ServerPac
Dialog Level: 29

Using the Installation Dialog

SA23-2278-40

Note

Before using this information and the product it supports, read the information in “Notices” on page 279.

This edition applies to Dialog Level 29 and to ServerPac (program number 5751-CS9), and to all subsequent releases and modifications until otherwise indicated in new editions.

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About this document

This document explains how to use the CustomPac installation dialog to install a ServerPac order. Included is planning information to help you familiarize yourself with the dialog before you install an order.

The examples in this document highlight the functions of the installation dialog that apply to a ServerPac order. Although the dialog also contains functions to support IBM's CustomPac offerings, such as SystemPac, FunctionPac, ProductPac®, RefreshPac, and Selective Follow-on Services (SFS), these functions are not described in this document. If you install a CustomPac offering, refer to the CustomPac *Installation Dialog Reference* and *Messages* documents that were shipped with your order in softcopy and hardcopy format.

Terms used in this document

Throughout this document, the CustomPac installation dialog is called "the installation dialog," "the master dialog," or, simply, "the dialog." The dialog's own data sets are sometimes referred to as "the master dialog data sets."

It is also important that you understand how the following terms are used in this document:

Driving system
The system image (hardware and software) that you use to install the target system.

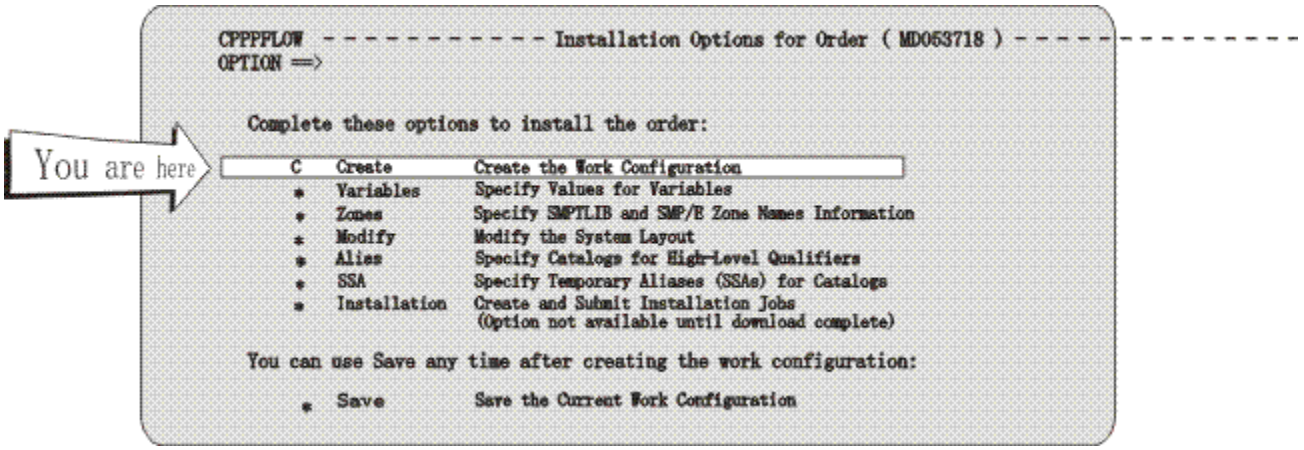
Target system
The system software libraries and other data sets that you are installing.

If you are installing a subsystem order (CICS®, Db2®, IMS, or NCP), or WebSphere® Application Server, the driving system and target system can be the same system.

The driving system and target system for subsystem orders can also be different systems, as long as the target system data sets are installed in the same catalog as the driving system data sets. The driving system must have access to target system data sets through the catalog using the final target data set names.

Marking your progress

Installing an order is a multiple-step process through an online dialog. To help you mark your progress through these steps, "sign posts," such as the following, are displayed throughout this document:



If your order contains only non-SMP/E installable products, you will see the following panel:

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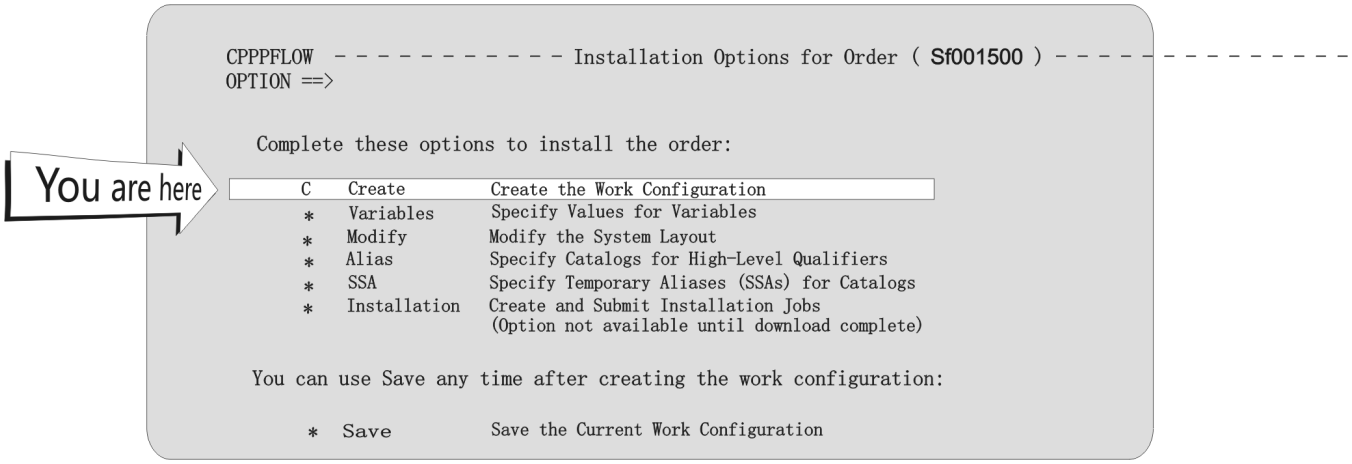

Where to find more information

This document references information in the following documents:

z/OS DFSMS Access Method Services Commands
z/OS DFSMSdfp Storage Administration
z/OS DFSMS Managing Catalogs
z/OS DFSMS Using Data Sets
z/OS ISPF Edit and Edit Macros
z/OS ISPF User's Guide Vol I
z/OS ISPF User's Guide Vol II
z/OS MVS JCL Reference
z/OS Planning for Installation
z/OS SMP/E Commands
z/OS SMP/E Messages, Codes, and Diagnosis
z/OS SMP/E Reference
z/OS TSO/E Customization
ServerPac: Installing Your Order (does not have an order number)

Before you begin your ServerPac installation of z/OS® (MVS™ SREL), see *z/OS Planning for Installation* to do the following tasks:

- Develop migration and installation plans for z/OS.
- Ensure that you have the hardware and software that is required to run the z/OS product set.
- Learn coexistence considerations for z/OS.
- Learn the levels of non-z/OS IBM® products that run in the z/OS environment.

This document contains most of the information you need when you begin to install an order. During one stage of the process (submitting the installation jobs), however, you need to refer to *ServerPac: Installing Your Order* for specific instructions for your particular order. Unlike a formal publication, *ServerPac: Installing Your Order* is tailored to match your individual z/OS ServerPac order. When you receive your ServerPac order using the CustomPac installation dialogs, the RECEIVE job copies the *ServerPac: Installing Your Order* document in PDF format into the hlq.ordernum.SCPPLENU(PDFIYO) data set.

You can choose either of the following two ways to download the manual to your workstation.

- Download it directly from `hlq.ordernum.SCPPLENU(PDFIYO` to your workstation, or
- First copy the manual from `hlq.ordernum.SCPPLENU(PDFIYO` into a sequential data set. Then, download the sequential data set in binary format to a workstation into a file named xxxx.PDF.

Note: To view the PDF, use the Adobe Acrobat Reader 6.0 or later for the best resolution.

Figure 1 on page 3 shows which document to use at each stage of the installation process.

For complete titles and order numbers of the documents for all products that are part of z/OS, see *z/OS Information Roadmap*.

How to send your comments to IBM

We invite you to submit comments about the z/OS product documentation. Your valuable feedback helps to ensure accurate and high-quality information.

Important: If your comment regards a technical question or problem, see instead “If you have a technical problem” on page xxi.

Submit your feedback by using the appropriate method for your type of comment or question:

Feedback on z/OS function
If your comment or question is about z/OS itself, submit a request through the IBM RFE Community (www.ibm.com/developerworks/rfe/).

Feedback on IBM Knowledge Center function
If your comment or question is about the IBM Knowledge Center functionality, for example search capabilities or how to arrange the browser view, send a detailed email to IBM Knowledge Center Support at ibmkc@us.ibm.com.

Feedback on the z/OS product documentation and content
If your comment is about the information that is provided in the z/OS product documentation library, send a detailed email to mhvrcfs@us.ibm.com. We welcome any feedback that you have, including comments on the clarity, accuracy, or completeness of the information.

To help us better process your submission, include the following information:

- Your name, company/university/institution name, and email address
- The following deliverable title and order number: ServerPac: Using the Installation Dialog, SA23-2278-50
- The section title of the specific information to which your comment relates
- The text of your comment.

When you send comments to IBM, you grant IBM a nonexclusive authority to use or distribute the comments in any way appropriate without incurring any obligation to you.

IBM or any other organizations use the personal information that you supply to contact you only about the issues that you submit.

If you have a technical problem

If you have a technical problem or question, do not use the feedback methods that are provided for sending documentation comments. Instead, take one or more of the following actions:

- Go to the IBM Support Portal (support.ibm.com).
- Contact your IBM service representative.
- Call IBM technical support.

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Summary of changes

This information includes terminology, maintenance, and editorial changes. Technical changes or additions to the text and illustrations for the current edition are indicated by a vertical line to the left of the change.

Summary of changes for z/OS Version 2 Release 4 (V2R4) (Dialog Level 29)

The following changes are made for z/OS Version 2 Release 4 (V2R4) (Dialog Level 29).

New

Prior to April 2021 refresh

A message was added: CPP0602014E.

Changed

April 2021 refresh

As of May 1, 2021, the panel CPPPEDIF is updated. For more information about this change, refer to “Receiving an order from a server” on page 22.

Prior to April 2021 refresh

The panel CPPP6017 was updated. For more information about this change, see “Selecting a JES for the configuration” on page 41.

A message was changed: CPP0605232I .

Summary of changes for z/OS Version 2 Release 3 (V2R3) (Dialog Level 28)

The following changes are made for z/OS Version 2 Release 3 (V2R3) (Dialog Level 28).

New

A new message was added: CPP0602017W.

Changed

z/OS Customized Offerings will no longer be available on tape. The CustomPac Installation Dialog level 28.12.00 or higher has Tape option removed for the RECEIVE of the order. As a result, various topics were updated to reflect this change.

As stated in *IBM Software Announcement* 218-041, dated January 30, 2018, IBM DB2® is rebranded to IBM Db2®. In accordance with this change, reference to DB2 in this publication are changed to Db2**,** where appropriate.

Various panels were updated to support orders containing only non-SMPE orderable products.

The following panels were updated: CPPP605R, CPPP6071

Deleted

z/OS Customized Offerings will no longer be available on tape. The CustomPac Installation Dialog level 28.12.00 or higher has Tape option removed for the RECEIVE of the order. As a result, information was removed from various topics. The following sections were removed: "Orders from Tape", "Copying the

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UPDATE job from tape", "Copying the LOADRIM job from tape", and "Receiving an order from tape". The following messages were removed: CPP0616002S. CPP0616003S, and CPP0616004S.

Summary of changes for z/OS Version 2 Release 2 (V2R2), as updated March 2017 (Dialog Level 27)

The following changes are made for z/OS Version 2 Release 2 (V2R2), as updated March 2017. In this revision, all technical changes for z/OS V2R2 are indicated by a vertical line to the left of the change.

Changed

Updates were made to the section Chapter 6, “Defining installation variables,” on page 59.

Summary of changes for z/OS Version 2 Release 2 (V2R2), as updated June 2016 (Dialog Level 27)

The following changes are made for z/OS Version 2 Release 2 (V2R2), as updated June 2016. In this revision, all technical changes for z/OS V2R2 are indicated by a vertical line to the left of the change.

Changed

- Updates were made to the following sections:
  - Chapter 2, “Installing and starting the dialog,” on page 13
  - “Updating your dialogs” on page 14
  - “Required migration step” on page 19
  - “Receiving an order from a server” on page 22
- The panel CPPPEDIF was updated; see Figure 23 on page 31

Summary of changes for z/OS Version 2 Release 2 (V2R2), as updated December 2015 (Dialog Level 27)

The following changes are made for z/OS Version 2 Release 2 (V2R2), as updated December 2015. In this revision, all technical changes for z/OS V2R2 are indicated by a vertical line to the left of the change.

New

The following new sections were added to “Merging UNIX file system data sets greater than 4 GB” on page 107:

- “For driving system z/OS V1R13 or for a z/OS V2R1 driving system where target data set is already SMS managed” on page 107
- “For driving system z/OS V2R1 and where target data set is non SMS managed” on page 110

The following new sections were added to “Modifying a data set's attributes” on page 114:

- “For driving system z/OS V1R13 or z/OS V2R1 and SMS managed data set” on page 118
- “For driving system z/OS V2R1 and non-SMS managed data set” on page 119

Changed

- Updates were made to the following command description: “CHANGE DSNTYPE” on page 179
- The message CPP0605232I was updated.

Summary of changes for z/OS Version 2 Release 2 (V2R2) (Dialog Level 27)

The following changes are made for z/OS Version 2 Release 2 (V2R2) (Dialog Level 27).

New

- File systems greater than 3.6 GB are now shipped with data set type HFS in the Modify System Layout.
- These panels were added:
  - CPPP60E1
  - CPPP60E2
  - CPPP60E3
  - CPPP60E4
  - CPPP60E5
- These messages were added:
  - CPP0605225E
  - CPP0605226W
  - CPP0605233E
  - CPP0605237I
  - CPP0605238I
  - CPP0605240I
  - CPP0605241E
  - CPP0611011E

Changed

- These panels were updated:
  - CPPP605T
  - CPPP605R
  - CPPP605S
  - CPPP605D
  - CPPP6058
  - CPPP6073

Deleted

No content was removed from this information.

Chapter 1. Introducing the installation dialog

Your ServerPac order includes the CustomPac installation dialog, an Interactive System Productivity Facility (ISPF) dialog that you use to install the order.

This chapter presents some important concepts that you should understand before using the dialog to install your order.

Preparing to install your ServerPac order

The information that IBM provides to help you prepare for installation depends on whether you are installing z/OS, a subsystem order (CICS, Db2, IMS, or NCP), WebSphere Application Server, or Tivoli®, as presented in the following list:

For z/OS orders:
Follow the instructions in *z/OS Planning for Installation* on preparing your system for a ServerPac installation. For example, you must have a driving system that meets certain requirements to perform the installation. *z/OS Planning for Installation* lists the hardware and software requirements for the driving system and also helps you determine how much DASD to use. Also, check the appropriate software preventive service planning (PSP) buckets for driving system requirements.

For subsystem orders and WebSphere Application Server orders:
For the driving system requirements, see *z/OS Planning for Installation*. For instructions on preparing your system for a ServerPac installation, see the documentation that is provided with your order. Also, check the appropriate software preventive service planning (PSP) buckets for coexistence and fallback service requirements.

See *z/OS Planning for Installation* for the PTFs that you might need to install on your existing system to allow it to coexist with the new release, and allow you to fall back to the existing system if necessary.

Regardless of whether your order is z/OS or a z/OS-related subsystem product, use the installation dialog to install the order.

Orders from a server

If you received your order from a server, be sure to review the contents of the ServerPac shipment that you received from IBM before you install your order. Also, take note of the order number, server name, server directory, user ID, password, and hash value. This data is located in the Dialog Data file on the Shopz Download page for your order. You will use this information later as input to the installation dialog.

Additional information about Internet delivery of orders can be found in *z/OS Planning for Installation*.

You might need to install or update the installation dialog and its associated data sets on your driving system. Instructions for installing and updating the dialog are provided Chapter 2, “Installing and starting the dialog,” on page 13.

Orders from DVD

If you received your order on DVD, be sure to review the contents of the ServerPac shipment that you received from IBM before you install your order. Also, take note of your order number, which can be obtained from the file DIALOG.txt "Required information for ServerPac Dialog" on the first DVD. You will later use this order number as input to the installation dialog. See the README.pdf file on the first DVD for information about copying the order from the workstation to your host system.

The following files and directories exist in the <ordernum> main directory and are included on the first DVD:

- COPYRIGHT.txt file, IBM products copyright statements
- DIALOG.txt file, Required information for ServerPac Dialog

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- IYO.pdf file, Order Installation Guide
- LOADRIM.jcl file, LOADRIM job to upload and restore ServerPac Dialog
- README.pdf file, Installation instructions
- UPDATE.jcl file, UPDATE job to update the ServerPac Dialog
- /<ordernum> main order directory
  - /<ordernum>.order: subdirectory with archived Order RIM files
  - /<ordernum>.content - subdirectory with archived Order content files

  Note: <ordernum> is manufacturing order number

Copy all files from DVD root, order, and content subdirectory to temporary work directory using the same directory structure as how files are stored on DVD.

The other DVDs have the following file structure:

- /<ordernum>, main order directory
  - /<ordernum>.content: subdirectory with additional archived Order content files

Copy files from DVDs /<ordernum>.content subdirectory to temporary work directory /<ordernum>/<ordernum>.content

You may need to install or update the installation dialog and its associated data sets on your driving system. Instructions for installing and updating the dialog are provided in Chapter 2, “Installing and starting the dialog,” on page 13.

Security system considerations

To install the products delivered in ServerPac, you might need to create new definitions for your security system.

Later, during the installation jobs phase of the installation process, you can submit jobs RACFDRV and (for z/OS orders only) RACFTGT. These jobs issue RACF® commands that require your user ID to have the RACF SPECIAL attribute.

These jobs also require that your user ID have ALTER access for the data set high-level qualifiers (HLQs) in the order. You will need ALTER access for the following HLQs:

- CPAC
- SYS1 (for z/OS orders)
- Product-specific high-level qualifiers for the products in your order. For a listing of these qualifiers, use the A (ALIAS) option of the dialog after you finish modifying the system layout. For example, ServerPac uses the high-level qualifier "ISP" for the ISPF product data sets. If you change the ISP high-level qualifier to "XYZ" for those data sets, your user ID must have ALTER authority for the "XYZ" high-level qualifier.
- System-specific aliases named in the SSA panel.

You will also need UPDATE access for the SSA qualifiers in the driving system's master catalog. For example, if you use an SSA of "ABC" for the ISPF data sets, and you use the default high-level qualifier, you will need ALTER access to "ABC" and UPDATE access to "ISP".

Review jobs RACFDRV and (for z/OS orders only) RACFTGT carefully before you submit them. Modify these jobs as necessary to suit your particular installation.

Also, if you decide to use SMS to manage data sets in your order using the CHANGE SMS command, the user ID that you later use to submit the installation jobs requires at least READ access to the FACILITY class profile for STGADMIN.IGG.DIRCAT, which allows you to direct a catalog request to a specific catalog.

If you use a security product other than RACF, you should consult its documentation and perform the equivalent actions for that product.

Working with your order: an overview of the dialog activities

Figure 1 on page 3 summarizes the steps for using the dialog to install a ServerPac order. The book for each step is listed under "Use this document ...".

Run each function in order. That is:

1. Receive an order.
2. Install an order.
3. Save the order's configuration.

Following the figure is a summary of these steps.

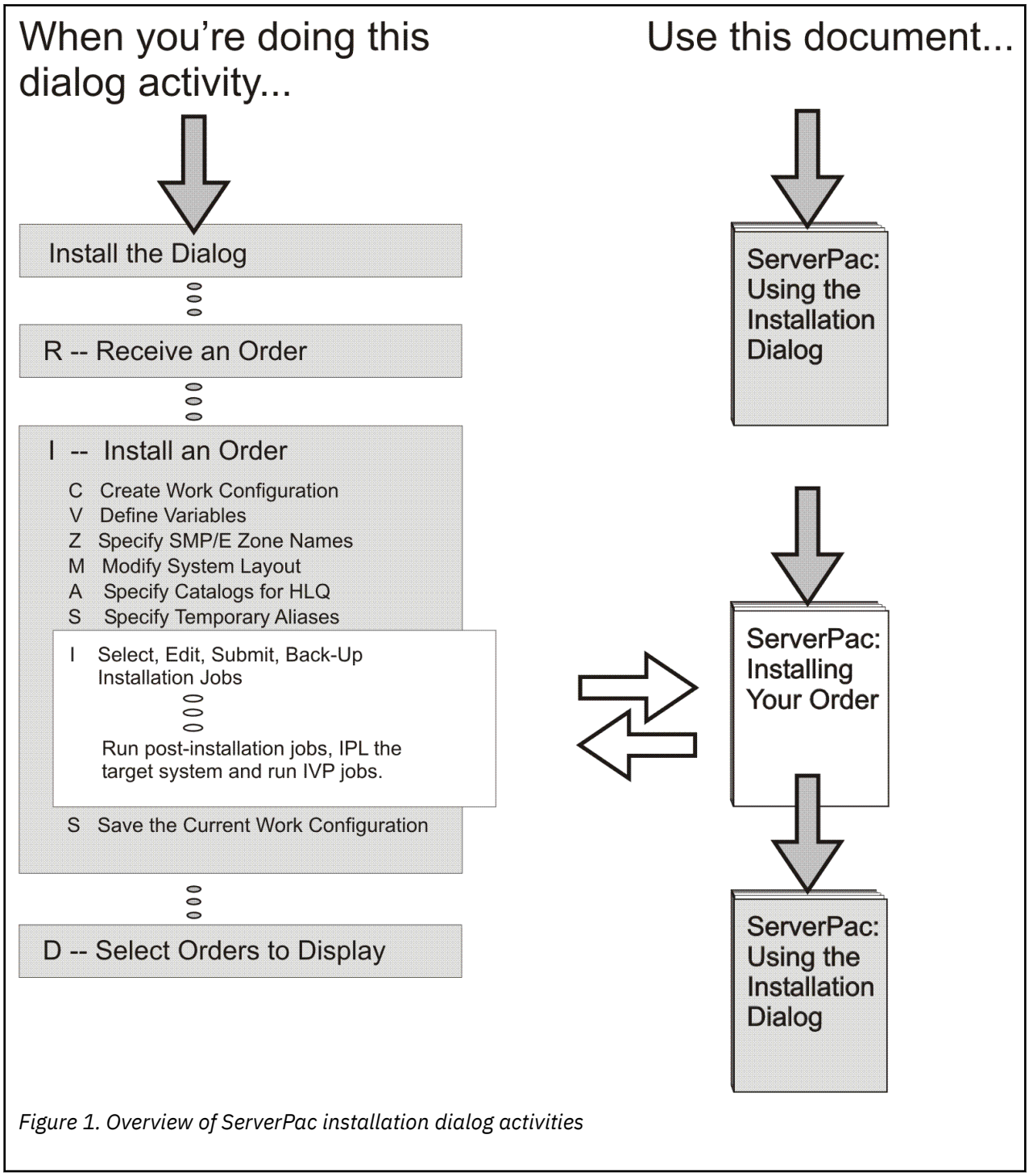

Figure 1. Overview of ServerPac installation dialog activities

Receiving your order

Use the dialog to receive your ServerPac order. The dialog generates a job to receive the new order by loading information from a server or a file system (local host or attached) to your DASD.

Receiving the order ensures that the following processes occur:

- The dialog is informed that the order is available for customization and installation.
- The IBM-supplied *shipped configuration* is copied to your DASD.

Installing your order

When you install an order, you receive a *shipped* configuration, from which you create work and saved configurations.

These configurations are briefly described here, and, in detail, later in this book:

- **Shipped**: The IBM-supplied default configuration (tailored to your order).
- **Work**: A working copy of the order configuration that you tailor as you proceed with the dialog. You use the installation dialog to create a copy of the shipped order configuration and, optionally, merge it with a saved configuration.
- **Saved**: A work configuration that was tailored with installation information from a previously installed order. You can have a different saved configuration for each order. For example, assume that you have installed three ServerPac orders and saved each configuration. If you install a fourth ServerPac order, you have three saved configurations from which to select for merging with the work configuration. You are, however, limited to one saved configuration for merging.

  Tip: You can also use a saved configuration to take a checkpoint while working with an order. After you have selected all the prior options and have no configuration warnings, you can save the configuration with the Save option and use it to recreate the same configuration, even for the same order. You do not need to submit any jobs to enable the option and save the configuration. So, if there are changes you want to try, but are not sure about, save the configuration and go ahead and try them. If the results are unsatisfactory, recreate the configuration using the saved one to get right back to where you were.

Installing a ServerPac order involves the following steps:

- **Create a configuration to tailor**. The shipped order configuration forms the basis of a *work configuration* that you will tailor. If you previously installed a ServerPac or dump-by-data-set SystemPac, and you saved the configuration, you can merge the saved version with the shipped configuration. Whenever possible, the dialog will carry forward the changes that you made the last time, so you will not need to repeat them. The resulting work configuration requires less tailoring than was needed the first time.
- **Tailor the work configuration**. You use a series of dialog panels to:
  - Select the installation type: full system replacement or software upgrade.
  - Define the variables to be used in the installation jobs.
  - Select appropriate names for the SMP/E zones.
  - Change the attributes and placement of data sets in the work configuration to suit your needs.
  - Define your alias-to-catalog relationships.
  - Define your catalogs.
- **Submit installation jobs**. The installation dialog generates a series of jobs that you run on your system to create a new target system or subsystem. The jobs are generated based on the work configuration for your order, but you can edit them through the dialog if you want. Another book, *ServerPac: Installing Your Order* guides you through this part of the process. That book describes the post-installation jobs that you must run, and guides you through your first IPL and verification of the target system.
  - For electronic orders, the SCPPLENU data set is shipped in the ORDER package. This data set is loaded to DASD when you receive your order.
  - For DVD orders, this book is shipped on DVD in the SCPPLENU data set.

For DVD orders, this book is also provided as a PDF file on the first DVD shipped for the order. For internet delivery orders, this book is also provided as a PDF file on the Shopz download page.

- **Save the work configuration and update the inventory**. Save the work configuration, so that you can reuse the data for future orders. Then, use the dialog to update the order inventory.

Installing an order on SMS-managed volumes

To use SMS-managed volumes for your order's data sets, you must intervene to some extent in the dialog's process of assigning configuration data sets to logical volumes. If you choose to SMS-manage any data sets, you must understand that logical volumes are the entities that are assigned to SMS storage classes.

To have SMS manage one or more volumes in your configuration, you can use either of two methods:

1. Assign logical volumes for data sets that are to be SMS-managed to storage classes.
   - Decide which SMS storage classes will be used for data sets that are to be managed by SMS.
   - Define the storage classes to SMS.
   - Ensure that your automatic class selection (ACS) routines will allow the chosen storage classes to be used.
   - In the dialog, assign the logical volumes for the data sets to be SMS-managed to the appropriate storage classes.
   - Run the installation jobs, as described in Chapter 11, “Submitting the installation jobs,” on page 151.

   If you also plan to use the dialog's Create a Recommended System Layout option, you should determine whether to assign data sets to SMS storage classes before using automatic assignment. For example, if you plan to SMS-manage all of the DLIB data sets, the order in which you do this is not important. However, if you plan to SMS-manage some of the target data sets, you should assign these data sets to storage classes first, so that the dialog does not create more volumes than are needed. For restrictions, see the Change SMS command in Appendix A, “Primary command reference,” on page 175.
2. You can allow your ACS routines to assign data sets to storage classes, based on data set names or qualifiers, initially-assigned storage class, or some other means that can be determined through ACS. Again, these storage classes must be defined before the ALLOCDS installation job runs. For information about writing ACS routines, see *z/OS DFSMSdfp Storage Administration*.

   If you use ACS routines, assign data sets to SMS management, and you also plan to use the dialog's Create a Recommended System Layout option, you should consider whether this process would be easier if you instead defined the data sets as SMS-managed in the dialog.

If you plan to share the SMS control data sets (SCDS, ACDS) that you use on your driving system with the target system, you must ensure that these data sets are available to the target system when it is activated. Also, ensure that your ACDS and COMMDS data sets are large enough. If you are migrating from earlier levels of DFSMSdfp, you might need to enlarge them.

For information about DFSMSdfp compatibility, see the topic "Translating and Validating in a Sysplex Environment" in *z/OS DFSMSdfp Storage Administration*, and the DFSMS migration information in *z/OS Planning for Installation*. For the space requirements for SMS control data sets, see the topic about calculating the size of storage and active control data sets in *z/OS DFSMSdfp Storage Administration*.

Saving your order's configuration

Save the work configuration, so that you can reuse it for future orders.

Using the installation menu

When you select an order containing only non-SMPE products to install, the Installation Menu is displayed (Figure 2 on page 6). This panel is the starting point for all of the functions that are needed to install your order.

```
CPPPFLOW  ----------- Installation Options for Order ( MD053718 ) --------------
OPTION ==>


  Complete these options to install the order:

     C    Create         Create the Work Configuration
     *    Variables      Specify Values for Variables
     *    Modify         Modify the System Layout
     *    Alias          Specify Catalogs for High-Level Qualifiers
     *    SSA            Specify Temporary Aliases (SSAs) for Catalogs
     *    Installation   Create and Submit Installation Jobs



  You can use Save any time after creating the work configuration:

     *    Save           Save the Current Work Configuration
```

Figure 2. Panel: Installation menu

For all other orders, the following Installation Menu is displayed (Figure 3 on page 6). This panel is the starting point for all of the functions that are needed to install your order.

```
CPPPFLOW  ----------- Installation Options for Order ( MD053718 ) --------------
OPTION ==>


  Complete these options to install the order:

     C    Create         Create the Work Configuration
     *    Variables      Specify Values for Variables
     *    Zones          Specify SMPTLIB and SMP/E Zone Names Information
     *    Modify         Modify the System Layout
     *    Alias          Specify Catalogs for High-Level Qualifiers
     *    SSA            Specify Temporary Aliases (SSAs) for Catalogs
     *    Installation   Create and Submit Installation Jobs
                         (Option not available until download complete)


  You can use Save any time after creating the work configuration:

     *    Save           Save the Current Work Configuration
```

Figure 3. Panel: Installation menu

At the beginning of a ServerPac installation, the only available function is **C**reate. Each of the other functions (now marked with asterisks) becomes available after the previous function is completed.

The Installation Menu provides access to the dialog functions, as in the following list:

C

Create the work configuration: Use this option to create a work configuration for the order you are installing. You can choose to merge the order's shipped configuration with a configuration that you saved from a previous order. The new order, together with the saved configuration, if any, forms the work configuration that you manipulate in subsequent functions of the dialog.

For operating system orders, you are prompted to choose an installation method (full system replacement or a software upgrade) and select a job entry subsystem (JES) for the installation.

For more information, see Chapter 5, “Creating a work configuration for the order,” on page 39.

V

Specify values for variables: Installing your order involves generating and submitting batch jobs. In the Variables function, the dialog collects certain data that it uses to tailor the installation jobs. Using that function, you can alter data values for the variables and define your own user variables.

For more information, see Chapter 6, “Defining installation variables,” on page 59.

Z

Specify SMPTLIB and SMP/E Zone Names Information: Products and features delivered with your order are shipped using default target and DLIB zone names. The dialog allows you to define the target and DLIB zone names when installing your order. IBM recommends that you use different zone names for each order. For more information, see Chapter 7, “Defining the SMP/E zone configuration,” on page 69.

This dialog also provides the SMS and non-SMS managed volumes support for the SMPTLIB DDDEF definition.

IBM also recommends that you use different CSI data set names for each order. To change the names of the CSI data sets, use the Modify System Layout function (see Chapter 8, “Modifying the system layout,” on page 79).

Note: You will not see this option if your order contains only non-SMP/E installable products.

M

Modify the system layout: This function assigns the data sets in the work configuration to your installation's DASD volumes. You can assign these data sets manually, or you can allow the dialog to automatically assign the data sets in accordance with the recommended system layout described in *z/OS Planning for Installation*.

Using the Modify System Layout function, you can merge and modify data sets in the work configuration. Through the dialog's view and change facility, you can merge and modify data sets based on a variety of criteria, including data set size, secondary space allocation, volume placement, link list placement, and whether SMS is to be used for data set management. For more information, see Chapter 8, “Modifying the system layout,” on page 79.

A

Specify catalogs for high-level qualifiers: Use this function to specify the catalogs for each high-level qualifier (HLQ). Data sets shipped with your order are cataloged in the system's normal order of catalog search when they are created. Data sets to be cataloged in user catalogs will have different high-level qualifiers. Aliases for those qualifiers will be created in the master catalog, referencing the user catalogs. For more information, see Chapter 9, “Defining HLQ-to-catalog relationships,” on page 135.

SSA

Specify temporary aliases (SSAs) for catalogs: Use this function to define temporary high-level qualifiers (HLQs) for the data sets in your order. Initially, data set names include temporary HLQs, called system-specific aliases, or SSAs. Later, during the installation, the temporary HLQs are removed from the data set names. For more information, see Chapter 10, “Defining system-specific aliases (SSAs),” on page 143.

I

Create and submit installation jobs: The dialog creates installation jobs based on the options you chose in previous steps of the dialog. Use this function to submit the jobs and track their execution. For more information, see Chapter 11, “Submitting the installation jobs,” on page 151.

S

Save the current work configuration: During the installation of your order, you customize the shipped order configuration to suit your needs. To save yourself from having to repeat this customization for future orders, use this function to save your changes (see Chapter 12, “Saving the configuration,” on page 163).

Features of the dialog panels

This section describes the user interface features of the installation dialog that you should be familiar with before using it.

Language support

The installation dialog is provided in U.S. English and Japanese. If the primary language specified in your TSO/E profile is neither of these languages, you must use the TSO/E PROFILE command to set the value of PLANGUAGE to either ENU for U.S. English, or JPN for Japanese.

To select U.S. English, enter the following command:

```
PROFILE PLANGUAGE(ENU)
```

To select Japanese, enter the following command:

```
PROFILE PLANGUAGE(JPN)
```

ISPF edit CAPS setting

The dialog uses the ISPF editor when you select a job through the S or B line commands. ISPF Edit is called with CAPS set to OFF. This setting preserves your text input in the form in which you enter it (uppercase, lowercase, or mixed case).

If you enter mixed case input in a job, the dialog does not convert your input to uppercase characters. You must ensure that lines that should contain only uppercase characters (like many JCL statements) do not contain lowercase characters. This is easily done with the ISPF Edit UC (Upper Case) line command.

For more information about ISPF Edit, initial macros, CAPS settings, and ISPF Edit line commands, see *z/OS ISPF Edit and Edit Macros*.

Use of color

The dialog uses color to identify key information on a panel.

- Input data is displayed in red. You can change input data by typing over it.
- Column headings are displayed in white and column separators are displayed in blue.
- Synonyms for field names are shown as uppercase letters in the field name, displayed in pink.
- Output data is yellow.

Choose colors that provide good contrast for you. You can change the displayed colors in the ISPF Options settings.

Panel IDs

Enter the ISPF PANELID command from any command line to see the panel IDs in the upper left corner. You can find information about the panel and how it works by doing a softcopy search in this book for the panel ID or by looking for it in the index.

Panel display format

The sample displays in Figure 4 on page 9 and Figure 5 on page 9 show the general format of the dialog's panel interface.

```
 CustomPac ----------- Sample Panel Display MODE(TE) -------  ROW &cont;
1 TO 12 OF 99
 COMMAND ==>                                                  SC&cont;
ROLL ==> PAGE

 Primary Commands:(? SET Locate Find Next Previous SORT VErbose) 1
 Line Commands:(Browse Delete Edit Select) 2

 S Order ID  Pack  SREL  CUSTomer                                STAtus
 - --------  ----  ----  --------------------------------       ------
3 MD010001  SERV  Z038  HERMANS ASSURANCE, LTD.                  R
   MD010022  CRS   C150  EELLS ARCHITECTURAL DESIGN              R
   MD010023  SERV  Z038  T. HOOD USABILITY, INC.                 F
   MD010032  EXPDD Z038  LAMASTRO CONTAINERS AND SHIPPING        R
   MD010048  SERV  Z038  DAYNE-TRONICS                           R
   MD010057  EXPDD Z038  ESMAT TECHNICAL SUPPORT                 R
   MD010059  SERV  Z038  EELLS ARCHITECTURAL DESIGN              R
   MD010068  SERV  Z038  HARRIGAN MANAGEMENT CORP.               R
   MD010069  SERV  C150  WALLE BUILDING AND SUPPLY CO.           A
   MD010070  CPP   Z038  B-MAZURIK FINANCIAL SERVICES           R
   MD010083  CPP   Z038  CORNELL LEGAL SERVICES                  F
   MD010101  CPP   Z038  LANDER O'BRIEN PARTNERSHIP             I
   MD010106  CPP   Z038  RONDOUT CREATIVE SERVICES              R
```

Figure 4. Panel displayed in terse format

You can display many of the dialog's panels in either of two formats, as listed below:

- Terse Mode. Only one line of information is displayed for each item, as shown in Figure 4 on page 9. Most panel displays use this mode.
- Verbose Mode. Multiple lines of information are displayed for each item, as shown in Figure 5 on page 9.

Panels that can be displayed in either mode display the commands that allow you to switch between modes.

```
 CustomPac ----------- Sample Panel Display MODE(VE) --------  ROW&cont;
 1 TO 3 OF 99
 COMMAND ==>                                                  SC&cont;
ROLL ==> PAGE

 Primary Commands:(? SET Locate Find Next Previous SORT TErse) 1
 Line Commands:(Browse Delete Edit Select) 2

 S Order ID  Pack SREL  CUSTomer STatus
                        CTRY    CONTACT
3
 - --------  ---- ----  ----------------------------------------&cont;
--  --------
   MD010059  SERV Z038  EELLS ARCHITECTURAL DESIGN               &cont;
    INSTALLED
                        C724    J. Eells
                        Updated ON  2002/01/01  By  EELLS
 - --------  ---- ----  ----------------------------------------&cont;
--  --------
   MD010069  SERV C150  WALLE BUILDING AND SUPPLY CO.            &cont;
    RECEIVED
                        C616    M. Walle
                        Updated ON  2002/02/27  By  MWALLE
 - --------  ---- ----  ----------------------------------------&cont;
--  --------
   MD010023  SERV Z038  T. HOOD USABILITY, INC.                  &cont;
    INSTALLED
                        C001    T. Hood
                        Updated ON  2002/03/29  By  TLHOOD
 - --------  ---- ----  ----------------------------------------&cont;
--  --------
```

Figure 5. Panel displayed in verbose format

Figure 4 on page 9 and Figure 5 on page 9 show the three significant areas of a panel display:

- 1 → Primary commands
- 2 → Line commands
- 3 → Display areas (column headings and synonyms, and data).

Each of these areas is described in the sections that follow.

Primary commands

Primary commands appear on the dialog panels in area 1. There are several common primary commands that you can use for most panels. Not all commands, however, are available for every panel. Primary

commands that are valid for a particular panel are listed in the panel. See Appendix A, “Primary command reference,” on page 175 for a complete description of the primary commands.

?
Invokes the help facility, if available, for the current panel. See “Help facility” on page 10 and “HELP” on page 192 for more information.

FIND
Searches the field specified on the SET command for a specified character string. If a match is found, the panel entry that contains the character string is displayed at the top of the scrollable area. See “FIND” on page 190 for a complete description of the FIND command.

LOCATE
Searches the field specified on the SET command for a character string that satisfies a specified search argument. If a match is located, the panel entry that contains the character string is displayed at the top of the scrollable area. See “LOCATE” on page 193 for a complete description of the LOCATE command.

NEXT
This command repeats the last FIND or LOCATE command, searching forward. See “NEXT” on page 195 for a complete description of the NEXT command.

PREVIOUS
This command repeats the last FIND or LOCATE command, searching backward. See “PREVIOUS” on page 198 for a complete description of the PREVIOUS command.

