPACKDEP  : IBMREQD(S)
SYSPLANDEP  : IBMREQD(S)
SYSPARMS    : ROUTINEID(S), DATATYPEID(S), CAST_FUNCTION_ID(S), IBMREQD(S)
SYSRELS     : IBMREQD(S), RELOBID1(S), RELOBID2(S), TIMESTAMP(S)
SYSRESAUTH  : TIMESTAMP(S), DATEGRANTED(S), TIMEGRANTED(S), IBMREQD(S),
              GRANTEDTS(S)
SYSROUTINEAUTH : GRANTEDTS(S), IBMREQD(S)
SYSROUTINES  : CREATEDBY(S), ROUTINEID(S), CREATEDTS(S), ALTEREDTS(S),
              IBMREQD(S), PARM1(S), PARM2(S), PARM3(S), PARM4(S), PARM5(S),
              PARM6(S), PARM7(S), PARM8(S), PARM9(S), PARM10(S), PARM11(S),
              PARM12(S), PARM13(S), PARM14(S), PARM15(S), PARM16(S),
              PARM17(S), PARM18(S), PARM19(S), PARM20(S), PARM21(S),
              PARM22(S), PARM23(S), PARM24(S), PARM25(S), PARM26(S),
              PARM27(S), PARM28(S), PARM29(S), PARM30(S)
SYSSCHEMAAUTH : GRANTEDTS(S), IBMREQD(S)
SYSSEQUENCES : NAME(S), SEQUENCEID(S), CREATEDBY(S), CREATEDTS(S),
              ALTEREDTS(S), IBMREQD(S)
SYSSEQUENCEAUTH : CONTOKEN(S), GRANTEDTS(S), IBMREQD(S)
SYSSEQUENCESDEP : BSEQUENCEID(S), IBMREQD(S)
SYSSTOGRUP   : VPASSWORD(S), SPACE(S), SPCDATE(S), IBMREQD(S), CREATEDBY(S),
              STATTIME(S), CREATEDTS(S), ALTEREDTS(S), SPACEF(S)
SYSSYNONYMS  : IBMREQD(S), CREATEDBY(S), CREATEDTS(S)
```

```

SYSTABAUTH      : TIMESTAMP(S), DATEGRANTED(S), TIMEGRANTED(S), IBMREQD(S),
                 GRANTEDTS(S)
SYSTABCONST     : CREATEDTS(S), IBMREQD(S)
SYSTABLEPART    : CARD(S), FARINDREF(S), NEARINDREF(S), PERCACTIVE(S),
                 PERCDROP(S), IBMREQD(S), CHECKRID(S), SPACE(S), PAGESAVE(S),
                 STATSTIME(S), CHECKRID5B(S), EPOCH(S), CARDF(S), ALTEREDTS(S),
                 SPACEF(S), DSNUM(S), EXTENTS(S), LIMITKEY_INTERNAL(S),
                 CREATEDTS(S)
SYSTABLES       : DBID(S), OBID(S), CLUSTERRID(S), CARD(S), NPAGES(S),
                 PCTPAGES(S), IBMREQD(S), PARENTS(S), CHILDREN(S), KEYOBID(S),
                 CHECKRID(S), CREATEDBY(S), CREATEDTS(S), ALTEREDTS(S),
                 RBA1(S), RBA2(S), PCTROWCOMP(S), STATSTIME(S), CARDF(S),
                 CHECKRID5B(S), NPAGESF(S), SPACEF(S), AVGWLEN(S),
                 RELCREATED(S)
SYSTABLESPACE   : DBID(S), OBID(S), PSID(S), NTABLES(S), NACTIVE(S), SPACE(S),
                 IBMREQD(S), ROOTNAME(S), ROOTCREATOR(S), CREATEDBY(S),
                 STATSTIME(S), CREATEDTS(S), ALTEREDTS(S), NACTIVEF(S),
                 SPACEF(S)
SYSTRIGGERS     : DBID(S), OBID(S), CREATEDBY(S), CREATEDTS(S), IBMREQD(S)
SYSVIEWDEP      : IBMREQD(S)
SYSVIEWS        : IBMREQD(S), RELCREATED(S), REFRESH_TIME(S), SIGNATURE(S)
SYSVOLUMES      : IBMREQD(S)

```

-----  
GOC2CMP - Compare DB2 Objects  
-----

2006-06-10 10:00

OBJECT COMPARISON REPORT  
=====

Only changed, added and deleted objects will be reported

Source: VIEW ADDED, CHANGED ONLY REPT  
Extracted from location \*FROM DDL FILE\* at 2006-06-10 09:56 by UNKNOWN

Target: TABLESPACE TTT8S81D FROM CATLG  
Extracted from DSN8 at 2006-06-10 09:56 by VNDR230

Target system is DB2 Release 810

View VNDR230.VDEPTS not found on target  
New View VNDR230.VDEPTS will be added  
Authorisations for View VNDR230.VDEPTS will be copied from source

COMPARISON SUMMARY REPORT  
=====

Obtyp	Source Object	Target Object	Result	Object type
S	RRR8D81A.DSN8S81D	TTT8D81A.DSN8S81D	No change	Tablespace
T	VNDR230.DEPT	VNDR230.DEPT	No change	Table
X	VNDR230.XDEPT1	VNDR230.XDEPT1	No change	Index
X	VNDR230.XDEPT2	VNDR230.XDEPT2	No change	Index
X	VNDR230.XDEPT3	VNDR230.XDEPT3	No change	Index
R	RDD	RDD	No change	Relation
R	RDE	RDE	No change	Relation
V	VNDR230.VASTRDE1	VNDR230.VASTRDE1	No change	View
V	VNDR230.VASTRDE2	VNDR230.VASTRDE2	No change	View
V	VNDR230.VDEPMG1	VNDR230.VDEPMG1	No change	View
V	VNDR230.VDEPT	VNDR230.VDEPT	No change	View
V	VNDR230.VDEPTS		Added	View
V	VNDR230.VEMPDPT1	VNDR230.VEMPDPT1	No change	View
V	VNDR230.VHDEPT	VNDR230.VHDEPT	No change	View
V	VNDR230.VPHONE	VNDR230.VPHONE	No change	View

COMPARISON COUNTS REPORT  
=====

Object type	On source	On target	Compared	Added	Dropped	Altered	Not
Added							
Recreated							

Tablespaces	1	1	1	0	0	0
0 Tables	1	1	1	0	0	0
0 Indexes	3	3	3	0	0	0
0 Views	8	7	7	1	0	0
0 Relations	2	2	2	0	0	0
0						
-----						
-----						

## Compare Db2 objects sample report 4

The sample batch compare report in the following figure shows a subset of the compare report in which LOB objects are converted from explicit to implicit. The OBJECT COMPARISON REPORT includes messages about the converted objects. The summary section of the report lists all objects and the end result of the action performed.

```

scale="80">OBJECT COMPARISON REPORT
=====
Tablespace DB33971.TL971APN not found on target
  New LOB Tablespace DB33971.TL971APN will be added

Compare tablespace source(DB33971.TL971AP1) and target(DB33971.TL971AP1)
  No changes to Tablespace

Compare tablespace source(DB33971.TL971AP2) and target(DB33971.TL971AP2)
  No changes to Tablespace

Compare tablespace source(DB33971.TL971AP3) and target(DB33971.TL971AP3)
  No changes to Tablespace

Tablespace DB33971.TL971BP1 not found on target
  New LOB Tablespace DB33971.TL971BP1 will be added

Compare tablespace source(DB33971.TS33971A) and target(DB33971.TS33971A)
  (A)Field Numparts changed from 3 to 4
  Tablespace will be altered

Tablespace DB33971.TS33971B not found on target
  New Tablespace DB33971.TS33971B will be added

Compare table source(VNDR1.TB33971A) and target(VNDR1.TB33971A)
  (D)Column CLOB2 added
  (A)Partition(s) added to the target table
  Auxiliary table VNDR1.TB971AP1 processed
  Auxiliary table VNDR1.TB971AP2 processed
  Auxiliary table VNDR1.TB971AP3 processed
  Auxiliary table VNDR1.TB971APN added
ADB7163W The number of auxiliary tables associated with the source
table might not be consistent with the number of LOB columns
in the source table and with the number of partitions in the
table space. Implicit LOB objects are used when the base
table is re-created. After changes are applied, ensure that
one auxiliary table exists for each LOB column in each
partition.
Table VNDR1.TB33971A is partitioned and will be dropped by dropping tablespace DB33971.TS33971A
Table will be recreated
Table data will not be converted
Not eligible for FORMAT INTERNAL processing

Table VNDR1.TB33971B not found on target
  Auxiliary table VNDR1.TB971BP1 processed
ADB7150W Source contains incomplete set of explicit LOB objects
  therefore all LOB objects for this base table will be created
  implicitly.
  New Table VNDR1.TB33971B will be added

Compare index source(VNDR1.IX33971A) and
target(VNDR1.IX33971A)
  Index VNDR1.IX33971A will be dropped by dropping the
tablespace
  Index will be recreated because the base table will be dropped and
recreated

```

Index VNDR1.IX33971B not found on target  
 New Index VNDR1.IX33971B will be added

Index VNDR1.IX971APN not found on target  
 This is an index on auxiliary table.  
 The index is will not be created because the auxiliary table has been converted from explicit to implicit.  
 The respective index will be created implicitly by DB2.

Compare auxiliary index source(VNDR1.IX971AP1) and target(VNDR1.IX971AP1)  
 Index VNDR1.IX971AP1 will be dropped  
 Index will not be recreated because the auxiliary table has been converted from explicit to implicit

Compare auxiliary index source(VNDR1.IX971AP2) and target(VNDR1.IX971AP2)  
 Index VNDR1.IX971AP2 will be dropped  
 Index will not be recreated because the auxiliary table has been converted from explicit to implicit

Compare auxiliary index source(VNDR1.IX971AP3) and target(VNDR1.IX971AP3)  
 Index VNDR1.IX971AP3 will be dropped  
 Index will not be recreated because the auxiliary table has been converted from explicit to implicit

Index VNDR1.IX971BP1 not found on target  
 This is an index on auxiliary table.  
 The index is will not be created because the auxiliary table has been converted from explicit to implicit.  
 The respective index will be created implicitly by DB2.

COMPARISON SUMMARY REPORT  
 =====

Obtyp	Source Object	Target Object	Result	Object
type				
D	DB33971	DB33971	No change	
Database				
S	DB33971.TL971APN		Not added	
Tablespace				
T	VNDR1.TB971APN		Not added	
Table				
X	VNDR1.IX971APN		Not added	
Index				
S	DB33971.TL971AP1	DB33971.TL971AP1	No change	
Tablespace				
T	VNDR1.TB971AP1	VNDR1.TB971AP1	Dropped	
Table				
X	VNDR1.IX971AP1	VNDR1.IX971AP1	Dropped	
Index				
S	DB33971.TL971AP2	DB33971.TL971AP2	No change	
Tablespace				
T	VNDR1.TB971AP2	VNDR1.TB971AP2	Dropped	
Table				
X	VNDR1.IX971AP2	VNDR1.IX971AP2	Dropped	
Index				
S	DB33971.TL971AP3	DB33971.TL971AP3	No change	

```

Tablespace
T      VNDR1.TB971AP3                VNDR1.TB971AP3                Dropped
Table
X      VNDR1.IX971AP3                VNDR1.IX971AP3                Dropped
Index
S      DB33971.TL971BP1                Not added
Tablespace
T      VNDR1.TB971BP1                Not added
Table
X      VNDR1.IX971BP1                Not added
Index
S      DB33971.TS33971A                DB33971.TS33971A                Altered
Tablespace
T      VNDR1.TB33971A                VNDR1.TB33971A                Dropped/created
Table
X      VNDR1.IX33971A                VNDR1.IX33971A                Dropped/created
Index
S      DB33971.TS33971B                Added
Tablespace
T      VNDR1.TB33971B                Added
Table
X      VNDR1.IX33971B                Added
Index
-----
-----

```

```

COMPARISON COUNTS
REPORT
=====

```

Object type	On source	On target	Compared	Added	Dropped	Altered	Not added
Recreated							
-----	-----	-----	-----	-----	-----	-----	-----
Schemas	0	0	0	0	0	0	0
0							
User Def Types	0	0	0	0	0	0	0
0							
Sequences	0	0	0	0	0	0	0
0							
Databases	1	1	1	0	0	0	0
0							
Tablespaces	7	4	4	1	0	1	
2							
Tables	7	4	4	1	0	0	
2							
Indexes	7	4	4	1	0	0	
2							
Aliases	0	0	0	0	0	0	0
0							
Storage groups	0	0	0	0	0	0	0
0							
Synonyms	0	0	0	0	0	0	0
0							
Functions	0	0	0	0	0	0	0
0							
Stored procedures	0	0	0	0	0	0	0
0							
Triggers	0	0	0	0	0	0	0
0							
Views	0	0	0	0	0	0	0
0							
Column masks	0	0	0	0	0	0	0
0							
Row permissions	0	0	0	0	0	0	0
0							
Relations	0	0	0	0	0	0	0
0							
-----	-----	-----	-----	-----	-----	-----	-----
-----							

The count report groups all objects by the type and reports the number of objects on the source and on the target. The count report also lists the number of objects compared, added or not added (on source only), and dropped (if on target only). You can also see how many objects from the compared objects were altered.

## Compare Db2 objects sample report 5

The sample batch compare report in the following figure shows a subset of the compare report for which the comparison was run for some specific objects, rather than all object types. You can generate reports in this format by entering the value Y for the Object specific option on the Specify Compare Reporting Options panel (GOC5RO).

```
>FIELDS IGNORED WHEN COMPARING SPECIFIC OBJECTS
=====
Specified Object Name                Compared Object Name
-----
DB47985.TS47985A                    DB47985.TS47985A
(f)SYSTABLESPACE:PARTITIONS,BPOOL
DB47985.TS47985B                    DB47985.TS47985B
(f)SYSINDEXPART:PARTITION,LIMITKEY
(f)SYSTABLEPART:PARTITION,LIMITKEY,LIMITKEY_INTERNAL,LOGICAL_PART
(f)SYSTABLES:PARTKEYCOLNUM
(f)SYSTABLESPACE:PARTITIONS
(f)SYSCOLUMNS:PARTKEY_COLSEQ,PARTKEY_ORDERING
(f)SYSAXRELS:PARTITION
DB47985.TS479*5B                    DB47985.TS47985B
(f)SYSTABLESPACE:PARTITIONS
DB47985.TS47985C                    DB47985.TS47985C
(f)SYSTABLESPACE:BPOOL
DB47985.TS47985D                    No Match
(f)SYSTABLESPACE:BPOOL
DB47985                              DB47985
(f)SYSDATABASE:INDEXBP
DB47985.TS479*5B                    DB47985.TS47985B
(g)PBG_NUMPARTS
DB47985.TS47985*                    DB47985.TS47985A
                                        DB47985.TS47985B
                                        DB47985.TS47985C
(f)SYSTABLESPACE:TYPE,ENCODING_SCHEME,SBCS_CCSID,DBCS_CCSID,MAXROWS,
    LOCKPART,LOG,CURRENT_VERSION,CREATORTYPE,INSTANCE,CLONE
DB4798501234567890>.TS47985E9012345678> No Match
(f)SYSTABLESPACE:PARTITIONS
-
(g) Indicates the name of the GENERIC group that was used.
(f) Indicates table name:field list.
```

## Compare Db2 objects sample summary conversion report

You might have few change windows to work with and limited time to run Work Statement Lists. You need a quick way to determine whether conversions will take place when a change is run, so you know what the potential problems are. The sample summary conversion report in the following figure shows the truncations and conversions that will take place when the change runs. This report is printed on a separate DD-card (CONVRPT).