SET
Specifies the field to be acted on by the FIND and LOCATE primary commands. See “SET” on page 199 for a complete description of the SET command.

SORT
For panels with sortable fields, the SORT command specifies the field by which the display should be sorted and, optionally, whether the sorted field should be displayed in ascending or descending order. See “SORT” on page 200 for a complete description of the SORT command.

TERSE
The TERSE command displays the panel with only one line of information for each item. See “TERSE” on page 201 for a complete description of the TERSE command.

VERBOSE
The VERBOSE command displays the panel with multiple lines of information for each item. See “VERBOSE” on page 202 for a complete description of the VERBOSE command.

Line commands

Line commands (shown in area 2) are specific to the panel being displayed. Enter line commands in the S (selection) column in area 3.

Some panels that display lists allow you to use the following line commands: B (browse), S (select), E (edit), I (insert) and D (delete). The effect of each command is generally consistent throughout the dialog, but can vary for some panels. For example, B means "browse" on most panels, with the exception of some panels in which it means "Back-up". When a command variation exists for a particular panel, this variation is documented.

In Figure 4 on page 9 and Figure 5 on page 9, the column for entering line commands is indicated by 3. For panels that do not allow line commands, as in "output only" displays, this column is omitted.

Help facility

Many of the dialog panels have a help facility. When you invoke help, you can "scroll" through information. You can set a PF key to ‘HELP’ or ‘?’. Or, you can simply enter HELP or ? at any time to invoke the help facility.

Diagnostic messages

For descriptions of messages that can be displayed during error conditions, see Appendix B, “Diagnostic messages,” on page 203.

Chapter 2. Installing and starting the dialog

If you are installing a ServerPac for the first time, you must install the installation dialog on your system; see “Installing the dialogs” on page 15. For subsequent orders, you might need to update the dialogs prior to receiving your order, see “Updating your dialogs” on page 14.

Restriction: If your Dialog is not at level 27.20.00 or later, you must update the dialog before receiving your order. To determine whether you must update the dialog, start the dialog and look at the first panel {CPPPPOLI}. If it does not contain a level number of 27.20.00 or later in the upper right corner, you must update your dialogs. See “Updating your dialogs” on page 14.

Summary of tasks

Installing and starting the installation dialog involves the following activities:

1. Plan for where the dialog data sets are to be loaded and cataloged. See “Allocating and cataloging the dialog data sets” on page 13.
2. If you are installing the dialogs for the first time:
   a. For DVD orders:
      i) Copy the LOADRIM job to your driving system's DASD. See “Installing the dialogs” on page 15.
      ii) Run the LOADRIM job to load the dialog data sets onto the driving system's DASD.

      Note:

      a) For DVD orders only: See the README.PDF file for more information about downloading the LOADRIM job from DVD.
   b. For orders from a server:
      i) Copy or download the LOADRIMS or LOADRIMH job to your driving system's DASD. See “Installing the dialogs” on page 15.
      ii) Run the LOADRIMS or LOADRIMH job to download and create the dialog data sets on your driving system's DASD.
3. If you are updating your dialogs:
   a. For DVD orders:
      i) Copy the UPDATE job to your driving system's DASD. See “Updating your dialogs” on page 14.
      ii) Run the UPDATE job to update the dialog data sets on your driving system's DASD.
   b. For orders from a server:
      i) Download the EUPDATES or EUPDATEH job to your driving system's DASD. See “Updating your dialogs” on page 14.
      ii) Run the EUPDATES or EUPDATEH job to download and update the dialog data sets on your driving system's DASD.
4. Select a method of invoking the dialog. See “Starting the dialog” on page 16.

This chapter describes these activities, and includes sample jobs for your use.

Allocating and cataloging the dialog data sets

You use the dialog to create the jobs for installing your order. For a z/OS order, you run many of these jobs on your driving system, and the rest on your new target system. For a subsystem order, all jobs are run on the driving system.

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After IPLing the target system, you can use the dialog on that system to determine which job to submit next, and to display the results of each job.

You will find it much easier to access the dialog from the target system if the data sets you create for the dialog (the master dialog data sets) are cataloged in a user catalog and reside on a volume that is accessible to both the driving system and the target system. Use a unique high-level qualifier for the data sets, so that alias entries in the driving system and target system master catalogs can refer to the user catalog.

Catalog the following data sets in a user catalog. We suggest that 'Qualifier' be MASTER to distinguish the master dialogs from the order dialogs:

- *CustomPac.Qualifier*.SCPPLOAD - Load Modules
- *CustomPac.Qualifier*.SCPPCENU - Clist/Rexx execs
- *CustomPac.Qualifier*.SCPPEENU - CustomPac messages - VSAM
- *CustomPac.Qualifier*.SCPPHENU - CustomPac dialog help - VSAM
- *CustomPac.Qualifier*.SCPPMENU - messages
- *CustomPac.Qualifier*.SCPPPENU - panels
- *CustomPac.Qualifier*.SCPPSENU - skeletons
- *CustomPac.Qualifier*.SCPPTENU - tables
- *CustomPac.Qualifier*.SCPPVENU - order inventory - VSAM

If the dialog's data sets are to be SMS-managed, assign them to a management class (MGMTCLAS) that does not allow the dialog data sets to be migrated unless the SMS and DFSMShsm environments will be shared between the driving system and target system.

When allocating the dialog data sets, do not convert them to PDSE format. In addition to the SCPP*n*ENU data sets, the following dialog data sets must remain in their original formats (PDS or PS):

Table 1. Dialog data sets and their original formats

Dialog data set	**Required format**
userid.CPPTEMPx.SCPPWORK	PS (physical sequential)
hlq.orderid.LOG	PS (physical sequential)
hlq.orderid.REPORT(MERGE)	PDS (partitioned data set)

The final steps for porting the dialog to the target system are described in *ServerPac: Installing Your Order*, in the chapter that describes how to IPL the target system.

Updating your dialogs

The CustomPac Installation Dialog must be at a level of 27.20.00 or higher. To determine whether your dialog is at the correct level, look for the dialog level number in the upper right-hand corner of panel CPPPPOLI, the first panel displayed when the dialog starts.

For DVD orders, see “Copying the UPDATE job from DVD” on page 14.

For orders from a server, see “Copying the EUPDATES or EUPDATEH job from a server” on page 15.

Copying the UPDATE job from DVD

For orders delivered on a DVD, IBM provides the UPDATE job as a file on the DVD.

1. Copy the UPDATE job to a workstation from the first DVD. Then, copy the UPDATE job to your driving system.

   _____

2. Before using the UPDATE job to update your master dialog data sets, you must allocate and mount a UNIX file system to contain the destination directory and its files and customize the job. Replace the JOB statement with a JOB statement that is valid for your installation and supply values for the following options:

   SET PATH
   Specify the path for the directory in which the CustomPac dialog and order information will be stored.

   CustomPac Qualifier
   The high-level qualifier of your master dialog data sets.

   volser
   The volume serial number of the DASD volume to be used to allocate the master dialog data sets.

   _____

3. Run the UPDATE job.

   _____

Copying the EUPDATES or EUPDATEH job from a server

To update the dialogs on your driving system, you must first copy the EUPDATES or EUPDATEH job from a server:

1. Click the link for the EUPDATES or EUPDATEH job on the Shopz download page and copy the file to your workstation. Then copy the EUPDATES or EUPDATEH job to your driving system.

   _____

2. Before using the EUPDATES or EUPDATEH job to update your master dialog data sets, you must allocate and mount a UNIX file system to contain the destination directory and its files, and then customize the job. Replace the JOB statement with a JOB statement that is valid for your installation and supply values for the following:

   PATH
   Specify the path for the directory in which the CustomPac dialog and order information will be stored.

   CustomPac.Qualifier
   The high-level qualifier of your master dialog data sets.

   volser
   The volume serial number of the DASD volume to be used to allocate the master dialog data sets.

   _____

3. Run the EUPDATES or EUPDATEH job.

   _____

Installing the dialogs

To install the dialogs on your driving system for the first time, you must first copy the LOADRIM job to your driving system. Then, use LOADRIM to load the rest of the dialog data sets onto your driving system's DASD.

Copying the LOADRIMS or EUPDATES job from a server

For orders downloaded from a server, IBM provides the LOADRIMS or LOADRIMH job as a file on the server.

1. Click the link for the LOADRIMS or LOADRIMH job on the Shopz download page and copy the file to your workstation. Then copy the LOADRIMS or LOADRIMH job to your driving system.

   _____

2. Before using the LOADRIMS or LOADRIMH job to allocate and load your master dialog data sets, you must allocate and mount a UNIX file system to contain the destination directory and its files, and then customize the job. Replace the JOB statement with a JOB statement that is valid for your installation and supply values for the following options:

   PATH
   Specify the path for the directory in which the CustomPac dialog and order information will be stored.

   CustomPac.Qualifier
   The high-level qualifier of your master dialog data sets.

   volser
   The volume serial number of the DASD volume to be used to allocate the master dialog data sets.

   _____

3. Run the LOADRIMS or LOADRIMH job.

   _____

Copying the LOADRIM job from a DVD

For orders delivered on a DVD, IBM provides the LOADRIM job as a file on the DVD.

1. Copy the LOADRIM job to a workstation from the first DVD. Copy the LOADRIM job then to your driving system.
2. Before using the LOADRIM job to allocate and load your master dialog data sets you must allocate and mount a UNIX file system to contain the destination directory and its files, and customize the job. Replace the JOB statement with a JOB statement that is valid for your installation and supply values for the following options:

   SET PATH
   Specify the path for the directory in which the CustomPac dialog and order information will be stored.

   CustomPac Qualifier
   The high-level qualifier of your master dialog data sets.

   volser
   The volume serial number of the DASD volume to be used to allocate the master dialog data sets.

   _____

3. Run the LOADRIM job.

   _____

Starting the dialog

After you have installed the installation dialog, you can start it in any of the following ways:

- “Option 1: Use a CLIST with LIBDEF statements” on page 17
- “Option 2: Start the dialog from the ISPF primary option menu” on page 18

Using the dialog in split screen mode: You can use ISPF's split screen mode to run other applications while using the dialog, but the dialog does not support being used in more than one logical session at a time.

Ensuring a sufficient region size: The dialog requires a minimum region size of 9 megabytes (MB). When you log on to TSO/E to use the dialog, ensure that the TSO/E logon panel specifies a value of 9000 or greater in the size field, as shown in the example in Figure 6 on page 17.

```
 ------------------------------ TSO/E LOGON ------------------------------

Enter LOGON parameters below:                   RACF LOGON parameter

Userid    ==> IBMUSER

Password  ==>                                 New Password  ===>

Procedure ==> IKJACCNT                        Group Ident   ===>

Acct Nmbr ==>

Size      ==> 9000

Perform   ==>

Command   ==>
Enter an 'S' before each option desired below:
        -Nomail         -Nonotice      S -Reconnect       -OIDcard

PF1/PF13 ==>Help   PF3/PF15 ==>Logoff   PA1 ==>Attention   PA2 ==>Reshow
You may request specific help information by entering a '?' in any entry field
```

Figure 6. Panel: TSO/E logon

If this much private area storage is not available below 16 MB, log on with a region size greater than 16 MB (for example, SIZE = 17000). Doing so causes the system to use private area storage above 16 MB.

Allowing for the allocation of additional data sets: When allocating additional data sets to a TSO/E session using CLISTs or LIBDEFs, ensure that you have a sufficiently high value specified for the DYNAMNBR parameter on the EXEC statement in your logon proc. DYNAMNBR defines the number of data sets that can be dynamically allocated at the same time. If this value is too low, the data set allocations will fail. For more information about using DYNAMNBR with logon procs, see the following documentation:

- *z/OS TSO/E Customization*
- *z/OS MVS JCL User's Guide*
- *z/OS MVS JCL Reference*

Ensure that your ISPPROF data set has sufficient available space: Because the dialog copies some of the SCPPSENU data set members into your ISPPROF data set, ensure that the ISPPROF data set has at least approximately 30 tracks of available space.

Ensure that SCEERUN is in the program search order: When you allocate the dialog's data sets to use the dialog, ensure that the SCEERUN data set is placed in the program search order that the system uses for you. If the SCEERUN data set is not in the link list, add it to the following concatenations:

- STEPLIB concatenation in your logon proc, ahead of any other libraries that contain PL/I runtime modules (such as PLI.PLIBASE or PLI.PLITASK)
- The JOBLIB concatenation used in installation jobs that use a JOBLIB concatenation ahead of any other libraries that contain PL/I run-time modules (such as PLI.PLIBASE or PLI.PLITASK)
- STEPLIB concatenations used in installation jobs that do not use a JOBLIB concatenation ahead of any other libraries that contain PL/I run-time modules (such as PLI.PLIBASE or PLI.PLITASK).

Option 1: Use a CLIST with LIBDEF statements

Copy and modify the sample member CPPCSAMP in data set SCPPCENU, as shown in Figure 7 on page 18.

Run the CLIST under TSO/E Option 6, as in the following example:

```
exec 'OBRIEN.MASTER.SCPPCENU(CPPCSAMP)'
```

```
PROC 0 DEBUG
  /*-------------------------------------------------------------------*/
  /* SAMPLE CLIST TO SETUP ENVIRONMENT AND START CPAC DIALOG           */
  /*                                                                   */
  /* NOTE: Change  CustomPac.Qualifier to your environment            */
  /*-------------------------------------------------------------------*/

  IF &DEBUG = DEBUG THEN CONTROL  MSG LIST CONLIST SYMLIST FLUSH
                    ELSE CONTROL  NOMSG

  ATTN LOGOFF               /* IF ATTENTION INTERRUPT OCCURS   */
                            /* THEN LOGOFF                     */

  /*-----------------------------------------------------------*/
  /* ALLOCATE (CPP) APPLICATION LIBRARIES                      */
  /*-----------------------------------------------------------*/

  ISPEXEC CONTROL ERRORS CANCEL  /* ERROR MODE IS SET          */
                                 /* DIALOG TERMINATE ON  ERROR */

  ALTLIB ACTIVATE APPLICATION (CLIST) +
         DATASET('CustomPac.Qualifier.SCPPCENU') UNCOND
  SET &ALTLIBRC = &LASTCC;

  IF  &ALTLIBRC NE 0 THEN +
     WRITE &SYSICMD: ALTLIB(ACTIVATE) RC = &ALTLIBRC;
  ELSE DO
     ISPEXEC LIBDEF ISPMLIB DATASET ID('CustomPac.Qualifier.SCPPMENU')
     ISPEXEC LIBDEF ISPPLIB DATASET ID('CustomPac.Qualifier.SCPPPENU')
     ISPEXEC LIBDEF ISPSLIB DATASET ID('CustomPac.Qualifier.SCPPSENU')
     ISPEXEC LIBDEF ISPTLIB DATASET ID('CustomPac.Qualifier.SCPPTENU')
     ISPEXEC LIBDEF ISPLLIB DATASET ID('CustomPac.Qualifier.SCPPLOAD')

     /*-----------------------------------------------------------*/
     /* START CPAC DIALOG                                         */
     /*-----------------------------------------------------------*/

     ISPEXEC SELECT CMD(%CPPCISPF CustomPac.Qualifier)
                           NEWAPPL(CPP) PASSLIB

     /*-----------------------------------------------------------*/
     /* CLEANUP                                                   */
     /*-----------------------------------------------------------*/

     ISPEXEC LIBDEF ISPMLIB
     ISPEXEC LIBDEF ISPPLIB
     ISPEXEC LIBDEF ISPSLIB
     ISPEXEC LIBDEF ISPTLIB
     ISPEXEC LIBDEF ISPLLIB

     ALTLIB DEACTIVATE APPLICATION(CLIST)
     SET &ALTLIBRC = &LASTCC;
     IF  &ALTLIBRC NE 0 THEN +
        WRITE &SYSICMD: ALTLIB(DEACTIVATE) RC = &ALTLIBRC;
  END

  EXIT CODE(0)
```

Figure 7. Starting the dialog: Using a CLIST with LIBDEF statements

Option 2: Start the dialog from the ISPF primary option menu

To start the dialog from the ISPF primary option menu, modify and copy the CPPCSAMP CLIST from the SCPPCENU data set into a data set that is available in your SYSPROC concatenation. Follow the instructions in “Option 1: Use a CLIST with LIBDEF statements” on page 17 to modify CPPCSAMP. Then, modify an existing ISPF selection panel (for example, ISR@PRIM) to include the following lines:

```
        )BODY

             C  CustomPac - Manage and Install CustomPac Orders

        )PROC

             &ZSEL = TRANS(&ZCMD,;
                           .....
                           .....
             C,'CMD(%CPPCSAMP)'
                           .....)
```

Chapter 3. Receiving a new order

This section describes the steps when receiving new orders.

Required migration step

If you are using a dialog whose package version is less than 27.20.00, you must migrate the dialog to level 27.20.00 or later. To determine whether your dialog is at the correct level, look for the dialog level number in the upper right-hand area of panel CPPPPOLI, the first panel displayed when the dialog starts.

There is a default jobcard containing the LINES parameter supplied with dialog level 27.20.00. If you want to use the default jobcard, ensure CPP@JOB member is not present in your userid.ISPF.ISPPROF data set before starting the installation dialog. However, if you want to use your existing jobcard for RECEIVE and installation jobs, then it is not required to remove CPP@JOB member from userid.ISPF.ISPPROF data set before starting the installation dialog.

Beginning the receive process

To begin receiving the order, select option R from the Main Installation panel (Figure 8 on page 19) and press Enter.

```
CPPPPOLI  --------------------- IBM Corporation  --------------------- 27.20.00
OPTION ==> R

                     CustomPac Order Management Menu


     R   RECEIVE      - Receive an Order

     I   INSTALL      - Install an Order

         Order Number ==>          (Leave blank to list uninstalled orders)

     D   DISPLAY      - Select Orders to Display

     Master dialog data set qualifiers: CPAC.MASTER

              This dialog supports secure Internet delivery.

         ************************************************************
         * 5751-CS4, 5751-CS5, 5751-CS6, 5751-CS7 and 5751-CS9  *
         * Copyright IBM Corp.  1988, 2016                      *
         ************************************************************
```

Figure 8. Panel: Main installation

The dialog displays the Receive an Order panel (Figure 9 on page 20) for you to enter information about the order.

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```
CPPP610A  --------------------- Receive an Order -------------------------------
COMMAND ==>

   Receive the order from ==>      F - File system
                                   S - Server

   Order Number           ==> MD053718

  ----------------- Order Dialog Data Set Allocation Information --------------

   Data Set Qualifiers ==> STOB4.MD053718                     (Must be unique)

   Volume Serial       ==> R12345    (Blank for SMS-managed data sets)
      - or -
   STORCLAS         ==>            (Blank for non-SMS-managed data sets)
   Specify a data class for SMS or non-SMS managed data sets (optional).
   DATACLAS                ==> LARGEPDS
   Specify a management class for only SMS managed data sets (optional).
   MGMTCLAS                ==>
   Dialog CLIST Record Format ==> FB  (FB or VB)

                  Press Enter to continue or End to cancel
```

Figure 9. Panel: Receive an order

In the Receive an Order panel, fill in the fields as listed below:

Receive the order from

Enter either S for Server or F for File System to specify where the ServerPac order resides. Server indicates that the ServerPac order is to be received from a server. File System indicates that you used the Store and Forward download method (download to workstation) and then uploaded the order to the host Download Filesystem outside the Dialog. The RECEIVE job generated by this option will retrieve the order directly from the Filesystem and not attempt a download. For DVD orders, you can choose either F or S. If you have set up a server such that the source directory points to the workstation directory where the order is copied, choose S; otherwise, enter F.

There are three methods to upload the DVD files to the z/OS host system, including:

- Configure your workstation as a server. You can then use the CustomPac Installation Dialog to receive the package from your workstation as an intermediate node. In this case you are first required to copy DVD order content to your workstation.
- Transfer the files from the workstation to the z/OS host, using FTP from your workstation. In this case you are first required to copy DVD order content to your workstation.
- Transfer the files from the DVD to the z/OS host, using FTP from your workstation. In this case you are not required to copy DVD order content to your workstation.

Order number

Enter your order number, as it was supplied by IBM (two alphabetic characters followed by six numerics). In Figure 9 on page 20, for example, the order number is MD053718.

To find your order number:

- For internet orders, check the title page of *ServerPac: Installing Your Order* file ("Server: Installing Your Dialog" link) or Dialog Data file (“Required information for ServerPac Dialog” link) provided on the Shopz download pages.
- For DVD orders, check the title page of *ServerPac: Installing Your Order* (IYO.pdf file on the first DVD) or look at file “Required information for ServerPac Dialog” (DIALOG.txt file on the first DVD).

Data set qualifiers

Enter the high-level qualifier (without quotation marks) that you plan to use to allocate the order libraries.

IBM recommends that you include your order number as part of the qualifier to ensure that it is unique. For example, if your order is MD053718, you can specify Data Set Qualifiers ==> STOB4.MD053718.

Do not use the *CustomPac.Qualifier*.

Consider placing all of the order's data sets on the same volume as the master dialog data sets to make it easier to port the dialog to the target system. For more information, see “Allocating and cataloging the dialog data sets” on page 13.

Volume serial or STORCLAS
Enter the serial number of the DASD volume that will receive the order data sets or a valid storage class (for SMS managed data sets) to be used to allocate the data sets.

DATACLAS
Enter a valid data class (for SMS or non-SMS managed data sets) to be used to allocate the data sets. This is an optional field.

MGMTCLAS
Enter a valid management class (for SMS managed data sets) to be used to allocate the data sets. This is an optional field.

Dialog CLIST record format
Enter VB if you want to use the variable-block versions of the dialog's CLISTs, which are supplied in the order in both FB and VB formats. FB is the initial default, but any value specified here is saved in the user's profile (ISPPROF) data set when the Enter key is pressed and becomes the new default value.

When you press Enter, the next panel displayed will be either the:

Download server information panel (Figure 11 on page 22)
if Server is specified to receive the order,

Receive an order from the file system panel (Figure 10 on page 22)
if File system is specified to receive the order.

Receiving an order from the file system

If you select the File System option on the **Receive an order** panel, the dialog displays the R**eceive an Order From the File System** panel (Figure 10 on page 22) for you to enter the information needed to load the order's data sets from the file system. This option is used when you have used the Store and Forward download method (download to workstation) and then uploaded the order to the host Download File system outside the Dialog. The RECEIVE job generated by this option retrieves the order directly from the file system and doesn't attempt a download. When using the option to receive an order electronically from a file system you need to make the electronic images local to the host (driving system). The ServerPac installation expects the new directory names be in the format (content and order in lowercase):

```
/<ordernum>.order
/<ordernum>.content
```

Where *ordernum* is the order number obtained from the *ServerPac: Installing Your Order* file ("Server: Installing Your Dialog" link) or Dialog Data file (“Required information for ServerPac Dialog” link) provided on the Shopz download pages.

```
CPPP610G------------ Receive an Order From the File system ------------------
COMMAND ==>


Target Directory ==> /service/very/big/omvs/filesystem/for/eserverpac/zosv1r6/v2









                    Press Enter to continue or End to cancel
```

Figure 10. Panel: Receive an order from the file system

In the **Receive an Order from the File System** panel, fill the field as listed:

Target directory
Enter the path name of the directory to which the order has been stored locally on your host system.

Press Enter. The **Edit JOB Statement** panel (Figure 22 on page 31) will be displayed.

Receiving an order from a server

If you select the S erver option on the **Receive an Order** panel, the dialog displays the **Download Server Information** panel (Figure 11 on page 22) for you to enter the information that is needed to load the order's data sets from the server.

```
CPPP610B  ------------------ Download Server Information -----------------------
COMMAND ==>

 Enter either the Server's Name or Address below:

 ==>



 Source
 Directory  ==> /ibm/server

 User ID    ==> Userid

 Password   ==> Password

 Hash Value ==> 12345678901234567890123456789012345678901 (40 Characters)


                    Press Enter to continue or End to cancel
```

Figure 11. Panel: Download server information

In the **Download Server Information** panel, complete the fields as described in the following list.

Server's name or address
Enter the name or address of the server from which the order is to be downloaded. This value is required.

The server might be an IBM server or it might be an intermediate server to which the order was transferred from an IBM server.

Note: Standard FTP (FTP) will no longer be available as a download method option on the **Specify Download Method** panel (Figure 13 on page 25) if the name or address entered is for an IBM server.

Source directory
Enter the name of the directory on the server that contains the order. This value is required.

User ID
Enter a valid user ID to be used to log on to the server. This value is required.

Password
Enter the password for the user ID. This value is required.

Hash value
Enter the hash value to be used for this download. This value is required.

If an intermediate server is used, the hash value must be the same as the one used for transferring the order from the IBM server.

Note: When downloading from an IBM server, it is expected that most users will copy and paste most or all of the data to be entered on this panel from the Dialog Data file provided on the Shopz download page. Data that is entered on this panel is case-sensitive.

Press Enter. The **Download file system information** panel (Figure 12 on page 23) is displayed.

```
CPPP610C  --------------- Download File System Information ---------------------
COMMAND ==>


Target Directory ==> /service/very/big/omvs/filesystem/for/eserverpac/zosv1r6/v2


Allocate a new file system data set ==> NO   (Yes or No)


-------------------------- New File System Data Set Information ----------------

 Data Set Name    ==> OMVS.ZOSV1R6.FILE.SYSTEM
 Mount Point      ==> /service/very/big/omvs/filesystem/for/eserverpac
 File System Type ==> ZFS       (HFS or zFS)
 Primary Space    ==> 500       (Minimum 500 cylinders)
 Secondary Space  ==>           (Secondary space recommended)
 Volume Serial    ==>           (Leave blank for SMS)
  - or -
 STORCLAS        ==> USSCLASS  (STORCLAS required for multivolume data set)

 Specify a data class for SMS or non-SMS managed data set (optional).
 DATACLAS         ==> LARGEZFS
 Specify a management class for only SMS managed data set (optional).
 MGMTCLAS         ==>
                   Press Enter to continue or End to cancel
```

Figure 12. Panel: Download file system information

In the **Download File System Information** panel, complete the following fields:

Target directory
Enter the path name of the target directory into which the order is to be downloaded. This value is required.

Allocate a new file system data set
Enter Yes to allocate a new file system data set or No to use an existing file system data set. This value is required.

If Yes is specified for Allocate a new file system data set, then complete the following fields:

Data set name
Specify a standard data set name for the file system data set.

Mount point
Specify the path name of the mount point for the file system data set.

File system type
Specify either HFS (for a hierarchical file system) or ZFS. ZFS is the default.

Primary space
You can find the order size in the Dialog Data file that is provided on the Shopz download page. This can be used in the algorithm to determine the space that is required in the file system. You can specify a primary space value of 500 to 99999 cylinders. The default is the minimum value, which is 500 cylinders.

Guideline: On a 3390 DASD, 1.4 cylinders are required for each MB (megabytes). On a 3380 DASD, 1.7 cylinders are required per MB. To assure adequate workspace, add 500 cylinders to the amount of the space calculated.

Note: On a 3390 DASD, an order that required 5 GB could be downloaded and processed using a file system that had: ((5000MB) * (1.4 cylinders/MB)) + 500 = 7500 cylinders.

Secondary space
Specify a secondary space value of 1 to 99999 cylinders, or leave blank if no secondary space is desired.

Guideline: Secondary space is recommended. Specifying space for this file system requires that you perform a calculation and estimate the size of the largest file requiring a workspace within the file system. There is opportunity for error in this calculation, and no way to know exactly how much workspace will be required. Your chances of success are much better if you specify secondary space.

Volume serial
For a non-SMS-managed data set, specify the volume serial for an online volume. For an SMS-managed data set, leave this field blank.

STORCLAS
For an SMS-managed data set, specify a valid storage class to be used to allocate the data set.

DATACLAS
For SMS or non-SMS managed data set, specify a valid data class to be used to allocate the data set. DATACLAS is an optional field.

MGMTCLAS
For an SMS-managed data set, specify a valid management class to be used to allocate the data set. MGMTCLAS is an optional field.

Note: If this panel was previously used to supply information, the fields on the panel are primed with information previously supplied for this order number (if any), the last input from this user ID (if any), or the most recent input available.

Press Enter. If an intermediate server name or address is specified on the **Download Server Information** panel (Figure 11 on page 22), then the **Specify Download Method** panel (Figure 13 on page 25) is displayed with Standard FTP (FTP) listed as a possible option. If an IBM download server name or address is specified on the **Download Server Information** panel (Figure 11 on page 22), then the **Specify Download Method** panel (Figure 14 on page 25) is displayed and Standard FTP (FTP) is not listed as a possible option.

```
CPPP610F  ------------------ Specify Download Method -------------------------
COMMAND ==>

  Specify the Download Method you will be using: Standard FTP (FTP),
  Secure FTP (FTPS), or HTTP Secure (HTTPS)
   ==> FTP    (FTP, FTPS, or
HTTPS)




               Press Enter to continue or End to cancel
```

Figure 13. Panel: Specify Download Method with FTP option

On the **Specify Download Method** panel, specify the download method that you will use. Answer FTP or FTPS or HTTPS to the question about the download method. If you specify FTP or FTPS and press Enter, the **Download Client Information** panel (Figure 15 on page 26) is displayed. If you specify HTTPS and press Enter, the Download Client Information panel (Figure 17 on page 28) is displayed.

```
CPPP610F  ------------------ Specify Download Method -------------------------
COMMAND ==>

  Specify the Download Method you will be using: Secure FTP (FTPS),
  or HTTP Secure (HTTPS)
   ==> FTPS    (FTPS, or HTTPS)




               Press Enter to continue or End to cancel
```

Figure 14. Panel: Specify Download Method without FTP option

On the **Specify Download Method** panel, specify the download method that you will use. Answer FTPS or HTTPS to the question about the download method. If you specify FTPS and press Enter, the **Download Client Information** panel (Figure 15 on page 26) is displayed. If you specify HTTPS and press Enter, the Download Client Information panel (Figure 17 on page 28) is displayed.

```
CPPP610D  ---------------- Download Client Information -----------------------
COMMAND ==>

 Do you need to enter commands to pass through a local FTP Firewall?
 (Yes or No)
 ==> NO

 Specify your Java home directory
 (for example: /usr/lpp/java/J7.0_64 or leave blank if you are using ICSF)
 ==> /usr/lpp/java/J7.0_64




 For further information, review the discussion of the CLIENT (SMPCLNT DD) data
 set in the SMP/E Commands manual.

          Press Enter to continue or End to cancel
```

Figure 15. Panel: Download Client Information

On the **Download Client Information** panel, you need to specify two pieces of information:

- Answer either YES or NO to the question about your need to enter commands to pass through a local firewall.

  If you specify NO (the default), you are indicating that no firewall commands are required by the server from which you plan to download your order.
- Indicate whether you are using ICSF or Java™ for encryption.

  If you are using ICSF, delete the sample Java directory information and leave this field blank.

  If you are using Java encryption, you need to specify your Java home directory on this line in the format shown.

If you specify YES to the Firewall question and press Enter, an ISPF Edit panel is displayed with a data set member containing skeleton firewall commands. Initially, this member appears as shown in Figure 16 on page 27. If you specify NO to the Firewall question, and you specified FTP as the download method on the **Specify Download** method panel (CPPP610F), then when you press Enter, the **Edit JOB Statement** panel (Figure 22 on page 31) is displayed. If you specified FTPS as the download method, then when you press Enter, the **Specify Secure FTP Options** panel (Figure 19 on page 29) is displayed.

```
CPPPEDIF  - PD001000 ---------------------------------------- COLUMNS 000 000
COMMAND ==>                                                  SCROLL ==> HALF
****** ***************************** Top of Data ******************************
000001 <!--  This section builds the SMPCLNT DD Card information          -->
000002 <!--                                                              -->
000003 <!--  Most FTP operations to the remote IBM Server pass through    -->
000004 <!--  a local firewall.  If so, then you must identify local       -->
000005 <!--  firewall information and commands below.                     -->
000006 <!--  When you have finished, press End to display and submit      -->
000007 <!--  the RECEIVE job.                                            -->
000008 <!--                                                              -->
000009 <!--  Or, use the CANCEL command to return to the prior panel.    -->
000010 <!--                                                              -->
000011 <!--  Notes: 1. All tags below are commented out.  Remove the      -->
000012 <!--            XML comment start and end tags to specify         -->
000013 <!--            firewall information.                             -->
000014 <!--         2. The tags here are defined by SMP/E.  For          -->
000015 <!--            information about them, see SMP/E Commands.       -->
000016 <!--         3. Do not include <CLIENT> tags in this data set.    -->
000017 <!--            They are built automatically by the dialog.       -->
000018 <!--                                                              -->
000019 <!--    <FIREWALL>                                                -->
000020 <!--      <SERVER                                                 -->
000021 <!--        host="host name|host ip address"                      -->
000022 <!--           user="userid"                                      -->
000023 <!--           pw="password"                                      -->
000024 <!--           port="port number"                                 -->
000025 <!--           account="account information">                    -->
000026 <!--      </SERVER>                                               -->
000027 <!--      <FIRECMD>                                               -->
000028 <!--        firewall specific commands                            -->
000029 <!--      </FIRECMD>                                              -->
000030 <!--    </FIREWALL>                                               -->
000031 <!--                                                              -->
*************************** Bottom of Data ***********************************
```

Figure 16. Panel: CPPPEDIF panel with firewall commands

Edit this member to supply the needed firewall information and to remove the comment tags (<!— and –>) from around the SMP/E tags. When you save the member and end the editing operation (with either the END Command or the END key), any changes you made are saved for future use. After ending the Edit session, the **Edit JOB Statement** panel (Figure 22 on page 31) is displayed if you entered a download method of FTP on the previous **Specify Download Method** panel or the **Specify Secure FTP Option**s panel Figure 19 on page 29) is displayed if you entered a download method of FTPS on the previous **Specify Download Method** panel.

Tip: If you get here by accident, you do not need to back up. Press the END key to save the commented-out firewall commands and continue.

```
CPPP610D  ---------------- Download Client Information -----------------------
COMMAND ==>

 Do you need to enter commands to pass through a HTTP or SOCKS Proxy Server?
 (Yes or No)
 ==>

 Specify your Java home directory (required)
 (for example: /usr/lpp/java/J7.0_64)
 ==>

 Specify the security manager keyring or CERTAUTH virtual keyring or keyword
 javatruststore (required)
 (ex: host_userid/ShareableKeyRing or *AUTH*/* or javatruststore)
 ==>

 For further information, review the discussion of the CLIENT (SMPCLNT DD) data
 set in the SMP/E Commands manual.

          Press Enter to continue or End to cancel
```

Figure 17. Panel: Download client information

- Answer either YES or NO to the question about your need to enter commands to pass through an HTTP or SOCKS Proxy Server.

  If you specify NO, you are indicating that no HTTP or SOCKS Proxy Server commands are required.
- Specify your Java home directory in the format shown. This field is required.
- Specify the security manager key ring or CERTAUTH virtual key ring or keyword javatruststore. It is a required field.

  If you specify YES to the HTTP or SOCKS Proxy Server question and press Enter, an ISPF Edit panel is displayed with a data set member that contains skeleton HTTP or SOCKS Proxy Server commands. Initially, this member appears as shown in Figure 18 on page 29.

  If you specify NO to the HTTP or SOCKS Proxy Server question and press Enter, the **Edit JOB Statement** panel (Figure 22 on page 31) is displayed.

```
CPPPEDIF  - ZD001011---------------------------------------- COLUMNS 000 000
COMMAND ==>                                                 SCROLL ==> CSR
****** ***************************** Top of Data ******************************
000001 <-- This section builds the SMPCLNT DD input.                        -->
000002 <--                                                                  -->
000003 <-- Most HTTPS operations to the remote IBM Server pass through an    -->
000004 <-- HTTP or SOCKS Proxy Server. If so, then you must identify HTTP or -->
000005 <-- SOCKS Proxy Server information and commands below. When you have  -->
000006 <-- finished, press End to display and submit the RECEIVE job.        -->
000007 <--                                                                  -->
000008 <-- Or, use the CANCEL command to return to the prior panel.         -->
000009 <--                                                                  -->
000010 <-- Notes:                                                           -->
000011 <-- 1. All tags below are commented out. Remove the XML comment start -->
000012 <-- and end tags to specify HTTP or SOCKS Proxy Server information.   -->
000013 <-- 2. The tags here are defined by SMP/E. For                        -->
000014 <-- information about them, see SMP/E Commands.                       -->
000015 <-- 3. Do not include <CLIENT> tags in this data set.                 -->
000016 <-- They are built automatically by the dialog.                       -->
000017 <--                                                                  -->
000018 <-- <HTTPPROXY                                                       -->
000019 <-- host="host name|host ip address"                                 -->
000020 <-- user="userid"                                                    -->
000021 <-- pw="password"                                                    -->
000022 <-- port="port number">                                              -->
000023 <-- </HTTPPROXY>                                                    -->
000024 <-- <HTTPSOCKSPROXY                                                  -->
000025 <-- host="host name|host ip address"                                 -->
000026 <-- user="userid"                                                    -->
000027 <-- pw="password"                                                    -->
000028 <-- port="port number">                                              -->
000029 <-- </HTTPSOCKSPROXY>                                               -->
000030 <--                                                                  -->
****** **************************** Bottom of Data ****************************
```

Figure 18. Panel: CPPPEDIF panel with HTTP or SOCKS proxy server statements

Edit this member to supply the needed HTTP or SOCKS Proxy Server information and to remove the comment tags (<-- and -->) from around the SMP/E tags. When you save the member and end the editing operation (with either the END Command or the END key), any changes you made are saved for future use. After the Edit session is ended, the **Edit JOB Statement** panel (Figure 22 on page 31) is displayed

```
CPPP610S  ---------------- Specify Secure FTP Options -------------------------
COMMAND ==>

Will you be using an Existing FTP.DATA File? (Yes or No)
 ==>









          Press Enter to continue or End to
cancel
```

Figure 19. Panel: Specify secure FTP options

Answer either YES or NO to the question about using an Existing FTP.DATA File. If you specify NO, when you press Enter, an ISPF Edit panel is displayed with a data set member containing skeleton secure FTP commands. Initially, this member appears as shown in Figure 20 on page 30).

```
CPPPEDIF  - PD001847 ---------------------------------------- COLUMNS 000 000
COMMAND ==>                                                  SCROLL ==> CSR
****** ***************************** Top of Data ******************************
000001   ; These FTP.DATA statements provide the FTP client with information
000002   ; to communicate with the IBM download server using TLS 1.2 or higher.
000003   ; Change values or add new lines based on your system set up.
000004   SECURE_MECHANISM  TLS
000005   TLSRFCLEVEL       RFC4217
000006   TLSMECHANISM      ATTLS    ; Connect at TLS 1.2 or
higher.
000007   SECURE_FTP        REQUIRED
000008   SECURE_CTRLCONN   CLEAR    ; Commands may be clear (unencrypted).
000009   SECURE_DATACONN   PRIVATE  ; Payload must be encrypted.
000010   EPSV4             TRUE
****** **************************** Bottom of Data ****************************
```

Figure 20. Panel: CPPPEDIF panel with secure FTP commands

Edit this member to supply the needed secure FTP commands. When you save the member and end the editing operation (with either the END command or the END key), any changes you made are saved for use in the RECEIVE job and the **Edit JOB Statement** panel (Figure 22 on page 31) is displayed. If you specify YES to the using Existing FTP.DATA File question, when you press Enter, fields are displayed as shown in Figure 21 on page 30, to specify the z/OS UNIX file name or a data set name for the FTP.DATA file that will be used in the RECEIVE job.

```
CPPP610S  ---------------- Specify Secure FTP Options -------------------------
 COMMAND ==>

 Will you be using an Existing FTP.DATA File? (Yes or No)
  ==> YES


 Specify the z/OS UNIX file name OR data set name for the FTP.DATA file
 (for example: /user/ftp/userid.ftp.data OR USERID.FTP.DATA).
 File Name     ==>
   - or -
 Data set name
==>

           Press Enter to continue or End to
cancel
```

Figure 21. Panel: Specify secure FTP options

You must enter a file name or a data set name but not both for the case when YES is specified for the Existing FTP.DATA File question.

After specifying either a file name or a data set name for the Existing FTP.DATA File, when you press Enter, the **Edit JOB Statement** panel (Figure 22 on page 31) is displayed.

Note: If you choose to use Secure FTP to download your order, the RECEIVE job is generated with only `-f` parameter. You can edit the generated JCL to add any other FTP parameters as required by your system settings.

Generating the RECEIVE job

```
CPPP6103  -------------------- Edit JOB Statement -----------------------------
COMMAND ==>



    Press Enter to edit the JOB statement.  The information you enter here
    creates the JOB statement that is used to generate the RECEIVE job,
    and used later for the installation jobs.   (If you want to change the
    JOB statement before generating the installation jobs, you will be
    able to change it later by selecting "DEFAULT JOBCARD.")









                    Press Enter to continue or End to cancel
```

Figure 22. Panel: Edit JOB statement

Press Enter. An ISPF Edit panel is displayed with a data set member containing a skeleton JOB statement. Initially, this member appears as shown in Figure 23 on page 31.

```
CPPPEDIF  - MD053718 ---------------------------------------- COLUMNS 000 000
COMMAND ==>                                                  SCROLL ==> HALF
****** ***************************** Top of Data ******************************
000001 //JOBNAME  JOB 'ACCOUNTING INFO','PROGRAMMER NAME',
000002 //         CLASS=A,
000003 //         MSGCLASS=H,
000004 //         MSGLEVEL=(1,1),
000005 //         NOTIFY=&SYSUID.,
000006 //         USER=&SYSUID.,
000007 //         TIME=NOLIMIT,
000008 //         LINES=(999999,WARNING),
000009 //         REGION=0M
000010 //*
000011 //*  MODIFY THE JOB STATEMENT ABOVE AS REQUIRED FOR YOUR INSTALLATION'S
000012 //*  REQUIREMENTS.  PRESS END TO CONTINUE OR ENTER CANCEL TO CANCEL.
000013 //*
*************************** Bottom of Data ***********************************
```

Figure 23. Panel: CPPPEDIF panel with JOB statement

Modify the JOB statement as required and press PF3. The Edit RECEIVE Job panel (Figure 24 on page 32) is displayed.

```
CPPP610E  --------------------- Edit RECEIVE Job ----------------------
COMMAND ==>



                Press Enter to edit and submit the RECEIVE job.
                After making any needed changes, submit the job.

                (Note: A copy of the job will be saved in the
                SCPPBENU data set.)









                   Press Enter to continue or End to cancel
```

Figure 24. Panel: Edit RECEIVE job

Press Enter. An ISPF Edit panel is displayed with a data set member containing the generated RECEIVE job. Initially, this member appears as shown in Figure 25 on page 32.

```
CPPPEDIF  - MD053718 ---------------------------------------- COLUMNS 000 000
COMMAND ==>                                                  SCROLL ==> HALF
****** ***************************** Top of Data ******************************
000001 //JOBNAME  JOB 'ACCOUNTING INFO','PROGRAMMER NAME',
000002 //         CLASS=A,
000003 //         MSGCLASS=H,
000004 //         MSGLEVEL=(1,1),
000005 //         NOTIFY=&SYSUID.,
000006 //         USER=&SYSUID.,
000007 //         TIME=NOLIMIT,
000008 //         LINES=(999999,WARNING),
000009 //         REGION=0M
000010 //*
000011 //*   ************************************************************
000012 //*   *   THIS JCL WAS GENERATED BY SKELETON CPPS6101
000013 //*   ************************************************************
000014 //*********************************************
000015 //* Restart instructions:
000016 //* --------------------
000017 //* After determining the cause of the failure,
000018 //* and making any necessary corrections, restart
```

Figure 25. Panel: CPPPEDIF panel with RECEIVE job

Edit the job, if necessary, and save it. To submit the job, enter SUBMIT and then exit the dialog. The job loads your order from a server or file system to your DASD.

Note:

1. You must exit the dialog for the RECEIVE job to run. It is not necessary to log off from TSO.
2. If the RECEIVE job fails, you must go into the CustomPac Installation Dialog panels to regenerate and rerun the RECEIVE job.

If you are downloading your order from a server, the entire download might take considerable time. However, the download is done in two phases, and the first phase will usually not take very long. Once it has finished, you can begin to use the dialog to configure your new order. The RECEIVE job will send you a message to tell you when the dialog is ready to be used if you are logged on and have INTERCOM set in your TSO/E Profile. To see whether you have INTERCOM set, issue the PROFILE command from the TSO/E Ready prompt or ISPF Option 6. To set INTERCOM, issue PROFILE INTERCOM.

It is acceptable for some steps to "flush" if one of the following conditions applies:

- CHKVERSN receives an RC4 indicating that your master dialogs are currently at the same level or higher than the order you are currently receiving.
- CHKINV receives an RC4 indicating that a new master dialog is loaded with the LOADRIM job and there are no current orders stored in the dialog inventory.

The conditions in which certain steps will be flushed are listed below:

- In case of RECEIVE from Server:
  - If CHKINV.RC ¬= 0 then DOWNLDP1 step will be flushed.
  - If SAVERECV.RC ¬= 0 then GENRECV step will be flushed.
  - If CHKINV.RC ¬= 0 then UNZIP1 step will be flushed.
  - If CHKINV.RC ¬= 4 then COPYSCPP, COPYBOOK and COPYEH steps will be flushed.
  - If CHKVERSN.RC ¬= 0 then DELMEM, COPYMEM, REPROEH, DELTENU, COPYTENU and COPYVTBL steps be flushed.
  - INVUPDT3 and SENDMSG2 steps will be executed only if (INVUPDT2.RC = 0 AND (SETPVARS.RC ¬= 0 OR DOWNLDP2.RC ¬= 0 OR SETRDY.RC ¬= 0)) otherwise they will be flushed.
  - If SETRDY.RC = ¬0 then DELSTEP step will be flushed.

  In case of RECEIVE from File system:

  - If SAVERECV.RC ¬= 0 then GENRECV will be flushed.
  - If CHKINV.RC ¬= 0 then UNZIP1 step will be flushed.
  - If CHKINV.RC ¬= 4 then COPYSCPP, COPYBOOK and COPYEH steps will be flushed.
  - If CHKVERSN.RC ¬= 0 then DELMEM, COPYMEM, REPROEH, DELTENU, COPYTENU and COPYVTBL steps will be flushed.
  - If SETPVARS.RC ¬= 0 then DELSTEP step will be flushed.

If you want to save a copy of the job, you can use the ISPF Edit CREATE primary command to save the job in a data set (or data set member) of your choice.

Chapter 4. Installing a new order

Before you install this order:

To avoid enqueue contention for dialog data sets, permit only one user ID to work with an order at a time.

To begin installing the order, select option I on the Order Processing panel (Figure 26 on page 35).

```
CPPPPOLI --------------- IBM Corporation ---------------------------26.00.00
OPTION ==>


                         CustomPac Order Management Menu

        R   RECEIVE      - Receive an Order

        I   INSTALL      - Install an Order

            Order Number ==>        (Leave blank to list uninstalled orders)

        D   DISPLAY      - Select Orders to Display

        Master dialog data set qualifiers: CPAC.MASTER

                   This dialog supports secure Internet delivery.

             ********************************************************
             * 5751-CS4, 5751-CS5, 5751-CS6, 5751-CS7 and 5751-CS9  *
             * Copyright IBM Corp.  1988, 2013                      *
             ********************************************************
```

Figure 26. Panel: Order processing

To go directly to a specific order, enter the order number in the blank field under "INSTALL" and press Enter. Processing proceeds directly to the Installation Menu for the order (see “Displaying the installation menu” on page 37).

If you leave the order number field blank and press Enter, the dialog displays a list of orders from which to choose (see “Selecting an order to install” on page 35). Select an order to install and press Enter.

Note: Although z/OS V1R10 or later supports Extended Address Volumes (EAV), the ServerPac Dialog does not support EAV in the configuration during installation.

Selecting an order to install

To list all of the uninstalled orders, select the I option, but leave the order number field blank. The dialog displays a list of orders for your selection, as shown in Figure 27 on page 36.

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```
CPPP6071  ------------------------ ORDER LIST --------------------- Row 1 of 2
COMMAND ==>                                                  SCROLL ==> HALF

Primary Commands: (? SET Locate Find Next Previous OFile SORT VErbose)
   Line Commands: (Select Edit Delete Products Report Output>

                                                                --- Last Change --
 S  Order   System Name SREL Package  Build Date   Status    User       Date
 - -------- ----------- ---- -------- ---------- ---------- -------- ----------
   JE000001  SYSNAME1   Z038 SERV     2003/10/23 Started    TONY     2004/05/09
   JE000002             Z038 SERV     2003/11/05 Received   NANCY    2004/04/03
   JE000003             Z038 SERV     2003/11/05 Installed  WAYNE    2004/04/03
   JE000007             Z038 SERV     2004/07/04 **Error**  JOHN     2004/07/24
S  MD053718             Z038 SERV     2004/04/01 Started    OBRIEN   2004/04/12
   TE000129  DB2        P115 EXP      2004/01/23 Received   KENJI    2004/02/10
   TE000130  SSP        P004 EXP      2004/12/10 Received   KATHH    2004/01/10
******************************** Bottom of data ********************************
```

Figure 27. Panel: Order list

The Order Installation panel indicates installable orders with either of the following status codes (in the Status column):

Received
This status is set when the order can be selected on the order list panel. For orders that are downloaded, this is after the first phase of the download has been completed.

Started
This status is set when the work configuration has been created.

****Error****
The RECEIVE job for this order has failed in step DOWNLDP2. You should examine the output of the RECEIVE job, correct the problem, and resubmit it.

After you have installed an order and reset its status to Installed, you can no longer display the order with the I option (Install Orders) on the Order Processing panel. You can, however, still view the order's work configuration and installation jobs through the dialog by using the D option (Select Orders to Display) on the Order Processing panel (Figure 26 on page 35) and then selecting the desired order from the list. Or, if you use the GENSKEL command described in “Using GENSKEL to generate the installation jobs” on page 154, you can view the order's installation jobs in the SCPPBENU data set for the order.

Select an order by entering an S line command before the desired order. In Figure 27 on page 36, order number MD053718 has been selected.

The following primary commands are valid for this panel:

? SET Locate Find Next Previous SORT VErbose

These are standard commands for panels that display lists. See “Primary commands” on page 9 and Appendix A, “Primary command reference,” on page 175.

OFile
This command writes the entire list of orders to a user-defined file. See Appendix A, “Primary command reference,” on page 175 for more information.

The following line commands are valid for this panel:

S
Selects an order for installation.

E
Edits an existing order.

D
Deletes an order from the order inventory. The dialog prompts you to confirm the deletion.

P
Displays the products and features for the order, along with their program numbers, versions, and FMIDs.

R
Writes a report of the information associated with an order to a data set that you specify.

O
Lists the installation jobs and any associated job output.

Displaying the installation menu

When you select an order containing only non-SMPE products to install, the following Installation Menu is displayed (Figure 28 on page 37). This panel is the starting point for all of the functions that are needed to install your order.

```
CPPPFLOW  ----------- Installation Options for Order ( MD053718 ) --------------
OPTION ==>


  Complete these options to install the order:

     C    Create         Create the Work Configuration
     *    Variables      Specify Values for Variables
     *    Modify         Modify the System Layout
     *    Alias          Specify Catalogs for High-Level Qualifiers
     *    SSA            Specify Temporary Aliases (SSAs) for Catalogs
     *    Installation   Create and Submit Installation Jobs



  You can use Save any time after creating the work configuration:

     *    Save           Save the Current Work Configuration
```

Figure 28. Panel: Installation menu

For all other orders, the following Installation Menu is displayed (Figure 29 on page 37). This panel is the starting point for all of the functions that are needed to install your order.

```
CPPPFLOW  ----------- Installation Options for Order ( MD053718 ) --------------
OPTION ==>


  Complete these options to install the order:

     C    Create         Create the Work Configuration
     *    Variables      Specify Values for Variables
     *    Zones          Specify SMPTLIB and SMP/E Zone Names Information
     *    Modify         Modify the System Layout
     *    Alias          Specify Catalogs for High-Level Qualifiers
     *    SSA            Specify Temporary Aliases (SSAs) for Catalogs
     *    Installation   Create and Submit Installation Jobs
                         (Option not available until download complete)


  You can use Save any time after creating the work configuration:

     *    Save           Save the Current Work Configuration
```

Figure 29. Panel: Installation menu

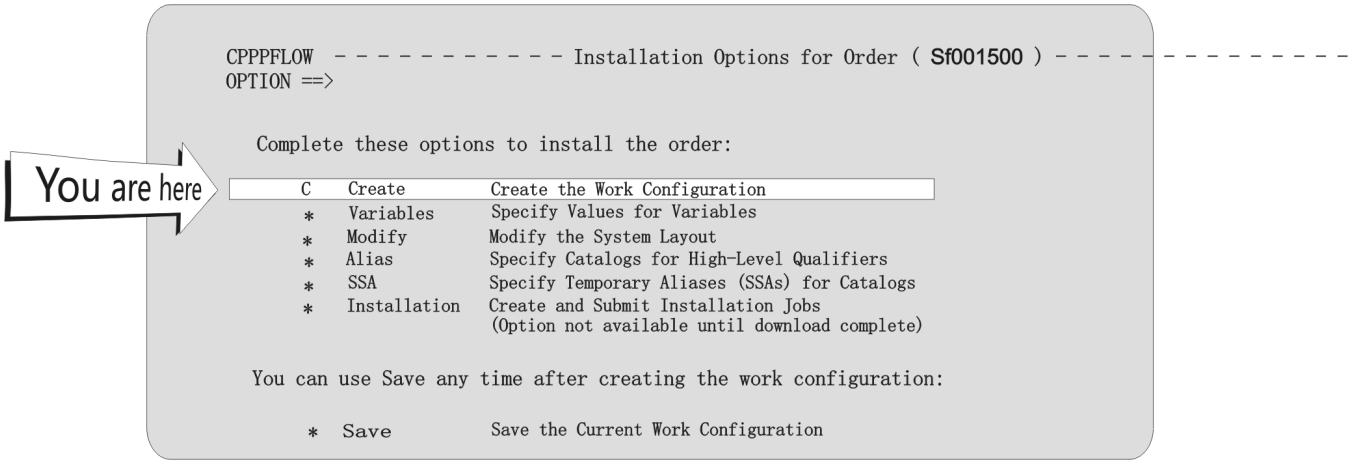
At the beginning of a ServerPac installation, the only available function is Create. Each of the other functions (now marked with asterisks) becomes available after the previous function is completed.

To continue the installation, enter C on the command line and press Enter. Proceed to Chapter 5, “Creating a work configuration for the order,” on page 39.

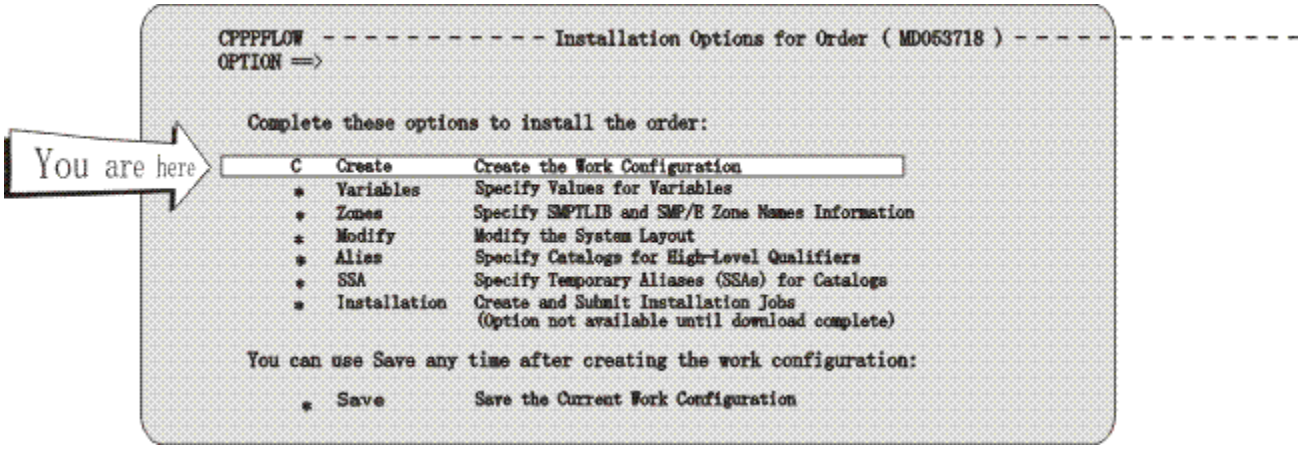
For a review of the Installation Menu's other options, see “Using the installation menu” on page 5 or select the Help option of this menu.

Chapter 5. Creating a work configuration for the order

If your order contains only non-SMP/E installable products, the Zones option will not be displayed. See the following figure.



For all other orders, see the following figure.



When you select an order for the first time, you must create a work configuration to start the installation.

Choosing the installation type

For an operating system order, option Create displays the Type of Installation panel shown in Figure 30 on page 40. For subsystem orders, skip ahead to “Creating the configuration” on page 44.

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```
CPPP6015  ------------- CREATE Configuration ( MD053718 ) ---------------------
OPTION ==> _

  Select the Install type :

F - Full System Replacement installs a complete new IPL-able
    standalone system including all SMP/E-maintained libraries, SMP/E
    environment, operational data sets, and CustomPac sample data sets.
    The supplied operational data sets must be merged with or replaced
    by production operational data sets before the new system is used
    in production.

S - Software Upgrade installs only the SMP/E-maintained libraries,
    SMP/E zones, and CustomPac sample data sets.  Operational data sets,
    including system control files (like LOGREC and VTAMLST), a security
    system database, and a master catalog must already exist.  These
    existing operational data sets must be updated as required for new
    products and product changes before the first IPL.

For more information about Software Upgrade, enter ? in the option field
```

Figure 30. Panel: Type of installation

Use this panel to select the type of installation you prefer: **full system replacement** or **software upgrade**. Select the installation type by entering Full system replacement or Software upgrade in the `OPTION ==>` field and pressing enter.

A full system replacement installs a complete z/OS system. It installs all data sets needed to IPL, log on to the target system, and run a z/OS image for completing other installation and customization tasks. These data sets fall into two major categories:

1. System software and related data sets (such as distribution and target libraries, SMP/E CSI data sets, and sample libraries)
2. Operational data sets (such as page data sets, system control files, and a master catalog).

Because IBM creates a working set of operational data sets for you, a full system replacement helps assure a successful first IPL.

Unless you are installing a new image, you must merge your existing operational data sets with the data sets created by ServerPac; this can be done before or after the first IPL.

A software upgrade (Figure 31 on page 41) installs only system software and related data sets (category 1 above). You must provide the operational data sets (category 2 above) and make them accessible to the new level of software installed. When new operational data sets are required, you must allocate and initialize them before you IPL. For example, you might need to add parameters required by the new software level, or change data sets so that they work with both the old and new levels.

A software upgrade uses your existing catalog structure. This includes your existing master catalog and user catalogs (with direct or indirect cataloging references). Also, software upgrade allows you to create new user catalogs as part of the installation process.

In Figure 31 on page 41, the dotted line contains the system software and data sets that are created by full system replacement. Within the dotted line, the data sets below "Target System" are the subset of data sets that are replaced by software upgrade.

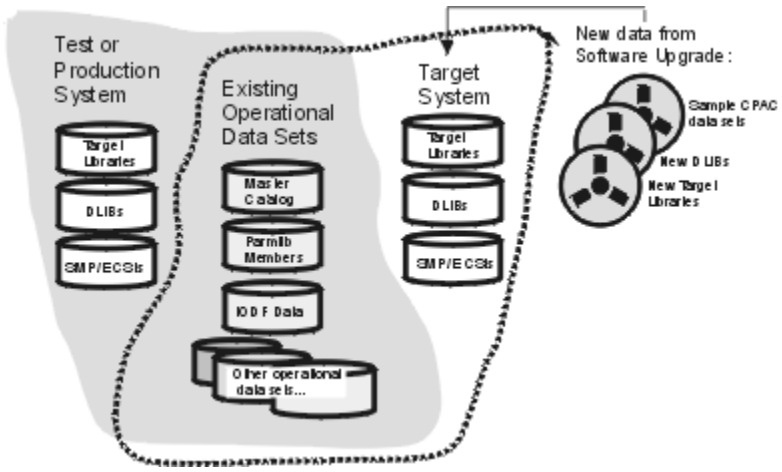


Figure 31. Software upgrade option preserves your existing operational data

If you select software upgrade or full system replacement and later wish to change the installation type, you must recreate the configuration by selecting Option C, specifying the desired installation type, specifying the JES elements to be installed, selecting a saved configuration for merge (if applicable), and issuing the Create command. If you wish to preserve your modifications, save the configuration. Doing so can reduce the amount of data that you would need to re-enter, depending on how far along you are in the installation process.

Software upgrade is available only for z/OS orders. It is not available for the related subsystem products (Db2, CICS, IMS, and NCP) or WebSphere Application Server.

Selecting a JES for the configuration

After you select a configuration for your z/OS order, the dialog displays panel CPPP6017 to prompt you to select a JES element.

Note: The panel has different views depending on the version of the z/OS products that are ordered.

For z/OS 2.3 or earlier products, the dialog displays the panel shown in Figure 32 on page 41 to prompt you to select a JES element.

```
CPPP6017 ------------- JES Element Selection ( xxxxxxxx ) ---------------------
 COMMAND ==>

 Choose JES elements to be installed:

       JES Elements to Install                 ==>      (JES2, JES3, or BOTH)









     Note: For more information, enter  ? in the command field.
```

Figure 32. Panel: JES element selection

Select at least one JES element for installation: JES2 or JES3. If your installation requires both JES elements, select BOTH. After your selection, the panel is displayed with appropriate merge options.

The default of each merge option is "N". In the available merge options, you can only specify one "Y". In other words, the merge options are mutually exclusive. If you specify more than one "Y" you will receive message CPPO601008E. If you plan to migrate to subsequent releases of JES2 or JES3 when you migrate to the next level of z/OS, it is recommended that you merge the JES zones with the BCP zone.

If you select JES2, the following panel is displayed:

```
CPPP6017  ------------ JES Element Selection ( xxxxxxxx ) ---------------------
 COMMAND ==>

 Choose JES elements to be installed:

       JES Elements to Install                 ==> JES2 (JES2, JES3, or BOTH)

 Specify options for merging SMP/E target and DLIB zones:


       Merge JES2 Zones into BCP Zone          ==> N    (Y or N)




     Note: For more information, enter  ? in the command field.
```

If you select JES3, the following panel is displayed:

```
CPPP6017  ------------ JES Element Selection ( xxxxxxxx ) ---------------------
 COMMAND ==>

 Choose JES elements to be installed:

       JES Elements to Install                 ==> JES3 (JES2, JES3, or BOTH)

 Specify options for merging SMP/E target and DLIB zones:


       Merge JES3 Zones into BCP Zone          ==> N    (Y or N)




     Note: For more information, enter  ? in the command field.
```

If you select BOTH, the following panel is displayed:

```
CPPP6017  ------------ JES Element Selection ( xxxxxxxx ) ---------------------
 COMMAND ==>

 Choose JES elements to be installed:

       JES Elements to Install                 ==> BOTH (JES2, JES3, or BOTH)

 Specify options for merging SMP/E target and DLIB zones:


       Merge JES2 Zones into BCP Zone          ==> N    (Y or N)

       Merge JES3 Zones into BCP Zone          ==> N    (Y or N)

       Merge JES2/JES3 Zones into BCP Zone     ==> N    (Y or N)









     Note: For more information, enter  ? in the command field.
```

Starting with z/OS 2.4 products, you cannot select JES3 without JES2. For that reason, the view of panel CPPP6017 and the JES selection scenario is slightly different from the previous panel.

```
CPPP6017 ------------- JES Element Selection ( xxxxxxxx ) ---------------------
 COMMAND ==>

 Choose JES elements to be installed:

       JES Elements to Install                 ==>      (JES2 or BOTH)

















     Note: For more information, enter  ? in the command field.
```

Choose JES elements for installation: select JES2 or if your installation requires both JES elements, select BOTH. After your selection, the panel is displayed with appropriate merge options.

The default of each merge option is "N". In the available merge options, you can only specify one "Y". In other words, the merge options are mutually exclusive. If you specify more than one "Y", you will receive message CPPO601008E. If you plan to migrate to subsequent releases of JES2 or JES3 when you migrate to the next level of z/OS, it is recommended that you merge the JES zones with the BCP zone.

If you select JES2, the following panel is displayed:

```
CPPP6017  ------------ JES Element Selection ( xxxxxxxx ) ---------------------
 COMMAND ==>

 Choose JES elements to be installed:

       JES Elements to Install                 ==> JES2 (JES2 or BOTH)

 Specify options for merging SMP/E target and DLIB zones:


       Merge JES2 Zones into BCP Zone          ==> N    (Y or N)




     Note: For more information, enter  ? in the command field.
```

If you select BOTH, the following panel is displayed:

```
CPPP6017  ------------ JES Element Selection ( xxxxxxxx ) ---------------------
 COMMAND ==>

 Choose JES elements to be installed:

       JES Elements to Install                 ==> BOTH (JES2 or BOTH)

 Specify options for merging SMP/E target and DLIB zones:


       Merge JES2 Zones into BCP Zone          ==> N    (Y or N)
       Merge JES3 Zones into BCP Zone          ==> N    (Y or N)
       Merge JES2/JES3 Zones into BCP Zone     ==> N    (Y or N)







     Note: For more information, enter  ? in the command field.
```

If you wish to change any of these decisions later, you must configure again by selecting Option Create, specifying the desired changes, selecting a saved configuration for merge (if applicable), and issuing the CReate command.

Creating the configuration

After you select the JES Element (for a z/OS order) or select option C (for a subsystem order), the Create Configuration panel is displayed, as shown in Figure 33 on page 45.

```
CPPP6011 ------------- CREATE Configuration ( MD053718 ) ----- Row 1 to 2 of 2
COMMAND ==> CR                                                  SCROLL ==> CSR

Select Configuration

Primary Commands: (? SET Locate Find Next Previous SORT CReate)
Line Commands: (Select)

S CONFiguration                      Comment
- ---------------------------------- ---------------------------------------
* CPP.MD053718                       Always Selected for Order
- ---------------------------------- ---------------------------------------
S CPP.MD058475                                  First saved config
  CPP.MD058476                                  Second saved config
****************************** Bottom of data ********************************
```

Figure 33. Panel: Select configuration

The shipped configuration is always automatically selected. Any configurations you have saved are also displayed. Selecting a saved configuration (if you have one) will reduce the time needed to install the order.

If you are using the dialog for the first time, simply enter the CReate primary command. Later in the installation, you will be able to save this configuration for use with subsequent ServerPac orders, or to preserve your work if you decide to recreate the configuration to change installation types or JES selections.

If you are merging this order with a saved configuration, see “Merging a configuration with a previous order” on page 45 for further considerations.

When you create the work configuration, the message "Work Configuration Created" appears, as shown in Figure 34 on page 45.

```
CPPP6011 ------------- CREATE Configuration ( MD053718 ) ----- Row 1 to 2 of 2
COMMAND ==> CR                                    SCROLL ==> CSR

CPP0601004I WORK Configuration Created

Select Configuration
Primary Commands: (? SET Locate Find Next Previous SORT CReate)
Line Commands: (Select)

S CONFiguration                      Comment
- ---------------------------------- ---------------------------------------
* CPP.MD053718                       Always Selected for Order
- ---------------------------------- ---------------------------------------
  CPP.MD058475                                  First saved config
  CPP.MD058476                                  Second saved config
```

Figure 34. Panel: Select configuration (configuration created)

Press the END key to return to the dialog's Main Menu.

Merging a configuration with a previous order

At this stage of installing your order, you can reuse any configuration information you might have customized and saved from previous orders. To do so, you merge the new order with the saved information. Wherever possible, saved data set attributes replace shipped attributes. New jobs are generated based on the resulting attributes and on further customization that you will do in the dialog. Data set types (PDS, PDSE, HFS or zFS) are derived from the saved order when those data sets are present in both the saved configuration and the new configuration and they are flagged as switchable in the new order.

You can merge a saved configuration with the order's shipped configuration. Selection of the saved configuration selection is restricted to configurations created in your current dialog release or up to two

prior releases. For example, if your shipped configuration was created in Dialog Level 27, you cannot merge this with a saved configuration with Dialog Level 24.

You select configurations to be merged with the new order configuration on the Create Configuration panel. Enter line command S for each configuration that you want to merge with the current order, and enter CR on the command line to create the new configuration. Figure 35 on page 46 shows the panel that is displayed.

```
CPPP6013       ---------- CREATE Configuration ( MD053718 ) -----------------
COMMAND ==>

            ----------------------------------------------------------
           |   ORDER  : STOB4.MD053718                                  |
           |                                                            |
           |    The following configuration will be MERGED with the     |
           |    Shipped Order Configuration                             |
           |                                                            |
           |    CONFIG : CPP.MD058475.CONFIG                            |
           |                                                            |
           |    REPORT : CPP.MD058475.REPORT                            |
           |    (data set merge report)                                 |
           |                                                            |
           |                                                            |
            ----------------------------------------------------------
          You MUST Confirm the MERGE By Typing MERGE and pressing ENTER

          Press the END or RETURN key to CANCEL the MERGE request
```

Figure 35. Panel: Merge configurations - confirmation

If you are installing a z/OS V2R1 or later order and the selected saved configuration does not contain the RACFTGT job, then the CREATE Configuration (CPPP6013) panel displays an additional text as shown in Figure 36 on page 46. Job RACFDLTA uses saved configuration data sets to generate the job. The job will not be generated if the configuration of the order being installed is not merged with a saved configuration or is merged with a saved configuration which does not contain the RACFTGT job. It is recommended that you select a saved configuration of the same SREL as the order being installed for the merge. SREL details can be found on the ORDER LIST panel.

```
CPPP6013 U26DEV ------- CREATE Configuration ( QD002655 ) ---------------------
COMMAND ==>


              ORDER  : CPPRUNQ.QD002655

              The following configuration will be MERGED with the
              Shipped Order Configuration

              CONFIG : CPPDEV.MX000267.CONFIG

              REPORT : CPPRUNQ.QD002655.REPORT
                       (data set merge report)

              THE SELECTED SAVED CONFIGURATION DOES NOT CONTAIN
              JOB RACFTGT.  THEREFORE JOB RACFDLTA WILL NOT BE
              GENERATED FOR THIS ORDER.


           You MUST Confirm the MERGE By Typing MERGE and pressing ENTER

           Press the END or RETURN key to CANCEL the MERGE request
```

Figure 36. Panel: Merge configurations - confirmation

To confirm the merge, enter MERGE in the COMMAND ==> field and press Enter.

If the dialog detects an existing work configuration for the current order, the panel shown in Figure 35 on page 46 will not appear until you delete the existing work configuration. Instead, the panel shown in Figure 37 on page 47 is displayed to request that you delete the existing configuration.

```
CPPP6012  ------------- CREATE Configuration ( MD053718 ) ---------------------
COMMAND ==>

DELETE an EXISTING Configuration




                  A configuration for this order already exists

                       If you continue this will be DELETED

                  You will lose ALL modifications you have made



            You MUST Confirm DELETION By Typing DELETE and pressing ENTER

            Press the END or RETURN key to CANCEL the DELETE request
```

Figure 37. Panel: Merge configurations - delete an existing configuration

To confirm the deletion, enter DELETE in the COMMAND ==> field and press Enter. After you have deleted the existing configuration, the panel shown in Figure 35 on page 46 will be displayed as previously described.

Modify the configuration as required, and save it. For subsequent installations, you can merge a new shipped configuration with the one you save after making changes to this configuration or with a configuration you saved from another installation.

User-defined jobs will retain the sequence if the working configuration is merged with R13 or post-R13 saved configurations.

Information used by ServerPac when merging configurations

When you create a configuration for your new order, the dialog allows you to reuse information that you saved from a previously installed order. Here, the dialog merges the information from the saved configuration with the information in the new order.

If a previously-installed product is in the new order at a new level and it now includes a new data set, then there is nothing to bring forward and the new data set gets the shipped defaults in the work configuration. Likewise, if a data set is not present in the product's new release, it is not carried forward from the saved configuration to the work configuration.

If your new order adds a product that was not in the previously installed order, the dialog adds the information about the product and its data sets from the new order to the configuration being created. If your new order omits a product that was included in a previously saved order, the dialog does not carry forward information or data sets for the omitted product in the new configuration.

Thus, if WebSphere for z/OS (for example) was included in the previously installed order, but is not included in the new order, the dialog does not include WebSphere data in the configuration being created. As a result, your changes for WebSphere (such as data set names or space) are not applied to the configuration for the new order, nor is the data for WebSphere saved when you save the configuration.

Another consideration for merging data exists when attributes of a data set are changed between levels of a product. Saved changes to allocation amounts (primary, secondary, and directory) are carried forward using the same increase amounts as were applied to the data sets in the saved configuration, except

when secondary allocation amounts were allowed for a data set in the saved configuration, but are not allowed for that data set in the shipped configuration. For example, assume that data set A in the previously saved configuration had 15 secondary blocks and you increased that amount to 20. Data set A in the new release of the product shipped with the new order has secondary blocks of 30. The secondary blocks value for data set A in the configuration being created is set to 35 (an increase of 5, just as before). On the other hand, if data set A in the new order had secondary blocks of 0; the secondary blocks value for data set A in the configuration being created would be set to 0 and any previous increase amount would be ignored.

When you merge the data sets into the new order, the dialog checks the previously saved configuration for user-defined data sets. The dialog adds these data sets to the configuration being created if their names do not conflict with any data set names in the new shipped order. Otherwise, the dialog indicates the existence of data set name conflicts in the Merge Report (see “Merge report” on page 50).

During merge configuration processing, the dialog first determines whether a data set will be included in the work configuration. If so, the dialog determines what information about the data set will be included in the work configuration from the previously saved configuration, as listed below:

- If, in the previously installed order, you did not change the particular data set value from the value that was originally shipped, the dialog uses the new shipped value in the configuration being created.
- If you changed the value in the previously saved configuration from the value that was originally shipped, the dialog uses the rules in Table 2 on page 48 to determine which value to use in the configuration being created.

Table 2. Values used in a merged configuration

Data set value	**Dialog action**
Data Set Name	If the data set exists in both the previously saved configuration and the new shipped order, the dialog uses the data set name from the previously saved configuration, unless the data set is marked unrenameable in the shipped configuration. A merged data set (described in “Merging and unmerging data sets” on page 104) retains its name. However, if a component data set in the merged data set does not appear in the new shipped order, the dialog automatically removes the component data set from the merged data set and updates the attributes and space of the merged data set based on the removal of the component data set.
Renameable	This attribute is not saved or merged. If you changed the status of some data sets from not renameable to overridden in the saved configuration, and want to rename them again, you must change their status using the `CHANGE RENAME` command (see “CHANGE RENAME” on page 183) and then rename them in each order. If the data set exists in both the previously saved configuration and the new shipped order, the dialog uses the data set name from the previously saved configuration.
DSORG	If the data set's organization (DSORG) in the previously saved configuration is different from its DSORG in the new shipped configuration, the dialog uses the DSORG from the new shipped configuration for the data set. For a merged data set, if the DSORG of a component data set changes from DSORG=PO, the dialog removes the component data set from the merged data set. The dialog automatically updates the attributes and space of merged data set based on the removal of the component data set.

Table 2. Values used in a merged configuration (continued)

Data set value	Dialog action
RECFM	If the record format (RECFM) of the data set in the previously saved configuration is different from its RECFM in the new shipped configuration, the dialog uses the RECFM from the new shipped configuration. For a merged data set, if the RECFM of a component data set no longer matches that of the merged data set, the dialog removes the component data set from the merged data set. The dialog automatically updates the attributes and space for the merged data set based on the removal of the component data set. In this case, the component data set's RECFM and allocation amounts are set from the new shipped configuration.
LRECL	If the logical record length (LRECL) in the previously saved configuration is different from its LRECL in the new shipped configuration, the dialog uses the LRECL from the new shipped configuration. For a merged data set, if the LRECL of a component data set no longer matches that of the merged data set, the dialog removes the component data set from the merged data set. The dialog automatically updates the attributes and space for the merged data set based on the removal of the component data set. In this case, the component data set's allocation amounts are set from the new shipped configuration.
Primary Space	The dialog uses one of the following values: • The primary allocation amount from the new shipped configuration plus the amount of space that was added to the old shipped configuration in the saved configuration. • If no saved configuration is being merged, the primary allocation amount from the new shipped configuration.
Secondary Space	If the value in either the previously saved configuration or the new shipped order value is 0 (zero), the dialog uses a value of 0 for the configuration being created. A value of 0 means that no secondary space allocation is allowed. When a data set shipped with no secondary allocation has been overridden using the CHANGE SECOND command, the value stored in the saved configuration will reflect the shipped value (0) not the overridden value. Otherwise, the dialog uses one of the following values: • The secondary allocation amount from the new shipped configuration plus the amount of space that was added to the old shipped configuration in the saved configuration. • If no saved configuration is being merged, the secondary allocation amount from the new shipped configuration.
Directory Space	The dialog uses one of the following values: • The number of directory blocks from the new shipped configuration plus the number of directory blocks that was added to the old shipped configuration in the saved configuration. • If no saved configuration is being merged, the number of directory blocks in the new shipped configuration.

Table 2. Values used in a merged configuration (continued)	
Data set value	**Dialog action**
Logical Volume	The dialog uses the logical volume name from the previously saved configuration for the data set, unless the logical volume name in the new shipped default configuration is IPLVOL. If the dialog uses the Logical Volume name from the previously saved configuration, the dialog also updates the following fields: • Physical Volume value • Physical Volume Control Unit Address value. This is the device number for the volume, as assigned through the hardware configuration definition (HCD). • Physical Volume Device Type. For a merged data set, if the logical volume of a component data set in the new release becomes IPLVOL, the dialog automatically reassigns the logical volume of the merged data set to IPLVOL accordingly.
SMS-Managed	The dialog uses the SMS-managed status from the saved configuration, unless doing so would conflict with the data set's SMS-eligible or SMS-required attributes.

Using merge configuration reports

To help you in identifying what information has been merged, the dialog generates two different types of reports when you create the merged configuration:

- "Merge report" on page 50
- "Data set merge report" on page 55.

These reports are described in the sections that follow.

Merge report

The dialog generates the Merge Report to identify the changes that were made to the logical volume table (the data set information) because of the merge with a previous order configuration. The dialog saves this report in a member named MERGE in a data set with the following naming convention:

```
hlq.orderid.REPORT(MERGE)
```

Use this report to discover potential problems, which are identified in the STATUS column of the report. **It is strongly recommended** that you investigate any data sets that have a non-blank status in the reports.

Each column in this report is separated by one blank. The report displays information in the following order:

1. Shipped SubSystem Type (SST), in ascending order.
2. Low-Level qualifier of the saved data set, in ascending order.
3. High-level qualifier (HLQ) and middle-level qualifier of the saved data set, in ascending order.

The following is an example of the report:

```
SST  STATUS      SAVED DATA SET NAME SHIPPED DATA SET NAME SVLVOL SHLVOL SHPVOL DEVN ED DEVICE  PRISP(DELTA) &cont;
SECSP(DELTA) DIRBS(DELTA)
aaaa bbbbbbbbbb ccccccccccccccc... ddddddddddd...       eeeeee ffffff gggggg hhhh i jjjjjjjj mmmmmmmmm  &cont;
nnnnnnnnn ooooooooo
```

The fields in the report are described in the following list:

SST
Subsystem name. This field is blank for operational and CustomPac data sets. For product-supplied data sets, it indicates the major system or subsystem with which the data set is associated:

Value
Meaning

Db2
Db2 and related products

CICS
CICS and related products

IMS
IMS and related products

MVS
z/OS, WAS, and related products

NCP
NCP and related products

STATUS
Status field. This field is a maximum of 11 characters and can be one of the following choices:

NEW
The data set is a new data set. This means that the data set did not exist in the saved order configuration, but now exists in the new shipped order. When a data set's status is NEW, all fields except Saved LVol are filled in using the shipped defaults

DSORG
The shipped DSORG for the new data set is not the same as the DSORG for the same data set in the saved order configuration. The shipped DSORG is used for this data set. The Shipped Data Set Name value is filled in for reference.

Because this report is sorted using the Saved Data Set Name by default, the Saved Data Set Name value is set to the Shipped Data Set Name value to prevent the Saved Data Set Name value from being blank.

LRECL
The shipped LRECL for the new data set is not the same as the LRECL for the same data set in the saved order configuration. The data set space allocations are not merged, but any data set name, logical volume, physical volume, device number, and shipped device information are merge candidates.

RECFM
The shipped RECFM for the new data set is not the same as the RECFM for the same data set in the saved order configuration. The data set space allocations are not merged, but any data set name, logical volume, physical volume, device number, and shipped device information are merge candidates.

D
The data set mode has been changed; the new shipped order mode is used. The data set mode indicates the installation type for which the data set is to be used (full system replacement, software upgrade, or both).

The new data set mode didn't match the old one. There are three possible modes (FSR-only, SU-only, and both SU and FSR) and that the new mode doesn't match the old one.

DSNAME
The shipped DSNAME for the new data set is not the same as the DSNAME for the same data set in the saved order configuration. The possible causes for this are listed below:

- A user-defined data set in the saved order configuration has the same name as an IBM-supplied data set in the shipped configuration
- A data set in the saved order configuration has been renamed, and a data set in the new shipped order is now shipped with that name.

- A data set was renamed in the saved order configuration, but the same data set is now shipped as an unrenameable data set.

In either case, no data set information is merged. The Saved Data Set Name value contains the name of the data set with the conflict. The Shipped Data Set Name is either:

- USER DATA SET for user-defined data set name conflicts
- IBM DATA SET for renamed data set name conflicts

Also, for each DSNAME conflict entry in the report for IBM DATA SET, there is also an entry in the report with a status of NEW.

I

The shipped IPL volume for the new data set is not the same as the IPL volume for the same data set in the saved order configuration. There are two possible ways this status can be set:

- The data set in the saved order configuration was required on the IPL volume, but the same data set in the new shipped order is **not** required on the IPL volume.
- The data set in the saved order configuration was not required on the IPL volume, but the same data set in the new shipped order is required on the IPL volume.

Data sets required on the IPL volume are unconditionally placed on the IPLVOL logical volume.

M

There is a change to the requirement for the data set to be defined in the master catalog. There are two ways this status can change:

- The data set in the saved order configuration was required to be in the master catalog and the same data set in the new shipped order is **not** required to be in the master catalog.
- The data set in the saved order configuration was **not** required to be in the master catalog, but the same data set in the new shipped order is required to be in the master catalog.

Some data sets should be cataloged in the master catalog. ServerPac marks some additional data sets as being required in the master catalog, but you can override this using the CH MCAT command. However, if you override this setting, you must be prepared to make whatever other changes are required to catalog the affected data set in a user catalog. After you have completed the ServerPac installation, you can uncatalog these additional data sets, or move their catalog entries to user catalogs as needed.

R

There is a reblock flag conflict between the new shipped order and the same data set in the saved order configuration. There are two possible ways this status can be set:

- The data set in the saved order configuration was allowed to be reblocked (the REBLOCK ALLOWED flag is set to Y), but the same data set in the new shipped order cannot be reblocked (the REBLOCK ALLOWED flag is set to N).
- The data set in the saved order configuration was not allowed to be reblocked (the REBLOCK ALLOWED flag is set to N), but the same data set in the new shipped order can be reblocked (the REBLOCK ALLOWED flag is set to Y).

S

There is a Secondary Blocks conflict between the new shipped order and the same data set in the saved order configuration. There are two possible ways this status can be set:

- The data set in the saved order configuration was allowed to have secondary blocks, but the same data set in the new shipped order cannot have secondary blocks.
- The data set in the saved order configuration was not allowed to have secondary blocks, but the same data set in the new shipped order can have secondary blocks.

T

There was a type conflict between a data set in the new shipped order and the same data set in the saved order configuration. Either of following occurred:

- The data set in the saved order configuration is a PDS, but the same data set in the new shipped order is a PDSE.
- The data set in the saved order configuration is a PDSE, but the same data set in the new shipped order is a PDS.

In these cases, the dialog uses the format of the data set from the saved configuration, unless the data set in the new shipped order is not eligible to have its format converted.

SMS

There was a conflict in the SMS status of the data set between the saved configuration and the shipped configuration. The data set is in one of the following situations:

- Managed by SMS in the saved configuration, but is not eligible for SMS management in the shipped configuration.
- Unmanaged by SMS in the saved configuration, but is required to be SMS-managed in the shipped configuration.

The data set's SMS status in the shipped configuration is unchanged. The dialog attempts to merge the remaining attributes of the data set.

X

The data set was moved across SSTs between the saved order configuration and the new shipped order. The status can be set when a data set in the saved order configuration was associated with one SST and the same data set in the new shipped order is associated with a different SST.

Note:

1. Any combination of the single character status values may appear at one time in the status field. If more than one value appears on the status line, it is separated from the next single character value by a comma.
2. The DSNAME and DSORG status values indicate that no merge of any values is done.
3. The LRECL and RECFM values allow the merge of only the data set name, logical volume, physical volume, device number, and shipped device, where a merge of the value applies.
4. Any non-blank status value in the table indicates the user should look closely at the data set to ensure that any merged values are still valid. Also, the following should be reviewed:
   - Data set name
   - Reblocking of the data set
   - Logical volume to physical volume mapping
   - Data set block size
   - Data set space allocation units: primary, secondary, and directory blocks.
5. A blank value indicates that no potential conflicts were identified during the merge of the data for a data set.

SAVED DATA SET NAME

Specifies the data set name that now exists in the configuration created when the saved order configuration was merged with the new shipped order. The field is a maximum of 44 characters long. This field is always nonblank because it is the default sorting field for the report. There are cases where the Saved Data Set Name value and the Shipped Data Set Name value are the same.

The names are the same for the following situations:

- The Status is set to NEW, or DSORG.
- The shipped order data set name and the saved order configuration data set name are the same.

For Status of DSNAME, the Saved Data Set Name is the name of the data set and the Shipped Data Set Name is 'USER DATA SET'.

SHIPPED DATA SET NAME
Specifies one of the following data sets:

- Name of the data set in the new shipped order. The maximum length for this value is 44 characters.
- USER DATA SET. A user-added data set was copied from the saved order configuration and added to the merged configuration. This value is also specified when a user added data set cannot be added to the merged configuration because of a data set name conflict (DSname in Status Column).
- IBM DATA SET. A data set was renamed in the save configuration and a data set by the same name is now shipped in the new shipped order.

SVLVOL
Specifies the logical volume from the saved order configuration. This value is 1-6 characters.

If this value is not blank, it is the value that is used for the data set in the merged configuration. If this value is blank, one or both of the following is true:

- Saved LVol is the same as the Shipped LVol.
- The Status is set to NEW, DSNAME, or DSORG.

SHLVOL
Specifies the logical volume from the new shipped order. This value is 6 characters long.

This value is blank when the logical volume value in the saved order configuration is the same as the logical volume value in the new shipped configuration.

SHPVOL
For an unmanaged data set, this field specifies the physical volume that exists in the saved configuration for this data set. For an SMS-managed data set, this field specifies the storage class of the data set. This value is 1-8 characters.

SHPVOL is blank when the physical volume value in the saved order configuration is the same as the value in the new shipped order. If this is a new data set (identified by NEW in the status column), this is the value from the new shipped order.

DEVN
Specifies the device number of the physical volume that is displayed in the Physical Volume column, or 'SMS' for an SMS-managed data set. This value is 1-4 characters. If the Physical Volume column is blank, this field is also blank.

ED

Specifies whether existing data resides on the volume displayed in the Physical Volume column. This value is either Y or N (meaning yes or no). If the Physical Volume column is blank, this field is also blank. If the DEVN field contains 'SMS,' this field is meaningless.

If the physical volume contains existing data, use the SUMP primary command to force the recalculation of space for the volume.

DEVICE
Specifies the device characteristic of the physical volume that is displayed in the Physical Volume column. This value is 1-8 characters. If the Physical Volume column is blank, this field is also blank. If the DEVN field contains 'SMS,' this field is meaningless.

PRISP(DELTA)
Specifies the primary allocation value of the data set in the merged configuration if there was a difference between the value in the saved order configuration and the new shipped configuration for this data set. *delta* is the difference between these primary allocations, if any. *delta* is 1-12 characters.

The value is blank if you did not change the value of the primary allocation in the saved order configuration, regardless of the value in the new shipped order. However, if you increased the value of the primary allocation in the saved order, one of the following occurs:

- If the value in the new shipped order is less than the value in the saved order configuration, the saved order configuration value is used and this is the value displayed in the Saved Primary field.
- If the value in the new shipped order is greater than the value in the saved order configuration, the amount of increase that the user specified in the saved order configuration is added to the new shipped order value. This new value is the value displayed in the Saved Primary field.

There are two ways in which you could have changed the primary allocation:

- You entered the CHANGE command to change the primary allocation of one or more data sets in the saved order configuration.
- You changed a specific data set's primary allocation.

SECSP(DELTA)
Specifies the secondary allocation value of the data set in the merged configuration if there was a difference between the value in the saved order configuration and the new shipped configuration for this data set. *delta* is the difference between the saved order configuration secondary allocation and the new shipped order secondary allocation. *delta* is 1-12 characters.

If you did not change the value of the secondary allocation in the saved order configuration, *delta* is blank, regardless of the value in the new shipped order. If you changed the value of the secondary allocation in the saved order, one of the following occurs:

- If the value in the new shipped order is less than the value in the saved order configuration, the dialog uses the saved order configuration value and displays this value in the Saved Secondary field.
- If the value in the new shipped order is greater than the value in the saved order configuration, the dialog adds the amount of increase that you specified in the saved order configuration to the new shipped order value. The dialog displays the new value in the Saved Secondary field.
- If the value of either the new shipped order or the saved order configuration is zero, the dialog displays a zero (0) in the Saved Secondary field and an *S* in the Status field.

There are two ways in which you could have changed the secondary allocation:

- You entered the CHANGE command to change the secondary allocation of one or more data sets in the saved order configuration.
- You changed a specific data set's secondary allocation.

DIRBS(DELTA)
Specifies the directory blocks value of the data set in the merged configuration if there was a difference between the value in the saved order configuration and the new shipped configuration for this data set. *delta* is the difference, if any, between these two values. *delta* is 1-12 characters.

If you did not change the value of the directory blocks in the saved order configuration, *delta* is blank, regardless of the value in the new shipped order. If you changed the value of the directory blocks in the saved order, one of the following occurs:

- If the value in the new shipped order is less than the value in the saved order configuration, the dialog uses the value for the saved order configuration and displays this value in the DIRBS field.
- If the value in the new shipped order is greater than the value in the saved order configuration, the dialog adds the amount of increase that you specified in the saved order configuration to the new shipped order value. The dialog displays the new value in the DIRBS field.

There are two ways that you could have changed the directory blocks:

- You entered the CHANGE command for the saved order configuration to change the directory blocks of a group of data sets.
- You changed a specific data set's directory blocks.

Data set merge report

The dialog generates the Data Set Merge report to show possible conflicts that involve merged data sets as a result of merging of the saved configuration with the new configuration. Use this report to discover potential problems, which are identified in the STATUS column of the report.

Recommendation: It is strongly recommended that you investigate any data sets that have a non-blank status in the reports.

The dialog saves this report in a member named DSMERGE in a data set with the following naming convention:

```
hlq.orderid.REPORT(DSMERGE)
```

The following is an example of the report:

```
STATUS      Merged DSname        Component DSname      RECFM  LRECL  DSTYPE AVBLOCK  PRI  SEC  DIR   C  I  N  M  D  S  E
U           SYS1.PANELS                                FB        80  PDS       8800   75    7   50   Y  N  Y  Y  Y  N  Y
A,I                              SYS1.PANELS                                                         N  N  Y  Y  Y  N  Y
                                 GIM.SGIMPENU                                                        N  N  Y  N  Y  N  Y
                                 ISP.SISPPENU                                                        N  N  Y  N  Y  N  Y
D                                ABC.SABDPENU                                                        Y  N  Y  N  Y  N  Y
                                 DEF.SDEFPENU                                                        Y  N  Y  N  Y  N  Y
P           SYS1.CLIST                                 FB        80  PDSE      8800   60    10  40   Y  N  Y  Y  Y  N  Y
                                 SYS1.CLIST                                                          Y  N  Y  Y  N  N  Y
                                 GIM.SGIMCLS0                                                        Y  N  Y  N  Y  N  Y
                                 ABC.SABDCENU                                                        Y  N  Y  N  Y  N  Y
A           SYS1.MSGS                                  FB        80  PDS      17200   60    10  40   Y  N  Y  Y  Y  N  Y
                                 SYS1.MSGS                                                           Y  N  Y  Y  Y  N  Y
                                 GIM.SGIMMENU                                                        Y  N  Y  N  Y  N  Y
                                 ABC.SABDMENU                                                        Y  N  Y  N  Y  N  Y
U           SYS1.SKELS                                 FB        80  PDS      17200   60    10  40   Y  N  Y  Y  Y  N  Y
C                                SYS1.SKELS                                                          Y  N  Y  Y  Y  N  Y
                                 GIM.SGIMSENU                                                        Y  N  Y  N  Y  N  Y
                                 ISP.SISPSENU                                                        Y  N  Y  N  Y  N  Y
            SYS1.PLILINK                                U         0  PDS       6144   70    10 100
Y  N  Y  Y  N  N  Y

S                                SYS1.LINKLIB                                                        Y  Y  N  Y  N  N  Y
```

The fields in the report are described in the following list:

STATUS
Identifies potential problems, such as data set name conflicts. Valid values for this field are as follows:

M
The component merged file system could not be merged because a file system was introduced in the shipped configuration, which contains an intermediate mount point. When file systems cannot be merged as a result of discrepancies between the saved configuration and the shipped configuration, all its component data sets are unmerged.

U
Data set was unmerged as a result of the configuration merge.

A
One or more of the data sets flags (shown in the rightmost columns in this report) have changed as a result of the merge. Each flag is marked with a value of Y or N ("yes" or "no") to indicate the post-merge conditions for the data set, as in the following list:

C
— Must the data set be cataloged in the Master Catalog?

I
— Must the data set reside on the IPL volume?

N
— Can the data set be renamed?

M
— Can the data set be merged with another data set?[1]

D
— Can the data set's type (HFS, PDS, PDSE, zFS) be changed?

S
— Must the data set be managed by SMS?

E
— Can the data set be managed by SMS?

The operating system requires some data sets to have particular names, or reside on the IPL volume, or be cataloged in the master catalog. The dialog sometimes requires that additional data sets follow these restrictions. During the installation, you can choose to make these data sets renameable through the CHANGE RENAME command. Or, you can rename, move, or recatalog these data sets after completing the ServerPac installation.

C
Data set was automatically unmerged of all of its component data sets because the dialog detected a member name conflict between it and another data set (which is also indicated with a C status elsewhere in this report).

D
Data set was not in the shipped configuration. The data set is deleted. If it was part of a merged data set, then it was either a merge component data set (that is, it was merged into another data set) or a merge target data set (that is, other data sets were merged into it). If it was a merge component, it is no longer part of the merged data set. However, if it was a merge target, then the dialog unmerges the data sets. If you want the data sets merged again, you will have to choose a different merge target data set.

I
Data set is ineligible for merging. This status is accompanied with a status of A to indicate that the merge attribute of the data set has changed to N.

P
The merged data set is a PDSE, but it contains at least one component data set that is a non-switchable PDS.

S
The component data set was unmerged because the dialog detected a mismatch with the secondary attribute. The dialog restricts merging data sets with unlike secondary attributes. When data sets cannot be merged as a result of discrepancies between the saved configuration and the shipped configuration, the component data set is unmerged.

Merged DSname
Name of the merged data set.

Component DSname
Name of a component data set in the merged data set. The first value in this list is the name of the target merge data set.

LRECL
Logical record size of the merged data set. This value is the same for all component data sets in the merged data set.

DSTYPE
Data set organization of the merged data set. Possible values are as follows:

PDS
PDS data set

PDSE
PDSE data set

zFS
zFS data set

[1] The saved data set name is used even if the value of M is changed. Also, if M is changed to make a data set unrenameable, you can rename the data set to the new name required by the dialog (or to a user-specified name) by using the CH RENAME command to change the status and to rename the data set.

HFS
HFS data set

This value is the same for all component data sets in the merged data set.

AVBLOCK
Space units of the merged data set. This value is the same for all component data sets in the merged data set.

PRI
Number of space units that are requested for the primary space allocation for the merged data set, including the space required for its component data sets.

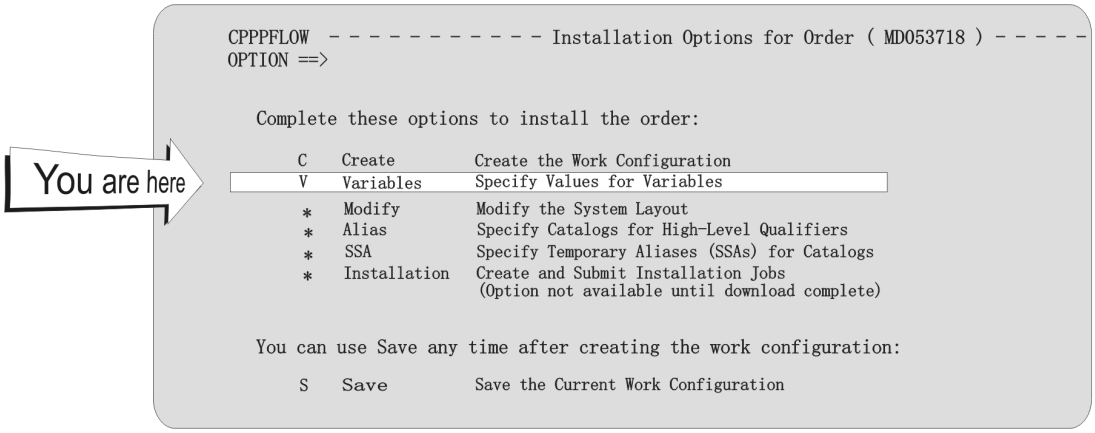
SEC
Number of space units that are requested for the secondary space allocation for the merged data set, including the space required for its component data sets.

DIR
Number of directory blocks that are required for the merged data set, including the space required for its component data sets.

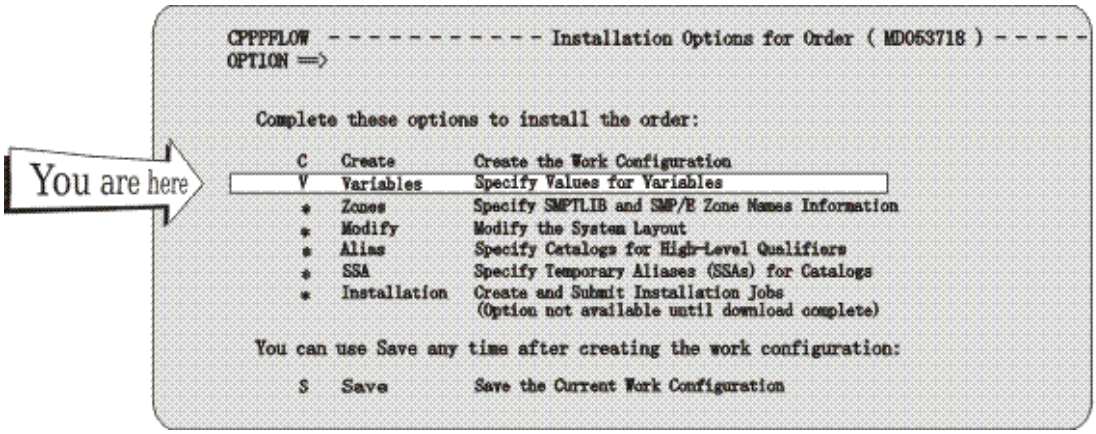
Note: For z/OS orders, the MERGE report shows both JES2 and JES3 data sets whether or not they are present in the configuration. If they appear incorrectly in the MERGE report, ignore them.

Chapter 6. Defining installation variables

If your order contains only non-SMP/E installable products, you will see the following panel.



For all other orders, you will see the following panel.



Select V from the Installation Menu to begin the next available function, Define Installation Variables. The Variable Selection List is displayed (Figure 38 on page 60).

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```
CPPP6111  ----------- Installation Variables ( MD053718 ) -------- Row 1 of 99
COMMAND ==>                                                  SCROLL ==> PAGE

Variable Selection List                                    SHOW( *          )

Primary Commands:(? SET Locate Find Next Previous CANcel SAVE SHow VARname)
   Line Commands:(Browse Delete Edit Insert Repeat Ship)

 S     Synonym            STA  Contents
 - --- -----------------  ---  ----+----0----+----0----+----0----+----0----
   ==> INSTALL OPTIONS
       DYNAMIC DASD INFO    P  YES

   ==> GEN SYSTEMPAC
       WORK VOLUME          D  SYSDA
       TGT UNIT TYPE        D
       TARGET VOLSER        D
       ASSEMBLER NAME       D  ASMA90

   ==> HFS/zFS Info
       INSTALL DIRECTORY    D  /Service

   ==> PKI SERVICES
       VSAM HLQ FOR PKI     D  PKISRVD.VSAM

   ==> NEW ADR
       ADR NEW MCON         D  0F2

   ==> NEW VOL
```

Figure 38. Panel: Variable selection list - variable synonyms

The Variable Selection List displays variables that are required to install your order. The list reflects the installation type you chose — full system replacement or software upgrade. Use this panel to set the values of these variables appropriately for your environment. Refer to the "Variables" appendix in *ServerPac: Installing Your Order*, for the exact variables for your order.

In this part of the dialog, you are asked to provide (as variables) information about your driving system and target system, such as the SYSNAME for the target system. In some cases, you will need to know the target and distribution zone names for both the driving system and target system, as well as other driving system specifics, such as console configuration, and system volumes (IPL, RACF unit type, catalogs).

The STA column displays the status of each variable, as listed below:

C
Customized

D
Default

E
Erased

I
Inserted

P
Pre-defined

U
User-defined

If you selected to merge a previous saved configuration with the new order configuration, then values for eligible variables are carried forward from the saved configuration. The STA column displays the status of such variables as M, along with above status as shown in Figure 39 on page 61.

```
CPPP6111  ----------- Installation Variables ( RD002751 ) - Row 1 to 33 of 149
 COMMAND ==>                                                  SCROLL ==> CSR

 Variable Selection List                                      SHOW( *        )

 Primary Commands:(? SET Locate Find Next Previous CANcel SAVE SHow VARname)
    Line Commands:(Browse Delete Edit Insert Repeat Ship)

  S     Synonym            STA  Contents
  - --- -----------------  ---  ----+----0----+----0----+----0----+----0----
    ==> INSTALL OPTIONS
        DYNAMIC DASD INFO    P  YES
        PROCESSED            C  N
        PROCESSED            C  N
        PROCESSED            C  N
        USE AUTOUID/GID      P  N

    ==> GEN SYSTEMPAC
        TARGET VOLSER        D
        ASSEMBLER NAME       C  ASMA90
        SMPTLIB DS PREFIX    C  SYS1.ZOS
        SMPTLIB DEV TYPE   M C  3390
        SMPTLIB STORCLAS     C
        SMPTLIB SMS MGT      C  NO
        SMPTLIB VOLUME1    M C  V750T1
        SMPTLIB VOLUME2      C
        SMPTLIB VOLUME3      C
        SMPTLIB VOLUME4      C
        SMPTLIB VOLUME5      C

    ==> HFS/ZFS INFO
        INSTALL DIRECTORY    D  /Service
        SMPWKDIR NAME        D  /tmp
        JAVA LIB SMPJHOME  M P  /
        ALLOCATE SMPWKDIR    D  N
        SMPWKDIR FILE SYS    D
        SMPWKDIR FS TYPE     D
        SMPWKDIR SMS MANA    D  N
        VOLSER               D
        STORCLAS             D
        DATACLAS             D
        PRIMARY CYLS       M D  15593
        SECONDARY CYLS     M D  3898
```

Figure 39. Panel: Variable selection list - merged variables

Except for customized variables, you can modify the values of variables by typing over the Contents field.

To display online help for a variable, enter B (Browse) next to it.

The following primary commands are valid for this panel:

? SET Locate Find Next Previous

These are standard commands for panels that display lists. See “Primary commands” on page 9.

CANCEL
This command, abbreviated as CAN, discards any changes that you have made since the last checkpoint and exits the Installation Variables panel. (A checkpoint is taken when you enter and exit the dialog, and after any SAVE command).

SAVE
This command saves any changes that you have made and establishes a new checkpoint. (A checkpoint is taken when you enter and exit the dialog, and after any SAVE command).

SHOW
This command, abbreviated as SH, displays the variables. To limit the display to certain types of variables, enter SH with one or more of the following filters:

*****
All variables.

C
Customized variables. You cannot edit or delete these variables.

D
Default variables

E
Erased variables

I
Inserted variables

P
Pre-defined variables

U
User-defined variables

For example, to display only variables with status codes of C (customized) or P (pre-defined), enter the SHOW command, as follows:

```
SH CP
```

You can prefix the list of status codes with a logical not operator (¬) to bypass variables with particular status codes. For example, to display variables that do not have status codes of C or P, enter the following command:

```
SH ¬CP
```

SYNONYM
This command, abbreviated as SYN, displays variables by their synonyms. Figure 38 on page 60 shows an example of the synonym format of this panel.

VARNAME
This command, abbreviated as VAR, displays variables by their names.

The following line commands are valid for this panel:

B
Browse the information for the selected variable, including:

- Variable name
- Full status
- Default data value
- Current data value
- Variable description

See “Browsing variable definitions” on page 64.

D
Delete a user variable. You must confirm your DELETE request. See “Deleting user variables” on page 67.

You cannot delete IBM-supplied variables.

E
Edit the following fields:

- Current data value
- Variable Description

See “Editing variable definitions” on page 65.

You cannot update variables with a status of C (customized).

I
Insert a user variable. See “Inserting user variables” on page 66.

R

Repeat the insertion of a user variable, using values copied from the selected variable (except for its name, because variable names must be unique). See “Inserting user variables” on page 66.

S

Restore the variable to the shipped CustomPac values. You must confirm your SHIP request (see “Restoring a variable to its shipped value” on page 67).

Use S carefully on this panel; S usually means SELECT in the other dialog panels.

Selecting new values for the variables in your order

Reviewing the variables in your order and identifying values for them in advance will simplify your work for this task. Table 3 on page 63 shows some variables that will likely require some research on your part, and, perhaps, a discussion with your storage administrator and security administrator.

Table 3. Installation variables that require some planning

Variable synonym	Default value	Description
DYNAMIC DASD INFO	**Default**: Yes	Specifies whether the dialog should use information from online volumes to automatically determine device characteristics, including device geometry, volume size and device number. If the system on which the dialog runs is not the same system on which the installation jobs will run, two different volumes with the same volume serial could be online (one in each system) and the dialog could retrieve information about the wrong device. In this situation, you should specify "No" for this variable and define the volumes manually.
INSTALL DIRECTORY	**Default**: /Service	Directory on the driving system in which your order's file system elements are to be restored and its file systems mounted. This value cannot be blank. By default, the Install Directory is /Service. If you specify a directory other than /Service, do not exceed 20 characters. Mixed case characters are allowed. If your driving system file system is mounted read-only, the specified directory must exist on the driving system. In a multilevel directory path, the lowest directory from the root is automatically created. Higher directories are not created.
SPOOL VOL PREFIX	**Default**: MVSC1	First 5 characters for names of spool volumes. This value must match the value specified in the allocation values for the HASPACE data set.
SYSNAME	**Default**: CPAC	System name, as it is specified on the SYSNAME= parameter of the IEASYSxx parmlib member. Standard data set naming conventions apply. If you change this value from the default (CPAC), you must also change the value of SYSNAME in the IEASYSxx member used to IPL the target system. For a full system replacement, changing the SYSNAME value requires that you update the system name list in the SMS Base Configuration (using ISMF after you IPL). Then, you must activate the changed SMS configuration before you can use SMS.
SYSTEM LOGGER HLQ	**Default**: IXGLOGR	This variable sets the high-level qualifier that System Logger will use to create staging data sets and log data sets for log streams.

Note:

1. As shipped in your order, the system name (SYSNAME) for the target system is CPAC. If you change the SYSNAME value for your order, later in the installation you must ensure that the new system name is

defined in the appropriate places, as described in the chapter on IPLing the target system in *ServerPac: Installing Your Order*.

2. The RACF OLD PDSN and RACF OLD BDSN variables allow you to specify only one primary RACF database name and one backup RACF database name. If you use more than one primary or backup RACF database, or do not use a backup RACF database, you must change some of the installation jobs accordingly.

Browsing variable definitions

To display the variable details, use a two panel sequence, as follows.

First, enter line command B for the variable to be browsed. The panel shown in Figure 40 on page 64 is displayed.

```
CPPP6115 ------------ Installation Variables ( MD053718 ) --------------------
COMMAND ==>

BROWSE Variable Definition - Value

               Variable :  FADAXX01
                Synonym :  DYNAMIC DASD INFO
                 Status :  PREDEFINED

            Default Value : YES

           Current Value : YES


  Acceptable Values:

    Y N YES NO

                                         ( Press ENTER for Description Fields )
```

Figure 40. Panel: Update variable definition - value

For some variables, a set of allowed values is listed in the `Acceptable Values:` field.

Press Enter to display the description fields for the variable. The panel shown in Figure 41 on page 64 is displayed.

```
CPPP6114  ------------ Installation Variables ( MD053718 ) -------------------
COMMAND ==>


BROWSE Variable Definition - Usage

      Variable Description

   :  This variable tells the dialog whether to use information from online
   :  volumes automatically to determine device characteristics including
   :  device geometry, volume size, and device number.
   :
   :  To have the dialog determine device characteristics automatically,
   :  set this variable to Yes.
   :
   :  To enter all device characteristics manually, set this variable to No.
   :
   :
   :
```

Figure 41. Panel: Browse variable definition - usage

You can also browse variable section headers (==>). The format of the first panel display changes to show only the synonym and status. The description panel gives a general overview of the variables in the current section.

The ENTER and END keys have the following actions:

ENTER
On the Value panel, displays the Usage panel. On the Usage panel, ends the Browse function.

END
On the Value panel, ends the Browse function. On the Usage panel, displays the Value panel.

Editing variable definitions

Except for customized variables, you can modify the values of the variables in your order. To update the variable details, use a two panel sequence, as follows.

First, enter line command E for the variable to be edited. The panel shown in Figure 42 on page 65 is displayed.

```
CPPP6115 ------------ Installation Variables ( MD053718 ) --------------------
COMMAND ==>

UPDATE Variable Definition - Value

               Variable :  FADAXX01
                Synonym :  DYNAMIC DASD INFO
                 Status :  PREDEFINED

            Default Value :  YES

           Current Value ==> YES


  Acceptable Values:

    Y N YES NO

                                        ( Press ENTER for Description Fields )
```

Figure 42. Panel: Update variable definition - value

For some variables, a set of allowed values is listed in the `Acceptable Values:` field. You can select another value from the list.

Then, press Enter to display the description field for the variable. The panel shown in Figure 43 on page 65 is displayed.

```
CPPP6116 ------------ Installation Variables ( MD053718 ) --------------------
COMMAND ==>

UPDATE Variable Definition - Usage

      Variable Description

  ==> This variable tells the dialog whether to use information from online
  ==> volumes automatically to determine device characteristics including
  ==> device geometry, volume size, and device number.
  ==>
  ==> To have the dialog determine device characteristics automatically,
  ==> set this variable to Yes.
  ==>
  ==> To enter all device characteristics manually, set this variable to No.
```

Figure 43. Panel: Update variable definition - usage

You can change the following fields:

Current value
The data value of the variable that is used when installation jobs are generated.

Variable description
The description of the variable. You have 15 fields to describe the variable.

You can also update variable section headers (==>), but you can change only the description.

The ENTER and END keys have the following actions:

ENTER
On the Value panel, displays the Usage panel. On the Usage panel, ends the Edit function and updates the variable using the values entered.

END
On the Value panel, ends the Edit function. On the Usage panel, displays the Value panel.

Inserting user variables

You can add one or more user-defined variables to your order. If you plan to insert multiple variables into your order, you can save time by replicating the definitions of existing variables through line command R (REPEAT).

To add a user-supplied variable, use a two-panel sequence. Begin by choosing an appropriate variable section header in the list for the new variable (for example, GENERAL DSN for general use data sets). Next to an existing variable in the section, enter line command I to insert a user variable. Figure 44 on page 66 is displayed.

```
CPPP6117 ------------ Installation Variables ( MD053718 ) --------------------
COMMAND ==>

INSERT a USER Variable - Value
                      :
      Variable Name    ==> $ _

             User Variables are ALWAYS a $ plus 1 to 7 characters

      Synonym     ==>

      Status       :  USER

      Default Value ==>

      Current Value ==>

                                  ( Press ENTER for Description Fields )
```

Figure 44. Panel: Insert a user variable - value

In this panel, define the following fields:

Variable Name
Name of the variable, prefixed by a $ symbol. Specify a name of 1 to 7 characters. The name you choose must be unique; otherwise, the dialog displays a "duplicate" message.

Synonym
Short phrase (1-19 characters) that identifies your variable.

Default Value
Value of the variable to be saved as a reference or model.

Current Value
Value of the variable to be used in the installation jobs you create.

To cancel an insert action, press END. Otherwise, to continue defining the variable, press Enter to display the variable's description fields, as shown in Figure 45 on page 67.

```
CPPP6118 ------------ Installation Variables ( MD053718 ) --------------------
COMMAND ==>

INSERT a USER Variable - Usage

      Variable Description

            ==> Describe your variable
            ==> in these fields...
            ==>
            ==>
            ==> You have 15 fields
            ==> to use for description.
            ==>
            ==>
            ==>
            ==>
            ==>
            ==>
            ==>
            ==>
            ==>
```

Figure 45. Panel: Insert a user variable - usage

Use this panel to provide a description of the variable. Fifteen fields are available for your use.

To add the variable, press Enter. The dialog inserts the variable using the values you entered. If you later return to the Variables list, you will find the user-supplied variables grouped at the end of the variable section, sorted alphabetically by variable name (not synonym).

To repeat the definition of a variable in the list, enter line command R for the variable. Reset the values of the fields to define the new variable.

Deleting user variables

Figure 46 on page 67 shows the panel that is displayed when you enter line command D to delete a user-defined variable.

```
CPPP611D ------------ Installation Variables ( MD053718 ) --------------------
COMMAND ==>

DELETE a USER Variable

                           Variable : $TESTVAR

               Status  : USER          Synonym : MY TEST VARIABLE

               Default : TESTVAR

               Current : TESTVAR

          You MUST Confirm DELETION By Typing DELETE and pressing ENTER

          Press the END or RETURN key to CANCEL the DELETE request
```

Figure 46. Panel: Delete a user variable - confirmation

You must confirm your request by entering DELETE in the `COMMAND ==>` field and pressing enter.

Caution: Be careful when deleting user variables that are used by user-defined installation jobs. Deleting these variables can cause errors to occur in the jobs generated by the Install option of the installation dialog, which is described in Chapter 11, “Submitting the installation jobs,” on page 151.

Restoring a variable to its shipped value

Figure 47 on page 68 shows the panel that is displayed when you enter line command S to restore a variable to its shipped value.

```
CPPP611S ------------ Installation Variables ( MD053718 ) --------------------
COMMAND ==>

RESTORE a Variable to the SHIPPED Value

                              Variable : F90GDQ01


               Status  : PREDEFINED    Synonym : PREFIX DIALOG DSN

               Default : CUSTNAME.MD053718

               Current : GLANDA.MD053718

            You MUST Confirm RESTORE By Typing RESTORE and pressing ENTER

            Press the END or RETURN key to CANCEL the RESTORE request
```

Figure 47. Panel: Restore a variable to the shipped value - confirmation

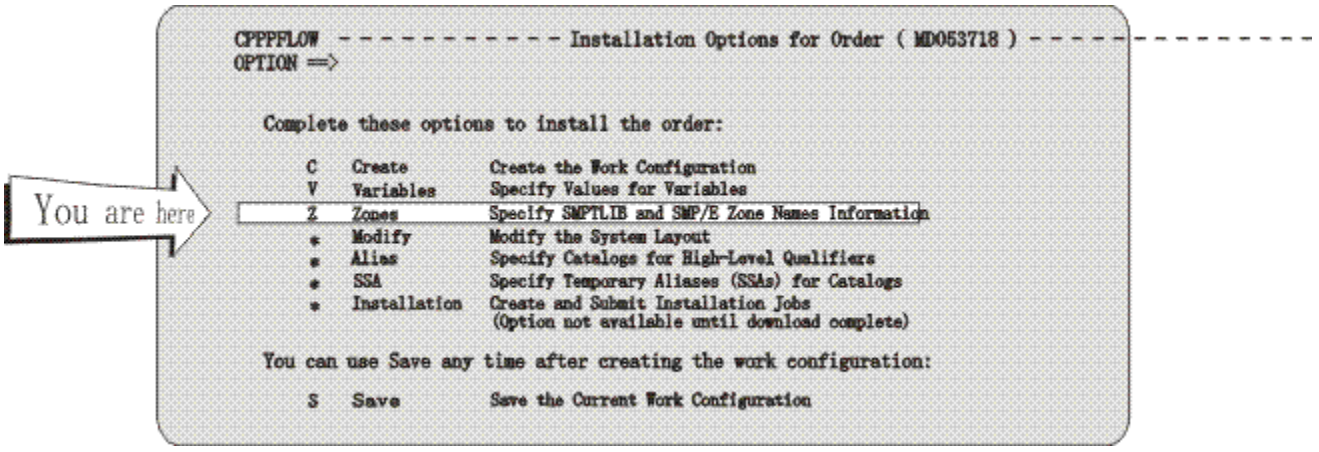
Your request restores the following values for the variable to the shipped CustomPac values:

- Default data value
- Current data value
- Variable description.

You must confirm your request by entering RESTORE in the `COMMAND ==>` field and pressing enter.

If you restore a user variable, the current data value is made the same as the default data value.

Chapter 7. Defining the SMP/E zone configuration



Note: If your order contains only non-SMP/E installable products, you will not see the preceding panel.

From the Installation Menu, enter Z to begin the next dialog function, Define Zone Configuration. If you are installing a Product ServerPac order, then the dialog displays the Global CSI Selection (CPPP6390) panel as shown in Figure 48 on page 69. The CPPP6390 panel is not displayed if the order is not a Product ServerPac order. If your order is not a Product ServerPac order and it contains products installed by Installation Manager (IM), the dialog displays the Modify Zones & Installation Manager Information (CPPP639A) panel as shown in Figure 50 on page 70. The CPPP639A panel is not displayed if the order does not contain IM-installed products. If your order is not a Product ServerPac order and it does not contain IM-installed products, then the Define SMPTLIB and Zone Names (CPPP6391) panel is displayed.

```
CPPP6390  ------------ ------ Global CSI Selection ( QD002626 ) ---------------
 COMMAND ==>


 Do you want to use your existing Global CSI? (Yes or No)

  ===> NO


 WARNING: If you select 'YES' your existing Global CSI will be updated
 with the shipped information of the order. You should make a backup of
 your existing Global CSI
beforehand.
```

Figure 48. Panel: Global CSI selection

On the Global CSI Selection panel, specify whether you want to use your existing Global CSI data set for installing the Product ServerPac order. Answer either YES or NO to the question about using existing Global CSI. If you specify NO, you are indicating that you do not want use your existing Global CSI. When you press Enter, either the Modify Zones & Installation Manager Information panel (see Figure 50 on page 70) or the Define SMPTLIB and Zone Names panel (see Figure 54 on page 73) is displayed. If you specify YES to the existing Global CSI question and press Enter, you are asked to enter the existing Global CSI name, as shown in Figure 49 on page 70.