```
>***** TOP OF DATA *****
-----
GOC2CMP - Expected Conversion Errors
-----

Database 2 Object Comparison Tool
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restricted by GSA ADP schedule contract with IBM Corp.

-----
GOC2CMP - Expected Conversion Errors
-----
Source:
    Extracted from location *FROM DDL FILE* at 2009-06-23 13:52 by VNDRG

Target:
    Extracted from DSN9 at 2009-06-23 13:52 by VNDRG

Target system is DB2 Release
```

Conversion report generated in ANALYZE mode

CONVERSION REPORT SUMMARY  
=====

Compare table source(VNDRG.SRC257TB) and target(VNDRG.TAR257TB)

Column name	From type	To type
EMPNO	INTEGER	SMALLINT
NAME	CHAR(30)	CHAR(25)

Compare table source(VNDRG.SRC257TB1) and target(VNDRG.TAR257TB1)

Column name	From type	To type
SALARY	SMALLINT	DECIMAL(5,2)

\*\*\*\*\* BOTTOM OF DATA \*\*\*\*\*

## Possible conversion errors

This topic provides a summary list of possible conversion errors that might occur due to truncation during conversion of data types.

### Possible conversion errors

The following list shows possible conversion errors.

- Integer to Smallint
- Integer to Decimal
- Smallint to Decimal
- Float to Smallint
- Float to Integer
- Float to Bigint
- Float to decimal
- Decimal to Smallint
- Decimal to Integer
- Decimal to Decimal
- Decimal to Date
- Decimal to Time
- Decimal to Timestamp
- Char to Char
- Char to Binary
- Char to Varchar
- Char to Date
- Char to Time
- Char to Timestamp
- Char to Smallint
- Char to Integer
- Char to decimal
- Char to Longvar
- Binary to Binary
- Varbinary to Varbinary
- Varchar to Char

Varchar to Varchar  
Varchar to Varbinary  
Varchar to Time  
Varchar to Timestamp  
Varchar to Smallint  
Varchar to Integer  
Varchar to Decimal  
Varchar to Longvar  
Varchar to Date  
  
Longvar to Char  
Longvar to Varchar  
Longvar to Date  
Longvar to Time  
Longvar to Timestamp  
Longvar to Longvar  
  
Graphic to Graphic  
Graphic to Vargraphic  
Graphic to Longvarg  
  
Vargraphic to Graphic  
Vargraphic to Longvarg  
Vargraphic to Vargraphic  
  
LongVarg to Graphic  
Longvarg to Vargraphic  
Longvarg to Longvarg  
  
Decfloat to Smallint  
Decfloat to Integer  
Decfloat to Float  
Decfloat to Decimal  
Decfloat to Bigint  
  
Date to Char  
Date to Varchar  
  
Time to Char  
Time to Varchar  
  
Timestamp to Char  
Timestamp to Varchar

---

## Chapter 10. Translation masks and ignore fields

These reference topics are designed to provide you with quick access to information about Db2 Object Comparison Tool translation masks and ignore fields.

The Db2 Object Comparison Tool supports the use of translation masks so that you can compare objects with different names and provides an option to specify fields to ignore when objects are compared.

By using Db2 Object Comparison Tool, you can use masking and ignore files to handle intentional differences and different naming conventions between the objects that you are comparing. For example, primary and secondary quantities usually differ between test and production systems. Likewise, the same object might have an owner name of TESTxxx on the test system and an owner name of PRODxxx on the production system. You can use the masking and ignore files to compare only for actual differences.

---

### Translation masks

In Object Comparison Tool, you can use translation masks to account for differences in naming conventions between source and target objects when doing a comparison. You can also use masks to overwrite values for object attributes.

This purpose is slightly different than the way masks are used in Db2 Administration Tool. In Db2 Administration Tool, you use masks to change the naming conventions that are used in the generated SQL. In Object Comparison Tool, you mainly use masks for translation. A name in the source can be translated with the mask so that it matches a name in the target. For example, if the source database is named SSEMMDB1 and the target is SSEMMDBA, the mask tells Object Comparison Tool to compare the two databases even though they have different names.

For mask syntax, see [Mask definition syntax \(IBM DB2 Administration Tool for z/OS\)](#). The syntax is different depending on whether you are specifying a mask to translate names or a mask to overwrite attribute values.

If you specify both a translation mask and ignore fields, the ignore fields specification overrides the mask.

#### Masks that translate names

Object Comparison Tool supports three types of translation masks to process names:

##### AUTHID masks

AUTHID masks are applied to all fields that contain Db2 authorization IDs, such as OWNER and CREATOR.

For example, the following mask specifies that all authorization IDs that have the value SYSIBM in the source are translated to COPY:

```
AUTHID: SYSIBM, COPY
```

With the following example mask, an owner of PROD01 in the source is translated to PROddb01.

```
AUTHID: *01*, *DB01*
```

You can also specify that you want to translate names for only specific authorization IDs, such as the table space owner. In that case, you specify TSOWNER instead of AUTHID. For a complete list of AUTHID masks, see [Mask definition syntax \(IBM DB2 Administration Tool for z/OS\)](#).

##### NAME masks

NAME masks are applied to all fields that name objects.

For example, the following mask specifies that any name that starts with ABC in the source is translated to a name that starts with DEF.

```
NAME: ABC*,DEF*
```

With the following example mask, name HLQ47D9 in the source is translated to NEW479 before it is compared with the target.

```
NAME: HLQ*D*, NEW**
```

You can also specify that you want to translate names for only specific types of objects, such as table spaces. In that case, you specify TSNAME instead of NAME. For a complete list of name masks, see [Mask definition syntax \(IBM DB2 Administration Tool for z/OS\)](#).

### RENAME specifications

RENAME specifications indicate that an object in the source was renamed and should be related to an existing object in the target.

The syntax for RENAME is:

```
renameobj: old-name, new-name
```

where *old-name* is the previous name of the object and *new-name* is the new name of the object. You can use the wildcard character, an asterisk (\*), in the object names.

*renameobj* is a keyword that indicates the object that was renamed. *renameobj* can have one of the following values:

#### RENAMEDB

A database was renamed.

Example syntax: RENAMEDB: X\*, P\*

#### RENAMETS

A table space was renamed.

Example syntax: RENAMETS: X\*.X\*, P\*.P\*

#### RENAMETB

A table was renamed.

Example syntax: RENAMETB: \*.X\*, \*.P\*

#### RENAMEIX

An index was renamed.

Example syntax: RENAMEIX: \*.X\*, \*.P\*

#### RENAMEGV

A global variable was renamed.

Example syntax: RENAMEGV: \*.GVT\*, \*.GVS\*

#### RENAMECOL

A column was renamed.

Example syntax: RENAMECOL: OWNERA.MYTB.OLDCOLNAME, NEWCOLNAME

An error message is generated in any of the following situations:

- If the name of compared columns is specified as an input mask in the RENAME column mask.
- A column with the name of the output mask does not exist.

You can also specify masks to translate names for a specific object, such a specific table space instead of all table spaces. For details, see [Mask definition syntax \(IBM DB2 Administration Tool for z/OS\)](#).

When you specify compare masks, you do not have to specify the same number of characters for both the input mask and the output mask.

## Masks that overwrite attributes

The following example mask specifies that table spaces that start with TESTHRTS in the TESTDB database are to be compressed.

```
COMPRESS: TESTDB.TESTHRTS*, YES
```

The following example mask specifies that the SEGSIZE attribute for all source table spaces is to be changed to 64.

```
SEGSIZE: *, 64
```

Using masks to overwrite attributes can be useful when you want to overwrite attributes for a large group of objects. In this case, you specify the mask during a comparison operation. For an example, see [“Scenario: Converting partitioned table spaces to partition-by-range universal table spaces”](#) on page 17

You can also use a REXX user exit to specify the overwrite value for table space and index space attributes. For more information about these REXX user exits, see [Specifying a REXX user exit for the overwrite value \(IBM DB2 Administration Tool for z/OS\)](#).

## Mask processing

Masks are applied to the source objects before they are compared with the target objects. Before the comparison process, any masks are applied to Db2 catalog fields in the version file for the source object so that the names match the naming convention of the target object.

You can use one or more translation masks on the source object to make it match the target object. Masks that translate names are processed first and then any masks that specify overwrite values are applied. Within each of those categories, masks are processed in the order that you list them.

When a value is translated, such as a name, the masks are processed one by one until a match is detected. A match means that both of the following conditions are true:

- The mask name is applicable to the value. For example, for a table name, mask names TBNAME and NAME are applicable.
- The value conforms to *inputmask* in the mask syntax. For example, PRODTAB1 conforms to mask PROD\*1.

The value is translated based on the *outputmask* value in the syntax, or, in the case where an attribute value is overwritten, the value of the attribute is overwritten to the new value. Only the first matching mask is used for a given value. If no matching mask is found, the value is not translated. Generally, you should put the most specific translation masks at the top of the mask file and the more general ones at the end.

**Performance tip:** Using many masks that translate names might increase processing time. If a match is not found early in the process, the program must search through the list of translation masks until a match is found.

### Related concepts

[“Special considerations for comparing DB2 objects”](#) on page 154

You can perform most comparisons field by field, comparing the catalog records that represent the objects. However, special considerations are needed in some situations.

### Related tasks

[“Specifying compare masks”](#) on page 90

You can define a mask either in a data set or in a table in the Change Management repository. Storing masks in a data set makes copying mask files easy. Storing masks in a table makes them easy to share, manage, and recover.

### Related reference

[“Db2 catalog records and associated masks”](#) on page 190

Masks are applied to information in the Db2 catalog before objects are compared or before the reverse engineering function (GEN) generates DDL.

## Ignore fields

By using ignore fields, you can compare DB2 catalog records while ignoring some fields. Ignore fields are used in situations where you are aware of differences between source and target objects, but you do not want these changes to be recognized and cause a change.

The purpose of ignoring fields during comparison is to:

- Avoid comparisons that are meaningless

Timestamps and statistical information are examples of this type of information. These types of ignore fields are called *system ignores* and are included by default whether they are explicitly specified on the ISPF panels.

- Protect specified fields against updates

You can specify that certain fields are to be ignored by the comparison process. Examples of fields that you might want to ignore are fields that contain space information because production tables and indexes are often larger than the corresponding test tables and indexes. You might also want to ignore fields that contain buffer pool names, because a broader set of pools might be implemented in the production system.

No field in a DB2 catalog record for which ignore is specified is compared. If you must recreate an object because of other changes, values for ignored fields are taken from the target version file. All other fields have values taken from the source version file.

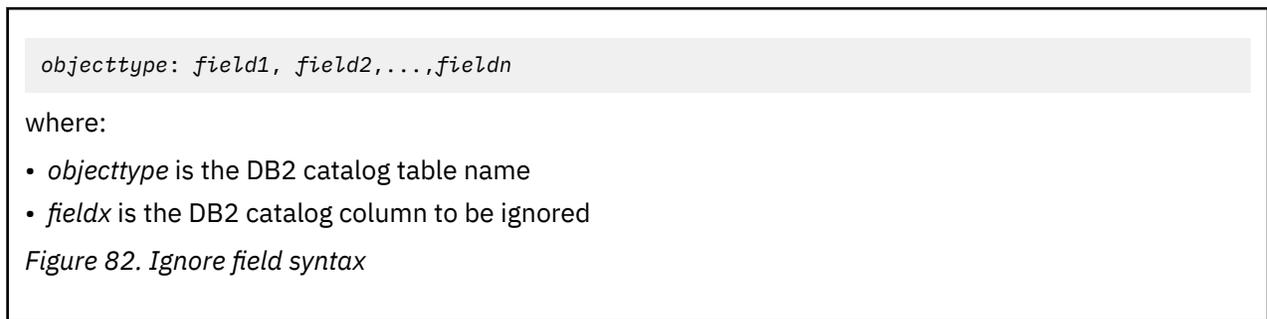
Some catalog fields are automatically ignored by the Compare program, such as statistics, dates, and internal identifiers. As mentioned previously, these fields are called *system ignores*. You can list system ignores by using the reporting options described in [Chapter 9, “Batch compare report format,”](#) on page 167.

**Important:** Use caution when specifying ignore fields. If possible, use the generic ignore field specifications: Bufferpool, Space, Storage, and Partitioning. These specifications provide for some common sets of fields that are often intentionally different on source and target systems.

Because many fields in the DB2 catalog records are interdependent, when one field is ignored, the value in another field might be invalid if that field is not ignored also. For example, the TYPE fields for tables and table spaces. If TYPE is ignored for table spaces, a table space could keep the LARGE (TYPE) attribute. If the compare source is a segmented table space, the resulting set of attributes will be invalid if the SEGSIZE field is not ignored also.

Another type of dependency is between the SQTY and SECQTYI fields on SYSTABLEPART and SYSINDEXPART that are updated by DB2. If secondary quantity is to be ignored, specify both fields or use the generic SPACE specification.

The syntax for specifying ignore fields is shown in the following figure:



Several examples of ignore field specifications are shown in the following figure:

```

SYSDATABASE: BPOOL
SYSDATABASE: INDEXBP,STGROUP
SYSTABLESPACE: BPOOL
SYSTABLEPART: PQTY,SQTY,STORNAME,VCATNAME
SYSINDEXES: INDEXSPACE
SYSINDEXPART: PQTY,SQTY,STORNAME,VCATNAME

```

Figure 83. Examples of ignore fields

When you specify fields to ignore, specify the DB2 catalog table name and which fields within it are to be ignored. In Figure 83 on page 187, the first example is for a database. It shows that for SYSDATABASE, the field BPOOL is ignored when the comparison is performed.

If the compared objects originate from two different versions of DB2, they might be different because more parameters, attributes, or clauses are supported by one of the version (typically the newer version). In this case, Object Comparison Tool ignores such fields just like ignore fields that are manually entered. No differences of this kind are reported.

**Important:** Some values are stored in the DB2 catalog in both internal and external formats. Internal format is only understood by DB2 (not documented) and external format is suitable for input and output. Object Comparison Tool will always ignore the internal format. To ignore the value, there must be an ignore specification for the field that contains the external format of the value.

For example, SYSINDEXPART.LIMITKEY keeps the high value of the limit key of the partition in internal format. SYSTABLEPART.LIMITKEY keeps the high value of the partition in external format. Therefore, if you need to ignore SYSINDEXPART.LIMITKEY, specify SYSTABLEPART.LIMITKEY.

## Storing an ignore in the Change Management database

If you are using Object Comparison Tool and choose option 4 on the Object Comparison Tool Menu to specify the fields to ignore, you can specify that the ignore that is created be stored in the Change Management database instead of a data set. To have the ignore stored in the Change Management database, complete the following steps:

1. Specify option 4 on the Object Comparison Tool Menu to display the **Specify Compare Ignore Fields** panel.
2. As shown in the following figure, specify an owner and a name for the ignore, do not specify a data set name, and specify YES in the **Edit Ignores** field.

```

Compare ----- Specify Compare Ignore Fields -----
Option ==>

Ignore Table Entry:
  Owner . . MYID      >          (? to look up)
  Name  . . MYIGNORE  >          (? to look up)
Data Set:
  Data Set Name . .
Options:
  Edit Ignores . . YES (Yes/No)

```

Figure 84. Specify Compare Ignore Fields panel (GOC4)

3. For each table that is displayed on the **Specify Ignore Fields: Objects** panel, use the U line command to display the catalog field columns that can be ignored.
4. On the **Select Ignore Fields** panel for the table, use the U and S line commands to select or de-select a particular field to be ignored.

5. Press F3 to return to the list of Db2 catalog tables (the **Specify Ignore Fields: Objects** panel). Pressing F3 again returns you to the Object Comparison Tool Menu panel.

### Related tasks

[“Specifying compare ignore fields” on page 98](#)

Specify compare ignore fields when you want to ignore some fields when comparing DB2 catalog records. Use ignore fields when there are differences in source and target objects, but you don't want the compare process to change them.

## Generic ignore field specifications

---

Generic ignore field specifications provide a shortcut for ignoring all bufferpools, allocated space information, how data is stored, or how data is partitioned.

The generic ignore specifications are:

- Bufferpool
- Space
- Storage
- Partitioning
- Key targets
- Business time
- System time
- Source pending changes
- Row permissions
- Column masks
- Include columns
- PBG numparts
- Hash organization
- XML modifier

Specifying a generic ignore specification has the same effect as specifying the ignore fields manually. For example, if you specify the BUFFERPOOL generic ignore specification, all of the following DB2 catalog table fields are ignored:

- SYSDATABASE.BPOOL
- SYSDATABASE.INDEXBP
- SYSINDEXES.BPOOL
- SYSTABLESPACE.BPOOL

If you specify the SPACE generic ignore specification, all of the following DB2 catalog table fields are ignored:

- SYSINDEXPART.PQTY
- SYSINDEXPART.SQTY
- SYSINDEXPART.FREEPAGE
- SYSINDEXPART.PCTFREE
- SYSINDEXPART.SECQTYI
- SYSTABLEPART.PQTY
- SYSTABLEPART.SQTY
- SYSTABLEPART.FREEPAGE
- SYSTABLEPART.PCTFREE

- SYSTABLEPART.SECQTYI
- SYSTABLESPACE.MAXROWS

If you specify the STORAGE generic ignore specification, all of the following DB2 catalog table fields are ignored as well as all of the fields that are ignored by the SPACE generic ignore information:

- SYSDATABASE.STGROUP
- SYSINDEXPART.STORTYPE
- SYSINDEXPART.STORNAME
- SYSINDEXPART.VCATNAME
- SYSTABLEPART.STORTYPE
- SYSTABLEPART.STORNAME
- SYSTABLEPART.VCATNAME
- SYSVOLUMES.VOLID
- SYSSTOGROUP.VCATNAME

If you specify the PARTITIONING generic ignore specification, all of the following DB2 catalog table fields are ignored:

- SYSINDEXPART.PARTITION
- SYSTABLEPART.PARTITION
- SYSTABLESPACE.PARTITIONS
- SYSINDEXPART.LIMITKEY
- SYSTABLEPART.LIMITKEY
- SYSTABLEPART.LIMITKEY\_INTERNAL
- SYSTABLEPART.LOGICAL\_PART
- SYSTABLES.PARTKEYCOLNUM
- SYSCOLUMNS.PARTKEY\_COLSEQ
- SYSCOLUMNS.PARTKEY\_ORDERING
- SYSAUXRELS.PARTITION

If you specify the KEY TARGETS generic ignore specification, the key targets from extended indexes will not be compared. The ignored values will be taken from target indexes. The column definition and the key-expression definition from the old index will be used in the CREATE INDEX statement. In addition, SYSINDEXES.KEYTARGET\_COUNT and SYSINDEXES.IX\_EXTENSION\_TYPE will be ignored because they are related to the extended index definition.

If you specify the PBG\_NUMPARTS generic ignore specification, the following DB2 catalog table field is ignored: SYSTABLESPACE.PARTITIONS.

If you specify the SOURCE\_PENDING\_CHANGES generic ignore specification, source pending changes are not propagated to the source object definition (they will be omitted)

If you specify the ROW\_PERMISSIONS generic ignore specification, the row permissions will not be compared, added or dropped (they will be not processed).

If you specify the COLUMN\_MASKS generic ignore specification, the column masks permissions will not be compared, added or dropped (they will be not processed).

If you specify the INCLUDE\_COLUMNS generic ignore specification, the include columns permissions will not be compared, added or dropped (they will be not processed).

## XMLMODIFIER ignore field specifications

XMLMODIFIER ignore field specifications provide a shortcut for ignoring all element names, schema locations, target namespaces, XSR object names, or XSR object schemas.

If XMLMODIFIER ignore specifications are selected, the differences in source and target are ignored and not compared. The XMLMODIFIER ignore specifications are:

Table 15. XMLMODIFIER ignore specifications

Column name	Data type	Description
XSROBJECTSCHEMA	VARCHAR(128) NOT NULL	Qualifier of the XML schema name. This is always set to 'SYSXSR'.
XSROBJECTNAME	VARCHAR(128) NOT NULL	Name of the XML schema.
TARGETNAMESPACE	INTEGER	The value of the STRINGID column in SYSIBM.SYSXMLSTRINGS when the target namespace URI of the primary XML schema document is stored in SYSIBM.SYSXMLSTRINGS.
SCHEMALOCATION	INTEGER	The value of the STRINGID column in SYSIBM.SYSXMLSTRINGS when the schema location URI of the primary XML schema document is stored in SYSIBM.SYSXMLSTRINGS.
ELEMENTNAME	INTEGER NOT NULL	String id for the local name of the root element node. It would be 0 if it is not specified. The value of element name stored in SYSIBM.SYSXMLSTRINGS.

## Db2 catalog records and associated masks

Masks are applied to information in the Db2 catalog before objects are compared or before the reverse engineering function (GEN) generates DDL.

For a list of the Db2 catalog columns that correspond to each mask, see [Db2 catalog columns and the corresponding masks \(IBM DB2 Administration Tool for z/OS\)](#).

### Related concepts

[“Translation masks” on page 183](#)

In Object Comparison Tool, you can use translation masks to account for differences in naming conventions between source and target objects when doing a comparison. You can also use masks to overwrite values for object attributes.

### Related tasks

[“Specifying compare masks” on page 90](#)

You can define a mask either in a data set or in a table in the Change Management repository. Storing masks in a data set makes copying mask files easy. Storing masks in a table makes them easy to share, manage, and recover.

# Chapter 11. Specifying alternate input to the generate apply job program

You can specify data sets for Db2 Object Comparison Tool to use as alternate inputs to the program that generates the apply job. In addition, you can create a template that specifies the batch parameter variables you want your data set to contain.

## About this task

There are two members in the primary input data set that store primary input variables: GOCSVARS and GOCSVAR2. You can instruct the generate apply job program to use the alternate data sets by adding a DD statement to the JCL. The alternate data sets can contain variables with customized values.

## Procedure

1. Create a primary input data set.
  - a) Select option 5 on the Db2 Object Comparison Tool menu to generate the data set that is referenced by the GOCSVARS DD statement.
2. Create new data sets based on the primary input data set.
  - a) Enter an I in the option field on the Db2 Object Comparison Tool menu. The I option is hidden and is not listed as an option on the menu.

The List ISPF Table Extension Variables panel is displayed, as shown in the following figure:

```
DB2 Admin ----- List ISPF Table Extension Variables ----- 09:02
Enter/verify the following:
Data Set Name  ===>
Member Name    ===>
```

Figure 85. List ISPF Table Extension Variables panel (ADB2IIT)

- b) Enter the primary data set name and the member name (GOCSVARS for Db2 Object Comparison Tool) that you want to list.
  - c) Press Enter.

The list of variables and values for the specified data set and member is displayed.
  - d) Copy the content of the member to the newly created alternate data set.

**Requirement:** The alternate input data set must exist prior to this step.
  - e) Edit the variables listed in the newly copied alternate data set with the alternate values that you want to use as input to the generate apply job program.

**Requirement:** The alternate input data set must have a fixed record length of 80 characters with no sequence numbers. Each logical record begins in column one. Logical records continue on subsequent lines if they exceed the line length. Each logical record must end with a semicolon (;). All variables that are listed must exist in the alternate input data set.
  - f) Save the modified variable list. While in the edit session, use the REPLACE command to save your changes.
  - g) Repeat the steps above, this time entering GOCSVAR2 for member name.
3. Add a DD statement, ALTSHV, that refers to the two input members in the alternate input data set. You must specify the member name explicitly.

Here is an example of the amended JCL:

```
//GOCSVARS DD DISP=SHR,DSN=HLQ.PRIMARY.SHV
//ALTSHV DD DISP=SHR,DSN=HLQ.ALTERNATE.ALTPDS(GOCSVARS)
// DD DISP=SHR,DSN=HLQ.ALTERNATE.ALTPDS(GOCSVAR2)
//CHANGES DD DISP=SHR,
// DSN=HLQ.THISCHG.CHG
```

4. Delete or rename members GOCSVARS and GOCSVAR2 from the primary input data set that is referenced by the GOCSVARS DD statement.

## Alternate values for the generate apply program

The Alternate shared variable input data table provides a list of alternate shared data variable names and their meanings. Panel names that are the source of primary input values are identified in parentheses, where applicable.

**Requirement:** The variable names for the UNLOAD and LOAD utilities marked by an asterisk (\*) in the table are required and cannot be changed. These variables must display in the alternate input data set as shown in the following example:

```
USU01=;
USU02=;
USU03=;
```

*Table 16. Alternate shared variable input data*

Variable	Definition	Valid Input
AAPFLIBR	DB2 Admin APF authorized library.	A dataset name. For example: HLQ.SADBLINK.
ADB081CM	DB2 8 CM	Y or N. Specify Y if DB2 is at this release level or higher.
ADB081NF	DB2 8 NFM	Y or N. Specify Y if DB2 is at this release level or higher.
ADB091CM	DB2 9 CM	Y or N. Specify Y if DB2 is at this release level or higher.
ADB091NF	DB2 9 NFM	Y or N. Specify Y if DB2 is at this release level or higher.
ADB101CM	Db2 10 CM	Y or N. Specify Y if DB2 is at this release level or higher.
ADB101NF	Db2 10 NFM	Y or N. Specify Y if DB2 is at this release level or higher.
ADB111CM	Db2 11 CM	Y or N. Specify Y if DB2 is at this release level or higher.
ADB111NF	Db2 11 NFM	Y or N. Specify Y if DB2 is at this release level or higher.
ADB121NF	Db2 12	Y or N. Specify Y if DB2 is at this release level or higher.
ADB25TUA	Template usage (ADB25TU)	Y or N.
ADB27ACF	Percent increase for converted data sets	An integer.
ADB2CPS	Catalog copy plan suffix.	A two-character alphanumeric value.
ADB2USM1	Modify indicator (ADB utilities)	Y or N.
ADBADATA	Flag to indicate building work statement list for recovery by using the original data.	O or E. Use O to specify Original or E to specify Existing.
ADBANID	Analyzed change identifier	An Integer. Change ID from ADBC Prerequisite table.
ADBASUSB	Use trusted context in batch	YES or NO.
ADBASUSR	Use trusted context	AS USER value.
ADBBINDE	Bind error (ADBTEP2)	MAXE, SAVE, or IGNORE.
ADBBLKS	Blocksize (ADB2UPA)	An integer.
ADBELIB	Admin exec library concatenation.	A list of data set names. For example: 'HLQ.SGOCEXEC' 'HLQ.SADBEXEC'.
ADBJ1	Job card line 1 (ADB2UPA).	A job card of up to 72 characters. Any valid job card syntax line.
ADBJ2	Job card line 2 (ADB2UPA)	A job card of up to 72 characters. Any valid job card syntax line pt2.

Table 16. Alternate shared variable input data (continued)		
ADBJ3	Job card line 3 (ADB2UPA)	A job card of up to 72 characters. Any valid job card syntax line pt3.
ADBJ4	Job card line 4 (ADB2UPA)	A job card of up to 72 characters. Any valid job card syntax line pt4.
ADBJ5	Job card line 5 (ADB2UPA)	A job card of up to 72 characters. Any valid job card syntax line pt5.
ADBJCGN	Generate Job class (ADB2UPA)	Y. Use Y to specify ADBJCLS (or DB2AJCLS if not set) as the job class.
ADBJCLS	Job class	A-Z, 0-9.
ADBJPM1	Job parm line 1 (ADB2UPA)	Any valid /*JOBPARM card syntax. For example: SYSAFF=SY4A.
ADBJPM2	Job parm line 2 (ADB2UPA)	Any valid /*JOBPARM card syntax. For example: SYSAFF=SY4A.
ADBJPM3	Job parm line 3 (ADB2UPA)	Any valid /*JOBPARM card syntax. For example: SYSAFF=SY4A.
ADBJPM4	Job parm line 4 (ADB2UPA)	Any valid /*JOBPARM card syntax. For example: SYSAFF=SY4A.
ADBTEP2	ADBTEP2 restart parm (ADB2UPA).	Y, N, or F. Any value other than N is interpreted as yes. (FORCE), or U (USER).
ADBLLIB	The Admin steplib library concatenation.	The Admin Tool load library allocation. For example: 'HLQ.SGOCLLIB' 'HLQ.SADBLLIB';
ADBMXDSD	Maximum allocation to DASD (ADB2UPA)	A numeric value in kilobytes.
ADBMXPRI	Maximum primary allocation (ADB2UPA)	A numeric value up to 3145680.
ADBMXPRM	Maximum primary quantity, in kilobytes, for DASD allocation (ADB2UPA)	A numeric value up to 3145680.
ADBNL	New line character variable	A hex value of '0D15'x. Use the hex edit capability of the ISPF editor and vertically specify 0D15 as shown here:  <pre>000386 ADBNL= ;           CCCDD70154444444           14253ED5E0000000</pre>
ADBNLC	New line character variable	A hex value of '0D15'x. Use the hex edit capability of the ISPF editor and vertically specify 0D15 as shown here:  <pre>000386 ADBNLC= ;           CCCDDC70154444444           142533ED5E0000000</pre>
ADBPRIM	Primary space allocation (ADB2UPA)	A numeric value specified in &ADBSPAC units.
ADBRPM1	(ADB2UPA)	Any valid /*JOBPARM card syntax. For example: SYSAFF=SY4A.
ADBRPM2	(ADB2UPA)	Any valid /*JOBPARM card syntax. For example: SYSAFF=SY4A.
ADBRPM3	(ADB2UPA)	Any valid /*JOBPARM card syntax. For example: SYSAFF=SY4A.
ADBRPM4	(ADB2UPA)	Any valid /*JOBPARM card syntax. For example: SYSAFF=SY4A.
ADBSECU	Secondary space allocation (ADB2UPA)	A numeric value specified in &ADBSPAC units.
ADBSPAC	Space allocation unit (ADB2UPA)	BLK, TRK, CYL or 4096-32760.
ADBTAPU	Tape unit (ADB2UPA)	Unit to use if allocation memory exceeds ADBMXDSD value. Esoteric name, such as 'TAPE'.
ADBTEPAC	Auto check (ADBTEP2)	YES, Y, NO, or N.
ADBTEPAI	Auto rebuild (ADBTEP2)	YES, Y, NO, or N.
ADBTEPAR	Auto reorg (ADBTEP2)	YES, Y, NO, or N.

Table 16. Alternate shared variable input data (continued)		
ADBTEPCD	Check at Drop (ADBTEP2)	YES, Y, NO, or N.
ADBTEPIB	Advisory auto rebuild (ADBTEP2)	YES, Y, NO, or N.
ADBTEPIR	Advisory auto reorg (ADBTEP2)	YES, Y, NO, or N.
ADBTEPSP	SPANNED	YES or NO. Use YES to specify SPANNED YES for utility statements or NO to specify SPANNED NO.
ADBTEST	Use test plan	YES or any other value.
ADBTLTB	Template library name (ADB25TU)	The ISPF table name defined by ADBGJOB if online processing or "Y" if batch processing.
ADBTSTPN	Test plan name	A name.
ADBUNIT	Unit (ADB2UPA)	An esoteric name, such as 'SYSALLDA'.
ADBWLDSN	Work list data set name (GOC5WL)	A data set name.
AHPULLIB	HPU load library	A data set name.
ALNALTR	DDL for the altered objects (ADB25TU3)	A template name. Associated with ALALTR keyword on ADB25TU3 panel.
ALNCMD	DB2 commands (ADB25TU3)	A template name. Associated with ALCMD keyword on ADB25TU3 panel.
ALNCNC	Load control cards for the altered objects (ADB25TU3)	A template name. Associated with ALCNC keyword on ADB25TU3 panel.
ALNCNT	Load control cards for the original objects (ADB25TU3)	A template name. Associated with ALCNT keyword on ADB25TU3 panel.
ALNCREA	DDL for the created objects (ADB25TU3)	A template name. Associated with ALCREA keyword on ADB25TU3 panel.
ALNDROP	DDL for the dropped objects (ADB25TU3)	A template name. Associated with ALDROP keyword on ADB25TU3 panel.
ALNMTC	Name of non-utility data set for multi-target change information	A template name. Associated with ALMTC keyword on ADB25TU3 panel.
ALNRBND	DB2 commands for the rebind of plans and packages (ADB25TU3)	A template name. Associated with ALRBND keyword on ADB25TU3 panel.
ALNREFR	DDL for the refresh of materialized query tables (MQT) (ADB25TU3)	A template name. Associated with ALREFR keyword on ADB25TU3 panel.
ALNULD	Unloaded data from the original objects (ADB25TU3)	A template name. Associated with ALULD keyword on ADB25TU3 panel.
ALNULDC	Converted unload data (ADB25TU3)	A template name. Associated with ALULDC keyword on ADB25TU3 panel.
ALTDSN	Alter control card data set name (ADB25TU)	A data set name.
ALUALTR	Use indicator for DDL for the altered objects (ADB25TU3)	/ or blank. Specify / to use, or blank to not use.
ALUCMD	Use indicator for DB2 commands (ADB25TU3)	/ or blank. Specify / to use, or blank to not use.
ALUCNC	Use indicator for load control cards for the altered objects (ADB25TU3)	/ or blank. Specify / to use, or blank to not use.
ALUCNT	Use indicator for Load control cards for the original objects (ADB25TU3)	/ or blank. Specify / to use, or blank to not use.
ALUCREA	Use indicator for DDL for the created objects (ADB25TU3)	/ or blank. Specify / to use, or blank to not use.
ALUDROP	Use indicator for DDL for the dropped objects (ADB25TU3)	/ or blank. Specify / to use, or blank to not use.
ALUMTC	Use indicator for non-utility multi-target template (ADB25TU) for multi-target change	/ or blank. Specify / to use, or blank to not use.
ALURBND	Use indicator for DB2 commands for the rebind of plans and packages (ADB25TU3)	/ or blank. Specify / to use, or blank to not use.

Table 16. Alternate shared variable input data (continued)		
ALUREFR	Use indicator for DDL for the refresh of materialized query tables (MQT) (ADB25TU3)	/ or blank. Specify / to use, or blank to not use.
ALUULD	Use indicator for Unloaded data from the original objects (ADB25TU3)	/ or blank. Specify / to use, or blank to not use.
ALUULDC	Use indicator for converted unload data (ADB25TU3)	/ or blank. Specify / to use, or blank to not use.
ASYRECD	Use activate HPU Parallel Unload/ Load in the batch apply job (ADB2UCUS)	A template name. Associated with ALULD keyword on ADB2UCUS panel.
ASYREDCD	Use activate HPU Parallel Unload/ Load in the batch apply job (ADB2UCUS)	A template name. Associated with ALULD keyword on ADB2UCUS panel.
ASYLLIA	ISPF linklist library 2	A data set name.
ASYLLIB	ISPF linklist library 1	A data set name.
ASYMLIB	ISPF message library	A data set name.
ASYSTLIB	ISPF table library	A data set name.
CLOBCOLN	LOBCOLDDN (ADB25TU4)	A template name.
CLOBCOLU	Use indicator for LOBCOLDDN (ADB25TU4)	/ or blank. Specify / to use, or blank to not use.
CREATDSN	Create control card data set name (ADB25TU)	A data set name.
CTNCOPY1	COPYDDN 1 (ADB25TU4)	A template name. Used as the first parameter to the COPYDDN keyword. For example: COPYDDN(mytemp1).
CTNCOPY2	COPYDDN 2 (ADB25TU4)	A template name. Used as the second parameter to the COPYDDN keyword. For example: COPYDDN(mytemp1, mytemp2).
CTNDISC1	DISCARDN (ADB25TU4)	A template name. Used as the parameter to the DISCARDN keyword. For example: DISCARDN( mytemp3 ).
CTNERR	ERRDDN (ADB25TU4)	A template name. Used as the parameter to the ERRDDN keyword. For example: ERRDDN(mytemp4).
CTNFCOPY	FCCOPYDDN (ADB25TU4)	A template name. Used as the parameter to the FCCOPYDDN keyword. For example: FCCOPYDDN(mytemp5).
CTNFILTR	FILTERDDN (ADB25TU4)	A template name. Used as the parameter to the FILTERDDN keyword. For example: FILTERDDN(mytemp6).
CTNMAPDD	MAPDDN (ADB25TU4)	A template name. Used as the parameter to the MAPDDN keyword. For example: MAPDDN (mytemp7).
CTNPUNCH	PUNCHDDN (ADB25TU4)	A template name. Used as the parameter to the PUNCHDDN keyword. For example: PUNCHDDN(mytemp8).
CTNREC1	RECOVERYDDN 1 (ADB25TU4)	A template name. Used as the first parameter to the RECOVERYDDN keyword. For example: RECOVERYDDN(mytemp9).
CTNREC2	RECOVERYDDN 2 (ADB25TU4)	A template name. Used as the second parameter to the RECOVERYDDN keyword. For example: RECOVERYDDN(mytemp9, mytempA).
CTNUNLDD	UNLDDN (ADB25TU4)	A template name. Used as the parameter to the UNLDDN keyword. For example: UNLDDN(mytempB).
CTNWORK1	WORKDDN 1 (ADB25TU4)	A template name. Used as the first parameter to the WORKDDN keyword. For example: WORKDDN(mytempC).
CTNWORK2	WORKDDN 2 (ADB25TU4)	A template name. Used as the second parameter to the WORKDDN keyword. For example: WORKDDN(mytempC, mytempD).
CTUCOPY1	Use indicator for COPYDDN 1 (ADB25TU4)	/ or blank. Specify / to use, or blank to not use.

Table 16. Alternate shared variable input data (continued)		
CTUCOPY2	Use indicator for COPYDDN 2 (ADB25TU4)	/ or blank. Specify / to use, or blank to not use.
CTUDISC1	Use indicator for DISCARDN (ADB25TU4)	/ or blank. Specify / to use, or blank to not use.
CTUERR	Use indicator for ERRDDN (ADB25TU4)	/ or blank. Specify / to use, or blank to not use.
CTUFCOPY	Use indicator for FCCOPYDDN (ADB25TU4)	/ or blank. Specify / to use, or blank to not use.
CTUFILTR	Use indicator for FILTERDDN (ADB25TU4)	/ or blank. Specify / to use, or blank to not use.
CTUMAPDD	Use indicator for MAPDDN (ADB25TU4)	/ or blank. Specify / to use, or blank to not use.
CTUPUNCH	Use indicator for PUNCHDDN (ADB25TU4)	/ or blank. Specify / to use, or blank to not use.
CTURECV1	Use indicator for RECOVERYDDN 1 (ADB25TU4)	/ or blank. Specify / to use, or blank to not use.
CTURECV2	Use indicator for RECOVERYDDN 2 (ADB25TU4)	/ or blank. Specify / to use, or blank to not use.
CTUUNLDD	Use indicator for UNLDDN (ADB25TU4)	/ or blank. Specify / to use, or blank to not use.
CTUWORK1	Use indicator for WORKDDN 1 (ADB25TU4)	/ or blank. Specify / to use, or blank to not use.
CTUWORK2	Use indicator for WORKDDN 2 (ADB25TU4)	/ or blank. Specify / to use, or blank to not use.
CXMLCOLN	XMLCOLDDN (ADB25TU4)	A template name.
CXMLCOLU	Use indicator for XMLCOLDDN (ADB25TU4)	/ or blank. Specify / to use, or blank to not use.
DB2AASW	Authorization switch	Y or N.
DB2AJCLS	Job class for DB2 utility jobs	Alphanumeric.
DB2ALOAD	DB2 system library concatenation	Specify a list of data sets. For example: DB2ALOAD='DB2A.SDSNEXIT' 'DB2.SDSNLOAD' ;
DB2APREL	DB2 release	Four characters, such as 0915 or 1015.
DB2ARLIB	DB2 run library	A data set name.
DB2ASERV	DB2 current server	SSID.
DB2AULIB	DB2 SDSNLOAD	A data set name.
DB2AUTH	DB2 authid	A User ID.
DB2SYS	DB2 system name	SSID.
DROPDSN	Drop control card data set name (ADB25TU)	A data set name.
GOCA1JOB	Generate one job (GOC5)	Y, N, or P (one per process).
GOCAJDSN	Data set for apply jobs (GOC5AJ)	A data set name.
GOCAJOBN	Member prefix (GOC5)	A name.
GOCAPCON	Content of apply job (GOC5)	A or D. Use A to specify All or D to specify DDL only.
GOCDELWL	Delete WSL member before writing	Y or any character. Use Y to specify Delete or anything else to specify do not delete.
GOCGACHK	Run CHECK DATA (GOC5)	Y or N.
GOCGAIMC	Run IMAGE COPY (GOC5)	R, A, B, or N. Use R to specify Reload, A to specify Alter, B to specify Both, or N ro specify None.
GOCGARUN	Run RUNSTATS (GOC5)	R – Reload A – Alter B – Both M – Minimum N – None.
GOCGAWL	As work statement list (GOC5)	Y or N.
GOCGREB	Run REBIND (GOC5)	Y or N.

Table 16. Alternate shared variable input data (continued)		
GOCGREOR	Run REORG (GOC5)	M – Mandatory A – All relevant N – None.
GOCJCL	PDS for batch jobs (GOC5)	A data set name.
GOCMIDQL	Middle level qualifier for data sets that are created	A name.
GOCONL	Generate online (GOC5)	Y or N.
GOCPRE	Prefix for data sets (GOC5)	A data set prefix
GOCUNLT	Unload method (GOC5)	U, P, or H. Use U to specify Unload, P to specify parallel unload, or H to specify HPU.
GOCUTOP	Use utility options (GOC5)	Y or N.
GOCWLN	Work list name (GOC5)	A name.
IFFDSN	Internal version file data set name (ADB25TU)	A data set name.
LOBCOLN	Name of the LOB data set	A template name. This value is used as the parameter to the LOBDDN keyword. For example: LOBDDN( <i>mytempF</i> ).
LOBCOLU	Use indicator for LOB column template.	/ or blank. Specify / to use, or blank to not use &LOBCOLN.
MAPDBNAM	MAPPINGDATABASE, a utility option for REORG tablespace	A database name.
MAPOWNER	Mapping table owner (ADB2USOO)	An owner or schema.
MAPTBNAM	Mapping table name (ADB2USOO)	A name.
NSTUPROC	Number of steps in DSNUPROC	An integer (1 – 20).
REBDSN	Rebind control card data set name (ADB25TU)	A data set name.
RECOVER	Recover control card data set name (ADB25TU)	A data set name.
REFDSN	Refresh control card data set name (ADB25TU)	A data set name.
RUNLIB	AHPULLIB	A data set name.
XMLCOLN	Name of XML column (ADB25TU)	A template name. This value is used as the parameter to the XMLDDN keyword. For example: XMLDDN( <i>mytempE</i> ).
XMLCOLU	Use indicator for XML column template (ADB25TU)	/ or blank. Specify / to use, or blank to not use &XMLCOLN
IMAGE COPY Utility Options		
USC01	FULL	Y or N. Use Y to specify FULL YES or N to specify FULL NO.
USC02	CHANGE LIMIT	Y or A. Use A to specify CHANGELIMIT (ANY) or Y to specify CHANGELIMIT (&USC03).
USC03	PERCENT VALUE1	0.0 to 100.0. This value is used as the first parameter to the CHANGELIMIT keyword.
USC04	PERCENT VALUE2	0.0 to 100.0. This value is used as the second parameter to the CHANGELIMIT keyword.
USC05	REPORT ONLY	Y or N. Use Y to specify REPORTONLY or N to specify no keyword.
USC06	PARALLEL	YES or an integer value between 0 and 32767.
USC07	CHECKPAGE	Y or N. Use Y to specify CHECKPAGE or N to specify no keyword.
USC08	CONCURRENT	Y or N. Use Y to specify CONCURRENT or N to specify no keyword.
USC09	SHRLEVEL	R or C. Use R to specify SHRLEVEL REFERENCE or C to specify SHRLEVEL CHANGE.
USC10	CLONE	Y or N. Use Y to specify CLONE or N to specify no keyword.

Table 16. Alternate shared variable input data (continued)		
USC11	SCOPE	A or P. Use A to specify SCOPE ALL or P to specify SCOPE PENDING.
USC113	TAPEUNITS	A numeric value. This value is used as a parameter to TAPEUNITS. For example: TAPEUNITS 3.
USC12	FLASHCOPY	Y, N, or C. Use Y to specify FLASHCOPY YES, N to specify FLASHCOPY NO, or C to specify FLASHCOPY CONSISTENT.
USC123	SYSTEMPAGES	YES or NO.
CHECK DATA Utility Options		
USK01	SCOPE	P, X, A, R, or M. Use P to specify SCOPE PENDING, X to specify SCOPE AUXONLY, A to specify SCOPE ALL, R to specify SCOPE REFONLY, or M to specify SCOPYE XMLSCHEMAONLY.
USK02	AUXERROR	R or I. Use R to specify AUXERROR REPORT or I to specify AUXERROR INVALIDATE.
USK03	EXCEPTIONS	0-32767. This number is used as a parameter to EXCEPTIONS. For example: EXCEPTIONS 257.
USK04	SORTDEVT	A device type. This value is used as a parameter to SORTDEVT. For example: SORTDEVT <i>devtype</i> .
USK05	SORTNUM	1-255. This value is used as a parameter to SORTNUM. For example: SORTNUM 93.
USK06	SHRLEVEL	R or C. Use R to specify SHRLEVEL REFERENCE or C to specify SHRLEVEL CHANGE.
USK07	CLONE	Y or N. Use Y to specify the CLONE keyword or N to specify no keyword.