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```
CPPP6390  ------------ ------ Global CSI Selection ( QD002626 ) ---------------
 COMMAND ==>


 Do you want to use your existing Global CSI? (Yes or No)

  ===> YES


 WARNING: If you select 'YES' your existing Global CSI will be updated
 with the shipped information of the order. You should make a backup of
 your existing Global CSI
beforehand.


 Enter the Global CSI Name:

  ===>
```

Figure 49. Panel: Global CSI selection

You must enter a valid Global CSI name when YES is specified for the existing Global CSI question.

After specifying the data set name for the Existing Global CSI and when you press Enter, either the Modify Zones & Installation Manager Information panel (see Figure 50 on page 70) or the Define SMPTLIB and Zone Names panel (see Figure 54 on page 73) is displayed.

```
CPPP639A  ---- Modify Zones & Installation Manager Information ( OD001342 ) ---
OPTION ==>




    Z   Specify SMPTLIB and Zone Names Information



    P   Specify Installation Manager Installed Products Information (Required)
```

Figure 50. Panel: Modify zones & installation manager information

On the CPPP639A panel, selecting the Z option will display the CPPP6391 panel, which is the same panel as the one in Figure 54 on page 73. This option is explained in detail later in this chapter. You can also select the P option to display the CPPP6398 panel (Figure 51 on page 71), which shows the list of components that can be installed using Installation Manager. For mandatory components, the Install field is filled with Y. For optional components, the Install field is displayed with default value ?, which must be changed to Y or N.

```
CPPP6398  ------------ IM Installed Products( OD001657 ) ----- Row 1 to 7 of 7
COMMAND ==>                                                   SCROLL ==> CSR

Primary Commands:(? CANcel SAVE VErbose)
   Line Commands:(NONE)

Component Names identified below will be installed via Installation Manager
if you enter a Y for Install field.


FMID    Component Name                                                Install
Name                                                                  (Y or N)
------- ------------------------------------------------------------- --------
HEJC800 WAS XD Compute Grid for WASV8                                 ?
HEJC800 WAS XD Compute Grid for WASV7                                 ?
HBBO800 WAS V8 Webserver Plug-ins                                     ?
HBBO800 WAS V8 IBM HTTP Server                                        ?
HBBO800 WebSphere Application Server V8 base                          Y
HBBO800 WAS V8 DMZ Secure Proxy Server                                ?
HCYE720 WAS V8 ITCAM                                                  ?
****************************** Bottom of data ********************************
```

Figure 51. Panel: IM-installed products

On the CPPP6398 panel, enter Y or N next to the optional components to include or exclude them for installation by the Installation Manager. You can also enter the primary command **VE** to display the VErbose mode of the panel as shown in Figure 52 on page 71.

```
CPPP6399  ------------ IM Installed Products( OD001657 ) ----- Row 1 to 7 of 7
COMMAND ==>                                                   SCROLL ==> CSR

Primary Commands:(? CANcel SAVE TErse)
   Line Commands:(NONE)

Component Names identified below will be installed via Installation Manager
if you enter a Y for Install field.


FMID    Component Name                                                Install
Name                                                                  (Y or N)
 PGM Number File System Path Name
------- ------------------------------------------------------------- --------
HEJC800 WAS XD Compute Grid for WASV8                                 Y
 5655V62    /usr/lpp/zWebSphere/V8R0
HEJC800 WAS XD Compute Grid for WASV7                                 Y
 5655V62    /usr/lpp/zWebSphereCG/V8R0
HBBO800 WAS V8 Webserver Plug-ins                                     Y
 5655W65    /usr/lpp/zWebSphere_Plugins/V8R0
HBBO800 WAS V8 IBM HTTP Server                                        Y
 5655W65    /usr/lpp/IHSA/V8R0
HBBO800 WebSphere Application Server V8 base                          Y
 5655W65    /usr/lpp/zWebSphere/V8R0
HBBO800 WAS V8 DMZ Secure Proxy Server                                Y
 5655W65    /usr/lpp/zWebSphere_SPS/V8R0
HCYE720 WAS V8 ITCAM                                                  Y
 5655W65    /usr/lpp/zWebSphere/V8R0
****************************** Bottom of data ********************************
```

Figure 52. Panel: IM-installed products (verbose mode)

The CPPP639$ panel is displayed when you attempt to exit CPPP639A panel without going into the P option.

```
CPPP639$  ------------------------------------------------------------------------
COMMAND ==>                                                  SCROLL ==> CSR

Confirming Processing Requirements




                  This Order contains IM installed products.

                    You have not selected which products

                      components you want to install.

                    Invoke option P on panel CPPP639A to

                   select the components to be installed.



           Press the ENTER key to continue editing the table.

           Press the END or RETURN key to save the current values and
           EXIT. Processing will resume at this function.
```

Figure 53. Panel: Confirming processing requirements

Note: Panels CPPP639A, CPPP6398, CPPP6399 and CPPP639$ are not displayed if order does not contain products installed by the Installation Manager.

The Z option allows you to change the SMP/E zone names that IBM supplied for your order.

Choose SMP/E zone names that are unique for your installation. Doing so will allow you to use SMP/E's cross-zone processing, such as SMP/E's reporting and management functions.

If you want to rename the CSI data set, you can do so later in the Modify System Layout function, described in Chapter 8, “Modifying the system layout,” on page 79.

This panel allows you to change the names of zones in your order, but not the contents of zones.

On entering the Z option, the dialog displays the current DLIB and target zone names for your order (as shown in Figure 54 on page 73). When an SMP/E operational data set includes the zone name you specified, your future changes to the zone names are propagated to the SMP/E operational data set. If the zone name does not appear on the data set name, then an informational message is shown to indicate that the subsequent zone name changes will not be propagated.

All SMP/E operational data sets are checked as to whether their rename causes the data sets name to exceed the 42 character limit (due to the minimum length of SSA). When the limit is exceeded, the data set that exceeded the limit is not renamed. The CPP0639009E error message is issued with the number of data sets, and the name of the data set that exceeded the limit.

If you select NO for SMS Managed, the following window appears.

```
CPPP6391 ----------- Define SMPTLIB and ZONE names ( MD053718 ) --- Row 1 of 5
COMMAND ==>                                                  SCROLL ==> CSR

Primary Commands:(? CANcel SAVE)
   Line Commands:(elemenTs Fmids)

                            SMPTLIB Information

   Data set Prefix ==> SYS1K.ZOS.HISASHI
      SMS Managed ==> NO        (YES/NO)

       Device Type ==> 3390
        Volume(s) ==> KENJIM ==> HIROTA  ==> HISAMX  ==>           ==>


                           Zone Names Information

        S  Nickname        DLIB Zone        Target Zone   SST
        -  --------        ---------        -----------   ----
            100            KMSD100          KMST100      MVS
            110            HHSD110          HHST110      MVS
            111            KMSD111          KMST111      MVS
            113            KMSD113          KMST113      MVS

****************************** Bottom of data ********************************
```

Figure 54. Panel: Define SMPTLIB and zone names with NO selected for the SMS managed field

If you select YES in the SMS Managed field, the following window appears:

```
CPPP6391 ----------- Define SMPTLIB and ZONE names ( MD053718 ) --- Row 1 of 5
COMMAND ==>                                                  SCROLL ==> CSR

Primary Commands:(? CANcel SAVE)
   Line Commands:(elemenTs Fmids)

                            SMPTLIB Information

   Data set Prefix ==> SYS1K.ZOS.HISASHI
      SMS Managed ==> YES        (YES/NO)

      Storage Class ==>     SCKENJI


                           Zone Names Information

        S  Nickname        DLIB Zone        Target Zone   SST
        -  --------        ---------        -----------   ----
            100            KMSD100          KMST100      MVS
            110            HHSD110          HHST110      MVS
            111            KMSD111          KMST111      MVS
            113            KMSD113          KMST113      MVS

****************************** Bottom of data ********************************
```

Figure 55. Panel: Define SMPTLIB and zone names with YES

If you run an elementTs line command against a zone from the CPPP6391 panel, the CPPP6396 panel is displayed.

```
CPPP6396 -------- Define SMPTLIB and Zone Names ( MD053718 ) ---- Row 1 of 82
COMMAND ==>
                                              SCROLL ==> CSR
SUMMARY Of Features/Elements for KMSD100/KMST100

Primary Commands:(? SET Find Locate Next Previous)
   Line Commands:(Fmids)

     S Feature/Element                        FMID#
     - -------------------------------------- -----
       dsf ICKDS ENU                          2
       msys for Setup                         2
       z/OS UNIX System Services - Intgd Call  1
       z/OS UNIX System Services Application Se1
       zSecure Base                           1
       zSecure Bookshelf                      1
       Appl Wkload Mod Z/OS                   1
       ASF V3R4 MUL                           1
       BookManager Build ENU                  2
       BookManager Read ENU                   2
       BCP - Capacity Provisioning            1
       BCP Base                               3
       BDT                                    1
       BDT FILE-TO-FILE                       1
       BDT SNA NJE                            1
       C/C++ Host Perf Analyzer               1
       Common Information Model               1
       Communications Server                  3
       Communications Server Security Level 3  1
       Cryptographic Services - ICSF          1
       Cryptographic Services - OCSF Base     1
       Cryptographic Services - PKI Services   1
       Cryptographic Services - System SSL Base1
       CICAT Config Services                  1
       CMD VERIFIER BASE                      1
       CT/Engine                              1
       Data Facility System Managed Storage Bas1
       Distributed File Service Base          2
       DCE Base Svcs                          1
       DCF 1.04.0                             3
       DFSORT Base                            1
       DITTO/ESA FOR MVS 1.03                 1
       DSF ICKDS Panl ENU                     1
```

Figure 56. Panel: Define SMPTLIB and zone names

If you run an Fmids line command against a zone from the CPPP6391 panel, the CPPP6395 panel is displayed with a summary of the FMIDs for that zone. You can also invoke this dialog by running an FMID line command in panel CPPP6396.

```
CPPP6395 ----------- Define SMPTLIB and ZONE names ( MD053718 ) --- Row 1 of 3
COMMAND ==>                                                  SCROLL ==> CSR

FMID Summary for zone KMSD100/KMST100

PRIM Cmds:(? SET Find Locate Next Previous)
LINE Cmds:(NONE)

    FMID   Description
    ------ ------------------------------------------------------------------
    EDU1H01 ICKDSF - Device Support Facilities, Base
    EER3500 Environmental Record Editing and Printing
    EMI2220 MICR/OCR
    ETI1106 TIOC
    FDU1H07 ICKDSF - Device Support Facilities, ISMF/MODS
    FDU1H08 ICKDSF - Device Support Facilities, ISMF/ENU
    HBB7750 BCP Base
    HBCNC00 SMP/E Planning and Migration Assistant Software Info Base
    HBCND0B SMP/E Planning and Migration Assistant
    HBD6602 BULK DATA TRANSFER BASE
    HBKM300 BOOKMANAGER READ/MVS BASE
    HBKP300 BOOKMANAGER BUILD/MVS BASE
    HBKQ330 Library Server
    HCKR1AB IBM Tivoli zSecure Bookshelf
    HCKR1A0 IBM Tivoli zSecure Base
    HCMG110 OS/390 UNIX SYSTEM SERVICES CO
    HCM1A10 Hardware Configuration Manager
    HCPT3A0 Cryptographic Services - System SSL Base
    HCRY740 Cryptographic Services - OCSF Base
    HCR7750 Cryptographic Services - ICSF
    HCS7750 Hardware Configuration Definition Base
    HC4R1A0 IBM Tivoli Command Verifier Base Parser
    HDZ1AN0 Network File System Server and Client
    HDZ1A10 Data Facility System Managed Storage Base & ENU
    HFST101 FFST
    HFX1112 PC 3270 FILE TRANSFER
    HGD3200 GDDM BASE
    HGD3201 GDDM PGF
    HIF5I02 ISPF Base
    HIMW530 IBM HTTP Server Base
    HIO1104 IOCP
    HIP61A0 Communications Server IP
    HIT7750 Integrated Security Services - Enterprise Identity Mapping
******************************* Bottom of data ********************************
```

Figure 57. Panel: Define SMPTLIB and zone names

How zone names are used in your order

All DLIB zones for each SREL are physically defined in the same DLIB CSI data set. All target zones for each SREL are physically defined in the same target CSI data set.

More than one zone pair (a DLIB and target) might be supplied with your order. Each zone pair has a 3-digit number as a "nickname." The nickname is used to associate DLIB and target zones together.

For example, suppose you selected JES2 when creating the work configuration, but chose not to merge its zones with the z/OS BCP zones. The following zone nicknames might be used:

```
         Nickname 100 . . .  z/OS BCP
         Nickname 110 . . .  JES2
```

The zone nicknames are also used to generate the default DLIB and target zone names, based on the following naming convention:

- First 3 characters of the order name: MVS (represents a z/OS order), CIC, Db2, IMS or NCP.
- 1-character zone type identifier:

  D
  Distribution Zone (DLIB)

T
Target Zone (TLIB)

- 3-character zone pair nickname.

For example, assume that a zone nickname of 500 was generated for a CICS order. The zone names would be:

```
CICD500  . . .  for the distribution zone
CICT500  . . .  for the target zone
```

For descriptions of the zones that came with your order, see the topic, "Zones Shipped with Your Order," in *ServerPac: Installing Your Order*.

Note: JES zones for an unselected JES element and JES zones that are to be merged with the BCP zones will not appear in the dialog, even though they are listed in *ServerPac: Installing Your Order*.

Changing the SMPTLIB and zone names in your order

For the SMPTLIB information, the Data set Prefix and SMS Managed (Yes/No) fields are mandatory. If SMS Managed is set to "No" (default), the Device Type field and at least one Volume is also mandatory. If SMS Managed is set to "Yes", the Storage Class is also mandatory. The dialog checks for all required SMPTLIB information to be specified, and if anything is missing or incorrect, a message is shown.

In the panel (shown in Figure 54 on page 73), type over the DLIB and target zone names with the names that you want for your installation and press Enter. The dialog checks for duplicate zone names and, if one is found, displays a message (CPP0639006E DUPLICATE Zone Name) on the panel.

Ensure that the zone names you specify are unique for all environments in your installation. The new zone names should not appear in ZONEINDEX subentries in the global zone ZONE entries for any of your existing systems.

The following primary commands are valid for this panel:

CANCEL
This command, abbreviated to CAN, discards any changes that you have made since the last checkpoint and exits the Zone Configuration panels. (A checkpoint is taken on entry and exit to the dialog, and after any SAVE command).

SAVE
This command saves any change that you might have made and establishes a new checkpoint. (A checkpoint is taken on entry and exit to the dialog, and after any SAVE command).

The following line commands are valid for this panel:

ELEMENTS
Displays the features/elements that are installed in the selected zone. Specify a T for a zone pair and press Enter to display the features installed in the zone. This line command displays feature names only; it does not show FMIDs, nor does it display any other type of SYSMODs, such as PTFs, for example.

FMIDS
FMIDS Displays the FMIDs that are installed in the selected zone. Specify a F for a zone pair and press Enter to display the FMIDS with the description installed in the zone.

Confirming processing requirements

The CPPP6397 panel is displayed when you attempt to end the Define SMPTLIB and Zone Names function when the required SMPTLIB information is not specified or is in error, and you ignored the ISPF messages "Enter required field" or "Invalid value". Some of the required SMPTLIB information have never been specified or were invalid.

```
CPPP6397 ------------------------------------------------------------------------
COMMAND ==>
Confirm Processing Requirements

                     Some of the required SMPTLIB information have

                           not been specified OR were invalid


               Press the ENTER key to continue editing the table.

               Press the END or RETURN key to save the current values and
               EXIT. Processing will resume at this function.
               If you enter CANcel command on the previous panel, no new
               checkpoint will be established.
```

Figure 58. Panel: Confirm processing requirements

Figure 59 on page 77 shows the panel that is displayed when you attempt to end the Zone Configuration function when the DLIB and target zone names you have specified are in error and you chose to ignore error message CPP0639006E or CPP0639013E. Either you have used the same zone name more than once or (in the case of a Product ServerPac order), if you have selected to use the existing Global CSI, then the zone names are already present in the existing Global CSI entered.

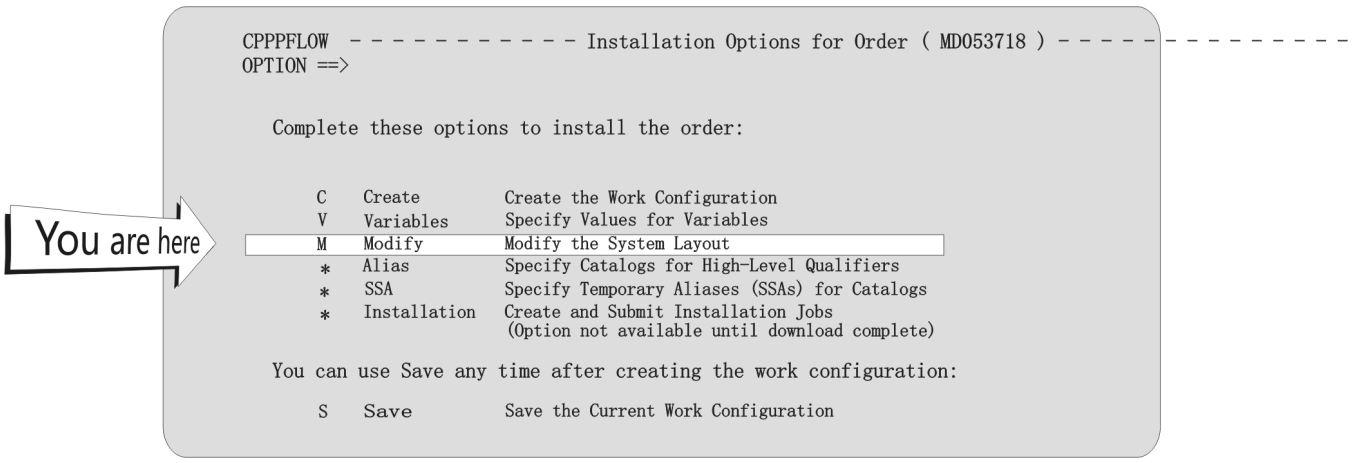
```
CPPP6393 ------------------------------------------------------------------------
COMMAND ==>
Confirm Processing Requirements

                     The Zone Configuration table contains at

                           least one duplicate zone name


            Press the ENTER key to continue editing the table.

            Press the END or RETURN key to save the current values and
            EXIT, Processing will resume at this function.
```

Figure 59. Panel: Confirm processing requirements

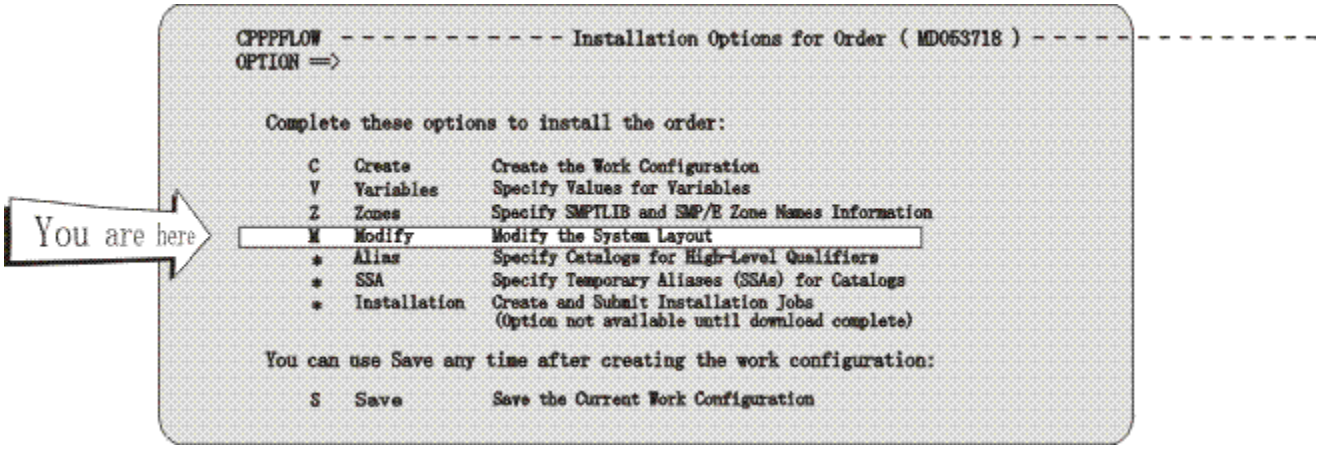
If you press Enter, the cursor is positioned on the first duplicate zone name. If you press End, you exit the panel now, but you will have to return to it before you can continue with the installation.

Chapter 8. Modifying the system layout

If your order contains only non-SMP/E installable products, you will see the following panel.



For all other orders, you will see the following panel.



From the Installation Menu, enter Modify to begin the next dialog function. The Modify System Layout Options panel is displayed, as shown in Figure 60 on page 79.

```
CPPP605T --------- Modify System Layout Options ( MD053718 ) ----------
OPTION ==>


A   Create a Recommended System Layout (Automatically assign target and
    DLIB data sets to physical volumes by data set type)

C   View and change data sets by selected attributes
T   View and change device type table (DEVT)

D   Data Set Summary (SUMD)

V   Physical Volume Summary (SUMP)
L   Logical Volume Summary (SUML)

P   Product, Feature, and Element Summary

---------------------- Session Control Options ----------------------
K   Keep Changes made in this dialog session so far (SAVE)
B   Back Out changes from this dialog session (CANcel)
```

Figure 60. Panel: Modify system layout options

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During this part of the dialog, you create the data set layout for your new system. After you have modified this configuration, you can save it for merging with future ServerPac installations.

IBM recommends that you modify your configuration in the following order:

1. Data set merges, if any.
2. Data set space changes, if any.
3. Specifying Reserved Space, if it will be used.
4. Specifying which volumes are not to be initialized.
5. Everything else.

This method can help you avoid situations in which volumes become overallocated.

You can create the new data set layout in one of three ways:

- Use Option A, Recommended System Layout, to assign your order's target and DLIB data sets to volumes automatically.
- Use Option C, View and Change, to assign your order's data sets to volumes by displaying groups of data sets and use the CHANGE PVOL command to specify their placement on physical volumes.
- Use the other options (D, V, L, and P) to assign your order's data sets to logical volumes and then assign those logical volumes to physical volumes (DASD).

To save the most time in the dialog, use Option A to create the recommended system layout. The dialog will automatically assign your order's target and DLIB data sets to your DASD volumes, attempting to match, as closely as possible, the IBM recommended system layout that is described in the topic "Recommended Data Set Placement" in *z/OS Planning for Installation*. Then use the View and Change Facility for any subsequent changes you make to the configuration data sets.

The recommended approach is described in three sections, as listed below:

- Option A in “Creating the recommended system layout” on page 80
- Option C in “Viewing and changing data sets” on page 96
- Option T in “Displaying device types” on page 119.

To control data set placement, use either Options A and C, or use the Summary Display commands for data sets (the SUMD commands), but not both. If you create a new layout through Option A or change data set assignments in Option C and later attempt to manage data set placement using the dialog's Summary Display commands, you will have difficulty because the dialog's automatic logical volume assignments will be dramatically different from those you have saved in previous releases. (Note that the summary of physical volumes displayed by Option V or the SUMP command is still used to manage volumes, no matter how you choose to control data set placement.)

To aid your work in this phase of the dialog, the Modify System Layout Options panel includes session control options to allow you to set the disposition of your changes, as listed below:

Option
Description

K
Keep any changes that you have made since the last SAVE.

B
Back out (discard) any changes that you have made since the last SAVE, and exit the Modify System Layout function.

Creating the recommended system layout

IBM's recommended system layout provides a foundation for the ongoing growth and maintenance of your system. When you group your system's data sets by their content and importance to your installation, you help to minimize the complexity of future installations. For a further discussion of the benefits of using the recommended system layout, see the topic, "Recommended Data Set Placement," in *z/OS Planning for Installation*.

When you select the Recommended System Layout option of the dialog, you are choosing to allow the dialog to **automatically assign** some or all of the target and DLIB data sets in your order to DASD volumes. The dialog assigns data sets based on the following considerations:

- Whether the data set is a target data set or a DLIB data set
- Whether the data set must reside on the IPL volume
- The type of data in the data set (panels, messages, load modules, and so on)
- Whether the dialog should attempt to place the data set on the first or last volume in the configuration.

The dialog does not automatically assign an order's operational data sets or any of the sample CustomPac Data sets. You must continue to place these data sets yourself based upon the IBM recommended system layout that is described in "Recommended Data Set Placement" in *z/OS Planning for Installation*.

If you are using a saved configuration with your order, and you run the Recommended System Layout option, only the new operational data sets remain to be assigned afterward. Here, you can use the dialog's View and Change Facility to help with determining which data sets are operational data sets. In View and Change, display the data sets that are new to the configuration. Then, examine this list for any operational data sets. If you do not know the operational data sets by name, you must display each of them for further information.

The dialog does not automatically assign any SMS-managed data sets in the configuration. Your SMS-managed data sets must reside on volumes other than those used for automatic assignment.

If you include a saved configuration from a previous order in the current work configuration, the dialog preserves any data set changes you might have made in the saved configuration.

Excluding specific data sets from automatic assignment

If there are specific data sets that you want to exclude from automatic assignment:

1. Identify the data sets you want to exclude and temporarily assign them to a storage class.
2. Use Recommended System Layout.
3. Reassign the data sets you assigned to a storage class above to physical volumes, using the CHANGE PVOL command.

The role of volumes in automatic assignment

To begin the automatic assignment of data sets to volumes, you can make some of your existing volumes available to the dialog for creating the new system, or you can have the dialog create a configuration based entirely on new volumes. During automatic assignment, the dialog assigns data sets to these volumes. If the dialog requires additional volumes to contain the new configuration, the dialog creates more volumes automatically.

If you are installing a z/OS order, you will restore the root file system into a single data set. For the root file system to be allocated as a single data set, you can place your z/OS root file system on a large DASD volume (generally larger than 3390-3), or use multiple volumes for the z/OS root file system data set (if you only have 3390-3 volumes available). Subsystem orders typically do not contain large file system data sets, so the amount of space to use might be smaller than z/OS. Note that the default volume value is 3390-9 in the dialog. If you are using smaller values for new volumes, you need to change the default volume to match.

How volume types are used

The type of data sets to be stored on a volume determines its **volume type**, as listed below:

Target volume
Target library data sets

DLIB volume
DLIB data sets

BOTH volume
Target library data sets or DLIB data sets (or both). BOTH volumes are intended for use with subsystem orders, which are often small enough to fit entirely on one volume. Also, BOTH volumes provide a final alternative in the event there are not enough target or DLIB volumes available for a data set assignment.

Usually, the dialog creates only target and DLIB volumes, not BOTH volumes. The dialog creates BOTH volumes only in the case in which there are no target (or DLIB) volumes available in the configuration, you have explicitly created at least one BOTH volume for the configuration, and there are additional target or DLIB data sets to be assigned.

How volume sequence numbers are used

For each volume in the new configuration, the dialog assigns a unique **sequence number** to indicate the order in which the volume will be selected for data set assignments. The volume sequence number follows a naming convention: T*nn* for target volumes, D*nn* for DLIB volumes, and B*nn* for BOTH volumes, where *nn* is 01 - 99, for a maximum of 99 volumes per type.

Assigning data sets to volumes

If the work configuration contains data sets that must reside on the IPL volume, the dialog assigns these data sets to the first target volume (T01). Then, the dialog assigns data sets to volumes, based on their element type. The dialog assigns element types in the following order (from first to last):

- LMOD
- PARM
- PROC
- CLIST
- EXEC
- PNL*xxx*
- SKL*xxx*
- TBL*xxx*
- MSG*xxx*
- HELP*xxx*
- Data sets, which have TVOL set to FIRST, that should reside on the first target volume
- All other element types and data sets having no element type
- Data sets, which have TVOL set to LAST, that should be placed on the last volumes in the configuration.

For example, the dialog assigns your configuration's panel data sets (element type PNL*xxx*) to volumes before it assigns your skeleton libraries (element type SKL*xxx*).

Some products include one or more data sets that should reside either on the first target volume or on one of the last target volumes in the configuration. For example, a product might include several data sets of element type DATA that should reside on the IPL volume, which is always the first target volume. During automatic assignment, the dialog recognizes such data sets and attempts to place them according to this requirement, rather than with other data sets of the same element type.

When TVOL is set to FIRST, the dialog will attempt to place the data set on the first volume where it will fit. Therefore, this might not be the first volume in the configuration, which for z/OS orders is the IPL volume. If there are multiple data sets for which the "Special target volume placement" attribute is set to FIRST, they might not all be placed on the first volume or the same volume in the configuration.

When TVOL is set to LAST, the dialog will attempt to place the data set on the volume that is last in the configuration at the time the data set is about to be assigned. If there is not enough room on that volume, the dialog will automatically create another volume. Therefore, if there are multiple data sets for which the "Special target volume placement" attribute is set to LAST, they might not all be placed on the same volume.

Setting the scope of automatic assignments

When you select the A option to "Create a Recommended System Layout" from the Modify System Layout Options panel, the panel shown in Figure 61 on page 83 is displayed. This option causes the dialog to automatically assign the target and DLIB data sets in the configuration to physical volumes. The dialog does not automatically assign any SMS-managed data sets in the configuration.

```
CPPP625B  --------- Automatic Data Set Assignment ( MD053718 ) ----------
OPTION ==>


    A - ALL      Assign all target and DLIB data sets in the configuration
                 to physical volumes automatically.  This option creates a
                 recommended system layout.

    N - NEW      Add new data sets to an existing configuration.  This
                 option automatically assigns new data sets, but preserves
                 the placement of previously-assigned data sets in your
                 saved configuration.

    P - PARTIAL  Assign new data sets and reassign some existing data sets
                 to physical volumes.  This option automatically assigns
                 all new data sets to physical volumes, as well as data
                 sets from selected volumes in the saved configuration.


Enter EITHER a default device type OR a model volume below:

Default Device Type ==> 3390-9     (For example, 3390-9)
 Model after Volume ==>            (For example, ZOSRES)
```

Figure 61. Panel: Modify system layout options

You can control the scope of the dialog's automatic assignments by selecting one of the following settings in the Modify System Layout Options panel:

ALL
: This setting causes all target and DLIB data sets in the configuration to be automatically assigned to physical volumes.

NEW
: This setting causes data sets that are new to the configuration to be automatically assigned to physical volumes, but preserves the assignment of data sets that already exist on volumes in the saved configuration.

PARTIAL
: This setting causes all new data sets in the configuration to be automatically assigned to physical volumes, and also allows you to exclude particular volumes from the saved configuration, freeing their data sets for reassignment.

To see which new data sets will be assigned automatically, you can use the dialog's View and Change Facility to create a list of data sets that have the attribute "New Data Set." For more information, see “Viewing and changing data sets” on page 96.

In some cases, not every setting on this panel is selectable. For example, if you are not including a saved configuration in the new configuration, the only selectable setting on this panel is All.

Choosing between PARTIAL and NEW

The Partial and New settings allow you to preserve some or all of your existing data set assignments. Choosing between these two settings requires careful consideration of your existing volumes. Usually, the best choice is the one that creates the least work for you.

Both Partial and New cause the dialog to automatically assign new data sets and preserve some or all of your current assignments. Partial preserves your existing assignments, except for those volumes that you choose to make available for reassignment (through the eXclude line command). New preserves all of your existing assignments.

The advantage of Partial over New is increased flexibility. New does not allow you to move volumes or rename them before you enter the CReate command (as you can with All or Partial).

If you have used the Recommended System Layout option before, the dialog displays volumes in sequence number order. Otherwise, the New setting simply displays the IPL volume first, if there is one in the configuration, and places remaining volumes in alphanumeric order. The dialog always attempts to assign data sets to volumes in the order in which they are displayed. Once they are used for automatic assignment, each volume will have a sequence number. If you need to move or rename volumes, it is recommended that you use All or Partial. (If you choose New and then need to rename volumes so that they show up in the order you want, you must follow the procedures described at the end of this topic.)

In choosing between New or Partial, consider whether you have used the Recommended System Layout option before. If so, use New when both of the following conditions are true:

- You used All in the past and you want to continue placing new data sets according to the Recommended System Layout.
- Your volumes have enough space to ensure that new data sets will be logically grouped with existing data sets of the same element type.

You should also use New if you do not want existing data sets to be moved and you do not want to place the new ones yourself.

In all other cases, choose All or Partial instead of New.

If you are reusing a saved configuration and you have not used the Recommended System Layout option before, the NEW setting offers the most benefit when your existing configuration follows the IBM recommended system layout that is described in the topic, "Recommended Data Set Placement," in *z/OS Planning for Installation*, and your volumes have adequate free space. If you have already gone through the effort of manually creating a Recommended System Layout configuration and have sufficient free space on the volumes, you should use the New path.

The first time you use automatic assignment, the dialog will assume that volumes are named using an ascending alphanumeric naming pattern (such as OSRES1, OSRES2, ... or OSRESA, OSRESB, ...) when assigning sequence numbers for automatic assignment. Therefore, if you have not used automatic assignment before and your target volume names do not follow an ascending alphanumeric naming pattern, you should rename the volumes before using the New path, and then rename the volumes to their original names afterward, as listed below:

- Before using Recommended System Layout, enter the SUMP command to display the work configuration's physical volumes. In the display, rename the target volumes to names that would ensure that the volumes would appear in the proper sequence when sorted alphanumerically.
- In Recommended System Layout, choose the New setting and create the new configuration. The volumes will be assigned sequence numbers.
- Display the volumes in the new configuration. Change the target volume names back to what you want them to be. The dialog will preserve this volume sequence for subsequent installations regardless of the volume names, until you choose to no longer preserve the volumes (for example, by excluding them during a subsequent PARTIAL automatic assignment).

Setting the default device type or model-after volume

On the Automatic Data Set Assignment panel, you must enter either a device type or a model volume to specify the type of device to be used if the dialog creates more volumes for data set assignments. If you choose to specify a model volume, either the volume must already be in the configuration or you must have set the DYNAMIC DASD INFO variable to Y and the volume must be online.

If you choose to specify a device type, ensure that device type has been defined to the dialog. To see a list of other available devices, enter a question mark (?) in the Default Device Type field and press Enter. You can then select the device type you want from the pop-up display.

To add user-defined device types to this list, return to the Modify System Layout Options panel and enter Option T.

If you are installing a z/OS order, you must use 3390-9 volumes (or larger) to accommodate some large data sets in the order. You can use smaller volumes for a subsystem order because these orders usually do not contain large data sets; however, you need to change the default volume value from 3390-9 to a smaller one in the dialogs.

Displaying the current volume configuration

After you select a setting for automatic assignment, the dialog displays the current volume configuration, as shown in Figure 62 on page 85.

```
CPPP625C  ---- Automatic Data Set Assignment ( MD053718 ) ---- ROW 1 TO 7 OF 7
COMMAND ==>                                                    SCROLL ==> PAGE

Current Volume Configuration                                  Scope==> ALL

Primary Commands: (? Reset CReate)
   Line Commands: (Select Insert List Move After Before eXclude)


    Phys.   Volume  Sequence  Device   Used +   Volume     Existing Reserved
 S  Volume  Type    Number    Type    Reserved  Threshold  Data     Space
 -  ------  ------  --------  ------  --------  ---------  -------- --------
    MVSRES  TARGET    T01     3390-3    315 %       85%        0 %    0 %
    MVSDLB  DLIB      D01     3390-3    224 %       85%        0 %    0 %
 ******************************* Bottom of Data ****************************
```

Figure 62. Panel: Current volume configuration

As shipped by IBM, a new configuration consists of a target volume (MVSRES), a DLIB volume (MVSDLB), and a catalog volume (MVSCAT). Because MVSCAT contains only operational data sets, this volume is excluded from automatic assignments, and therefore is not shown in the panel display.

Volumes are shown in volume sequence order if they have been used for automatic assignment before. Otherwise, all volumes except the IPL volume are shown in alphanumeric order. The IPL volume, if it is present in the order, is always shown first with sequence number T01.

If you use existing volumes for data set assignments, the dialog checks the storage capacity of these volumes. If the dialog creates a volume (and the DYNAMIC DASD INFO installation variable is set to YES), the dialog determines whether the volume is online. If so, the dialog retrieves the volume's attributes and available space, just as if the volume had been inserted on the Current Volume Configuration panel. For the ALL or PARTIAL settings, the dialog limits its use of volumes (new and existing) to 85% of capacity. The dialog preserves the remaining 15% of each volume's capacity for later growth of existing data sets and the assignment of data sets that might be added during future installations. For the NEW setting, the dialog limits its use of new volumes to 85% of capacity, but allows its use of existing volumes to increase to 90% before restricting these volumes from further data set assignments.

Note: You can further limit the dialog's use of a volume capacity to less than the default 85% by reserving additional space. For example, if you want the volume to have 25% free space at the end of automatic assignment, you can do this by reserving 10% of the volume's space (334 cylinders for a 3390-3) for the ALL or PARTIAL settings or 15% for the NEW setting.

When the total of used space and reserved space is 10 times the size of the volume or more (that is, more than 999%), the "Used + Reserved" column will contain "999 % *," with the asterisk (*) highlighted as an eyecatcher.

In the Current Volume Configuration panel, use line command S to select volumes for changes. Use line command L to list the data sets currently assigned to a volume. Use line command I to insert more volumes into the work configuration. Use line command X to make exceptions to automatic assignments (as described in “Excluding volumes from automatic assignments” on page 86).

When you select the ALL or PARTIAL settings, the following line commands are also available on this panel:

M, A, B

Move a volume to a different position in the list. To move a volume after another, enter Move for the volume to be moved, and After for the volume that is to precede it. To move a volume before another, enter Move and Before.

You can move a volume only among other volumes of the same type. For example, you can move a target volume before or after other target volumes, but not into a group of DLIB volumes or BOTH volumes.

To move a volume into a group of volumes of a different type, you must first change the volume's type to the other type (target, DLIB, or BOTH) through line command S. You can then move the volume within the group of volumes with that type.

Moving a volume will cause the dialog to adjust the volume sequence numbers accordingly.

If your installation uses volume names that do not ascend in the same order in which you want to have the dialog use the volumes, you can use the Move, After, and Before line commands in the Current Volume Configuration panel to reposition the volumes in the order in which you want them to be used. The dialog will retain the volume sequence numbers and use them in the appropriate order thereafter.

If you select the NEW setting for your first use of automatic assignment, you should temporarily rename the volumes in the dialog, use the Recommended System Layout option, and then rename the volumes back to their original names.

When you finish making changes to volumes, enter the primary command CRreate on the Current Volume Configuration display to create a new configuration.

Excluding volumes from automatic assignments

The Current Volume Configuration panel provides line command eXclude to allow you to make exceptions to automatic assignment. Line command eXclude has different uses, based on the scope of automatic assignment, as listed below:

- For the ALL setting, you use line command eXclude to select volumes for removal from the work configuration (the volumes are not actually removed from the work configuration until after you enter the CReate command to create the configuration). The dialog does not use excluded volumes for data set assignments. When you create the new configuration (through the CReate command) and display it again, excluded volumes do not appear in the panel.
- For the NEW setting, you use line command eXclude to make a volume ineligible for the assignment of new data sets; the volume remains in the work configuration and its existing data set assignments are left unchanged. However, as in the ALL setting, the volume is removed from the Current Volume Configuration panel because no new data sets will be assigned to it. When you create the new configuration and display it again, excluded volumes do not appear in the panel. (However, if you exit the Recommended System Layout function and re-enter it, the volume is again included in the Current Volume Configuration panel.)
- For the PARTIAL setting, you use line command eXclude to make a volume's data sets eligible for reassignment. When you create the new configuration, the excluded volume is removed from the work configuration. When you enter a CReate command, an excluded volume will also be removed from the Current Volume Configuration panel because the volume's data sets will be reassigned to other volumes. When you redisplay the Current Volume Configuration panel, the excluded volume does not appear in the Current Volume Configuration panel.

If you exclude a volume from the work configuration and then later change your mind, you can restore the volume to the Current Volume Configuration panel. If you have not yet created the new configuration (through the CReate command), you can restore the volume to the panel by exiting the Recommended System Layout option and re-entering it. The configuration will be displayed as it was when you previously entered the Recommended System Layout option.

If you have already created the configuration, choose one of following approaches:

- In the ALL and PARTIAL settings, the volume is gone. Take one of these actions:
  - Add the volume to the configuration and assign data sets to it

  - Rename one of the new volumes to the volser you want
  - Recreate the configuration (re-enter the CReate command) and try again.
- In the NEW setting, the volume will reappear when you exit the Recommended System Layout option after creating the new configuration.

Selecting volumes for changes

If you select a volume for changes, the dialog displays the panel shown in Figure 63 on page 87, allowing you to change the volume and save your changes.