USK08	LOBERROR	R or I. Use R to specify LOBERROR REPORT or I to specify LOBERROR INVALIDATE.
USK09	XMLERROR	R or I. Use R to specify XMLERROR REPORT or I to specify XMLERROR INVALIDATE.
USK10	DELETE	YES or NO. Use YES to specify DELETE YES or NO to specify no keywords.
USK11	LOG	YES or NO. Use YES to specify LOG YES or NO to specify LOG NO.
USK12	DRAIN WAITV	1-1800. This number is used as a parameter to DRAIN_WAIT. For example: DRAIN_WAIT 97.
USK13	RETRYV	0-255. This number is used as a parameter to RETRY. For example: RETRY 98.
USK14	RETRY DELAYV	1-1800. This number is used as a parameter to RETRY_DELAY. For example: RETRY_DELAY 103.
USK15	INCLUDE XML TABLESPACES	Name or ALL. This value is used as a parameter to TABLESPACES. For example: INCLUDE XML TABLESPACES mydb.myts. Substitute your database and tablespace for mydb.myts. For long names, also provide the table &FRTAB. Long object names are not supported.
USK16	INCLUDE XML COLUMNS	Use the following syntax: TABLE myschema.mytable XMLCOLUMN mycolumn. This value is used as a parameter to TABLESPACES. For example: INCLUDE XML TABLESPACES mydb.myts TABLE myschema.mytable XMLCOLUMN mycolumn. For long names, also provide table &TTNAME. Long object names are not supported.
USK17	INCLUDE XMLSCHEMA	YES or NO. Use YES to specify XMLSCHEMA keyword or NO to specify no keyword.
USKN1	FOR EXCEPTION IN table name	An object name. Use this value to specify FOR EXCEPTION IN name. Should also provide table &INTABL.
USKN2	USE table name	An object name. Use this value to specify USE name. Also provide the table &USTABL.
USKS1	FOR EXCEPTION IN table schema	A schema name. This value is used in conjunction with &uskn1.

Table 16. Alternate shared variable input data (continued)		
USKS2	USE table schema	A schema name. This value is used in conjunction with &uskn2.
MODIFY Utility Options		
USM01	AGE	0-32767. This value is used as a parameter to AGE. For example: DELETE AGE( 27).
USM02	DATE	yyyymmdd. This date value is used as a parameter to DATE. For example: DELETE DATE(20130704).
USM033	CLONE	YES or NO. Use YES to specify CLONED YES and CLONE keywords or NO to specify no keyword.
USM04	LASTV	0-32767. Use this value as a parameter to LAST. For example: RETAIN LAST(41).
USM05	LOGLIMITV	YES or NO. Use YES to specify RETAIN LOGLIMIT or NO to specify no keyword.
USM06	GDGLIMITV LASTV	0-32767. This value is used as a parameter to LAST. For example: RETAIN GDGLIMIT LAST( 12).
USM061	GDGLIMITV	YES or NO. Use YES to specify RETAIN GDGLIMIT or NO to specify no keyword.
USM07	GDGLIMITV LOGLIMITV	YES or NO. Use YES to specify RETAIN GDGLIMIT LOGLIMIT or NO to specify no keyword.
REORG Utility Options:		
USO01	REUSE	Y or N. Use Y to specify REUSE or N to specify no keyword.
USO02	LOG	Y or N. Use Y to specify LOG YES or N to specify LOG NO.
USO03	SORTDATA	Y or N. Use Y to specify SORTDATA or N to specify no keyword.
USO04	NOSYSREC	Y or N. Use Y to specify NOSYSREC or N to specify no keyword.
USO05	SORTKEYS	Y or N. Use Y to specify SORTKEYS or N to specify no keyword.
USO06	SHRLEVEL	C, R, or N. Use C to specify SHRLEVEL CHANGE, R to specify SHRLEVEL REFERENCE, or N to specify SHRLEVEL NONE.
USO07	FASTSWITCH	Y or N. Use Y to specify FASTSWITCH YES or N to specify FASTSWITCH NO.
USO08	OFFPOSLIMIT	0-65535. This value is used as a parameter to OFFPOSLIMIT. For example: OFFPOSLIMIT 1021.
USO09	INDREFLIMIT	0-65535. This value is used as a parameter to INDREFLIMIT. For example: INDREFLIMIT 201.
USO10	KEEPDICTIONARY	Y or N. Use Y to specify KEEPDICTIONARY or N to specify no keyword.
USO11	STATISTICS	Y or N. Use Y to specify STATISTICS TABLE (ALL) or N to specify no keyword.
USO12	REPORT	Y or N. Use Y to specify REPORT YES or N to specify REPORT NO.
USO13	UPDATE	A, P, S, or N. Use A to specify UPDATE ALL, P to specify UPDATE ACCESSPATH, S to specify UPDATE SPACE, or N to specify UPDATE NONE.
USO14	HISTORY	A,P,S, or N. Use A to specify HISTORY ALL, P to specify HISTORY ACCESSPATH, S to specify HISTORY SPACE, or N to specify HISTORY NONE.
USO15	FORCEROLLUP	Y or N. Use Y to specify FORCEROLLUP YES or N to specify FORCEFOLLUP NO.
USO16	PREFORMAT	Y or N. Use Y to specify PREFORMAT or N to specify no keyword.
USO17	SORTDEVT	A device type. This value is used as a parameter to SORTDEVT. For example: SORTDEVT devt.

Table 16. Alternate shared variable input data (continued)		
US018	SORTNUM	1 - 255. This number is used as a parameter to SORTNUM. For example: SORTNUM 3.
US019	DEADLINE	N, timestamp, or labeled duration expression. Use N to specify DEADLINE NONE together with a timestamp that is used as a parameter to DEADLINE. For example: DEADLINE 13:15:01. An example of a labeled duration expression is CURRENT_DATE +3 DAYS.
US020	DRAIN_WAIT	1-1800. This value is used as a parameter to DRAIN_WAIT.
US021	RETRY	0-255. This value is used as a parameter to RETRY. For example: RETRY 8.
US022	RETRY DELAY	1-1800. This value is used as a parameter to RETRY_DELAY. For example RETRY_DELAY 17.
US024	MAXRO	D or numeric value. Use D to specify MAXRO DEFER or numeric value to specify MAXRO &uso24.
US025	DRAIN	W or A. Use W to specify DRAIN WRITERS or A to specify DRAIN ALL.
US026	LONGLOG	C, T, or D. Use C to specify LONGLOG CONTINUE, T to specify LONGLOG TERM, or D to specify LONGLOG DRAIN.
US027	DELAY	A numeric value. This value is used as a parameter to DELAY. For example DELAY 17.
US028	TIMEOUT	A or T. Use A to specify TIMEOUT ABEND or T to specify TIMEOUT TERM.
US029	CLONE	YES or NO. Use YES to specify CLONE or NO to specify no keyword.
US030	SCOPE	A or P. Use P to specify SCOPE PENDING or A to specify no keyword.
US031	REBALANCE	Y or N. Use Y to specify REBALANCE or N to specify no keyword.
US032	REPORTONLY	Y or N. Use Y to specify REPORTONLY or N to specify no keyword.
US033	UNLOAD	C, P, O, or E. Use C to specify UNLOAD CONTINUE, P to specify UNLOAD PAUSE, O to specify UNLOAD ONLY, or E to specify UNLOAD EXTERNAL.
US034	NOPAD	Y or N. Use Y to specify NOPAD or N to specify no keyword.
US035	FROM TABLE	An object name. Also provide table &FRNAME.
US036	AUX	YES or NO. Use YES to specify AUX YES or NO to specify AUX NO.
US037	A list of partitions.	Identifies the set of partitions that are to be reorganized. For example: 1, 3, 5:8
US038	FLASHCOPY	Y, C, or N. Use Y to specify FLASHCOPY YES, C to specify FLASHCOPY CONSISTENT, or N to specify FLASHCOPY NO.
US0363	This variable is not used.	
US040	LOGRANGES	<ul style="list-style-type: none"> <li>Y - Yes, REORG uses SYSLGRNX information for the LOG phase whenever possible. This option is the default behavior.</li> <li>N - NO, REORG does not use SYSLGRNX information for the LOG phase.</li> </ul>
US041	DRAIN_ALLPARTS	<ul style="list-style-type: none"> <li>Y - YES, REORG obtains the table space level drain on the entire partitioned table space first, before draining the target data partitions and the indexes.</li> <li>N - NO, REORG drains the target data partitions serially followed by the non-partitioned secondary indexes. This option is the default behavior.</li> </ul>

Table 16. Alternate shared variable input data (continued)		
USO42	SWITCHTIME	<ul style="list-style-type: none"> <li>N - NONE, does not specify a time for the final log iteration of the LOG phase. This option is the default behavior. Specifies the time that the final log iteration of the LOG phase is to begin. This time must not have already occurred when REORG is run.</li> <li>labeled-duration-expression, SWITCHTIME labeled-duration-expression is added.</li> </ul>
USO43	NEWMAXRO	<ul style="list-style-type: none"> <li>N - NONE, specifies that when the specified SWITCHTIME is met, REORG proceeds to the last log iteration without taking log processing time into consideration. This option is the default.</li> <li>Integer, specifies the number of seconds. Valid values are 0 through 2147483647.</li> </ul>
USO44	RECLUSTER	<ul style="list-style-type: none"> <li>Y - YES</li> <li>N - NO</li> </ul>
USO45	LISTPARTS	<ul style="list-style-type: none"> <li>n - An integer representing the maximum number of data partitions to be reorganized at once. Valid values are integers 1 through 2147483647.</li> </ul>
USO47	PARALLEL	YES or an integer value between 0 and 32767.
USO50	TABLE schema	Specifies the table owner for which STATISTICS information is to be gathered.
USO51	TABLE name	Specifies the table name for which information is to be gathered. The table must belong to the specified table space. Multiple table names are not currently supported. Information may be gathered for all tables in the table space by specifying ALL for the table name and leaving the table owner blank.
USO52	SAMPLE	Indicates the percentage of rows to sample when collecting non-indexed column statistics. Valid values are 1 through 100. The default is 25.
USO53	COLUMN name	Specifies the columns for which column information is to be gathered. This option is valid only if a table name is specified. The utility accepts a maximum of 10 column names, but DB2 Admin does not validate this number. ALL means that statistics are to be gathered for all columns in the specified table name.
USO54	COLGROUP name	Specifies that inline statistics will collect a cardinality value on the group of named columns. Multiple column groups are not currently supported.
USO55	FREQVAL	<ul style="list-style-type: none"> <li>Y - YES, collect frequency statistics</li> <li>N - NO, do not collect frequency statistics</li> </ul>
USO56	COUNT	Indicates the number of frequently occurring values to be collected from the specified column group.
USO57	OCCUR	<ul style="list-style-type: none"> <li>M - MOST, collect the most frequently occurring values</li> <li>B - BOTH, collect both the most and least frequently occurring values</li> <li>L - LEAST, collect the least frequently occurring values</li> </ul>
USO58	HISTOGRAM	<ul style="list-style-type: none"> <li>Y - YES, gather histogram statistics from the specified column group</li> <li>N - NO, do not gather such statistics</li> </ul>
USO59	NUMQUANTILES for HISTOGRAM	Indicates the number of quantiles that the utility collects.
USO60	INDEX(ALL)	<ul style="list-style-type: none"> <li>Y - YES, gather information for all indexes on all tables in the table space</li> <li>N - NO, do not gather such information</li> </ul>
USO61	INDEX HISTOGRAM	<ul style="list-style-type: none"> <li>Y - YES, gather histogram statistics for all indexes on all tables in the table space</li> <li>N - NO, do not gather such statistics</li> </ul>

Table 16. Alternate shared variable input data (continued)		
USO62	NUMCOLS	The number of key columns that are to be concatenated when collecting histogram statistics from the specified index.
USO63	NUMQUANTILES for INDEX HISTOGRAM	Indicates the number of quantiles that the utility collects.
USORBALR	RBALRSN	Specifies the RBA and LRSN format in which the target object is to be left after a REORG. <ul style="list-style-type: none"> <li>• N - None No conversion</li> <li>• B - Basic Convert to a basic format</li> <li>• E - Extended Convert to extended format</li> </ul>
RUNSTATS Utility Options		
USR03	SAMPLE	1-100. This value is used as a parameter to SAMPLE. For example SAMPLE 37.
USR06	FREQVAL COUNT	1-65535. This value is used as a parameter to FREQVAL COUNT. For example FREQVAL COUNT 49.
USR07	FREQVAL COUNT type	MOST, BEST, or LEAST. This value is used as a parameter to FREQVAL. For example: FREQVAL COUNT 50 LEAST.
USR10	PART	1-4096. This value is used as a parameter to PART. For example: PART 31.
USR11	KEYCARD	Y or N. Use Y to specify KEYCARD or N to specify no keyword.
USR12	NUMCOLS	A numeric value. This value is used as a parameter to NUMCOLS. For example: FREQVAL NUMCOLS 9 COUNT.
USR13	NUMCOLS COUNT	1 - 99999. This value is used as a parameter to COUNT. For example FREQVAL NUMCOLS 3 COUNT 7.
USR14	NUMCOLS COUNT type	MOST, LEAST, or BOTH. This value is used as a parameter to COUNT. For example: FREQVAL NUMCOLS 3 COUNT 3 BOTH.
USR15	SORTDEVT	A device type. This value is used as a parameter to SORTDEVT. For example: SORTDEVT <i>devt</i> .
USR16	SORTNUM	2-255. This value is used as a parameter to SORTNUM. For example SORTNUM 251.
USR17	SHRLEVEL	R or C. Use R to specify SHRLEVEL REFERENCE or C to specify SHRLEVEL CHANGE.
USR18	REPORT	Y or N. Use Y to specify REPORT YES or N to specify REPORT NO.
USR19	UPDATE	A, P, S, or N. Use A to specify UPDATE ALL, P to specify UPDATE ACCESSPATH, S to specify UPDATE, or N to specify UPDATE NONE.
USR20	HISTORY	A, P, S, or N. Use A to specify HISTORY ALL, P to specify HISTORY ACCESSPATH, S to specify HISTORY SPACE, or N to specify HISTORY NONE.
USR21	FORCEROLLUP	Y or N. Use Y to specify FORCEROLLUP YES or N to specify FORCEROLLUP NO.
USR22	NUMQUANTILES 1	1-100. This value is used as a parameter to NUMQUANTILES. For example HISTOGRAM NUMQUANTILES 8.
USR23	NUMQUANTILES 2	1-100. This value is used as a parameter to NUMQUANTILES. For example HISTOGRAM NUMCOLS 3 NUMQUANTILES 61.
USR30	PROFILE	USE or DELETE. Specify USE to specify USE PROFILE or DELETE to specify DELETE PROFILE.
USR31	FROM EXISTING INCLUDE NPI	YES or NO. Use YES to specify INCLUDE NPI or NO to specify no keyword.

Table 16. Alternate shared variable input data (continued)		
USR32	TABLESAMPLE	AUTO or numeric literal between '0.01' and '100'. This value is used as a parameter to TABLESAMPLE SYSTEM. For example TABLESAMPLE SYSTEM 7.
USR33	REPEATABLE	A numeric value. This value is used as a parameter to REPEATABLE. For example REPEATABLE 65.
USR35	SET PROFILE	SET or UPDATE. Use SET to specify SET PROFILE or UPDATE to specify UPDATE PROFILE.
USR36	FROM EXISTING STATS	YES or NO. Use YES to specify FROM EXISTING STATS or NO to specify no keyword.
USR37	HISTOGRAM NUMCOLS	A numeric value. This value is used as a parameter to HISTOGRAM NUMCOLS. For example HISTOGRAM NUMCOLS 89.
UNLOAD Utility Options		
USU01	FROMCOPY*	A data set name without quotation marks. This value is used as a parameter to FROMCOPY. For example FROMCOPY <i>my.dsn</i> .
USU02	FROMVOLUME*	CATALOG or valid. This value is used as a parameter to FROMVOLUME. For example: FROMVOLUME <i>vol001</i> .
USU03	FROMCOPYDDN*	DD name. This value is used as a parameter to FROMCOPYDDN. For example: FROMCOPYDDN <i>dd001</i> .
USU04	ENCODINGScheme	E, A or U. Use E to specify EBCDIC, A to specify ASCII, or U to specify UNICODE.
USU05	SBCS CCSID	A numeric value. This value is used as a parameter to CCSID. For example: CCSID( <i>n</i> ).
USU06	MIXED CCSID	A numeric value. This value is used as the second parameter to CCSID. For example: CCSID(1, <i>n</i> ).
USU07	DBCS CCSID	A numeric value. This value is used as the third parameter to CCSID. For example: CCSID(1, 2, <i>n</i> ).
USU08	NOSUBS	Y or N. Use Y to specify NOSUBS, or N to specify no keyword.
USU09	NOPAD	Y or N. Use Y to specify NOPAD or N to specify no keyword.
USU10	FLOAT	S or I. Use S to specify FLOAT S390 or I to specify FLOAT IEEE.
USU11	MAXERR	A numeric value. This value is used as a parameter to MAXERR. For example MAXERR 47.
USU12	SHRLEVEL	1, 2 or 3. Use 1 to specify SHRLEVEL CHANGE ISOLATION CS, 2 to specify SHRLEVEL CHANGE ISOLATION UR, or 3 to specify SHRLEVEL REFERENCE.
USU13	DELIMITED	Y or N. Use Y to specify DELIMITED or N to specify no keyword.
USU17	HEADER	O, N or C. Use O to specify HEADER OBID, N to specify HEADER NONE, or C to specify HEADER CONST #.
USU18	CONST	A character or X'hex string'. This value is used as a parameter to CONST. For example: HEADER CONST #.
USU19	SAMPLE	A percent, where 0 < x <= 100. This value is used as a parameter to SAMPLE. For example SAMPLE 22.
USU20	LIMIT	An integer, 0 - 2147483647. This value is used as a parameter to LIMIT. For example: LIMIT 20.
USU21	SKIP LOCKED DATA	YES or NO. Use YES to specify SKIP LOCKED DATA or NO to specify no keyword.
USU22	This variable is not used.	
USU23	CLONE	YES or NO. Use YES to specify CLONE or NO to specify no keyword.
USU24	IMPLICIT TIMEZONE	+NN:NN, -NN:NN. This value is used as a parameter to IMPLICIT_TZ. For example: IMPLICIT_TZ +7.

Table 16. Alternate shared variable input data (continued)		
USU25	SPANNED	YES or NO. This value is used as a parameter for SPANNED. For example: SPANNED YES.
USU27	PARALLEL	YES or an integer value between 0 and 32767.
USURND	DECFLOAT_ROUNDMODE	ROUND_CEILING, ROUND_DOWN, ROUND_FLOOR, ROUND_HALF_DOWN, ROUND_HALF_EVEN, ROUND_HALF_UP, or ROUND_UP. This value is used as a parameter to DECFLOAT_ROUNDMODE. For example: DECFLOAT_ROUNDMODE ROUND_UP.
USUUF1	FORMAT INTERNAL	Y or N. Use Y to specify FORMAT INTERNAL or N to specify no keyword.
USULIC	LAST IC	LAST, BEFORE, or AFTER. This value is used as a parameter to FROM. Use LAST to specify FROM LAST_IC, BEFORE to specify FROM BEFORE_IC, or AFTER to specify FROM AFTER_IC.
USUICD	IC date	A date, YYYY/MM/DD. This value is used as a parameter to ICDATE. For example: FROM LAST_IC ICDATE 2013/08/04.
USUICT	IC time	Time, HH:MM:SS, used as a parameter to ICDATE. For example FROM LAST_IC ICTIME 12:04:00.
LOAD Utility Options		
UTC01	UTILITY ID	A name. This value is used for UID parameter. For example: //LOAD1 EXEC DSNUPROC,SYSTEM=DSNA,UID='PSV01'.
UTC02	DSNAME	A data set name. This value is used as the SYSREC data set name. For example: //DSNUPROC.SYSREC DD DISP=SHR,DSN= my.dsn.
UTC03	DSNAME into-table-spec	A data set name. The data set contains LOAD ... INTO TABLE ... statements.
UTC04	RESUME	YES or NO. This value is used as a parameter to RESUME. For example: RESUME YES.
UTC05	SHRLEVEL	NONE or CHANGE. This value is used as a parameter to SHRLEVEL. For example: SHRLEVEL CHANGE.
UTC06	REPLACE	YES or NO. Use YES to specify REPLACE or NO to specify no keyword.
UTC07	COPYDDN1	A name. This value is used as a parameter to COPYDDN. For example: COPYDDN( name).
UTC08	COPYDDN2	A name. This value is used as a parameter to COPYDDN. For example: COPYDDN( , name).
UTC09	RECOVERYDDN1	A name. This value is used as a parameter to RECOVERYDDN. For example: RECOVERYDDN( name).
UTC10	RECOVERYDDN2	A name. This value is used as a parameter to RECOVERYDDN. For example: RECOVERYDDN( ddn1, name).
UTC12	SAMPLE*	An integer, 1- 100. This value is used as a parameter to SAMPLE. For example: SAMPLE 48.
UTC13	INDEX ALL*	YES or NO. Use YES to specify INDEX(ALL) or NO to specify no keyword.
UTC14	REPORT*	YES or NO. Use YES to specify REPORT YES or NO to specify no keyword.
UTC15	UPDATE*	A, P, S, or N. Use A to specify UPDATE ALL, P to specify UPDATE ACCESSPATH, S to specify UPDATE SPACE, or N to specify UPDATE NONE.
UTC16	KEEPDICTIONARY	YES or NO. Use YES to specify KEEPDICTIONARY or NO to specify no keyword.
UTC17	REUSE	YES or NO. Use YES to specify REUSE or NO to specify no keyword.
UTC18	LOG	YES, NO, or NOC. Use YES to specify LOG YES, NO to specify LOG NO or NOC to specify LOG NO NOCOPYPEND.

Table 16. Alternate shared variable input data (continued)		
UTC19	WORKDDN1	A name. This value is used as a parameter to WORKDDN. For example: WORKDDN( <i>name</i> ).
UTC20	WORKDDN2	A name. This value is used as a parameter to WORKDDN. For example: WORKDDN( , <i>name</i> ).
UTC21	SORTKEYS	An integer, 0 - 2147483647. This value is used as a parameter to SORTKEYS. For example: SORTKEYS 39.
UTC22	ENFORCE	YES or NO. Use YES to specify ENFORCE CONSTRAINTS or NO to specify ENFORCE NO.
UTC23	SORTDEVT	A device type. This value is used as a parameter to SORTDEVT. For example: SORTDEVT SYSALLDA.
UTC24	SORTNUM	1- 255. This value is used as a parameter to SORTNUM. For example: SORTNUM 12.
UTC25	SORTWK	0, 1, 2, 3, or 4. This parameter determines how many sort work DD statements are allocated. DD statements for SORTWK01, SORTWK02, SORTWK03, and SORTWK04 may be added.
UTC26	how unloaded	U or R. Use U to specify WHEN (00001:00002 = X'&XOBID') or R to specify WHEN (00004:00005 = X'&XOBID').
UTC27	DECFLOAT ROUNDING	Use &UTCRRND instead.
UTC28	IMPLICIT_TZ	+NN:NN, -NN:NN. This value is used as a parameter to IMPLICIT_TZ. For example: IMPLICIT_TZ +08.
UTC29	FLASHCOPY	Y, N or C. Use Y to specify FLASHCOPY YES, N to specify FLASHCOPY NO, or C to specify FLASHCOPY CONSISTENT.
UTC30	PRESORTED	YES or NO. This value is used as a parameter to PRESORTED. For example: PRESORTED YES.
UTC31	PARALLEL (DB2 V11 and above)	YES or an integer value between 0 and 32767.
UTC40	Table schema*	Blank. Use Blank to not specify STATISTICS TABLE(table-name) because it is not supported in the compare process.
UTC41	Table name*	Y, ALL or Blank. Use ALL to specify STATISTICS TABLE(ALL) or Blank to specify no keyword.
UTC54	DISCARDS	0 - 2147483647. This value is used as a parameter to DISCARDS. For example, DISCARDS 12.
UTCRRND	DECFLOAT ROUNDING	ROUND_CEILING, ROUND_DOWN, ROUND_FLOOR, ROUND_HALF_DOWN, ROUND_HALF_EVEN, ROUND_HALF_UP, ROUND_UP. This value is used as a parameter to DECFLOAT_ROUNDMODE. For example: DECFLOAT_ROUNDMODE ROUND_UP.
UTNCOPY1	Name of data set for copy (ADB25TU)	A template name. This value is used as the first parameter to the COPYDDN keyword. For example: COPYDDN( <i>mytemp1</i> ).
UTNCOPY2	Name of data set for copy (ADB25TU)	A template name. This value is used as the second parameter to the COPYDDN keyword. For example: COPYDDN( <i>mytemp1</i> , <i>mytemp2</i> ).
UTNDISC1	Template discard data set name	A template name. This value is used as the parameter to the DISCARDDDN keyword. For example: DISCARDDDN( <i>mytemp3</i> ).
UTNERR	Template error data set name (ADB25TU)	A template name. This value is used as the parameter to the ERRDDN keyword. For example: ERRDDN( <i>mytemp4</i> ).
UTNFCOPY	Name of utility data set for system FCCOPY (ADB25TU)	A template name. This value is used as the parameter to the FCCOPYDDN keyword. For example: FCCOPYDDN( <i>mytemp5</i> ).
UTNFILTR	Name of utility data set for system filter (ADB25TU)	A template name. This value is used as the parameter to the FILTERDDN keyword. For example: FILTERDDN( <i>mytemp6</i> ).
UTNMAPDD	Name of utility data set for system map (ADB25TU)	A template name. This value is used as the parameter to the MAPDDN keyword. For example: MAPDDN( <i>mytemp7</i> ).

Table 16. Alternate shared variable input data (continued)		
UTNPUNCH	Name of utility data set for system punch (ADB25TU)	A template name. This value is used as the parameter to the PUNCHDDN keyword. For example: PUNCHDDN( <i>mytemp8</i> ).
UTNRECV1	Name of recovery data set (ADB25TU)	A template name. This value is used as the first parameter to the RECOVERYDDN keyword. For example: RECOVERYDDN( <i>mytemp9</i> ).
UTNRECV2	Name of recovery data set (ADB25TU)	A template name. This value is used as the second parameter to the RECOVERYDDN keyword. For example: RECOVERYDDN( <i>mytemp9</i> , <i>mytempA</i> ).
UTNUNLDD	Name of utility data set for unload (ADB25TU)	A template name. This value is used as the parameter to the UNLDDN keyword. For example: UNLDDN( <i>mytempB</i> ).
UTNWORK1	Name of utility data set for work (ADB25TU)	A template name. This value is used as the first parameter to the WORKDDN keyword. For example: WORKDDN( <i>mytempc</i> ).
UTNWORK2	Name of utility data set for work (ADB25TU)	A template name. This value is used as the second parameter to the WORKDDN keyword. For example: WORKDDN( <i>mytempC</i> , <i>mytempD</i> ).
UTUCOPY1	Use indicator for copy template (ADB25TU)	/ or blank. Specify / to use, or blank to not use &UTNCOPY1
UTUCOPY2	Use indicator for copy template (ADB25TU)	/ or blank. Specify / to use, or blank to not use &UTNCOPY2
UTUDISC1	Use indicator for template discard name	/ or blank. Specify / to use, or blank to not use &UTNDISC1
UTUERR	Use indicator for ERROR template (ADB25TU)	/ or blank. Specify / to use, or blank to not use &UTNERR
UTUFCOPY	Use indicator for FCCOPY template (ADB25TU)	/ or blank. Specify / to use, or blank to not use &UTNFCOPY
UTUFILTR	Use indicator for filter template (ADB25TU)	/ or blank. Specify / to use, or blank to not use &UTNFILTR
UTUMAPDD	Use indicator for Map template (ADB25TU)	/ or blank. Specify / to use, or blank to not use &UTNMAPDD
UTUPUNCH	Use indicator for punch template (ADB25TU)	/ or blank. Specify / to use, or blank to not use &UTNPUNCH
UTURECV1	Use indicator for recovery template (ADB25TU)	/ or blank. Specify / to use, or blank to not use &UTNRECV1
UTURECV2	Use indicator for recovery template (ADB25TU)	/ or blank. Specify / to use, or blank to not use &UTNRECV2
UTUUNLDD	Use indicator for unload template (ADB25TU)	/ or blank. Specify / to use, or blank to not use &UTNUNLDD
UTUWORK1	Use indicator for work1 template (ADB25TU)	/. This value must be set to "/" to use &UTNWORK1
UTUWORK2	Use indicator for work2 template (ADB25TU)	/ or blank. Specify / to use, or blank to not use &UTNWORK2
REORG INDEX utility options:		
UXO01	REUSE	Y or N. Use Y to specify REUSE or N to specify no keyword.
UXO02	SHRLEVEL	R or C. Use R to specify SHRLEVEL REFERENCE or C to specify SHRLEVEL CHANGE.
UXO03	LEAFDISTLIMIT	Valid values are 0 through 2147483647.
UXO04	REPORTONLY	Y or N. Use Y to specify REPORTONLY or N to specify no keyword.
UXO05	UNLOAD	C, P, O, or E. Use C to specify UNLOAD CONTINUE, P to specify UNLOAD PAUSE, O to specify UNLOAD ONLY, or E to specify UNLOAD EXTERNAL.
UXO06	PREFORMAT	Y or N. Use Y to specify PREFORMAT or N to specify no keyword.

Table 16. Alternate shared variable input data (continued)		
UX007	DEADLINE	N, timestamp, or labeled duration expression. Use N to specify DEADLINE NONE together with a timestamp that is used as a parameter to DEADLINE. For example: DEADLINE 13:15:01. An example of a labeled duration expression is CURRENT_DATE +3 DAYS.
UX008	DRAIN_WAIT	1-1800. This value is used as a parameter to DRAIN_WAIT.
UX009	RETRY	0-255. This value is used as a parameter to RETRY. For example: RETRY 8.
UX010	RETRY_DELAY	1-1800. This value is used as a parameter to RETRY_DELAY. For example RETRY_DELAY 17.
UX011	FASTSWITCH	Y or N. Use Y to specify FASTSWITCH YES or N to specify FASTSWITCH NO.
UX012	MAXRO	D or numeric value. Use D to specify MAXRO DEFER or numeric value to specify MAXRO &uso24.
UX013	DRAIN	W or A. Use W to specify DRAIN WRITERS or A to specify DRAIN ALL.
UX014	LONGLOG	C, T, or D. Use C to specify LONGLOG CONTINUE, T to specify LONGLOG TERM, or D to specify LONGLOG DRAIN.
UX015	DELAY	A numeric value. This value is used as a parameter to DELAY. For example DELAY 17.
UX016	TIMEOUT	A or T. Use A to specify TIMEOUT ABEND or T to specify TIMEOUT TERM.
UX017	STATISTICS	Y or N. Use Y to specify STATISTICS TABLE (ALL) or N to specify no keyword.
UX018	REPORT	Y or N. Use Y to specify REPORT YES or N to specify REPORT NO.
UX019	KEYCARD	Y or N. Use Y to specify KEYCARD or N to specify no keyword.
UX020	FREQVAL	Indicates that frequency statistics are to be gathered from the specified column group. <ul style="list-style-type: none"> <li>• Y - YES, collect frequency statistics</li> <li>• N - NO, do not collect frequency statistics</li> </ul>
UX021	NUMCOLS	A numeric value. This value is used as a parameter to NUMCOLS. For example: FREQVAL NUMCOLS 9 COUNT.
UX022	COUNT	Indicates the number of frequently occurring values to be collected from the specified column group.
UX023	UPDATE	A, P, S, or N. Use A to specify UPDATE ALL, P to specify UPDATE ACCESSPATH, S to specify UPDATE, or N to specify UPDATE NONE.
UX024	HISTORY	A, P, S, or N. Use A to specify HISTORY ALL, P to specify HISTORY ACCESSPATH, S to specify HISTORY SPACE, or N to specify HISTORY NONE.
UX025	FORCEROLLUP	Y or N. Use Y to specify FORCEROLLUP YES or N to specify FORCEROLLUP NO.
UX026	SORTDEVT	A device type. This value is used as a parameter to SORTDEVT. For example: SORTDEVT SYSALLDA.
UX027	SORTNUM	1- 255. This value is used as a parameter to SORTNUM. For example: SORTNUM 12.
UX028	CLONE	Y or N. Use Y to specify CLONE or N to specify no keyword.
UX029	FLASHCOPY	Y, C, or N. Use Y to specify FLASHCOPY YES, C to specify FLASHCOPY CONSISTENT, or N to specify FLASHCOPY NO.
UX030	HISTOGRAM	<ul style="list-style-type: none"> <li>• Y - YES, gather histogram statistics from the specified column group</li> <li>• N - NO, do not gather such statistics</li> </ul>

Table 16. Alternate shared variable input data (continued)		
UXO31	NUMCOLS	The number of key columns that are to be concatenated when collecting histogram statistics from the specified index.
UXO32	NUMQUANTILES	Indicates the number of quantiles that the utility collects.
UXO40	LOGRANGES	<ul style="list-style-type: none"> <li>Y - Yes, REORG uses SYSLGRNX information for the LOG phase whenever possible. This option is the default behavior.</li> <li>N - NO, REORG does not use SYSLGRNX information for the LOG phase.</li> </ul>
UXO42	SWITCHTIME	<ul style="list-style-type: none"> <li>N - NONE, does not specify a time for the final log iteration of the LOG phase. This option is the default behavior. Specifies the time that the final log iteration of the LOG phase is to begin. This time must not have already occurred when REORG is run.</li> <li>labeled-duration-expression, SWITCHTIME labeled-duration-expression is added.</li> </ul>
UXO43	NEWMAXRO	<ul style="list-style-type: none"> <li>N - NONE, specifies that when the specified SWITCHTIME is met, REORG proceeds to the last log iteration without taking log processing time into consideration. This option is the default.</li> <li>Integer, specifies the number of seconds. Valid values are 0 through 2147483647.</li> </ul>
UXORBALR	RBALRSN	<p>Specifies the RBA and LRSN format in which the target object is to be left after a REORG.</p> <ul style="list-style-type: none"> <li>N - None No conversion</li> <li>B - Basic Convert to a basic format</li> <li>E - Extended Convert to extended format</li> </ul>

Refer to *IBM DB2 Administration Tool for z/OS User's Guide and Reference* for additional information about utilities.

## Creating user-defined templates

You can create a data set template in Db2 Object Comparison Tool to save DB2 Admin Change Management batch parameter variables. After you define a data set with DB2 TEMPLATE statements, you can reuse these template statements in apply jobs.

### About this task

Without a reusable template, the settings of each new apply job that you run overwrite the settings of your previous apply job. To create a reusable template, you must save the Change Management batch variables in USRTEMPL DD. USRTEMPL and ADB25TU templates can be used at the same time. USRTEMPL templates take precedence over 25TU templates.

### Procedure

1. Create a data set and name it ADBPRE.USRTEMPL.
  - a) Define the logical record length of 80.
  - b) Enter the prefix value ADBPRE in panel GOC5, ADBPALT, or ADB2C11A, depending on the method you are using to run the apply job.
2. Add the Change Management batch parameters and variables for the templates that you want to use. In the USRTEMPL data set, you must set the parameters before adding the templates. You can store the following Change Management batch parameters in the USRTEMPL data set:

- UTIL\_TEMPLATE\_DISCARDNN\_NAME
- UTIL\_TEMPLATE\_DISCARDNN\_USE
- UTIL\_CLONE\_TEMPLATE\_DISCARDNN\_NAME
- UTIL\_CLONE\_TEMPLATE\_DISCARDNN\_USE
- UTIL\_TEMPLATE\_DISCARDNC\_NAME
- UTIL\_TEMPLATE\_DISCARDNC\_USE
- UTIL\_CLONE\_TEMPLATE\_DISCARDNC\_NAME
- UTIL\_CLONE\_TEMPLATE\_DISCARDNC\_USE
- UTIL\_TEMPLATE\_UNLOAD\_PUNCHDDN\_NAME
- UTIL\_TEMPLATE\_UNLOAD\_PUNCHDDN\_USE
- UTIL\_CLONE\_TEMPLATE\_UNLOAD\_PUNCHDDN\_NAME
- UTIL\_CLONE\_TEMPLATE\_UNLOAD\_PUNCHDDN\_USE
- UTIL\_TEMPLATE\_UNLOAD\_PUNCHDDNC\_NAME
- UTIL\_TEMPLATE\_UNLOAD\_PUNCHDDNC\_USE
- UTIL\_CLONE\_TEMPLATE\_UNLOAD\_PUNCHDDNC\_NAME
- UTIL\_CLONE\_TEMPLATE\_UNLOAD\_PUNCHDDNC\_USE
- UTIL\_TEMPLATE\_UNLOAD\_UNLDDN\_NAME
- UTIL\_TEMPLATE\_UNLOAD\_UNLDDN\_USE
- UTIL\_TEMPLATE\_UNLOAD\_UNLDDNC\_NAME
- UTIL\_TEMPLATE\_UNLOAD\_UNLDDNC\_USE
- UTIL\_CLONE\_TEMPLATE\_UNLOAD\_UNLDDN\_NAME
- UTIL\_CLONE\_TEMPLATE\_UNLOAD\_UNLDDNC\_NAME
- UTIL\_TEMPLATE\_COPYDDN1\_NAME
- UTIL\_CLONE\_TEMPLATE\_COPYDDN1\_NAME
- UTIL\_TEMPLATE\_COPYDDN2\_NAME
- UTIL\_CLONE\_TEMPLATE\_COPYDDN2\_NAME
- UTIL\_TEMPLATE\_ERRDDN\_NAME
- UTIL\_CLONE\_TEMPLATE\_ERRDDN\_NAME
- UTIL\_TEMPLATE\_FCCOPYDDN\_NAME
- UTIL\_CLONE\_TEMPLATE\_FCCOPYDDN\_NAME
- UTIL\_TEMPLATE\_LOBCOL\_NAME
- UTIL\_CLONE\_TEMPLATE\_LOBCOL\_NAME
- UTIL\_TEMPLATE\_MAPDDN\_NAME
- UTIL\_CLONE\_TEMPLATE\_MAPDDN\_NAME
- UTIL\_TEMPLATE\_PUNCHDDN\_NAME
- UTIL\_CLONE\_TEMPLATE\_PUNCHDDN\_NAME
- UTIL\_TEMPLATE\_RECOVERYDDN1\_NAME
- UTIL\_CLONE\_TEMPLATE\_RECOVERYDDN1\_NAME
- UTIL\_TEMPLATE\_RECOVERYDDN2\_NAME
- UTIL\_CLONE\_TEMPLATE\_RECOVERYDDN2\_NAME
- UTIL\_TEMPLATE\_UNLDDN\_NAME
- UTIL\_CLONE\_TEMPLATE\_UNLDDN\_NAME
- UTIL\_TEMPLATE\_WORKDDN1\_NAME

- UTIL\_CLONE\_TEMPLATE\_WORKDDN1\_NAME
- UTIL\_TEMPLATE\_WORKDDN2\_NAME
- UTIL\_CLONE\_TEMPLATE\_WORKDDN2\_NAME
- UTIL\_CLONE\_TEMPLATE\_WORKDDN2\_NAME
- UTIL\_TEMPLATE\_XMLCOL\_NAME
- UTIL\_CLONE\_TEMPLATE\_XMLCOL\_NAME
- UTIL\_TEMPLATE\_COPYDDN1\_USE
- UTIL\_CLONE\_TEMPLATE\_COPYDDN1\_USE
- UTIL\_TEMPLATE\_COPYDDN2\_USE
- UTIL\_CLONE\_TEMPLATE\_COPYDDN2\_USE
- UTIL\_TEMPLATE\_ERRDDN\_USE
- UTIL\_CLONE\_TEMPLATE\_ERRDDN\_USE
- UTIL\_TEMPLATE\_FCCOPYDDN\_USE
- UTIL\_CLONE\_TEMPLATE\_FCCOPYDDN\_USE
- UTIL\_TEMPLATE\_LOBCOL\_USE
- UTIL\_CLONE\_TEMPLATE\_LOBCOL\_USE
- UTIL\_TEMPLATE\_MAPDDN\_USE
- UTIL\_CLONE\_TEMPLATE\_MAPDDN\_USE
- UTIL\_TEMPLATE\_PUNCHDDN\_USE
- UTIL\_CLONE\_TEMPLATE\_PUNCHDDN\_USE
- UTIL\_TEMPLATE\_RECOVERYDDN1\_USE
- UTIL\_CLONE\_TEMPLATE\_RECOVERYDDN1\_USE
- UTIL\_TEMPLATE\_RECOVERYDDN2\_USE
- UTIL\_CLONE\_TEMPLATE\_RECOVERYDDN2\_USE
- UTIL\_TEMPLATE\_UNLDDN\_USE
- UTIL\_CLONE\_TEMPLATE\_UNLDDN\_USE
- UTIL\_TEMPLATE\_WORKDDN1\_USE
- UTIL\_CLONE\_TEMPLATE\_WORKDDN1\_USE
- UTIL\_TEMPLATE\_WORKDDN2\_USE
- UTIL\_CLONE\_TEMPLATE\_WORKDDN2\_USE
- UTIL\_TEMPLATE\_XMLCOL\_USE
- UTIL\_CLONE\_TEMPLATE\_XMLCOL\_USE

3. Add the template by typing one of the following formats in the data set:

- DB2 template format