```
CPPP625D  ---- Automatic Assignment - Attributes ( MD053718 ) --------------------
COMMAND ==>

Display and Change Volume Attributes


          Volume Serial ==> MVSRS1    (Always required)

            Volume Type ==> TARGET    (Target, DLIB or Both - Always required)
            Device Type ==> 3390-9    (For example, 3390-9)


         Reserved Space ==> 0         (Cylinders)

      Initialize Volume ==> N         (Y or N)




Note: Only the volume serial and volume type are required for online volumes
      when the DYNAMIC DASD INFO variable is set to Yes.
```

Figure 63. Panel: Display and change volume attributes

Use caution in resetting volumes from 'Initialize Volume NO' to 'Initialize Volume YES'. Doing so causes the volume to be initialized by the installation jobs, and any existing data on the volume is lost.

Volumes for which Initialize Volume is set to NO must be online, even if DYNAMIC DASD INFO is set to NO.

To save your changes to the volume, press Enter. You return to the Current Volume Configuration display.

Examples of using automatic assignment

How you achieve the recommended system layout depends on whether you are starting with an entirely new system or bringing forward a saved configuration to be merged with the new order. And, in the later case, whether you are using the Recommended System Layout option for the first time, or have already used it on the saved configuration.

This section presents the panel sequence for each of these situations. To determine a course of action, review each example and choose the one that best matches your objectives, as listed below:

- “Example 1: Using ALL without a saved configuration” on page 87
- “Example 2: Using ALL with a saved configuration” on page 90
- “Example 3: Using NEW with a saved configuration” on page 92
- “Example 4: Using PARTIAL with a saved configuration” on page 94.

Example 1: Using ALL without a saved configuration

Follow this path if you are installing a ServerPac order for the first time, or if you are not using a saved configuration as the basis of your new system. This approach creates a new configuration based only on the new order to be installed.

Select "Automatic Data Set Assignment" (Option A) from the Modify System Layout Options panel. The panel shown in Figure 64 on page 88 is displayed.

```
CPPP625B  --------- Automatic Data Set Assignment ( MD053718 ) ----------
OPTION ==>


    A - ALL      Assign all target and DLIB data sets in the configuration
                 to physical volumes automatically.  This option creates a
                 recommended system layout.

    N - NEW      Add new data sets to an existing configuration.  This
                 option automatically assigns new data sets, but preserves
                 the placement of previously-assigned data sets in your
                 saved configuration.

    P - PARTIAL  Assign new data sets and reassign some existing data sets
                 to physical volumes.  This option automatically assigns
                 all new data sets to physical volumes, as well as data
                 sets from selected volumes in the saved configuration.


Enter EITHER a default device type OR a model volume below:

Default Device Type ==> 3390-9     (For example, 3390-9)
 Model after Volume ==>            (For example, ZOSRES)
```

Figure 64. Panel: Modify system layout options

Because you are not including a saved configuration in the new configuration, the only selectable setting on this panel is All. This setting causes the dialog to automatically assign all target and DLIB data sets in your order to physical volumes.

On the Automatic Data Set Assignment panel, you must enter either a device type or a model volume to specify the type of device to be used if the dialog creates more volumes for data set assignments. Check this value to ensure that the device type is available for this installation. To see a list of other available devices, enter a question mark (?) in the Default Device Type field and press Enter. You can then select the device type you want from the pop-up display. A configuration can include more than one device type.

If the DYNAMIC DASD INFO variable is set to Y, the model volume must be online. If DYNAMIC DASD INFO is set to N, the model volume must already exist in the configuration.

Enter All and press Enter. The current volume configuration is shown (Figure 65 on page 88).

```
CPPP625C  ---- Automatic Data Set Assignment ( MD053718 ) ---- ROW 1 TO 7 OF 7
COMMAND ==>                                                   SCROLL ==> PAGE

Current Volume Configuration                                Scope==> ALL

Primary Commands: (? Reset Create)
   Line Commands: (Select Insert List Move After Before eXclude)


    Phys.   Volume  Sequence  Device   Used +   Volume     Existing Reserved
 S  Volume  Type    Number    Type    Reserved  Threshold  Data     Space
 -  ------  ------  --------  ------  --------  ---------  -------- --------
    MVSRES  TARGET    T01     3390-3   315 %       85 %        0 %     0 %
    MVSDLB  DLIB      D01     3390-3   224 %       85 %        0 %     0 %
 ******************************* Bottom of Data ***************************
```

Figure 65. Panel: Current volume configuration

Here, the configuration consists of a target volume (MVSRES), a DLIB volume (MVSDLB), and a catalog volume (MVSCAT). Because MVSCAT contains only operational data sets, this volume is excluded from automatic assignments, and therefore is not shown in the panel display. Observe that MVSRES and MVSDLB are overallocated.

If you plan to rename these volumes, select the volumes now through line command S and rename them as needed. Later, when the new configuration is created, it is more difficult to rename these volumes.

If you choose to change the device type, do so now through line command S, rather than after you create the new configuration (by entering the CReate command on the Current Volume Configuration panel). Otherwise, the volume might become overallocated (for example, if the default is 3390-9 and you change it to 3390-3).

To have the dialog create the new configuration, enter the primary command CReate and press Enter. The panel shown in Figure 66 on page 89 is displayed, allowing you to confirm this action before continuing.

```
CPPP625E  ---- Automatic Assignment Confirmation ( MD053718 ) -----------------
COMMAND ==>                                                   Scope: ALL

You have chosen to have data sets automatically assigned to physical
volumes.  IF YOU CONTINUE, THE ASSIGNMENTS CANNOT BE EASILY REVERSED WITHIN
MODIFY SYSTEM LAYOUT.  However, you will be able to modify the configuration
after the assignments have been done.  If you decide not to use the
automatic assignments after they have been done, return to Create
Configuration, create the configuration again, and use other options in
Modify System Layout to tailor your configuration.

Enter Y to continue, or N to return to the previous panel:

                Continue ==> Y   ( Y or N )
```

Figure 66. Panel: Automatic assignment confirmation

To continue, press Enter. The CustomPac progress panel is displayed (as shown in Figure 67 on page 89) as volumes are assigned.

```
CPPPMLOG  --------------                              ----------------
                                                 All Rights Reserved






                      P L E A S E   W A I T

                         M E R G I N G

                       LOGICAL VOLUME TABLE
```

Figure 67. Panel: Automatic assignment progress panel

After Recommended System Layout completes, the Current Volume Configuration panel (Figure 68 on page 89) is displayed again to show you the new configuration.

```
CPPP625C  ---- Automatic Data Set Assignment ( MD053718 ) ---- ROW 1 TO 7 OF 7
COMMAND ==>                                                    SCROLL ==> PAGE

CPP0625014I Automatic data set assignment complete.

Current Volume Configuration                                  Scope==> ALL

Primary Commands: (? Reset Create)
   Line Commands: (Select Insert List Move After Before eXclude)


    Phys.   Volume  Sequence  Device   Used +   Volume     Existing Reserved
 S  Volume  Type    Number    Type    Reserved  Threshold  Data     Space
 -  ------  ------  --------  ------  --------  ---------  -------- --------
    MVSRES  TARGET    T01     3390-3    84 %       85 %        0 %     0 %
    TARG02  TARGET    T02     3390-3    83 %       85 %        0 %     0 %
    TARG03  TARGET    T03     3390-3    85 %       85 %        0 %     0 %
 s  TARG04  TARGET    T04     3390-3    62 %       85 %        0 %     0 %
    MVSDLB  DLIB      D01     3390-3    83 %       85 %        0 %     0 %
    DLIB02  DLIB      D02     3390-3    83 %       85 %        0 %     0 %
    DLIB03  DLIB      D03     3390-3    55 %       85 %        0 %     0 %
 ******************************* Bottom of Data ***************************
```

Figure 68. Panel: Current volume configuration

The new configuration is shown. Observe the following results:

- Four target volumes and three DLIB volumes were used for the new configuration: MVSRES, TARG02, TARG03, TARG04, MVSDLB, DLIB02, and DLIB03.
- The volumes were assigned sequence numbers T01 through T04, and D01 through D03, respectively, and are of the device type 3390-3.
- All but the last volumes of each type were filled close to the threshold (85%). The final volumes, TARG04 and DLIB03, contain the remainder of the target and DLIB data sets from your order.
- No volumes are over-allocated.

In some cases, you might find that the dialog creates more volumes than you think you need. If the last target or DLIB volume has very little used space and you want to eliminate it by placing its data sets on other volumes, you can reassign the volume's data sets using the dialog's View and Change Facility (Option C on the Modify System Layout Options panel). Select "Current PVOL," select each volume in turn, and then use the CHANGE PVOL command to move the data sets to other volumes. For more information, see “Viewing and changing data sets” on page 96.

If you decide to change the volumes after the new configuration has been created, use Option V from the Modify System Layout Options panel (shown in Figure 60 on page 79) to display the Summary of Physical Volumes and modify the volume names accordingly, as described in “Displaying a summary of physical volumes” on page 130.

Example 2: Using ALL with a saved configuration

This approach creates a new configuration based on your order and a saved configuration. Follow this path if you want the dialog to restructure your saved configuration in accordance with IBM's recommended system layout.

Select "Automatic Data Set Assignment" (Option A) from the Modify System Layout Options panel. The panel shown in Figure 69 on page 90 is displayed.

```
CPPP625B  --------- Automatic Data Set Assignment ( MD053718 ) ----------
OPTION ==>


    A - ALL      Assign all target and DLIB data sets in the configuration
                 to physical volumes automatically.  This option creates a
                 recommended system layout.


    N - NEW      Add new data sets to an existing configuration.  This
                 option automatically assigns new data sets, but preserves
                 the placement of previously-assigned data sets in your
                 saved configuration.

    P - PARTIAL  Assign new data sets and reassign some existing data sets
                 to physical volumes.  This option automatically assigns
                 all new data sets to physical volumes, as well as data
                 sets from selected volumes in the saved configuration.


Enter EITHER a default device type OR a model volume below:

Default Device Type ==> 3390-9     (For example, 3390-9)
 Model after Volume  ==> MODVOL    (For example, ZOSRES)
```

Figure 69. Panel: Modify system layout options

To reassign all target and DLIB data sets (saved and new), choose the ALL setting to cause the dialog to automatically assign these data sets to your DASD volumes, based on data set type. The ALL setting allows the dialog to create a new configuration that will follow the recommended system layout as much as possible.

On the Automatic Data Set Assignment panel, you must enter either a device type or a model volume to specify the type of device to be used if the dialog creates more volumes for data set assignments. If you choose to specify a model volume, either the volume must already be in the configuration or you must have set the DYNAMIC DASD INFO variable to Y and the volume must be online.

If you choose to specify a device type, ensure that device type has been defined to the dialog. To see a list of other available devices, enter a question mark (?) in the Default Device Type field and press Enter. You can then select the device type you want from the pop-up display.

Press Enter. The panel shown in Figure 70 on page 91 is displayed, showing the current configuration that you would see if the model volume "MODVOL" specified on the previous panel happened to be a 3390-3.

```
CPPP625C  ---- Automatic Data Set Assignment ( MD053718 ) ---- ROW 1 TO 7 OF 7
COMMAND ==>                                                   SCROLL ==> PAGE

Current Volume Configuration                                 Scope==> ALL

Primary Commands: (? Reset Create)
   Line Commands: (Select Insert List Move After Before eXclude)


    Phys.   Volume  Sequence  Device   Used +   Volume     Existing Reserved
 S  Volume  Type    Number    Type    Reserved  Threshold  Data     Space
 -  ------  ------  --------  ------  --------  ---------  -------- --------
    MARNA1  TARGET    T01     3390-3    99 %       85 %        0 %     0 %
    MARNA2  TARGET    T02     3390-3    85 %       85 %        0 %     0 %
    MARNA3  TARGET    T03     3390-3    85 %       85 %        0 %     0 %
    MARNA4  TARGET    T04     3390-3    84 %       85 %        0 %     0 %
    OSDLB1  DLIB      D01     3390-3    95 %       85 %        0 %     0 %
    OSDLB2  DLIB      D02     3390-3    94 %       85 %        0 %     0 %
    OSDLB3  DLIB      D03     3390-3    81 %       85 %        0 %     0 %
    ******************************* Bottom of Data ***************************
```

Figure 70. Panel: Current volume configuration

When you reuse a saved configuration, you already have target and DLIB volumes. Note that the contents of several volumes (MARNA1, OSDLIB1, OSDLIB2) exceed 85% of capacity.

In this panel, you can use line command X (eXclude) to select volumes for removal from the work configuration (the volumes are not removed from the work configuration until after you enter the CReate command to create the configuration). The dialog does not use excluded volumes for data set assignments.

To have the dialog create the new configuration, enter the primary command CReate and press Enter. The panel shown in Figure 71 on page 91 is displayed, allowing you to confirm this action before continuing.

```
CPPP625E  ---- Automatic Assignment Confirmation ( MD053718 ) -----------------
COMMAND ==>                                                   Scope: ALL

You have chosen to have data sets automatically assigned to physical
volumes.  IF YOU CONTINUE, THE ASSIGNMENTS CANNOT BE EASILY REVERSED WITHIN
MODIFY SYSTEM LAYOUT.  However, you will be able to modify the configuration
after the assignments have been done.  If you decide not to use the
automatic assignments after they have been done, return to Create
Configuration, create the configuration again, and use other options in
Modify System Layout to tailor your configuration.

Enter Y to continue, or N to return to the previous panel:

               Continue ==> Y   ( Y or N )
```

Figure 71. Panel: Automatic assignment confirmation

Be aware that the dialog organizes logical volumes very differently from the manner in which you assigned them in previous releases. If you attempt to use the older dialog functions (the Summary Display Commands) to manage the configuration after using Recommended System Layout, you will the find the old groupings to be replaced. Therefore, use either Recommended System Layout to derive logical volumes automatically, or the Summary Display Commands to derive logical volumes manually, but not a combination of both.

To continue, press Enter. The CustomPac progress panel is displayed as volumes are assigned.

After Recommended System Layout completes, the Current Volume Configuration panel (Figure 70 on page 91) is displayed again, to show you the new configuration.

Press Enter. The panel shown in Figure 72 on page 92 is displayed, showing the current configuration.

```
CPPP625C  ---- Automatic Data Set Assignment ( MD053718 ) ---- ROW 1 TO 7 OF 7
COMMAND ==>                                                   SCROLL ==> PAGE

Current Volume Configuration                                 Scope==> ALL

Primary Commands: (? Reset Create)
   Line Commands: (Select Insert List Move After Before eXclude)


    Phys.   Volume  Sequence  Device   Used +   Volume     Existing Reserved
 S  Volume  Type    Number    Type    Reserved  Threshold  Data     Space
 -  ------  ------  --------  ------  --------  ---------  -------- --------
    MARNA1  TARGET    T01     3390-3    85 %       85 %       0 %      0 %
    MARNA2  TARGET    T02     3390-3    85 %       85 %       0 %      0 %
    MARNA3  TARGET    T03     3390-3    85 %       85 %       0 %      0 %
    MARNA4  TARGET    T04     3390-3    85 %       85 %       0 %      0 %
    TARG05  TARGET    T05     3390-3    13 %       85 %       0 %      0 %
    OSDLB1  DLIB      D01     3390-3    85 %       85 %       0 %      0 %
    OSDLB2  DLIB      D02     3390-3    85 %       85 %       0 %      0 %
    OSDLB3  DLIB      D03     3390-3    85 %       85 %       0 %      0 %
    DLIB04  DLIB      D04     3390-3    15 %       85 %       0 %      0 %
    ******************************** Bottom of Data ****************************
```

Figure 72. Panel: Current volume configuration

The new configuration is shown. Observe the following results:

- The new configuration required five target volumes and four DLIB volumes. These volumes were assigned sequence numbers T01 through T05, and D01 through D04, respectively.
- Because the saved configuration contained several volumes that exceeded 85% of capacity, the dialog created two new volumes (TARG05 and DLIB04) of the default device type to reduce the use of volumes to no more than 85%. In the resulting configuration, all but the last volumes of each type were filled close to the threshold (85%).

Example 3: Using NEW with a saved configuration

This approach creates a new configuration by automatically assigning data sets in your order that are not present in your saved configuration. Follow this path if you want the dialog to preserve your saved configuration, but assign new data sets automatically. In this example, NEW is used with a configuration for which automatic assignment was not done previously.

Select "Automatic Data Set Assignment" (Option A) from the Modify System Layout Options panel. The panel shown in Figure 73 on page 92 is displayed.

```
CPPP625B  --------- Automatic Data Set Assignment ( MD053718 ) ----------
OPTION ==>


    A - ALL      Assign all target and DLIB data sets in the configuration
                 to physical volumes automatically.  This option creates a
                 recommended system layout.

    N - NEW      Add new data sets to an existing configuration.  This
                 option automatically assigns new data sets, but preserves
                 the placement of previously-assigned data sets in your
                 saved configuration.

    P - PARTIAL  Assign new data sets and reassign some existing data sets
                 to physical volumes.  This option automatically assigns
                 all new data sets to physical volumes, as well as data
                 sets from selected volumes in the saved configuration.


Enter EITHER a default device type OR a model volume below:

Default Device Type ==> 3390-9     (For example, 3390-9)
 Model after Volume ==>            (For example, ZOSRES)
```

Figure 73. Panel: Modify system layout options

Select the NEW setting to cause the dialog to automatically assign data sets that are new to the configuration to physical volumes. The dialog preserves the assignment of data sets that exist on volumes in the saved configuration.

On the Automatic Data Set Assignment panel, you must enter either a device type or a model volume to specify the type of device to be used if the dialog creates more volumes for data set assignments. Check this value to ensure that the device type is available for this installation. To see a list of other available devices, enter a question mark (?) in the Default Device Type field and press Enter. (The list of available devices contain only the devices that have already been defined or whose characteristics have already

been discovered.) You can then select the device type you want from the pop-up display. A configuration can include more than one device type.

If the DYNAMIC DASD INFO variable is set to Y, the model volume must be online. If DYNAMIC DASD INFO is set to N, the model volume must exist in the configuration.

Press Enter. The panel shown in Figure 74 on page 93 is displayed, showing the current configuration.

```
CPPP625C  ---- Automatic Data Set Assignment ( MD053718 ) ---- ROW 1 TO 7 OF 7
COMMAND ==>                                                    SCROLL ==> PAGE

Current Volume Configuration                                  Scope==> ALL

Primary Commands: (? Reset Create)
   Line Commands: (Select Insert List Move After Before eXclude)


    Phys.   Volume  Sequence  Device   Used +   Volume     Existing Reserved
 S  Volume  Type    Number    Type    Reserved  Threshold  Data     Space
 -  ------  ------  --------  ------  --------  ---------  -------- --------
    MARNA1  TARGET    T01     3390-3    92 %       90 %        0 %     0 %
    MARNA2  TARGET    T02     3390-3    85 %       90 %        0 %     0 %
    MARNA3  TARGET    T03     3390-3    86 %       90 %        0 %     0 %
    MARNA4  TARGET    T04     3390-3    27 %       90 %        0 %     0 %
    OSDLB1  DLIB      D01     3390-3    88 %       90 %        0 %     0 %
    OSDLB2  DLIB      D02     3390-3    86 %       90 %        0 %     0 %
    OSDLB3  DLIB      D03     3390-3    38 %       90 %        0 %     0 %
    ****************************** Bottom of Data ***************************
```

Figure 74. Panel: Current volume configuration

The dialog treats data sets in the saved configuration as existing data sets, and data sets that appear only in the new order as new data sets. Because automatic assignment has never been done for this configuration, your existing target and DLIB volumes lack volume sequence numbers. In this case, the dialog shows the sequence numbers for these volumes as they would appear after an automatic assignment.

If you want the volumes to be used in a different order, use this panel to reposition the volumes. The dialog will adjust the volume sequence numbers accordingly.

Because you limited automatic assignments to only new data sets, the dialog will use up to 100% of a volume's capacity for existing data sets and will assign new data sets to a volume that has reached up to 90% of its capacity. This additional space allows for the possible expansion of existing data sets and increases the likelihood that data sets of a given type will be placed together.

On this panel, you can use line command X to make a volume ineligible for the assignment of new data sets; the volume remains in the work configuration and its existing data set assignments are left unchanged.

Enter the primary command CReate on the Current Volume Configuration display to create a new configuration. The Automatic Assignment Confirmation panel is displayed, allowing you to confirm this action before continuing.

Recommended System Layout organizes logical volumes very differently from how they were organized in previous releases. If you attempt to use the older dialog functions (the Summary Display Commands) to manage the configuration after using Recommended System Layout, you will the find the old groupings to be replaced. Therefore, use either Recommended System Layout to derive logical volumes automatically, or the Summary Display Commands to derive logical volumes manually, but not a combination of both.

To continue, press Enter. The CustomPac progress panel is displayed as volumes are assigned. After Recommended System Layout completes, the Current Volume Configuration panel (Figure 74 on page 93) is displayed again.

```
CPPP625C  ---- Automatic Data Set Assignment ( MD053718 ) ---- ROW 1 TO 7 OF 7
COMMAND ==>                                                   SCROLL ==> PAGE

CPP0625014I Automatic data set assignment complete.

Current Volume Configuration                                  Scope==> NEW

Primary Commands: (? Reset Create)
   Line Commands: (Select Insert List Move After Before eXclude)


    Phys.   Volume  Sequence  Device   Used +   Volume     Existing Reserved
 S  Volume  Type    Number    Type    Reserved  Threshold  Data     Space
 -  ------  ------  --------  ------  --------  ---------  -------- --------
    MARNA1  TARGET    T01     3390-3    92 %       90 %        0 %     0 %
    MARNA2  TARGET    T02     3390-3    90 %       90 %        0 %     0 %
    MARNA3  TARGET    T03     3390-3    90 %       90 %        0 %     0 %
    MARNA4  TARGET    T04     3390-3    90 %       90 %        0 %     0 %
    TARG05  TARGET    T05     3390-3    26 %       85 %        0 %     0 %
    OSDLB1  DLIB      D01     3390-3    90 %       90 %        0 %     0 %
    OSDLB2  DLIB      D02     3390-3    90 %       90 %        0 %     0 %
    OSDLB3  DLIB      D03     3390-3    90 %       90 %        0 %     0 %
    DLIB04  DLIB      D04     3390-3    12 %       85 %        0 %     0 %
    ******************************* Bottom of Data ***************************
```

Figure 75. Panel: Current volume configuration

The new configuration is shown. Observe the following results:

- The dialog preserved the data set assignments of the saved configuration.
- The dialog automatically assigned all new target and DLIB data sets to volumes.
- The dialog created two new volumes (TARG05 and DLIB04) because the new order would exceed the capacity threshold of the existing volumes. The dialog restricts the other volumes from any additional data set assignments.

Example 4: Using PARTIAL with a saved configuration

Follow this path if you are reusing a saved configuration and want to preserve some of your existing data set assignments, but not all of them. The PARTIAL setting allows you to redistribute data sets, which is useful if your volumes become overallocated as data sets in the configuration grow over time.

Select "Automatic Data Set Assignment" (Option A) from the Modify System Layout Options panel. The panel shown in Figure 76 on page 94 is displayed.

```
CPPP625B  --------- Automatic Data Set Assignment ( MD053718 ) ----------
OPTION ==>


    A - ALL      Assign all target and DLIB data sets in the configuration
                 to physical volumes automatically.  This option creates a
                 recommended system layout.

    N - NEW      Add new data sets to an existing configuration.  This
                 option automatically assigns new data sets, but preserves
                 the placement of previously-assigned data sets in your
                 saved configuration.

    P - PARTIAL  Assign new data sets and reassign some existing data sets
                 to physical volumes.  This option automatically assigns
                 all new data sets to physical volumes, as well as data
                 sets from selected volumes in the saved configuration.


Enter EITHER a default device type OR a model volume below:

Default Device Type ==> 3390-9     (For example, 3390-9)
 Model after Volume  ==>           (For example, ZOSRES)
```

Figure 76. Panel: Modify system layout options

To reassign some data sets but not all, choose the PARTIAL setting. During automatic data set assignment, the dialog reassigns all data sets on volumes that you explicitly exclude through line command X on the next panel.

On the Automatic Data Set Assignment panel, you must enter either a device type or a model volume to specify the type of device to be used if the dialog creates more volumes for data set assignments. Check this value to ensure that the device type is available for this installation. To see a list of other available devices, enter a question mark (?) in the Default Device Type field and press Enter. (The list of available devices will contain only the devices that have already been defined or whose characteristics have already

been discovered.) You can then select the device type you want from the pop-up display. A configuration can include more than one device type.

If the DYNAMIC DASD INFO variable is set to Y, the model volume must be online. If DYNAMIC DASD INFO is set to N, the model volume must already exist in the configuration.

Press Enter. The panel shown in Figure 77 on page 95 is displayed, showing the current configuration.

```
CPPP625C  ---- Automatic Data Set Assignment ( MD053718 ) ---- ROW 1 TO 7 OF 7
COMMAND ==>                                                    SCROLL ==> PAGE

Current Volume Configuration                                  Scope==> PARTIAL

Primary Commands: (? Reset Create)
   Line Commands: (Select Insert List Move After Before eXclude)


    Phys.   Volume  Sequence  Device   Used +   Volume     Existing Reserved
 S  Volume  Type    Number    Type    Reserved  Threshold  Data     Space
 -  ------  ----    --------  ------  --------  ---------  -------- --------
    MARNA1  TARGET    T01     3390-3    92 %       90 %        0 %     0 %
 X  MARNA2  TARGET    T02     3390-3    85 %       90 %        0 %     0 %
    MARNA3  TARGET    T03     3390-3    86 %       90 %        0 %     0 %
    MARNA4  TARGET    T04     3390-3    27 %       90 %        0 %     0 %
    OSDLB1  DLIB      D01     3390-3    88 %       90 %        0 %     0 %
    OSDLB2  DLIB      D02     3390-3    86 %       90 %        0 %     0 %
    OSDLB3  DLIB      D03     3390-3    38 %       90 %        0 %     0 %
    ******************************* Bottom of Data ***************************
```

Figure 77. Panel: Current volume configuration

To make the data sets on an existing volume (MARNA2) available for automatic assignment, enter the eXclude line command to the left of the volume. The dialog will reassign the data sets on this volume.

Enter the primary command CReate on the Current Volume Configuration display (Figure 77 on page 95) to create a new configuration. The Automatic Assignment Confirmation panel is displayed, allowing you to confirm this action before continuing.

To continue, press Enter. The CustomPac progress panel is displayed as volumes are assigned.

After Recommended System Layout completes, the Current Volume Configuration panel (Figure 78 on page 95) is displayed again.

```
CPPP625C  ---- Automatic Data Set Assignment ( MD053718 ) ---- ROW 1 TO 8 OF 8
COMMAND ==>                                                    SCROLL ==> PAGE

CPP0625014I Automatic data set assignment complete.

Current Volume Configuration                                  Scope==> PARTIAL

Primary Commands: (? Reset Create)
   Line Commands: (Select Insert List Move After Before eXclude)


    Phys.   Volume  Sequence  Device   Used +   Volume     Existing Reserved
 S  Volume  Type    Number    Type    Reserved  Threshold  Data     Space
 -  ------  ------  --------  ------  --------  ---------  -------- --------
    MARNA1  TARGET    T01     3390-3    92 %       90 %        0 %     0 %
    MARNA3  TARGET    T02     3390-3    89 %       90 %        0 %     0 %
    MARNA4  TARGET    T03     3390-3    85 %       90 %        0 %     0 %
    TARG05  TARGET    T04     3390-3    76 %       85 %        0 %     0 %
    OSDLB1  DLIB      D01     3390-3    90 %       90 %        0 %     0 %
    OSDLB2  DLIB      D02     3390-3    89 %       90 %        0 %     0 %
    OSDLB3  DLIB      D03     3390-3    90 %       90 %        0 %     0 %
    DLIB04  DLIB      D04     3390-3    55 %       85 %        0 %     0 %
    ******************************* Bottom of Data ***************************
```

Figure 78. Panel: Current volume configuration

The new configuration is shown. Observe the following results:

- All data set assignments except those on MARNA2 (which was excluded), were preserved. MARNA2's data sets were reassigned.
- Data sets on the volumes with sequence numbers T01, T03, T04, and D01-D03 were not reassigned, but stayed where they were.
- The final volumes of each type, TARG05 and DLIB04, have increased to 76% and 55% of capacity, respectively. (As have some of the others, because the volume threshold was 90% and not all were previously 90% full.)

Viewing and changing data sets

The dialog provides you with a general-purpose view and change facility for working with groups of data sets in your configuration. With this facility, you can:

- Display groups of data sets in your configuration by various attributes
- Make changes to all or some of the data sets in a displayed group
- Save lists of groups you display.

For example, you can use the View and Change Facility to do the following tasks:

- Identify your ISPF panel libraries, so that you can consolidate them through the Merge line command
- Identify your link list libraries, so you can increase their primary space allocation amounts, or cause each of them to be allocated without secondary space. Also, a saved list of these data sets can be useful during migration to other systems after the installation has been completed.
- Identify and save lists of LPA and APF list libraries. These lists are useful when updating catalogs and parmlib during migration to production systems.
- Identify the unrenameable data sets, or those required in the master catalog, and change their status
- Identify all new data sets. This list is useful, for example, when adding security system definitions, updating production PROCs, and in determining what new entries are needed in production master catalogs during migration.
- Identify data sets that were shipped with no secondary space allocation.

To access the View and Change Facility, select Option C from the Modify System Layout Options panel. A panel with a list of possible attributes from which to select is displayed, as shown in Figure 79 on page 97.

Generally, the process of viewing and changing data sets in the work configuration follows this flow:

1. Choose the attribute to display. For example, assume that you want to view the English language panel data sets in your configuration. Here, you begin by choosing the "Element Type" attribute.
2. Narrow the scope of the display to only those data sets having one or more possible values for the attribute. In this example, choose the values PNL, PNLENU and PNLENP to create a list of the English language panel libraries in your configuration.
3. On the resulting display, you can enter CHange or Merge line commands for some or all of the data sets in this list, or you can save the list to a separate file for later examination.

You can change data sets in various ways, including the following examples:

- Change high-level qualifiers or names
- Assign data sets on the list to different volumes
- Override the "unrenameable" or "required in master catalog" attributes
- Change eligible data sets from PDS to PDSE (or back again)
- Change eligible UNIX file systems from HFS to zFS (or back again)
- Change space allocation amounts and specify whether data sets will be allocated with secondary space.

For information about the CHange command, see “Making changes to data sets” on page 101.

Figure 79 on page 97 shows the panel that is displayed when you access the dialog's View and Change Facility (Option C on the Modify System Layout Options panel).

```
CPPP605R  ------------- Select Data Set View ( CB000095 ) -------- Row 1 of 35
COMMAND ==>                                                    SCROLL ==> CSR

Select a Data Set List View:

Primary Commands:(?)
   Line Commands:(Select)

 S  Display          Data Set List Description
 -  ---------------  ------------------------------------------------------------
    APF Required     APF Authorization Required (Yes or No)
    Category         DLIB, Target, Operational
    Current LVOL     Assigned Logical Volume
    Current PVOL     Assigned Physical Volume
    Cylinders        Current Data Set Size in Cylinders
    Data Set Origin  Origin of data sets (IBM or User-Defined)
    Data Set Type    HFS, PDSE, PDS, SEQ, VSAM or ZFS
    Device Type      Assigned device type
    DDDEF Name       Owning Product DDDEF Name
    Element type     Data Set Element Type (LMOD, PNLENU, EXEC, etc.)
    HLQ              Data Set High Level Qualifiers
    LNKLST Eligible  Eligible for Placement in the Link List (Yes or No)
    LPA Eligible     Eligible for Placement in LPA (Yes or No)
    LPA Required     Required in LPA List (Yes or No)
    LRECL            Logical Record Length
    Master Catlg     Must be in Master Catalog (Yes, No or Overridden)
    Merge Status     Merged and unmerged data sets
    Mount Point      Unix File System Mount Point
    New Data Set     Whether data set is new in this order (Yes or No)
    Product Name     Name of the product, feature or element
    Renameable       Whether rename is allowed (Yes, No or Overridden)
    RECFM            Record Format (FB, VB, U, etc.)
    Secondary Space  Whether secondary space is allowed (Yes or No)
    Switchable       Can be changed between PDS/PDSE or HFS/zFS (Yes or No)
    SMP/E SYSLIB     Data set in SMP/E SYSLIB concatenation (Yes or No)
    SMS ACS          Whether data set is managed by ACS routines (Yes or No)
    SMS Classes      SMS Data Class, Storage Class and Management Class
    SMS-Eligible     Whether data set may be SMS-managed (Yes or No)
    SMS-Managed      Whether data set is SMS-managed (Yes or No)
    SMS-Required     Whether data set must be SMS-managed (Yes or No)
    SST              Subsystem Type (MVS, CICS, DB2, IMS, NCP)
    Tracks           Current Data Set Size in Tracks
    TVOL             Special target volume placement (FIRST or LAST)
    Unit             Assigned Unit
    Volume Number    Volume Sequence Number (Tnn, Dnn, and Bnn)
******************************* Bottom of data ********************************
```

Figure 79. Panel: Select a data set view

The list of attributes is scrollable. You can view data sets by any single attribute; you cannot select more than one attribute at a time. In Figure 79 on page 97, the attribute "Data Set Origin" is selected; this is the first step in displaying a list of the data sets that are IBM-shipped or User-Defined.

Use the Select line command to select an attribute to display and press Enter. The dialog displays a second panel with the values found for the selected attribute. In Figure 80 on page 98, for example, the value IBM is selected for the attribute "Data Set Origin."

```
CPPP605S  ---- Select Values to Display ( MD053718 )  -- Row 1 to 2 of 2
COMMAND ==>                                             SCROLL ==> PAGE

Select list for:  Data Set Origin

Select values for which data sets are to be listed and press Enter:

 Primary Commands: (?)
    Line Commands: (Select SS)

 S  Values
 -  ---------------
    IBM
    User-Defined
 ****************************** Bottom of Data **********************
```

Figure 80. Panel: Select values to display

The dialog displays only values that are applicable to the order. For example, if you attempt to display the Data Set Origin data sets in an order that does not contain User-Defined data sets, the only displayed value is IBM.

For the Values section, IBM indicates IBM-defined data sets while User-Defined indicates user-defined data sets.

Select the values for the attribute to display and press Enter. The dialog displays a list of the data sets that satisfy your search criteria. The values you selected are shown, along with the physical volumes for the data sets. For example, in Figure 81 on page 98, the dialog displays the data sets that are shipped with your order by IBM.

```
CPPP605U  --------------- Data Set List ( MD053718 ) -------- Row 1 to 3 of 3
COMMAND ==>                                                   SCROLL ==> PAGE


Data Set List for: Data Set Origin

Primary Commands:(? SET Locate Find Next Previous SORT CHange OFile OList
                  FindComp)
   Line Commands:(Merge eXpand Conflict Unmerge Select Insert Delete)

                                                                      Physical
S Data Set Name                                Selected Value         Volume
- -------------------------------------------- ---------------------- --------
  ACFNCP.ANCPMAC1                              IBM                    MVSDLB
  ACFNCP.SNCPMAC1                              IBM                    MVSRES
  ACFNCP.SSPCLS1                               IBM                    MVSRES
    *************************** Bottom of Data **************************
```

Figure 81. Panel: Select values to display

From this panel, you can make a number of changes to the data sets shown. For example, you could change all of the displayed link list data sets to set their secondary space allocation to zero (see “Making changes to data sets” on page 101). Your changes affect only the data sets that you select from the list.

The following primary commands are valid for this panel:

? SET Locate Find Next Previous SORT

These are standard commands for panels that display lists. See “Primary commands” on page 9.

CHANGE

This command is used to make changes to data sets in display lists. Use CHange to modify the various attributes and space requirements of multiple data sets. For information about the CHange command, see “CHANGE” on page 175.

OFILE
This command writes this data set list to a user-defined file. For information about the 0File command, see “OFILE” on page 196.

OLIST
This command writes the list of data sets to the ISPF LIST data set. For information about the 0List command, see “OLIST” on page 198.

FindComp
This command helps you find a particular component data set among your merged data sets — which can be useful, if you forget where you put the data set. Use this command to search on the shipped name of the data set or its modified name, using a full or partial data set name as input (as described in “Finding "lost" component data sets” on page 112). For information about the FindComp command, see “FINDCOMP” on page 191.

The following line commands are valid for this panel:

Merge-related line commands, as in the following list:

M
Starts the data set merge process by presenting a list of the currently displayed data sets that you can choose to merge into the selected data set. For more information, see “Merging and unmerging data sets” on page 104.

X
Expands the display of a merged data set to show its component data sets. The components of a merged data set are displayed in a scrollable pop-up window that allows you to review the attributes and space of the individual component data sets. This display also allows you to unmerge specific component data sets. For more information, see “Merging and unmerging data sets” on page 104.

C
Displays any data sets (in a scrollable pop-up) that contain at least one member with the same name as the selected data set. The dialog automatically excludes these data sets from the Merge Candidates panel for the selected data set.

U
Unmerges the entire merged data set into its original, component data sets. For more information, see “Merging and unmerging data sets” on page 104.

S
Displays a panel on which you can change particular data set attributes. See “Modifying a data set's attributes” on page 114.

I
Displays a panel on which you can add user-defined data sets. See “Defining new user data sets” on page 121.

D
Displays a panel on which you can confirm the request to delete the user-defined data set. You cannot delete IBM supplied data sets. See “Deleting user-defined data sets” on page 128.

If you select SMS Classes in Figure 79 on page 97, Figure 82 on page 100 will be displayed with three values : Data Class, Management Class and Storage Class.

```
CPPP605S CMD -------- Select Values to Display ( RF001230 ) -- Row 1 to 3 of 3
COMMAND ==>                                                    SCROLL ==> CSR

Select list for: SMS Classes

Select values for which data sets are to be listed and press Enter

 Primary Commands:(?)
    Line Commands:(Select SS)

 S   Values
 --  ----------------------------------------
     Data Class
     Management Class
     Storage Class
```

Figure 82. Panel: Select values to display

If you select the Storage class, Data Class and Management Class options, then Figure 83 on page 100 will be displayed with Dataset name, Selected value and Class name. If the data sets are SMS Managed but ACS controlled, *ACS* will be displayed under column “Class Name”.

```
CPPP60E4  --------------- Data Set List ( RF001230 ) --------- Row 1 to 2 of 2
COMMAND ==>                                                    SCROLL ==> CSR

Data Set List for: Data Class

Primary Commands:(? SET Locate Find Next Previous SORT CHange OFile OList
                  FindComp)
   Line Commands:(Merge eXpand Conflict Unmerge Select Insert Delete)

                                                                       Class
S Data Set Name                              Selected Value            Name
- ------------------------------------------- ----------------------- --------
  AOK.AAOKHFS                                 Data Class              DATA
  OMVS.JAVA31M1                               Data Class              DCVSAMEX
```

Figure 83. Panel: Data set list

If you select both Storage Class and Data Class from Figure 82 on page 100, then Figure 84 on page 100 will be displayed with a list of data sets that have assigned selected Class. In this scenario, if you issue the Global Change command, it will not be executed and the following message will be displayed:

```
CPP0605241E Global change command for SMS classes can only be used when
selecting a single class from the Class Selection view.
```

It will be supported only if 'Storage Class' , ‘Data Class’ or ‘Management Class’ is Selected.