```
TEMPLATE template_name
DSN dsn_definition
template_details
```

- XML template format

```
<TEMPLATE>
<NAME>
template_name
</NAME>
<DSN>
dsn_definition
</DSN>
<OTHER>
template_details
```

```
</OTHER>  
</TEMPLATE>
```

### **What to do next**

Now you can use USRTEMPL data sets to run different apply jobs without losing the template settings for each job due to overwrites. Reusable templates are useful if you are frequently running more than one apply job.

### **Related information**

[Using DB2 templates: Change Management batch interface \(IBM DB2 Administration Tool for z/OS\)](#)

[Change Management batch interface: Parameter definitions \(IBM DB2 Administration Tool for z/OS\)](#)



## Chapter 12. Recommendations when comparing a large number of objects

Enterprise Resource Planning (ERP) systems typically have a large number of objects. When you use Db2 Object Comparison Tool to compare a large number of objects, use the following recommendations:

- If online compare fails with an ONCODE=451 (out of storage), try running the comparison as a batch job. Using the same version files, a batch object compare job running under an initiator usually runs to completion. The online compare failure is due to TSO and ISPF control blocks, tasks and code that are not present in a batch address space, and limits on the region size for the TSO address space in which online compare is executing.
- Specify a large region size on the job card to ensure that the batch job can get sufficient virtual storage. If possible, specify 0M.
- Ensure that your batch jobs can get sufficient CPU time. When you compare a large number of objects, you might, depending on your installation settings and processor speed, need to add a TIME=*n* option on your job card. The recommended initial value for *n* is 300 (CPU minutes).
- Ensure that the data sets for the version file output are large enough to contain the data for the objects. If the data sets are not large enough, Step 1 or Step 2 of the compare batch job can terminate with a x37 abend. To prevent this storage problem, modify the JCL before submitting the job to use PACE=(CYL,(10,100)) for the following data sets:
  - CAT (in two places)
  - SRCSIN
  - SRCSOUT
  - TGTSOUT
- To avoid data set extension failures caused by referback, allocate the data set in advance.

The following JCL shows how the JCL should look before and after you modify it:

### Before

```
//CAT      DD DSN= ....
//          DISP=(NEW,CATLG,DELETE),
//          DCB=(LRECL=16384,RECFM=VB,BLKSIZE=27998),
//          SPACE=(CYL,(10,10),RLSE),
//          UNIT=SYSDA
(in two places)
...
//SRCSIN   DD DSN=&SRCSIN,DISP=(,DELETE),
//          DCB=(LRECL=16384,RECFM=VB,BLKSIZE=27998),
//          SPACE=(CYL,(10,20),RLSE),
//          UNIT=SYSALLDA
//SRCSOUT  DD DSN=&SRCSOUT,DISP=(,DELETE),
//          DCB=(LRECL=16384,RECFM=VB,BLKSIZE=27998),
//          SPACE=(CYL,(10,20),RLSE),
//          UNIT=SYSALLDA
//TGTSIN   DD DISP=SHR,
//          DSN= ....
//TGTSOUT  DD DSN=&TGTSOUT,DISP=(,DELETE),
//          DCB=(LRECL=16384,RECFM=VB,BLKSIZE=27998),
//          SPACE=(CYL,(10,20),RLSE),
//          UNIT=SYSALLDA
```

### After

```
//CAT      DD DSN= ....
//          DISP=(NEW,CATLG,DELETE),
//          DCB=(LRECL=16384,RECFM=VB,BLKSIZE=27998),
//          SPACE=(CYL,(10,100),RLSE),
//          UNIT=SYSDA
(in two places)
...
//SRCSIN   DD DSN=&SRCSIN,DISP=(,DELETE),
```