```
CPPP60E4 CMD ------------ Data Set List ( RF001230 ) --------- Row 1 to 4 of 4
COMMAND ==>                                                    SCROLL ==> CSR

Data Set List for: Data Class and Storage Class

Primary Commands:(? SET Locate Find Next Previous SORT CHange OFile OList
                  FindComp)
   Line Commands:(Merge eXpand Conflict Unmerge Select Insert Delete)

                                                                       Class
S Data Set Name                              Selected Value            Name
- ------------------------------------------- ----------------------- --------
  AOK.AAOKHFS                                 Storage Class           SMSDCLAS
  AOK.AAOKHFS                                 Data Class              DATA
  OMVS.JAVA31M1                               Data Class              DCVSAMEX
  OMVS.JAVA31M1                               Storage Class           TEST02
```

Figure 84. Panel: Data set list

If you select option SMS ACS in Figure 79 on page 97, Figure 85 on page 101 will be displayed with values “Yes” and “No”. If you select “Yes”, then Figure 81 on page 98 will be displayed with Data Set Name, Selected Value and Physical Volume. 'ACS' will be displayed in physical volume column If you select “No”, the same CPPP605U panel will be displayed, but the physical volume column displays *SMS*/Physical Volume.

```
CPPP605S CMD -------- Select Values to Display ( RF001230 ) -- Row 1 to 2 of 2
COMMAND ==>                                                   SCROLL ==> CSR

Select list for: SMS ACS

Select values for which data sets are to be listed and press Enter

Primary Commands:(?)
   Line Commands:(Select SS)

   S   Values
   --  ----------------------------------------
       No
       Yes
```

Figure 85. Panel: Select values to display

The following line commands are valid for this panel:

S
Selects the value for which configuration data sets are to be displayed.

SS
Selects a range of values for which configuration data sets are to be displayed.

If you use line command **SS** and **S** more than once, then the global Change command will be disabled from the resulting Data Set List panel (CPPP605U).

Making changes to data sets

CHANGE is a powerful command that you can use to make changes to many data sets at once. Using CHANGE is much faster than making changes to individual data sets in the dialog, so you should use it whenever possible to save time. Use this command to perform tasks such as:

- Changing data set names
- Making unrenameable data sets renameable
- Changing data set types
- Changing the SMS management status
- Overriding the master catalog requirement for data sets
- Changing the physical volume for data sets
- Allocate secondary space for data sets shipped with no secondary space
- Changing logical volumes
- Changing data set space values.

Based on the parameters you specify on your CHANGE command, the dialog checks the data sets in the current display list and returns a **candidate list** of data sets that are eligible to be changed by the command. At this point, changes are only simulated; no data sets have actually been changed.

For example, Figure 86 on page 102 shows a candidate list that simulates a change to data set types (for the CHANGE TYPE command).

```
 CPPP6050 ------------- Modify System Layout ( MD053718 ) --  ROW 1 TO 4 OF 22
 COMMAND ==>                                                   SCROLL ==> PAGE

GLOBAL Change - Candidate List                          Change: Type

Primary Commands:(? SET Locate Find Next Previous SORT CANcel)
   Line Commands:(eXclude)

                                          DS        P.Volume/ Seq Logical
S Data Set Name        (Old  New)         Type  SMS STORCLAS  No. Volume
- ------------------------------------------ ----- --- --------- --- -------
  AOP.AAOPEXEC                            PDS    N   DLIB02    D02 DLB308
  AOP.AAOPEXEC                            PDSE   N   DLIB02    D02 DLB308
  ------------------------------------------ ----- --- --------- --- -------
  AOP.AAOPHFS                             PDS    N   MVSDLB    D01 DLB318
  AOP.AAOPHFS                             PDSE   N   MVSDLB    D01 DLB318
  ------------------------------------------ ----- --- --------- --- -------
  AOP.AAOPMENU                            PDS    N   DLIB02    D02 DLB308
  AOP.AAOPMENU                            PDSE   N   DLIB02    D02 DLB308
  ------------------------------------------ ----- --- --------- --- -------
  AOP.AAOPPENU                            PDS    N   DLIB02    D02 DLB307
  AOP.AAOPPENU                            PDSE   N   DLIB02    D02 DLB307
  ------------------------------------------ ----- --- --------- --- -------
```

Figure 86. Panel: Global change - candidate list for data set attributes

You now must determine whether to commit the changes as shown in the display, cancel your change request, or exclude particular data sets from the candidate list before committing the changes. For example, the data sets shown in Figure 86 on page 102 are currently in PDS format. Committing this change, however, would cause the data sets to be changed to PDSE format.

To commit the changes, press Enter or End. To cancel the changes, enter the CANcel command and press Enter.

Figure 87 on page 102 shows an example of a candidate list that is displayed for changes to data set space values (for the CHANGE SPACE command).

```
 CPPP6057 ------------- Modify System Layout ( MD053718 ) --  ROW 1 TO 5 OF 22
 COMMAND ==>                                                   SCROLL ==> PAGE

 GLOBAL Change - Candidate List                     Change: Space

 Primary Commands:(? SET Locate Find Next Previous SORT CANcel)
    Line Commands:(eXclude)
                                                  Primary    Secondary  Directory
 S Data Set Name         (Old  New)               Tracks      Tracks     Blocks
 - ------------------------------------------- ---------- ---------- ---------
   AOP.AAOPHFS                                     1400        400         6
   AOP.AAOPHFS                                     1800        400         6
   ------------------------------------------- ---------- ---------- ---------
   ASMT.AASMBOK2                                    680        400         6
   ASMT.AASMBOK2                                    850        400         6
   ------------------------------------------- ---------- ---------- ---------
   ASMT.AASMSHF2                                    680        400         6
   ASMT.AASMSHF2                                    850        400         6
   ------------------------------------------- ---------- ---------- ---------
   ASMT.SASMBOK2                                    680        400         6
   ASMT.SASMBOK2                                    850        400         6
   ------------------------------------------- ---------- ---------- ---------
   ASMT.SASMSHF2                                    680        400         6
   ASMT.SASMSHF2                                    850        400         6
```

Figure 87. Panel: Global change - candidate list for data set space values

Any changes that you make to merged data sets through the CHange command are applicable to their component data sets. These changes are retained even if you later unmerge the data set.

The following primary commands are valid for this panel:

? SET Locate Find Next Previous SORT

These are standard commands for panels that display lists. See “Primary commands” on page 9.

CANCEL
This command, abbreviated as CAN, discards any changes that you have made to the data sets.

The following line command is valid for this panel:

X
Excludes the selected data set from the list of data sets to be changed. The data set is not changed if the change is committed.

A detailed description of the CHange command and its syntax can be found in Appendix A, "Primary command reference," on page 175:

- "CHANGE" on page 175
- "CHANGE DSNAME" on page 177
- "CHANGE DSNAME *HLQ*" on page 178
- "CHANGE DSNTYPE" on page 179
- "CHANGE LVOL" on page 180
- "CHANGE MCAT" on page 181
- "CHANGE PVOL" on page 182
- "CHANGE RENAME" on page 183
- "CHANGE SECOND" on page 184
- "CHANGE SMS" on page 185
- "CHANGE SPACE" on page 188

Some considerations for a maintenance system versus an IPL-able system

IBM recommends certain data set restrictions to help avoid potential problems with maintaining a production environment. By default, ServerPac ships your order with these restrictions. For example, LNKLST data sets are shipped with no secondary space allocations and data sets required to be cataloged in the master catalog. If you plan to use your ServerPac environment for support of system maintenance only, you may consider changing some of the IBM recommendations shipped with your ServerPac order. Using the ServerPac installation dialogs, you can make some of the modifications listed below prior to executing the ServerPac installation jobs.

Using the Modify System Layout function within the ServerPac dialogs:

- To add secondary space allocation to your data sets shipped with Secondary space 0.
  1. Select D (Data Set Summary).
  2. Enter CH SECOND Y to set the secondary space to be 10% of the primary space.
  3. Use the X line command to exclude any data set that you don't want affected by this change.
  4. If you want to increase the secondary space to be more than 10% of the primary, you can now use the CH SPACE command.
- To remove the Master catalog requirement for data sets:
  1. Select D (Data Set Summary).
  2. Enter CH MCAT N to override the Must be in Master catalog attribute.
  3. Use the X line command to exclude any data set that you don't want affected by this change.
- To allow unrenameable data sets to be renameable:
  1. Select D (Data Set Summary).
  2. Enter CH RENAME Y to override the unrenameable attribute.
  3. Use the X line command to exclude any data set that you don't want affected by this change.

Virtual storage management and LPA-eligible data sets

ServerPac puts all LPA-eligible data sets in the LPA list, which will probably reduce the size of the private area below 16MB. The View and Change option lets you display some lists that can help you determine what to move to the link list, or, in some cases, simply remove from the LPA list.

There are four kinds of LPA-eligible data sets:

1. Those that must be in the LPA list for the system to work (like LPALIB),
2. Those you **do** need for a function you use to work (such as RMF's SERBLPA),
3. Those that can be placed either in the LPA list for better performance or in the link list (like DFSORT's SORTLPA), and
4. Those you **do not** need for a function to work (for example, ISAM's ISAMLPA, if you do not use ISAM).

To see how much virtual storage will be used by an LPA list data set, browse each one and sort the member list by Residency Mode (enter SORT RM on the command line). Scroll to the bottom, and see whether the data set has RMODE 24 modules in it. If it does, you will use less virtual storage for LPA below 16MB if you remove it from the LPA list. Use these View and Change lists to help you decide what to move to the link list or simply remove from the LPA list:

- LPA Required (leave all of these data sets in the LPA list)
- LPA Eligible (those not required might be candidates for removing from the LPA list)
- LNKLST Eligible (you might be able to move some LPA Eligible data sets there).

For related information about virtual storage management, see the topic "How Placement Affects Virtual Storage" in z/OS MVS Initialization and Tuning Guide. Do not forget to compare the results to your current LPA list to see what changed.

Merging and unmerging data sets

The dialog allows you to simplify your new configuration by merging some of the PDS and PDSE or HFS and zFS data sets in your order (see “Merging UNIX file system data sets” on page 106). You can merge target data sets to reduce the number of libraries with similar attributes and uses. For example, you can merge ISPF panel libraries to consolidate them. Later, when you save your configuration through the Save Configuration command (see Chapter 12, “Saving the configuration,” on page 163), the dialog also saves the data for each merged data set and its component data sets. The merged data sets are then available for merging with future ServerPac orders.

Unmerging a data set causes its attributes and space allocations to revert to their pre-merge values, with the exception of changes made to merged data sets through the CHANGE command (these are retained). Therefore, to avoid possible extra work, you should complete all merges and unmerges before going on to modify the attributes and space allocations of your merged data sets (as described in “Modifying a data set's attributes” on page 114).

While you can merge data sets from any data set list panel, you can use this function most effectively from the dialog's View and Change Facility (described in “Viewing and changing data sets” on page 96). Use the View and Change Facility to create lists of specific kinds of target data sets for merging, so that you spend less time excluding individual data sets from merges.

The merge and unmerge functionality is available for user-defined data sets as target-data sets.

When you select a data set for merging (through line command `M`), the Data Set Merge Candidates panel shown in Figure 88 on page 105 is displayed.

```
CPPP605M ------------- Modify System Layout ( MD053718 ) ---  ROW 1 TO 9 OF 9
COMMAND ==>                                                   SCROLL ==> PAGE
Data Set Merge Candidates for BFS.SBFSPLIB

Primary Commands:(? SET Locate Find Next Previous SORT Merge)
   Line Commands:(Information Select Conflict)


                                              Element    DS   MCAT IPL
S Data Set Name                               Type      Type  Reqd Vol APF
- --------------------------------------------  -----    ----- ----- --- ----
  EOY.SEOYPENU                                PNLENU    PDS   N     N   N
  GIM.SGIMPENU                                PNLENU    PDS   N     N   N
  ICQ.ICQPLIB                                 PNLENU    PDS   N     N   N
  IOE.SIOEPNLE                                PNLENU    PDS   N     N   N
  SYS1.DGTPLIB                                PNLENU    PDS   N     N   N
  SYS1.SBPXPENU                               PNLENU    PDS   N     N   N
  SYS1.SCBDPENU                               PNLENU    PDS   N     N   N
  SYS1.SICEPENU                               PNLENU    PDS   N     N   N
****************************** BOTTOM OF DATA ********************************
```

Figure 88. Panel: Data set merge candidates

This panel shows the data sets from the display list that are eligible for merging with the selected data set (the target data set). Enter Information to the left of a candidate data set and press Enter to get information about data set attributes. Enter Select to the left of candidate data sets to select them for merging with the target data set.

In the Merge Candidates panel, observe the following conventions:

- The Element Type column displays the element type of the data set, or one of these values:
  - LMOD, for load libraries and PDSEs containing program objects
  - DLIB, for distribution libraries.

  For information about SMP/E element types, see *z/OS SMP/E Reference*.
- The DS Type column displays the data set type.
- The MCAT Reqd column displays a Y if the data set must be cataloged in the master catalog.
- The IPL Vol column displays a Y if the data set resides on the IPLVOL logical volume.
- The APF column displays a Y if the data set requires APF authorization.

Not all data sets can be merged. The dialog restricts you from some, but not all, merge operations that would result in configurations that would be unworkable, lack important functions, or perhaps even be impossible to IPL. Specifically, the dialog prevents you from making the following types of merges:

- Merging libraries that are required in the LPA with libraries that cannot reside in the LPA.
- Merging libraries that are eligible to reside in the LPA with libraries that cannot reside in the LPA.
- Merging libraries that are eligible to reside in the link list concatenation with libraries that cannot reside in the link list.
- Merging data sets shipped with no secondary space with data sets with secondary space.

Also, the dialog prevents you from merging the following types of data sets:

- The NUCLEUS data set
- The SVCLIB data set
- Operational data sets, such as PARMLIB and VTAMLST
- SMP/E data sets
- VSAM data sets

The dialog prevents you from merging any data sets that contain a member that matches (conflicts with) a member name within the selected data set. To see whether naming conflicts exist for a particular data set, enter line command C for the data set in the candidate list.

Lastly, you cannot merge a data set that is already a component of another merged data set. In this case, you must first unmerge the component data set from the merged data set before you can merge it with another data set.

The dialog allows you to merge data sets only when they share all of the following attributes with the target data set:

- Record format (RECFM)
- Logical record size (LRECL)
- Data set type (DSNTYPE)
- Eligibility to be managed by SMS
- Compatible link list or LPA attributes
- Origin library (DLIB or target library).

The candidate list automatically excludes any data sets that do not match these attributes of the target data set.

The candidate list excludes data sets with RECFM as U or V or VB, which have block size value higher than that of the target data set.

Also, the candidate list excludes data sets that do not match the *SMS eligibility* of the target data set. For a target data set that is managed by SMS, for example, the candidate list excludes data sets that are not eligible to be managed by SMS. Likewise, for a target data set that is not SMS-managed, the candidate list excludes data sets for which SMS management is required.

The candidate list can extend for several screens. You can scroll through the list and select data sets, as needed, for merging with the target data set.

When you are done selecting data sets, enter the M (merge) primary command on the command line of this panel and press Enter to merge the data sets. The dialog checks each selected component data set for member name conflicts with data sets that were previously merged into the target data set. If the dialog detects a conflict, a pop-up panel appears at the bottom of your screen. Press Enter to clear the pop-up and continue with the next selected data set in the candidates list. When the merge operation completes, the Data Set Merge Candidates panel displays a message indicating that the merge is successful.

Redisplaying the data set list panel now shows an asterisk in the X column for the target data set. Also, the component data sets that were merged into the target data set no longer appear in the list.

Merging UNIX file system data sets

The dialog allows you to merge some of the eligible HFS and zFS data sets in your order. When you select a UNIX file system data set as a merge target (through line command M), the Data Set Merge Candidates panel shown in Figure 89 on page 106 is displayed. The panel shows the file system data sets that are eligible for merging with the selected data set (target data set). Later, when you save your configuration through the Save Configuration command (see Chapter 12, “Saving the configuration,” on page 163), the dialog also saves the data for each merged file system data set and its component data sets. The merged file system data sets are now available for merging with future ServerPac orders.

```
CPPP605V ------------- Modify System Layout ( MD053718 ) ---  ROW 1 TO 4 OF 4
COMMAND ==>                                                    SCROLL ==> HALF
Data Set Merge Candidates for OMVS.ROOT

Primary Commands:(? SET Locate Find Next Previous Merge)
   Line Commands:(Information Select)


                                            DS
S Data Set Name                             Type  Mount Point
- ------------------------------------------ ----- ----- --- ----
  OMVS.AS390                                zFS   /usr/lpp/was
  OMVS.XML                                  zFS   /usr/lpp/xml
  ****************************** BOTTOM OF DATA ********************
```

Figure 89. Panel: Data set merge candidates for UNIX file system data sets

The functions of the primary and line commands on this panel are the same as those for Figure 88 on page 105. The Conflict line command, however, is not applicable to the UNIX file system data sets and is not available on this panel.

Not all file system data sets can be merged. The dialog prevents you from these restrictions. Specifically, the dialog prevents you from merging the following file system data sets in z/OS orders:

- OMVS.ETC
- OMVS.VAR

Also, the dialogs prevents you from merging when the following conditions are not met:

- The data set must be either:
  - The same type (HFS or zFS), or
  - The file system data set must be marked as Switchable. Use the dialog's View and Change Facility (Option C on the Modify System Layout Options panel) and select the display "Switchable."
- The merge target file system data set has a lower-level mount point.

In order to merge eligible HFS and zFS data sets together they must both be included in the generated list from which you issue the Merge line command. For example, if you generate your list of file system data sets using the Data Set Type display from the dialogs View and change data sets by selected attributes facility, you must select both HFS and zFS data set types.

Once you have selected the file system data sets to be merged you can enter the primary command Merge. For UNIX file system data sets, merge will proceed for a selected component when there are no other file system data sets having a mount point that is hierarchically between the target data set's mount point and the candidate component data set's mount point. The space allocated for a merged file system data set will be equal to the sum of the space of both the merge target data set plus the space of all the merge component data sets.

For an example of the MERGE command, refer to “MERGE” on page 194.

Merging UNIX file system data sets greater than 4 GB

This section contains the following topics:

- “For driving system z/OS V1R13 or for a z/OS V2R1 driving system where target data set is already SMS managed” on page 107
- “For driving system z/OS V2R1 and where target data set is non SMS managed” on page 110

For driving system z/OS V1R13 or for a z/OS V2R1 driving system where target data set is already SMS managed

When you select a zFS data set as a merge target (through line command **M**) and that target dataset exceeds 4 GB. Figure 90 on page 108 will be displayed with the total calculated size of the merge target data set along with the merge candidate data set in GB information where the requirement and options for you will be explained. You will have the following options:

- To continue with the merge, select one of the following:
  1. Review and change SMS Classes
  2. Change data set types to HFS
  3. Unmerge one or more file systems and reduce total size of file systems to less than 4 GB.

Specify the desired option in the command line.

If the target data set is non SMS Managed, the first option will be 'Change file systems to be SMS Managed with a Data Class' for z/OS V1R13 driving system.

```
CPPP60E1 CMD ---------- Merge Error for  OMVS.ROOT       --------------------
COMMAND ==>

Error: Estimated target zFS file system size is  4.58 GB

A zFS that is > 4GB must be SMS managed and use a SMS Data
Class that supports extended addressability.

To continue with the merge, select one of the following:

 1    Review and change SMS Classes

 2    Change data set type(s) to HFS

 3    Unmerge one or more file systems and reduce total size of file
      systems to less than 4 GB.
```

Figure 90. Panel: Merge error for OMVS.ROOT

If you select option '1', Figure 91 on page 108 is displayed to collect SMS information, such as Storage Class, Data Class and Management Class. If SMS Storage Class was assigned prior to this request, it will be set to that value. If Data Class was assigned prior to this request, it will be set to that value. If no classes are assigned, defaults will be used for Storage Class and Data Class. The default values are as follows:

- Storage Class
- SMSTCLAS
- Data Class
- DCVSAMEX

```
CPPP60E3 CMD --------- Specify SMS Classes  ( RF001230 ) ----------------------
COMMAND ==>


      Data Set Name:  OMVS.ROOT


   Data Class          ==> DCVSAMEX

   Management Class    ==>

   Storage Class       ==> SMSTCLAS


Specify a Data Class that supports extended addressability.
The SMS Classes specified must be defined to SMS.
Leave blank to indicate the data set is managed by ACS routines.


               Press Enter to continue or End to cancel
```

Figure 91. Panel: Specify SMS classes

Once you enter SMS Class information and hit ENTER, then the existing Figure 92 on page 108 will be displayed with information message that merge is completed.

```
CPPP605U  --------------- Data Set List ( RF001230 ) --------- Row 5 to 6 of 6
COMMAND ==>                                                   SCROLL ==> CSR

Data Set List for: Data Set Type

Primary Commands:(? SET Locate Find Next Previous SORT CHange OFile OList
                  FindComp)
   Line Commands:(Merge eXpand Conflict Unmerge Select Insert Delete)

                                                                    Physical
S Data Set Name                              Selected Value         Volume
- ------------------------------------------- ---------------------- --------
  OMVS.SCFZHFS2                              ZFS                    TEST03
  OMVS.VAR                                   ZFS                    TEST03
*******************************Bottom of Data*********************************
```

Figure 92. Panel: Data set list

If you select option '2', the target data set will be changed to HFS and Figure 94 on page 109 will be displayed with the message

```
CPP0605237I Data set type changed to HFS and the merge request was successful.
```

The Data class value will be blank and SMS Managed will be YES or NO (depends on target data set SMS Managed input before merging) in the Data Set Attributes panel. See Figure 93 on page 109.

```
CPPP605D CMD ------ Data Set Attributes 1 of 2 ( RF001230 ) ------------------
COMMAND ==>

  Data set Name ==> OMVS.ROOT
   Shipped Name  :  OMVS.ROOT
  Data Set Type ==> ZFS  (HFS or ZFS)       Shipped  :  ZFS
Data Set Element Type  :  FS
           Category  :  Target
      Logical Volume ==> SMR042            Shipped  :  RES042
         SMS Managed ==> Yes   (Yes or No)

       Storage Class  :  SMSRCLAS  (Blank if managed by ACS routines)
          Data Class  :
    Management Class  :

      Primary Tracks ==> 78000             Shipped  :  45092
    Secondary Tracks ==> 4510              Shipped  :  4510

   Product, Element, or Feature :  Z/OS UNIX SYSTEM SERVICES APPLICATION SE
```

Figure 93. Panel: Data set attributes 1 of 2

```
CPPP605U  --------------- Data Set List ( RF001230 ) --------- Row 5 to 5 of 5
COMMAND ==>                                                   SCROLL ==> CSR

Data Set List for: Data Set Type

Primary Commands:(? SET Locate Find Next Previous SORT CHange OFile OList
                  FindComp)
   Line Commands:(Merge eXpand Conflict Unmerge Select Insert Delete)

                                                                      Physical
S Data Set Name                              Selected Value           Volume
- ------------------------------------------- ----------------------- --------
  OMVS.VAR                                   ZFS                     TEST03
*******************************Bottom of Data*********************************
```

Figure 94. Panel: Data set list

If you select option '3', then the candidate list should be re-displayed in a new dialog panel Figure 95 on page 109. A new error message will be displayed asking you to deselect one or more file systems from the candidate list.

```
CPPP60E5 CMD ----------- Modify System Layout  ( RF001230 ) -- Row 1 to 6 of 6
COMMAND ==>                                                   SCROLL ==> CSR


CPP0605231E Deselect one or more data sets from merge candidate list.
Merge Component Data Sets for: OMVS.ROOT
Press F3 to continue.

Line Commands:(Information Unmerge)


S   Data Set Name                            DS Type Size in GB/MB
-   ------------------------------------------- ------- ---------------------
  * OMVS.ROOT                                  ZFS     4.91 GB
    OMVS.SIGYROOT                              ZFS     0.81 MB
    OMVS.JAVA64V7                              ZFS     417.96 MB
    OMVS.SIBMROOT                              ZFS     1.62 MB
    OMVS.SAOPROOT                              ZFS     318.33 MB
    OMVS.TIVOLI                                ZFS     79.38 MB
```

Figure 95. Panel: Modify system layout

After you unmerge one or more zFS file systems (in the preceding figure), if the target data set still exceeds 4 GB, the panel CPPP60E1 will be displayed again with reduced size information.

For driving system z/OS V2R1 and where target data set is non SMS managed

When you select a zFS data set as a merge target (through line command **M**) and that target data set exceeds 4 GB, Figure 96 on page 110 will be displayed with the total calculated size of the merge target data set along with the merge candidate data set in GB information and options for the user. You will have the following options:

1. Allocate Data set using Data Class with Extended Addressability.
2. Unmerge one or more file systems and reduce total size of file systems to less than 4 GB.

Specify the desired option in the command line.

```
CPPP60E6  ------------- Merge Error for  OMVS.ROOT       --------------
COMMAND ==>

Error: Estimated target zFS file system size is  5.55 GB

 A zFS that is > 4GB must use a Data Class that supports
 extended addressability with no extended Format and DSORG = LS

To continue with the merge, select one of the following:

 1    Allocate Data set using Data Class with Extended Addressability

 2    Unmerge one or more file systems and reduce total size of files
      systems to less than 4 GB
```

Figure 96. Panel: Merge error for OMVS.ROOT

If you select option '1', Figure 97 on page 110 will be displayed to collect Data Class with Extended Addressability. If you have already provided Data Class for the data set, this panel will be displayed with pre-populated Data Class.

```
CPPP60E7  ------------ Specify SMS Classes  ( RF001424 ) -------------
COMMAND ==>


      Data Set Name:  OMVS.ROOT


   Data Class          ==>


Specify a Data Class that supports extended addressability with
No Extended Format and Recorg = LS


               Press Enter to continue or End to cancel
```

Figure 97. Panel: Specify SMS classes

If you select option '2', it will be processed the same way as option 3 of Figure 90 on page 108.

Considerations for merging data sets

When you enter the Merge command from a data set list panel, the dialog checks the data set list panel for data sets with matching attributes and presents these data sets as candidates for merging. The dialog does not enforce the operating system's rules for data set placement or rules that individual products might impose. Therefore, use caution in deciding which data sets to merge.

Generally, to keep your configuration as manageable as possible, IBM recommends that you merge only data sets of the same element type or that serve a similar purpose. If you choose to merge data sets of different element types, understand that the dialog will display only one of those element types for the merged data set in subsequent dialog data set lists.

Use the dialog's View and Change Facility, described in “Viewing and changing data sets” on page 96, to identify similar groups of target data sets that you can merge (the dialog does not display DLIB data sets by individual type). You might, for example, merge target libraries that are required in the LPA list or

merge your ISPF panel libraries. Also, consider merging your procedure libraries into a smaller number of procedure libraries.

These actions result in configurations that are easier to manage.

Consider the following IBM recommendations:

- Do not merge macro libraries with panel libraries; doing so can cause assemblies to fail.
- Do not merge data sets that appear in the SMP/E SYSLIB concatenation. Usually, these are MAC and SRC data sets. To see which data sets in the configuration reside in SMP/E SYSLIB, use the dialog's View and Change Facility to display the data sets having an SMP/E SYSLIB attribute of 'YES'.
- Merge target data sets only. Do not merge DLIB data sets.
- If you merge data sets that were originally shipped with no secondary space allocation that you later changed to having secondary allocation, any saved configuration for these data sets will reflect only the shipped values of these data sets and not the changed values.

Merging PDSE data sets

When merging PDSE data sets, observe the following conventions:

1. You can merge PDSE data sets when they have matching RECFM, LRECL, and origin library (target or DLIB).
2. With some exceptions, you can merge PDS data sets with a PDSE target data set. The PDSE target data set must have matching characteristics (RECFM, LRECL, origin library). The exceptions are PDS data sets that must reside on the IPL volume or have a record format (RECFM) of U. The dialog automatically excludes these PDS data sets from the candidates list for a PDSE target data set.
3. You cannot merge a PDSE data set with a PDS target data set, unless you first change the PDSE data set to a PDS data set. This conversion is possible only if the PDSE was originally shipped as a PDS data set.

Merging IBM data sets into a merge target user-defined data set

User-defined data set can be used as target data set to merge eligible IBM data sets as merged components. However, user-defined data sets are not eligible for merge component data sets. User-defined data sets cannot be used to merge into the target data set.

In order to merge eligible IBM data sets into eligible user-defined target data set, they must both be included in the generated list from which you issue the **M**erge line command. For example, if you generate your list of data sets using the **Data Set Origin** display from the dialogs View and change data sets by selected attributes facility, you must select both **IBM** and **User-Defined**. After you select the IBM data sets to be merged into user-defined data set, you can enter the primary command **M**erge. The selected IBM data sets will then be merged into the target user-defined data set.

Effects of merging data sets

When merged, component data sets assume the following attributes of the target data set:

- Data set name.
- Data set type (PDS or PDSE, HFS or zFS).
- Logical volume
- Catalog, unless one or more of the component data sets is cataloged in the master catalog. If so, the merged data set becomes cataloged in the master catalog.

A merged data set has the combined space of the merge target data set and its merge component data sets.

If you merge data sets of different element types, the dialog displays only one of those element types for the merged data set in subsequent dialog data set lists. In selecting an element type to represent the merged data set, the dialog selects the "highest" element type from among the data sets being merged.

To select an element type, the dialog uses the same priority order it uses for creating a recommended system layout (from highest to lowest; see “Creating the recommended system layout” on page 80). For example, merging a panel data set (element type PNL*xxx*) with a skeleton library (element type SKL*xxx*) results in a merged data set with an element type of PNL*xxx*.

If you intend to change the merge target data set from SMS-eligible to SMS-managed, you should make the change prior to the merger.

The dialog updates the installation jobs in your order to use the name of the merged data set. The dialog does not, however, update any product-supplied code on your system (such as EXECs or CLISTs) that might refer explicitly to data sets by name. As with renaming data sets, be aware that merging data sets can cause conflicts in any products that reference data sets explicitly by name.

When a merge action completes, the dialog reserves the names of component data sets so that you can, if desired, unmerge the data sets during the Modify System Layout phase of installation. Use care, however, in merging data sets. After you begin to run the installation jobs, unmerging a data set requires you to reinstall the order, starting from Modify System Layout.

Finding "lost" component data sets

If you forget where a particular data set is after you merge it, you can use the FINDCOMP (`Find Component`) primary command on the Select Values to Display panel to find it among your merged data sets. The FINDCOMP command allows you to search for a data set by either its shipped name or its new name if you renamed the data set during a subsequent phase of the installation. For more information, see “FINDCOMP” on page 191.

Unmerging data sets

When unmerged, a data set returns to its pre-merge values for data set name, data set type, attributes, and space allocations, with the exception of any changes you made through the CHANGE command (these are retained). You can unmerge a merged data set of all of its component data sets at once, or you can remove particular component data sets from a merged data set. To unmerge a merged data set of all its component data sets at once, enter line command U to the left of the merged data set. When you press Enter, a message is displayed to indicate whether the unmerge action was successful.

To remove only particular component data sets from a merged data set, you must first expand the display of the merged data set to see its individual component data sets. To do so, enter line command X (expand) to the left of the merged data set. The pop-up window shown in Figure 98 on page 112 is displayed.

```
CPPP605U ------------ Data Set List ( MD053718 )  ----  ROW 1 TO 10 OF 10
COMMAND ==>                                              SCROLL ==> PAGE

Data Set List for: Element type

Primary Commands:(? SET Locate Find Next Previous SORT CHange OFile
                  OList FindComp)
   Line Commands:(Merge eXpand Conflict Unmerge Select)
            ------------------------------------------------------
  DSName     |CPPP605X :(Information Unmerge) Row 1 to 3 of 3     |   R C I
-  ----------|                                                    |   - - -
   ANF.AANFE |                                                    |   Y N N
   ANF.AANFL | Merge Component Data Sets for:                     |   Y N N
   ANF.AANFM | ANF.AANFEXEC                                       |   Y N N
   ANF.AANFM | S   Data Set Name                                  |   Y N N
X  ANF.AANFP | -   ----------------------------------             |   Y N N
   ANF.AANFS |   * ANF.AANFPROC                                   |   Y N N
   ANF.SANFE |     ASU.AASUEXEC                                   |   Y N N
   ANF.SANFL |     ASU.AASUPROC                                   |   Y N N
   ANF.SANFM |                                                    |   Y N N
   ANF.SANFM |                                                    |   Y N N
   ANF.SANFP  ----------------------------------------------------   Y N N
   ANF.SANFSAMP                                SAMP       FB   PO    Y N N

    ***************************** BOTTOM OF DATA ***************************
```

Figure 98. Panel: Expansion of a merged data set

Select individual component data sets for unmerging by entering a U to the left of the component data set and pressing Enter. (Note that the data set marked with an asterisk is the merge target data set, while the others are merge component data sets. The merge target data set is not allowed to be the target of an Unmerge line command; this command will act only on merge components.) A message is displayed to indicate whether the unmerge action was successful.

Enter 'I' to the left of a component data set and press Enter to get information about the component data set.

As shown in Figure 98 on page 112, the pop-up list indicates the target data set with an asterisk. This is the name of the target data set before it was merged. Only line commands I or U are valid for the target data set.

It is also possible to completely unmerge the data set of all its component data sets from the EXPAND pop-up display. Simply enter a U for every component data set (the ones *without an asterisk)* in the pop-up display and press Enter.

Note: This is not true for UNIX file system data sets. The dialog prevents you from unmerging all the components at once. They must be unmerged one at a time. See "Unmerging UNIX file system data sets" on page 113 for more information.

Unmerging UNIX file system data sets

Unmerging UNIX file system data sets is different from unmerging other data set types.

The dialog will prevent you from unmerging a file system data set from a target file system data set if there is a third file system component data set with a mount point that is hierarchically below the mount point of the target file system and the selected component file system data sets. In this situation, you have the following options:

- Deselect the file system data set you selected for unmerging and the unmerge should be canceled, or
- Unmerge the third file system data set and then you can unmerge the other component file system data set.

For example, a data set with a mount point of /a/b cannot be unmerged from a data set having mount point of /a if another component of the merge has a data set with a mount point of a/b/c.

When you enter the line command eXpand to the left of a merged UNIX file system data set on panel CPPP605W, the Figure 99 on page 113 panel appears.

```
CPPP605W --- Show Merged Data Set Components ( MD053718 ) ---  ROW 1 TO 4 OF 4
COMMAND ==>                                                   SCROLL ==> HALF

   Line Commands:(Information Unmerge)

   Merge Component Data Sets for: OMVS.ROOT


S Data Set Name                               Mount Point
- ------------------------------------------  ----- --- ----
* OMVS.ROOT                                   /
  OMVS.AS390                                  /usr/lpp/was
  OMVS.XML                                    /usr/lpp/xml
  ******************************* BOTTOM OF DATA ********************
```

Figure 99. Panel: Expansion of the merge component data set panel for UNIX file system data sets

Saving merged data sets

To preserve your merged data sets for merging with future ServerPac orders, you must save your configuration through the Save Configuration command (see Chapter 12, "Saving the configuration," on page 163). The dialog saves the data for each merged data set and its component data sets.

Modifying a data set's attributes

The Data Set Attributes panel, shown in Figure 100 on page 114, appears when you enter a **S**elect line command from a data set list panel or when you enter an **I**nformation line command from a data set merge candidate panel. This panel shows the attributes of a specific data set. When you navigate to this panel from any of the data set merge candidate panels (CPPP605M or CPPP605V), or CPPP605X, all fields are display only.

```
CPPP605D CMD ------ Data Set Attributes 1 of 2 ( RF001230 ) -------------------
COMMAND ==>

  Data set Name ==> OMVS.ROOT
   Shipped Name  :  OMVS.ROOT
  Data Set Type ==> ZFS  (HFS or ZFS)        Shipped  :  ZFS
Data Set Element Type  :  FS
           Category  :  Target
       Logical Volume ==> SMR042             Shipped  :  RES042
          SMS Managed ==> Yes   (Yes or No)

        Storage Class  :  SMSRCLAS  (Blank if managed by ACS routines)
           Data Class  :
     Management Class  :

       Primary Tracks ==> 78000              Shipped  :  45092
     Secondary Tracks ==> 4510               Shipped  :  4510

   Product, Element, or Feature :  Z/OS UNIX SYSTEM SERVICES APPLICATION SE
```

Figure 100. Panel: Data set attributes 1 of 2

Depending on the data set's type (VSAM, sequential, or partitioned), you can change the following fields on the Data Set Attributes 1 panel (Figure 100 on page 114):

- Data set name
- Data set type (for HFS, PDS, PDSE, and zFS data sets only)
- Logical volume.
- SMS Managed status
- Tracks

The fields in the Data Set Attributes 1 panel are described in the following list.

Data set name

Specifies the name of the data set. If the Data Set Name field is preceded by ==>, you can rename the data set, otherwise it is unrenameable. Unrenameable data sets cannot be renamed unless you first override this attribute through a CHANGE RENAME command. For information about unrenameable data sets, see “CHANGE RENAME” on page 183.

If you change the high-level qualifier of a data set, you might need to re-establish its catalog and SMS relationships.

Rule: The data set must be renamed to a valid data set name. The dialog does not enforce special cases; for example, the restriction limiting SYS1.DAE data set name to 20 characters or less is not enforced. For information about valid data set names, refer to the appropriate z/OS documentation.

For other considerations about changing the names of data sets in your configuration, see “CHANGE RENAME” on page 183.

Shipped name

Specifies the shipped name of the data set.

Data set type

Specifies the data set type. For data sets that are eligible (see “CHANGE DSNTYPE” on page 179 command), zFS is the default data set type. The Data Set Attributes 1 panel (Figure 100 on page 114) allows you to change

- PDS data sets to PDSE data sets
- PDSE data sets to PDS data sets
- HFS data sets to zFS data sets
- zFS data sets to HFS data sets

Type over the Data set type field with the new value, as in the following list:

HFS
To change a zFS data set to an HFS data set

PDS
To change a PDSE data set to a PDS data set (if the PDSE was originally shipped as a PDS data set).

PDSE
To change a PDS data set to a PDSE data set

ZFS
To change an HFS data set to a zFS data set. Here the ' Data Set Type' field will be editable for the data set (larger than 4 GB) for which you want to change from HFS to ZFS.

For data sets that are not eligible to be changed, the Data Set Type field is read-only. The dialog does not, for example, allow you to change your order's PDSE data sets to PDS data sets, because they contain members that cannot be loaded into a PDS.

The dialog does not enforce all product requirements. You must determine whether data sets are allowed to be changed before changing them.

For considerations about changing the data set type of data sets in your configuration, see “CHANGE DSNTYPE” on page 179.

Data set element type
Specifies the element type of the data set. For example, MAC stands for macro library and LMOD is a load module. For user-defined data sets, the element type is *USER*.

Category
The Category field contains a 1-character value that indicates where the data set resides, as in the following list:

DLIB
DLIB volume

Target
Target library volume

Operational
Catalog volume. This value is set for operational data sets, such as page and dump data sets.

Logical volume

Specifies the logical volume to which the data set is assigned. This is a data entry field, preceded by ==>, if the logical volume is one you can change; otherwise, this will be a display-only field, preceded by a colon (:).

Observe the following considerations:

- If space recalculation is required (because the new logical volume is assigned to a physical volume that has different device capacity), the recalculation occurs automatically.
- Two logical volumes, CSIVOL and IPLVOL, are reserved for the system's use. You cannot assign data sets to or from either of these logical volumes. If you attempt to do so, your request is rejected.

For other considerations about changing the logical volumes of data sets in your configuration, see “CHANGE LVOL” on page 180 command.

SMS-managed

Specifies whether SMS is to manage the data set (this is the *SMS status* of the data set). If the data entry area for the SMS-Managed field is active, you can change the setting for this data set. You are allowed to change SMS Managed field to NO only if the data set type is set to HFS. If the data set type is still ZFS, you cannot change to non SMS managed. Data sets for which the SMS-Eligible field is set to YES can be SMS-managed or not, as you choose. Data sets for which the SMS-Required field is YES must remain SMS-managed data sets.

To see which data sets in your configuration are eligible for SMS-management, use the dialog's View and Change Facility (described in "Viewing and changing data sets" on page 96). Be aware that you cannot assign data sets that reside on the IPLVOL logical volume to SMS-managed logical volumes.

For considerations about changing the SMS management status of data sets in your order, see "CHANGE SMS" on page 185.

Data class

This field is mandatory for the SMS Managed zFS data sets larger than 4 GB. If you leave this field blank, you will be notified through an informational message.

Management class

This is an optional field.

Physical volume or storage class

If the value for SMS Managed is No, the displayed name for this field is Physical Volume and the value is the name of the physical volume to which the logical volume has been assigned.

If the value for SMS Managed is Yes, the displayed name for this field is Storage Class and the values is the storage class to which the data set has been assigned.

Tracks

Depending on a data set's record format (RECFM) and type (VSAM, sequential or partitioned), you can change the following fields on the Data Set Attributes 1 panel (Figure 100 on page 114):

- Primary tracks
- Secondary tracks
- Directory blocks

You cannot decrease the size of a shipped data set to less than its original, shipped amount.

The fields in the Data Set Modification - Space panel are described in the following list.

Primary tracks

Specifies the primary space allocation (in tracks) for the data set. You can specify any value from 1 to 999999 tracks. However, you cannot specify less than the "Shipped" amount shown on the right side of the panel.

Note: If you want to change the primary space allocations for a large number of data sets, it might be faster to use the View and Change option and the CHANGE SPACE command.

Secondary tracks

Specifies the secondary space allocation (in tracks) for the data set. You can specify any value from 0 to 999999 tracks.

To specify no secondary space allocation for the data set, set this value to 0 (zero). You can, if necessary, reset this value at a later time.

Note:

1. If you want to change the secondary space allocations for a large number of data sets, it might be faster to use the View and Change option and the CHANGE SPACE command.

2. Some data sets are not allowed to have secondary space because of operating system restrictions. These data sets are shipped with their Secondary Space fields set to zero.

Directory blocks

Specifies the number of directory blocks for a partitioned data set (PDS). You can set this field to any value between 1 and 99999, but you cannot decrease it below the shipped number of directory blocks.

For information about directory blocks, see *z/OS DFSMS Using Data Sets*.

Product, element, or feature

Specifies the product, element, or feature associated with the data set.

If you press End on this panel, the previous panel appear.

If you make modifications on the Data Set Attributes 1 panel (Figure 100 on page 114) and press Enter, the panel remains on display with the updated fields. If you then press Enter again, the Data Set Attributes 2 panel (Figure 101 on page 117) appears for non-UNIX file system data sets. If you make no modifications on the Data Set Attributes 1 panel (Figure 100 on page 114) and press Enter, the Data Set Attributes 2 panel (Figure 101 on page 117) appears for non-UNIX file system data sets.