```
//          DCB=(LRECL=16384,RECFM=VB,BLKSIZE=27998),
//          SPACE=(CYL,(10,100),RLSE),
//          UNIT=SYSALLDA
//SRCOUT DD DSN=&SRCOUT,DISP=(,DELETE),
//          DCB=(LRECL=16384,RECFM=VB,BLKSIZE=27998),
//          SPACE=(CYL,(10,100),RLSE),
//          UNIT=SYSALLDA
//TGTSIN DD DISP=SHR,
//          DSN=....
//TGTSOUT DD DSN==&TGTSOUT,DISP=(,DELETE),
//          DCB=(LRECL=16384,RECFM=VB,BLKSIZE=27998),
//          SPACE=(CYL,(10,100),RLSE),
//          UNIT=SYSALLDA
```

## Chapter 13. Reference

Use the Db2 Object Comparison Tool reference information when you need more information about the customization of the components. You can find details about the tasks, steps, and parameters that are displayed on the Component Parameters panel, and information about the generated jobs.

### Db2 Object Comparison Tool parameters

The following table shows the parameters for DB2 Object Comparison Tool that you can specify by using Tools Customizer. These parameters are displayed on the **Product Parameters** panel.

Parameter name	Parameter description
CCQ_GOC_ADB_HLQ	The high-level qualifier of the DB2 Admin Tool data sets, one of which contains the EXEC (ADFB2VB) which performs the conversion.
CCQ_GOC_HLQ	The high-level qualifier of the DB2 Object Comparison Tool data sets for the product customization step.
CCQ_GOC_FB2VB_VLSRNM	The volume_serial used for copying fixed-block libraries to variable-blocked libraries. This is not necessary for SMS (System Managed Storage).
CCQ_GOC_FB2VB_DASD	The UNIT name used for copying fixed-block libraries to variable-blocked libraries. This is not necessary for SMS(System Managed Storage).

### Customization jobs generated by Tools Customizer

Tools Customizer generates customization jobs based on the tasks and steps that you select.

The following table shows the relationship between the tasks and steps that you select, and the member that contains the jobs that Tools Customizer generates.

Tasks	Steps	Template name	Template type
Create the VB CLIST and EXEC libraries.	Create the VB libraries.	GOCFB2VB	perhlq

### 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 Object Comparison Tool 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 Object Comparison Tool. If the product to be customized requires Db2 entries, you can customize Db2 Object Comparison Tool only on Db2 entries that are in the associated list. When you customize Db2 Object Comparison Tool, 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 Object Comparison Tool.

### **Master list**

The list of all Db2 entries that are defined but are not associated with Db2 Object Comparison Tool. 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 Object Comparison Tool, 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 Object Comparison Tool, 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 Object Comparison Tool. These parameters are defined by Db2 Object Comparison Tool and are stored in a data member that is defined by Db2 Object Comparison Tool.

### **LPAR parameters**

Parameters on the local LPAR that are required to customize Db2 Object Comparison Tool. 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 Object Comparison Tool, 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 Object Comparison Tool will be customized.

The following table shows the meaning of the status types. Each status is defined differently for each type of parameter.

*Table 19. 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.
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.

Table 19. Status types for the product, the LPAR, and the Db2 entries (continued)

Status	Product	LPAR	Db2 entries
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 Object Comparison Tool.

#### 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 Object Comparison Tool with Tools Customizer. These data sets are supplied by Db2 Object Comparison Tool, supplied by Tools Customizer, or allocated by Tools Customizer.

Db2 Object Comparison Tool 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.SGOCDENU*, 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 Object Comparison Tool Discover EXEC. When you customize Db2 Object Comparison Tool, 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 Object Comparison Tool, the lowest-level qualifier is SGOCDENU. 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 Object Comparison Tool. 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 Object Comparison Tool Discover EXEC. The Db2 Object Comparison Tool Discover EXEC retrieves the metadata and values for the parameters from a previous customization of Db2 Object Comparison Tool.

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 Object Comparison Tool.

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 Object Comparison Tool, 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\$.XYZ410.

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:

<i>Table 20. Data set attributes for allocating the Discover output, data store, and customization library data sets</i>					
<b>Data set</b>	<b>Organization</b>	<b>Record format</b>	<b>Record length</b>	<b>Block size</b>	<b>Data set name type</b>
Discover output data set	PO	Variable block	16383	32760	LIBRARY

*Table 20. Data set attributes for allocating the Discover output, data store, and customization library data sets (continued)*

<b>Data set</b>	<b>Organization</b>	<b>Record format</b>	<b>Record length</b>	<b>Block size</b>	<b>Data set name type</b>
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 14. Troubleshooting and messages

Use this information to diagnose and correct problems that you might experience when you customize Db2 Object Comparison Tool.

**Important:** This section includes only the messages that you might encounter during the Tools Customizer customization process. For the complete list of messages, see the DB2 Administration Tool for z/OS user's guide.

---

### DB2 Object Comparison Tool condition codes

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These topics provide information about the condition codes Db2 Object Comparison Tool issues.

The following condition codes are issued by the ADB2GEN program. ADB2GEN is used to create a version file.

If you receive a condition code greater than zero, review the messages carefully.

**0**

The run was successful.

**4**

- A parameter error occurred. The parameter was ignored or the default was used. No generate requests were issued.
- Requested object was not found. A warning is issued.

**8**

- No parameters were found. Processing ended.
- The DB2 version is not supported. Other errors might be issued.

**12**

- The DB2 version is not supported. Processing ended.
- The remote location is not defined or is not a DB2 z/OS system. This is an internal error or limitation.
- Other severe errors were detected.

**16**

A severe error occurred.

The following condition codes are issued by the GOC2CMP program.

**0**

The GOC2CMP was run successfully.

**4**

Index not dropped which can lead to loss of referential integrity. Refer to the listed error message.

**6**

SQL PL functions have been bypassed because the BYPASSSQLPL parameter was specified. Examine the generated APPLY job or work statement list to verify that the content is complete.

**8**

There are problems with referential constraints. Manual action is required. Refer to the listed error message.

**16**

A severe error occurred. Refer to the listed error message.

In addition to the condition codes for GOC2CMP, GOC2DTC can issue the following condition code.

**12**

A quoted string is too long.

If the messages that are associated with these codes do not contain adequate information regarding the actions you should take, use the information in the following table to diagnose common problems before you contact IBM Support.

## Before contacting IBM Support

If you receive Db2 Object Comparison Tool error messages that do not contain adequate information regarding the actions you should take, use the information contained in this section to diagnose common problems before you contact the IBM Support. The information that you gather to diagnose the problem is required when you open an incident with the Db2 Object Comparison Tool support team.

The following table provides the documentation that is required for errors that can occur during the compare process.

*Table 21. Documentation required by IBM Support*

Step or function	Documentation required
All failures	Always provide the complete job output
Generate version file from DDL (Step <i>fnnDDL</i> - program GOC2DTC)	The DDL file
Extract version file from the catalog (Step <i>fnnDB2</i> - program ADB2GEN)	<ul style="list-style-type: none"> <li>The original DDL as defined in the catalog, or</li> <li>An extract of the source and target objects selected using GEN</li> </ul>
Compare (Step T03COMP - program GOC2CMP)	<ul style="list-style-type: none"> <li>Source and target version files</li> <li>Source and target DDL as defined in the catalog</li> <li>MASK and IGNORES input files</li> <li>CHANGES file output, if any</li> <li>IFF file output, if any</li> </ul>
Apply (multiple steps and programs)	<ul style="list-style-type: none"> <li>The work statement list, if applicable</li> <li>The JCL that was submitted</li> <li>If the error is a logic error in DDL or utility statements or if you are unsure, provide the utility control statements. These might be included in the complete job output.</li> </ul>

## Troubleshooting: The Compare report shows changes to bind options for trigger packages

If the report from Object Comparison Tool includes unexpected changes to bind options for trigger packages, you might need to rebind some packages. This situation can occur when you migrate to Db2 11 or a later version.

**Symptom:** The compare report includes unexpected changes to bind options for trigger packages, as shown in the following example:

```
Compare Trigger source <table_schema>.<table_name> and target <table_schema>.<table_name>
Source type : <trigger_type> Target type : <trigger_type>
(A)Field SYSTEM_TIME SENSITIVE changed from YES to NO
(A)Field BUSINESS_TIME SENSITIVE changed from YES to NO
(A)Field ARCHIVE SENSITIVE changed from YES to NO
```

**Explanation:** When a trigger is created, the following fields in the SYSPACKAGE table have a default value of YES:

- SYSTIMESENSITIVE
- BUSTIMESENSITIVE
- ARCHIVESENSITIVE

These values are stored in packages at the time they are bound. Check these field attributes in your trigger packages. If you set them to NO on your old system and then these trigger packages are created on a new system, the default values of these fields on the new system are YES.

**Solution:** Rebind the packages.

To rebind the packages:

1. On the **DB2 Administration Menu (ADB2) panel**, specify option I, and press Enter.
2. On the **DB2I PRIMARY OPTION MENU panel**, specify option 5, and press Enter.
3. On the **BIND/REBIND/FREE panel**, specify option 6, and press Enter.
4. Change the **PLAN MANAGEMENT** field to OFF.
5. Change the **SYSTEM\_TIME SENSITIVE**, **BUSINESS\_TIME SENSITIVE**, and **ARCHIVE SENSITIVE** field to the desired values.

**Related information**

[BIND and REBIND options for packages, plans, and services \(Db2 12 for z/OS documentation\)](#)

## 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.

## 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 223](#). 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 223](#). 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 223](#). 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 223](#). 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 223](#). 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 223](#). 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 223](#). 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 223. 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 223. 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 223. 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 223. 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 223. 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 223. 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 223. 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 to 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 223. 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 223. 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 223. 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 223. 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 223. 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 223. 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 223. 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 223. 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 223.  
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 223.  
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 223.  
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 223.  
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 223.  
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 223.  
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 223.  
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 223. 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 223. 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 223. 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 223. 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 223. 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 223. 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 223. 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 223. 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 223. 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 223. 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 223. 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 223. 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 223. 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 223](#). 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 223](#). 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 223](#). 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 223](#). 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 223](#). 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 223](#). 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 223](#). 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 223. 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 223. 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 223. 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 223. 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 223. 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 223. 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 223. 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 223. 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 223. 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 223. 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 223. 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 223. 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 223. 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 223. 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 223. 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 223. 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 223. 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 name 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 Db2 member 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**

An attempt was made to customize the product on an LPAR that is different than the LPAR in the data store. The LPAR that is stored in the data store data set must be used to customize the product.

This error can occur in the following situations:

- 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.

This message is issued to prevent the data store from becoming corrupted.

**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 223](#). 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 223](#). 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 223](#). 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 223](#).  
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 223](#).  
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 223](#).  
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 223](#).  
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 223](#).  
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 223](#).  
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 223](#).  
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 223.  
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 223.  
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 223.  
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 223.  
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 223.  
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 223.  
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 223. 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 223. 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 223. 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 223. 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 223. 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 223](#). 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 223](#). 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 223](#). 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 223](#). 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 223](#). 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 223](#). 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 223](#). 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 223](#).  
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 223](#).  
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 223](#).  
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 223](#).  
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 223](#).  
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 223](#).  
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 223](#).  
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 223. 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 223. 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 223. 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 223. 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 223. 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 223. 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 223. 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 223. 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 223. 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 223. 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 223. 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 223. 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 223. 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 223. 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 223. 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 223. 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 223. 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 223](#). 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 223](#). 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 223](#). 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 223](#). 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 223](#). 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 223](#). 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 223](#). 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 223. 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 223. 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 223. 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 223. 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 223. 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 223.  
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 223.  
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 223.  
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 223.  
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 223.  
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 223.  
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 223.  
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 223.  
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 223.  
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 223.  
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 223.  
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 223.  
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 223.  
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 223. 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 223. 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 223. 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 223. 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 223. 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 223. 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 223. 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 223. 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 223. 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 223. 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 223. 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 223. 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 223](#).  
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 223](#).  
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 223](#).  
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 223](#).  
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 223](#).  
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 223](#).  
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 223](#).  
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 223.  
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 223.  
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 223.  
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 223.  
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 223.  
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 223.  
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 223.  
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 223. 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 223. 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.SGOCDENU*.

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 223](#). 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 223](#). 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 223](#). 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 223](#). 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 223](#). 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 223](#).  
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 223](#).  
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 223](#).  
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 223](#).  
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 223](#).  
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 223](#).  
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 223](#).  
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 223.  
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 223.  
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 223.  
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 223.  
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 223.  
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 223.  
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 223.  
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 223.  
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 223](#).  
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 223](#).  
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 223](#).  
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 223](#).  
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 223.  
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 223.  
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 223.  
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 223.  
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 223.  
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 223.  
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 223.  
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 223.](#)  
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 223.](#)  
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 223.](#)  
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 223.](#)  
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 223.](#)  
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 223.](#)  
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 223.](#)  
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 223](#). 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 223](#). 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 223](#). 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 223](#). 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 223](#). 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 223](#). 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 223](#). 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 223.  
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 223.  
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 223.  
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 223.  
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 223.  
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 223](#). 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 223](#). 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 223](#). 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 223](#). 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 223](#). 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 223](#). 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 223.  
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 223.  
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 223.  
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 223.  
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 223.  
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 223.  
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 223.  
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 223. 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 223. 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 223. 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 223. 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 223. 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 223](#). 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 223](#). 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 223](#). 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 223](#). 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 223](#). 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 223](#). 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 223](#). 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 223.  
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 223.  
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 223.  
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 223.  
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 223.  
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 223.  
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 223.  
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 223.  
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 223.  
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 223.  
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 223.  
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 223.  
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.

---

**CCQ0001S**      **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.

---

**CCQ0002S**      **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 223. Contact IBM Software Support.

---

**CCQ0003S**      **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 223. Contact IBM Software Support.

---

**CCQ0004S**      **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 223. Contact IBM Software Support.

---

**CCQ0005S**      **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 223. Contact IBM Software Support.

---

**CCQ0006S**      **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 223. Contact IBM Software Support.

---

**CCQ0007S**      **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 223. Contact IBM Software Support.

---

**CCQ0008S**      **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 223.  
Contact IBM Software Support.

---

**CCQ0009S**      **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 223.  
Contact IBM Software Support.

---

**CCQ0010S**      **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 223.  
Contact IBM Software Support.

---

**CCQ0011S**      **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 223.  
Contact IBM Software Support.

---

**CCQ0012S**      **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 223.  
Contact IBM Software Support.

---

**CCQ0013S**      **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 223.  
Contact IBM Software Support.

---

**CCQ0014S**      **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 223.  
Contact IBM Software Support.

---

**CCQ0015S**      **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 223.  
Contact IBM Software Support.

---

**CCQ0016S**      **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 223.  
Contact IBM Software Support.

---

**CCQ0017S**      **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 223.  
Contact IBM Software Support.

---

**CCQ0050S**      **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.

---

**CCQ0051W**      **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.

---

**CCQ0052S**      **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.

---

**CCQ0053W**      **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.

---

**CCQ0054W**      **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.

---

**CCQ0055W**      **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.

---

**CCQ0056W**      **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.

---

**CCQ0057W**      **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.

---

**CCQ0058W**      **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 223. Contact IBM Software Support.

---

**CCQ0059W**      **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.

---

**CCQ0060W**      **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 223. Contact IBM Software Support.

---

**CCQ0061I**      **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 the 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.

---

**CCQ0062W**      **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.

---

**CCQ0064W**      **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 223. Contact IBM Software Support.

---

**CCQ0065W**      **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 223. Contact IBM Software Support.

---

**CCQ0066W**      **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.

---

**CCQ0067W**      **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.

---

**CCQ0068W**      **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.

---

**CCQ0069W**      **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.

---

**CCQ0070W**      **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.

---

**CCQ0071W**      **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.

---

**CCQ0072S**      **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 223. Contact IBM Software Support.

---

**CCQ0073E**      **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.

---

**CCQ0074S**      **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 223. Contact IBM Software Support.

---

**CCQ0075W**      **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.

---

**CCQ0076W**      **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.

---

**CCQ0077S**      **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 223. Contact IBM Software Support.

---

**CCQ0078I**      **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.

---

**CCQ0080I**      ***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 223. 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.SGOCDENU*.

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.SxxxSAMP.**

**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.SxxxSAMP, 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.

---

**CCQS012E**      **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 (Formatted 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 Object Comparison Tool.

---

**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.



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