```
CPPP605E ------------- Data Set Attributes 2 of 2 ( MD053718 ) -----------
COMMAND ==>


Data set Name  :  SMPE.CICT500.SMPSTS

                         RECFM  :  FB
                         LRECL  :  80
                APF Authorized  :  No
                  LPA Eligible  :  No
                  LPA Required  :  No
            Link List Eligible  :  No
         SMP/E SYSLIB Data Set  :  No
        Required on IPL Volume  :  No
                  SMS-Eligible  :  Yes
                  SMS-Required  :  No
                    Renameable  :  Yes
    Required in Master Catalog  :  No
```

Figure 101. Panel: Data set attributes 2

This is an information only display panel. It presents the current values for the data set. Changes to eligible fields can only be made with the **CH**ange command. The displayed values are for presentation only and may not reflect the actual internal value. For example, the internal value of Y is presented as the logical value Yes. Also, any value that has been overridden is displayed as its logical value (Yes or No) followed by the word Overridden.

This panel displays different fields depending on the data set type. For example, Figure 102 on page 118 shows a panel for a shipped VSAM data set.

```
CPPP605E ------------- Data Set Attributes 2 of 2 (  ) -----------
COMMAND ==>


Data set Name  :  SMPE.GLOBAL.CSI









        Required on IPL Volume  :  No
                  SMS-Eligible  :  Yes
                  SMS-Required  :  No
                    Renameable  :  No
    Required in Master Catalog  :  Yes
```

Figure 102. Panel: Data set attributes 2 for a shipped VSAM data set

For UNIX file system data sets, when you press Enter on the Data Set Attributes 1 panel (Figure 100 on page 114), the Data Set Attributes 2 panel for a UNIX file system data set (Figure 103 on page 118) appears. The entire mount point can be displayed on this panel along with the data set attributes. Pressing end on this panel returns you to the Data Set Attributes 1 panel.

```
CPPP605F ------------- Data Set Attributes 2 of 2 (  ) -----------
COMMAND ==>


Data set Name  :  OMVS.ROOT
  Mountpoint   :/









        Required on IPL Volume  :  No       SMS-Eligible  :  No
                    Renameable  :  No       SMS-Required  :  No
    Required in Master Catalog  :  Yes
```

Figure 103. Panel: Data set attributes 2 for a UNIX file system data set

For driving system z/OS V1R13 or z/OS V2R1 and SMS managed data set

For UNIX file system data sets larger than 4 GB, if you change HFS to ZFS , Figure 104 on page 118 will be displayed. This panel is also displayed when the global Change command is used. The information that zFS file system is larger than 4 GB, and that it must be SMS managed with a Data Class that includes extended format and addressability is displayed. The User will have the option to confirm the request or to cancel it.

```
CPPP60E2 CMD ------ Verify Data Set Type Change ( RF001230 ) ------
COMMAND ==>


                     OMVS.ROOT

  The zFS or VSAM file system is larger than 4GB, and it must be
  SMS managed with a Data Class (defined with Extended Format and
  Extended Addressability) and a Storage Class.


      Do you want to change the Data Set Type (Yes or No)
       ==>


               Press Enter to continue or End to cancel
```

Figure 104. Panel: Verify data set type change

The user will need to provide Data Class with extended addressability. If the user has already provided Data Class for the data set, Figure 104 on page 118 will be displayed with pre-populated Data Class.

For driving system z/OS V2R1 and non-SMS managed data set

If you change the large file system data set type from HFS to ZFS, either using the change command or using the Data Set Attributes panel (CPPP605D), the following panel will be displayed.

```
CPPP60E7  ------------ Specify SMS Classes  ( RF001425 ) ----------------------
COMMAND ==>


      Data Set Name:  OMVS.SBBOIMRM


   Data Class          ==>


Specify a Data Class that supports extended addressability with
No Extended Format and Recorg = LS

               Press Enter to continue or End to
cancel
```

The user will need to provide Data Class with extended addressability. If the user has already provided Data Class for the data set, this panel will be displayed with a pre-populated Data Class.

Figure 105. Panel: Specify SMS Classes

Displaying device types

Figure 106 on page 119 shows the panel that is displayed when you enter Option T on the Modify System Layout options panel, or enter the DEVT command from another panel.

```
CPPP606#  --------------------- Device Type Table ---------- Row 1 to 11 of 11
COMMAND ==>                                                  SCROLL ==> PAGE

Primary Commands:(?)
   Line Commands:(Select Delete Insert)

     Device      Unit    Bytes/    Tracks/    Cylinders/   VTOC   Index  How
S    Type        Type    Track     Cylinder   Volume       TRKS   TRKS   Defined
-    --------    ------  -------   --------   ----------   ----   -----  -------
     D001-001    D001     65536       19         17206      399      80  DYNAMIC
     3380-1      3380     47476       15           885       30       6  IBM
     3380-2      3380     47476       15          1770       45       9  IBM
     3380-3      3380     47476       15          2665       60      12  IBM
     3390-1      3390     56664       15          1113       30       6  IBM
     3390-2      3390     56664       15          2226       60      12  IBM
     3390-3      3390     56664       15          3339       75      15  IBM
     3390-6      3390     56664       15          6678      150      30  USER
     3390-9      3390     56664       15         10017      225      45  IBM
     ******************************* BOTTOM OF DATA ****************************
```

Figure 106. Panel: Device type table

This panel shows the direct-access storage devices (DASD) defined to ServerPac. You cannot delete or edit the IBM-defined devices in this list. However, you can add entries for real or emulated devices and edit and delete those entries.

The ? primary command is valid for this panel. This is a standard command for panels that display lists. See “Primary commands” on page 9.

The following line commands are valid for this panel:

S

Select a user-defined device for editing. You can do this only if the device is not currently referenced by any data sets (see “Inserting or editing device types” on page 120). You cannot edit IBM-supplied DASDs or dynamically-created entries.

D

Delete a user-defined device. You must confirm the delete request (see “Deleting device types” on page 120). You cannot delete IBM-supplied DASDs or dynamically-created entries.

I
Insert a user-defined device. For more information, see “Inserting or editing device types” on page 120.

Inserting or editing device types

Figure 107 on page 120 shows the panel that is displayed when you enter Insert or Select for a device type on the Device Type Table panel. (This panel is not displayed for IBM-defined devices, because you cannot modify those devices.)

```
CPPP606I ---------------------- Device Type Table -----------------------------
COMMAND ==>

             Device Type  ==>          (Must be unique)
               Unit Type  ==>          (UNIT to be used for allocation)


             Cylinders/Device  ==>          (50 to 32767 Cylinders)
             Tracks/Cylinder   ==>          (10 to 999 Tracks)
             Bytes/Track       ==>          (32767 to 65535 Bytes)

             How Defined : USER
```

Figure 107. Panel: Device type insertion/edit

The fields are described in the following list:

Device type
Specifies the device type and model by which the DASD is to be known.

Unit type
Specifies the generic name to be used to allocate data sets on the device. For example, UNIT might be specified as 3390 or 3380.

Cylinders/Device
Specifies the number of cylinders for each DASD. Obtain this value from your DASD supplier; it need not match the number of cylinders available on any IBM device.

Tracks/Cylinder
Specifies the number of tracks for each cylinder on the DASD. Obtain this value from your DASD supplier.

Bytes/Track
Specifies the number of bytes for each track on the DASD. Obtain this value from your DASD supplier.

How defined
Specifies whether the device was user-defined (USER) or dynamically defined (DYNAMIC).

For a user-defined device, you can modify any of the values in this panel. For a dynamically-defined device, you can modify only the Device Type value.

Deleting device types

Figure 108 on page 121 shows the panel that is displayed when you enter line command D to delete a user-defined device type from the Device Type Table panel.

```
CPPP606D ---------- Device Type Deletion, Confirmation Request ---------------
COMMAND ==>

DELETE REQUESTED
                              DEVICE ATTRIBUTES

           Device NAME: STAGEDEV     Bytes/Track : 56664
           Device TYPE: 3390         Tracks/Cyl  : 15
                                     Cyls/Device : 200

         You MUST Confirm DELETION By Typing DELETE and pressing ENTER

         Press the END or RETURN key to CANCEL the DELETE request
```

Figure 108. Panel: Device type deletion

You can delete only user-defined device types. Confirm deletion by entering DELETE in the COMMAND ==> field and pressing Enter.

If you attempt to delete a device name that is currently referenced by a data set, the dialog rejects your delete request.

Handling user data sets

This section lists the tasks connected with handling user data sets.

Defining new user data sets

User sets can be defined as HFS or zFS data sets.

To define a new user data set, you must first go to the Data Set List (CPPP605U) panel.

You can go to Data Set List panel by using option C (View and change data sets by selected attributes) on Modify System Layout as shown in Figure 60 on page 79 and then selecting any of the attributes on Select Data Set View panel as shown in Figure 79 on page 97. When you use the Select line command to select an attribute to display and press Enter, the dialog displays a second panel with the values found for the selected attribute. Select the values for the attribute to be displayed and press Enter. The dialog displays the Data Set List panel which has line command Insert.

Enter the Insert command on the Data Set list panel as shown in Figure 109 on page 122 to display the Define a USER Data Set panel (Figure 110 on page 122).

```
 CPPP605U  --------------- Data Set List ( OD001009 ) --- Row 929 to 939 of 939
COMMAND ==>                                                  SCROLL ==> CSR

Data Set List for: Data Set Origin

Primary Commands:(? SET Locate Find Next Previous SORT CHange OFile OList
                  FindComp)
   Line Commands:(Merge eXpand Conflict Unmerge Select Insert Delete)

                                                                      Physical
S Data Set Name                              Selected Value           Volume
- ------------------------------------------- ----------------------- --------
I SMPE.GLOBAL.CSI                            IBM                     MVSCAX
  SYS1.DFSMS.SCDS                            IBM                     MVSCAX
  SYS1.DFSMS.ACDS                            IBM                     MVSCAX
  SMPE.MVS.TARGET.CSI                        IBM                     MVSREX
  OMVS.JAVA64V5                              IBM                     MVSREX
  OMVS.JAVA31V6                              IBM                     MVSREX
  OMVS.ETC                                   IBM                     MVSCAX
  OMVS.JAVA31V5                              IBM                     MVSREX
  OMVS.JAVA64V6                              IBM                     MVSREX
  OMVS.VAR                                   IBM                     MVSCAX
  OMVS.ROOT                                  IBM                     MVSREX
*******************************Bottom of
Data*********************************
```

Figure 109. Panel: Data set list

```
 CPPP605I ---------- Define a USER Data Set ( OS160125 ) ----------------------
 COMMAND ==>

   Data Set Name          ==>  USERDEFINED
   Logical Volume         ==>  LVUSER
   Data Set DDNAME        ==>
   Define DDDEF           ==>  N     (Y or N)
   Data Set Category      ==>       (? for List of Available Types
   Allocate Data Set      ==>  Y     (? Y or N)

   Data Set Type         ==>        (PDS, PDSE, SEQ)
   RECFM                 ==>        (U, F-B-S-AM, V-B-S-AM)
   LRECL                 ==>        (0 - 32760)
   Block Size            ==>        (1-32760 or blank for optimized BLKSIZE)


   Primary Tracks        ==>
   Secondary Tracks      ==>
   Directory Blocks      ==>        (Zero for sequential data set)


   If defining the DDDEF, the following information is required:
      Zone Nickname        ==>       (? for List of Available Zones)
   If defining the DDDEF for HFS or zFS, the following information is required:
      DDDEF Path           ==>

   If Data set Type is HFS or zFS, the following information is required:
    Mount Point          ==>
```

Figure 110. Panel: Define a user data set

On the Define a USER Data Set panel (Figure 110 on page 122), fill out the required fields and press Enter to add the user data set.

The fields in the Define a USER Data Set panel are described in the following list:

Data Set Name
Specifies the name of the data set. This name must be unique within your order's work configuration

Logical Volume
Specifies the logical volume to which the data set is to be assigned. This is a required field. You can specify any logical volume, except for two volumes, CSIVOL and IPLVOL, which are reserved for the system's use. If you specify a logical volume name that is not already known to the dialog, you can use the SUML primary command (from the Summary of Features/Elements panel) to assign the logical volume to a physical volume. (To assign a data set to a physical volume, use the dialog's CHANGE PVOL command.)

Data set DDNAME
Specifies the name of the data set DDNAME. This field is mandatory because it is used as the DD name for merge processing. The name must be unique within your order's work configuration. The value of this field is defined as DDDEF in CSI zones if the Define DDDEF field is set to Y.

Define DDDEF
Indicates whether or not the SMP/E DDDEF should be defined in CSI zones. Set this field to Y if you want the dialog to define the DDDEF in CSI zones. Otherwise, set the field to N.

Data Set Category
Specifies the data set category. If you are unsure of the available categories enter a ? and a list will be displayed as shown in Figure 111 on page 124.

Allocate Data Set
Indicates whether the data set should be physically allocated by dialog install job. If the user data set already exists, then this field must be set to N. If data set is to be allocated by the dialog install job, then this field must be set to Y.

In the Full System Replacement (FSR) install for z/OS, make sure that the user-defined data sets that already exist (for example, Allocate Data Set is set to N), are not cataloged in the driving system's master catalog. The existing user data sets must be defined in the user catalog during z/OS FSR install. This restriction is not there for z/OS software upgrade installations and subsystem installations.

Data Set Type
Specifies the data set type: PDS, PDSE, SEQ, HFS or zFS.

RECFM
Specifies the record format. You can specify any of the following formats:

U
Undefined

Fixed
You can specify any of the following formats:

- B (blocked)
- S (standard block size)
- A (ANSI control characters)
- M (machine control characters)

Variable
You can specify any of the following formats:

- B (blocked)
- S (spanned records)
- A (ANSI control characters)
- M (machine control characters)

LRECL
Specifies the logical record length (LRECL). This field can contain any value from 0 to 32760. While defining HFS or zFS user data set, you can keep this field blank.

Block Size
Specifies the block size. This field can contain any value from 1 to 32760 or you can keep this field blank.

Primary Tracks
Specifies the primary space allocation (in tracks) for the data set. You can specify any value from 1 to 65536 tracks.

Secondary Tracks
Specifies the secondary space allocation (in tracks) for the data set. You can specify any value from 0 to 65536 tracks. To specify no secondary space allocation for the data set, set this value to 0 (zero). You can, if necessary, reset this value later.

Directory Blocks
For a PDS or HFS data set, this value specifies the number of directory blocks. You can set this field to any value between 1 and 99999.

Zone Nickname
Specifies the nickname of the zone in which you want to define the SMP/E DDDEF. If Define DDDEF is set to Y then this field is required. If you are unsure of the available zones enter a ? and a list of available zones in your order will be displayed as shown in Figure 112 on page 124. Select one of the displayed zone nicknames from that list. For the DLIB category data sets, DDDEF is defined in both DLIB and Target zones corresponding to the specified zone nickname. For Target and Operational category data sets, DDDEF is defined in Target zone corresponding to the specified zone nickname.

DDDEF Path
Specifies the DDDEF path name for the HFS or zFS file system data set. If Define DDDEF is set to Y for HFS or zFS data set, then DDDEF is defined pointing to this path in CSI zones.

Mount Point
Specifies the path name of the mount point for the HFS or zFS file system data set.

Figure 111 on page 124 shows the panel to display the data set category:

```
 S CATEGORY  DESCRIPTION
- --------  -----------
  D         DLIB
  O         OPERATIONAL
  T         TARGET
- --------
-----------
```

Figure 111. Panel: List of data set categories (CPPP6053)

Figure 112 on page 124 shows the panel to display the available zones present in your order:

```
S Nickname  DLIB Zone Target Zone  SST
- --------  --------- -----------  ---
  100        MVSD100   MVST100     MVS
  110        MVSD110   MVST110     MVS
  --------   --------  ----------
---
```

Figure 112. Panel: List of zones (CPPP6059)

Viewing user-defined data sets

To view a list of all user-defined data sets, select the `Data Set Origin` attribute on the `Select Data Set View` panel as shown in Figure 79 on page 97 and press Enter. The dialog displays a second panel with the values `IBM` and `User-Defined` as shown in Figure 80 on page 98. Select `User-Defined` and press Enter. The dialog displays a list of all the user-defined data sets on the Data Set List panel as shown in Figure 113 on page 125.

```
CPPP605U  --------------- Data Set List ( OD001009 ) ------- Row 3 to 13 of 13
COMMAND ==>                                                  SCROLL ==> CSR

Data Set List for: Data Set Origin

Primary Commands:(? SET Locate Find Next Previous SORT CHange OFile OList
                  FindComp)
   Line Commands:(Merge eXpand Conflict Unmerge Select Insert Delete)

                                                                        Physica
S Data Set Name                                 Selected Value          Volume
- ---------------------------------------------- ---------------------- -------
  CPPDEV.TEST.ONE                               User-Defined           MVSCAX
  CPPDEV.USER.PDSY                              User-Defined           MVSCAX
  CPPDEV.YOGESHD.JCL                            User-Defined           MVSCAX
  CPPDEV.USER.PDSN                              User-Defined           MVSCAX
  CPPDEV.UDDTEST.PDS                            User-Defined           MVSCAX
  CPPDEV.USER.SEQY                              User-Defined           MVSCAX
  CPPDEV.USER.SEQN                              User-Defined           MVSCAX
  CPPDEV.UDDTEST.SEQ                            User-Defined           MVSCAX
  CPPDEV.UDDTEST.HFS                            User-Defined           MVSCAX
  CPPDEV.USER.ZFSN                              User-Defined           MVSCAX
  CPPDEV.UDDTEST.ZFS                            User-Defined           MVSCAX
*******************************Bottom of Data*********************************
```

Figure 113. Data set list to display user-defined data sets

On the Data Set List panel, you can Select the data set to view the attributes.

Depending on the data set type (HFS/zFS or PDS/PDSE or SEQ) and the value of the Allocate Data set field (Y or N) of the user-defined data set, there will be different views of Data Set Attributes 1 of 2 panel for user data sets.

The following fields on the Data Set Attributes 1 of 2 panel are displayed only for user-defined data sets. They are for display only.

- Allocate Data Set
- Define DDDEF
- Data set DDNAME
- Zone Nickname
- DDDEF Path (This field is displayed only for HFS or zFS user-defined data sets.)

The following fields on the Data Set Attributes 1 of 2 panel are not displayed for user-defined data set that have the Allocate Data Set field set to N.

- Primary Tracks
- Secondary Tracks
- Directory Blocks

The PDS/PDSE user data set with Allocate Data set=Y will have the following Data Set Attributes 1 of 2 panel display as shown in Figure 114 on page 126

```
CPPP605D  --------- Data Set Attributes 1 of 2 ( OD001009 ) -------------------
COMMAND ==>

  Data set Name ==> CPPDEV.USER.PDSY
   Shipped Name  :  CPPDEV.USER.PDSY
  Data Set Type ==> PDS  (PDS or PDSE)       Shipped  :  PDS
Data Set Element Type  :  *USER*
             Category  :  DLIB

       Logical Volume ==> CAT001             Shipped  :  CAT001
          SMS Managed ==> No    (Yes or No)

      Physical Volume  :  MVSCAX

       Primary Tracks ==> 50                Shipped  :  50
     Secondary Tracks ==> 30                Shipped  :  30
     Directory Blocks ==> 10                Shipped  :  10
     Allocate Data set   :  Y
     Define DDDEF        :  Y
     Data set DDNAME     :  USRPDSY
     Zone Nickname       :  100

   Product, Element, or Feature :  USER DEFINED DATASETS
```

Figure 114. Data set attributes 1 of 2 (PDS/PDSE user data set with allocate data set = Y)

The PDS/PDSE user data set with Allocate Data set=N will have the following Data Set Attributes 1 of 2 panel display as shown in Figure 115 on page 126.

```
CPPP605D  --------- Data Set Attributes 1 of 2 ( OD001009 ) -------------------
COMMAND ==>

  Data set Name ==> CPPDEV.USER.PDSN
   Shipped Name  :  CPPDEV.USER.PDSN
  Data Set Type ==> PDSE  (PDS or PDSE)       Shipped  :  PDSE
Data Set Element Type  :  *USER*
             Category  :  DLIB

       Logical Volume ==> CAT001             Shipped  :  CAT001
          SMS Managed ==> No    (Yes or No)

      Physical Volume  :  MVSCAX


     Allocate Data set   :  N
     Define DDDEF        :  Y
     Data set DDNAME     :  USRPDSN
     Zone Nickname       :  100

   Product, Element, or Feature :  USER DEFINED DATASETS
```

Figure 115. Data set attributes 1 of 2 (PDS/PDSE user data set with allocate data set = N)

The following fields are not displayed for user-defined data sets with Allocate Data Set=N.

- Primary Tracks
- Secondary Tracks
- Directory Blocks

The HFS/zFS user data set with Allocate Data set=Y will have the following Data Set Attributes 1 of 2 panel display as shown in Figure 116 on page 127.

```
CPPP605D  --------- Data Set Attributes 1 of 2 ( OD001009 ) -------------------
COMMAND ==>

  Data set Name ==> CPPDEV.USER.HFSY
   Shipped Name  :  CPPDEV.USER.HFSY
  Data Set Type ==> HFS  (HFS or zFS)       Shipped  :  HFS
Data Set Element Type  :  *USER*
             Category  :  DLIB

       Logical Volume ==> CAT001             Shipped  :  CAT001
          SMS Managed ==> No    (Yes or No)

      Physical Volume  :  MVSCAX

       Primary Tracks ==> 50                Shipped  :  50
     Secondary Tracks ==> 30                Shipped  :  30

     Allocate Data set   :  Y
     Define DDDEF        :  Y
     Data set DDNAME     :  USRPDSY
     Zone Nickname       :  100
     DDDEF PATH          :  /user/hfs1
   Product, Element, or Feature :  USER DEFINED DATASETS
```

Figure 116. Data set attributes 1 of 2 (HFS/zFS user data set with allocate data set =Y)

The following field is displayed only for HFS/zFS user-defined data sets and is display-only.

- DDDEF Path

The HFS/zFS user data set with Allocate Data set=N will have the following Data Set Attributes 1 of 2 panel display as shown in Figure 117 on page 127.

```
CPPP605D  --------- Data Set Attributes 1 of 2 ( OD001009 ) -------------------
COMMAND ==>

  Data set Name ==> CPPDEV.USER.ZFSN
   Shipped Name  :  CPPDEV.USER.ZFSN
  Data Set Type ==> ZFS  (HFS or ZFS)       Shipped  :  ZFS
Data Set Element Type  :  *USER*
             Category  :  DLIB

       Logical Volume ==> CAT001             Shipped  :  CAT001
          SMS Managed ==> No    (Yes or No)

      Physical Volume  :  MVSCAX




     Allocate Data set   :  N
     Define DDDEF        :  Y
     Data set DDNAME     :  USRZFSN
     Zone Nickname       :  100
     DDDEF PATH          :  /user/zfs1
```

Figure 117. Data set attributes 1 of 2 (HFS/zFS user data set with allocate data set = N)

The SEQ user data set with Allocate Data set=Y will have the following Data Set Attributes 1 of 2 panel display as shown in Figure 118 on page 128.

```
CPPP605D  --------- Data Set Attributes 1 of 2 ( OD001009 ) -------------------
COMMAND ==>

  Data set Name ==> CPPDEV.USER.SEQY
   Shipped Name  :  CPPDEV.USER.SEQY
  Data Set Type  :  SEQ                     Shipped  :  SEQ
Data Set Element Type  :  *USER*
             Category  :  DLIB

       Logical Volume ==> CAT001            Shipped  :  CAT001
          SMS Managed ==> No    (Yes or No)

      Physical Volume  :  MVSCAX

       Primary Tracks ==> 20                Shipped  :  20
     Secondary Tracks ==> 10                Shipped  :  10

     Allocate Data set   :  Y
     Define DDDEF        :  Y
     Data set DDNAME     :  USRSEQY
     Zone Nickname       :  100

   Product, Element, or Feature :  USER DEFINED
DATASETS
```

Figure 118. Data set attributes 1 of 2 (SEQ user data set with allocate data set = Y)

The SEQ user data set with Allocate Data set=N will have the following Data Set Attributes 1 of 2 panel display as shown in Figure 119 on page 128.

```
CPPP605D  --------- Data Set Attributes 1 of 2 ( OD001009 ) -------------------
COMMAND ==>

  Data set Name ==> CPPDEV.USER.SEQN
   Shipped Name  :  CPPDEV.USER.SEQN
  Data Set Type  :  SEQ                     Shipped  :  SEQ
Data Set Element Type  :  *USER*
             Category  :  DLIB

       Logical Volume ==> CAT001            Shipped  :  CAT001
          SMS Managed ==> No    (Yes or No)

      Physical Volume  :  MVSCAX




     Allocate Data set   :  N
     Define DDDEF        :  N
     Data set DDNAME     :  USRSEQN
     Zone Nickname       :

   Product, Element, or Feature :  USER DEFINED
DATASETS
```

Figure 119. Data set attributes 1 of 2 (SEQ user data set with allocate data set = N)

Deleting user-defined data sets

Figure 120 on page 129 shows the panel that is displayed when you enter line command D to delete a user-defined data set from the Data Set List panel (Figure 113 on page 125).

```
CPPP605$  ---------------------- Data Set Details -----------------------------
COMMAND ==>

DELETE a User-Defined Data Set


                              DATA SET DETAILS


          Data Set Name: CPPDEV.USER.SEQN


           You MUST Confirm DELETION By Typing DELETE and pressing ENTER

           Press the END or RETURN key to CANCEL the DELETE request
```

Figure 120. Panel: Data set details to confirm the deletion

Confirm the deletion by entering DELETE in the COMMAND ==> field and pressing Enter.

Restriction: The following data sets cannot be deleted:

- IBM-shipped data sets
- Data sets that contain merge data sets.

Displaying a summary of data sets

From the Modify System Layout Options panel (see Figure 60 on page 79), enter Option D to display the Summary of Data Sets panel. You can also display this panel by entering the SUMD command from the Summary of Features/Elements panel.

The Figure 121 on page 129 is displayed.

```
CPPP6052  ------------- Modify System Layout ( QD002626 ) -- Row 1 to 31 of 44
 COMMAND ==>                                                 SCROLL ==> CSR

 Summary Of Data Sets

 Primary Commands:(? SET Locate Find Next Previous SORT CHange OFile OList
                  FindComp)
    Line Commands:(Merge eXpand Conflict Unmerge Select)

                                                --- Data Set --- Primary
 S Data Set Name                             X F  Type RECFM LRECL Tracks  WARN
 - ------------------------------------------- - -  ---- ----- ----- ------- ----
   BBO.ABBOEXEC                                   PDS   VB     255       3
   BBO.ABBOIMR                                    PDSE  VB     255   83431
   BBO.ABBOJCL                                    PDS   FB      80       8
   BBO.SBBOEXEC                                   PDS   VB     255       3 WARN
   BBO.SBBOJCL                                    PDS   FB      80       8 WARN
   BBO.V8R0.GINHFS                                ZFS                39375
   BBO.V8R0.SBBOHFS                               ZFS                63000
   BBO.V8R0.SGINREPO                              ZFS                  315
   CPAC.CMDPROC                                   PDS   FB      80       4 WARN
   CPAC.ISPPLIB                                   PDS   FB      80       5 WARN
   CPAC.PARMLIB                                   PDS   FB      80     142 WARN
   CPAC.PDFPD                                     PDS   VB     255      56
   CPAC.PROCLIB                                   PDS   FB      80      19 WARN
   CPAC.VTAMLST                                   PDS   FB      80     116 WARN
   CPAC.WAS.PARMLIB                               PDS   FB      80       4
   CPACWAS.DOCLIB                                 PDS   FB      80       4
   CPACWAS.SAMPLIB                                PDS   FB      80       4
```

Figure 121. Panel: Summary of data sets

For descriptions of various Primary Commands and Line Commands in this panel, press HELP (?).

In the panel, the WARN column indicates data set conditions you have to resolve before continuing with the installation. The possible warnings are as follows:

WARN
The data set already exists in the driving system master catalog. For more information, see the description of message CPP0605229E.

Displaying a summary of physical volumes

To see the physical volumes that are used by a particular feature or element, use the Summary of Features/Elements panel. From the Modify System Layout Options panel (Figure 60 on page 79), enter Option V to display the Summary of Physical Volumes panel. You can also display this panel by entering the SUMP command from the Summary of Features/Elements panel.

The panel shown in Figure 122 on page 130 is displayed.

```
CPPP605K  ------------- Modify System Layout ( RF001230 ) ---- Row 1 to 6 of 6
COMMAND ==>                                                   SCROLL ==> CSR

SUMMARY Of Physical Volumes

Primary Commands:(? DEVT)
   Line Commands:(Select Dslist)

  PVolume/ Seq Device Device   Warn-  Init   ---------- Cylinders ------------
S STORCLAS No. Number Type     ings   Volume Existng  RSVD Assignd  Used  Free
- -------- --- ------ -------- ------ ------ ------- ----- ------- ----- -----
  *ACS*         SMS   3390-27                            0   2354
  SMSDCLAS      SMS   3390-27                            0   6209
  SMSRCLAS      SMS   3390-27                            0   5200
  TEST01        SMS   3390-27                            0  22304
  TEST02        SMS   3390-27                            0  11746
  TEST03        9173  3390-27           Y         0      5   3796   3801 28959
*******************************Bottom of Data*********************************
```

Figure 122. Panel: Summary of physical volumes

For descriptions of the fields in this panel, press HELP (?).

Use this panel to verify and change (if necessary) the attributes of the physical volumes. Before you proceed, however:

- If there are warnings on this panel, you should not try to resolve them until you have completed any data set merges, space allocation changes, or volume assignment changes that you intend to make.
- If you have DYNAMIC DASD INFO set to No, you must use the Select line command to display the Display and Change Volume Attributes panel, on which you must specify the required information about each volume and may choose to reserve space on the volume or tell the dialog not to initialize it.
- If you have DYNAMIC DASD INFO set to Yes, you can use the Select line command to reserve space on the volume or tell the dialog not to initialize it.
- These changes should be among the last things you do before exiting Modify System Layout (because other changes you make could force you to do rework), but they must be completed before you attempt to run any jobs that install the data sets on your DASD volumes.

To accommodate libraries that expand during the installation of service, and to make it less likely that libraries will have to be moved when you install a subsequent release, allow at least 15 percent free space for each physical volume allocation. You can create more space by moving some data sets to another volume. For more information, see “Resolving over-allocated volume conditions” on page 131.

In the panel, the Warnings column indicates volume conditions you might have to resolve before continuing with the installation. The possible warnings are listed as follows:

DEV<<S
Incorrect device type specified for the volume. For more information, see the description of message CPP0605055S in Appendix B, “Diagnostic messages,” on page 203.

OFF<<S
Volume cannot be accessed because it is offline. For more information, see the description of message CPP0605056S in Appendix B, “Diagnostic messages,” on page 203.

EXT<<W
The combined size of the data sets to be allocated on this volume exceeds the size of the largest free extent on the volume. For more information, see the description of message CPP0605057W in Appendix B, “Diagnostic messages,” on page 203.

VOL<<S
Information about the volume could not be retrieved. For more information, see the description of message CPP0605058S in Appendix B, “Diagnostic messages,” on page 203.

OVR<<S
The number of cylinders to be allocated on the volume exceeds the total number of cylinders for the volume. For more information, see “Resolving over-allocated volume conditions” on page 131 and the description of message CPP0605059S in Appendix B, “Diagnostic messages,” on page 203.

The following primary commands are valid for this panel:

?

Displays help for this panel. See “Primary commands” on page 9.

DEVT
Displays the currently-defined device types and their storage capacities (in cylinders).

The following line commands are valid for this panel:

Select
Use the S line command to select physical volumes and SMS storage classes for reassignment, as in the following list:

- For a physical volume, the S line command displays a panel that allows you to specify a different physical volume and to change the attributes of the current physical volume, as described in “Changing the attributes of a physical volume” on page 132.
- For a storage class or ACS, the S line command displays a panel that allows you to specify a new storage class, as described in “Changing an SMS storage class” on page 133, then the group of data sets will be managed by external ACS routines. If `P.Volume/STORCLAS` column contains the value `*ACS*` in Figure 122 on page 130, it indicates that it is SMS Managed but allocated using the ACS routine. For such data sets, 'SMS' will be displayed under the `Device Number` column.

Note: To assign a STORCLAS in place of a physical volume, you must assign the logical volume to the STORCLAS.

Dslist
Use the D line command to display the data sets for the selected physical volume or storage class. The Summary of Data Sets panel is displayed, allowing you to take any of the following actions::

- Merge or unmerge ServerPac-shipped data sets (you cannot merge or unmerge user-defined data sets)
- Make global changes to multiple data sets (using one of the CHANGE commands described in Appendix A, “Primary command reference,” on page 175)
- Modify the attributes of particular data sets or modify their space information (using one of the CHANGE commands described in Appendix A, “Primary command reference,” on page 175)
- Write a list of the data sets to the ISPF LIST data set or to a user-defined file (using the OLIST or OFILE command described in Appendix A, “Primary command reference,” on page 175).

Resolving over-allocated volume conditions

While processing the configuration you specify in Modify System Layout, the dialog might show that some volumes are over-allocated (as in Figure 122 on page 130). The dialog displays a message on the panel,

with "OVR<<S" indicated for the over-allocated volume. Until you resolve this condition, the dialog prevents you from continuing to the next function.

There are several ways to resolve this condition:

- Change the device type to one having a larger capacity.
- Move some or all data sets to another physical volume. See the topic, "Recommended Data Set Placement" in *z/OS Planning for Installation* for assistance in determining which data sets to move.

For help in changing the device type or moving a data set to another physical volume, see the descriptions that accompany Figure 123 on page 132.

To add another volume, use the CHANGE PVOL command or follow this process:

1. Enter the END command (or press PF3 using the default PF key definitions) to return to the Summary of Features/Elements panel.
2. On the Summary of Features/Elements panel, select entries to be moved to a new volume and press Enter. The Logical Volume by Feature/Element panel is displayed.
3. The Logical Volume by Feature/Element panel lists the logical volumes that have been defined for the feature or element. Write down the names of the logical volumes to be moved. Enter the END command to return to the Summary of Features/Elements panel.
4. Enter the SUML primary command to display the Summary of Logical Volumes panel.
5. On the Summary of Logical Volumes panel, select the logical volumes to be moved. Specify line command S for the volumes. Assign a physical volume to the logical volume. Enter the END command.
6. On the Summary of Features/Elements panel, enter the SUMP command to display the Summary of Physical Volumes panel. The new volume is shown.

Changing the attributes of a physical volume

When you select a physical volume from the Summary of Physical Volumes panel (through line command S), the panel shown in Figure 123 on page 132 is displayed.

```
CPPP605J ------------- Modify System Layout ( MD053718 ) ---------------------
COMMAND ==>

Display and Change Volume Attributes


      Volume Serial   ==> MVSCAT    (Always required)

      Device Number   ==> 07C2
      Device Type     ==> 3390-9    (Enter ? For List of Available Devices)
                                    (See Device Type Table for UNIT Type)

      Reserved Space  ==> 0         (Cylinders)

    Initialize Volume ==> Y         (Y or N.  Default is Y)

                  Press Enter to continue or End to Cancel

Note: Only the volume serial is required for online volumes when the
      DYNAMIC DASD INFO variable is set to Yes.
```

Figure 123. Panel: Display and change volume attributes

You can change these attributes for a physical volume:

Volume serial
A unique name for the physical volume; you cannot use a name that is already defined to the dialog.

Device number
A unique device number for the volume, in hexadecimal. Each physical volume that you define in the dialog must have a unique device number. This field is filled in only if the DEFAULT DASD INFO variable is set to NO.

Device type
A device type that is defined to the dialog.

For a list of available device names, enter a question mark (?) in the Device Type field. A pop-up window — Defined Device Types — displays the currently-defined device names and their storage capacities (in cylinders).

By default, the device name is 3390-9.

If space recalculation is required because the new physical volume has a different device capacity, the dialog recalculates the space automatically.

This field is filled in only if the DEFAULT DASD INFO variable is set to NO.

Reserved space
Amount of space, in cylinders, that you require to be reserved on the volume. Specify a value from 0 to 999. The maximum allowed value is the maximum allocatable space on the volume, minus one cylinder. The default is 0 (no space is reserved).

To accommodate libraries that can use secondary extents, allow at least 15 percent free space for each physical volume allocation.

Initialize volume
Use this field to specify whether the dialog is to initialize the volume. Valid values are Y or N (yes or no). The default is Y. If the volume already contains data that you wish to preserve, specify N.

IBM recommends that you defragment any existing volumes that you plan to use for data sets supplied with your order. Also, to avoid a warning message, ensure that the VTOCs of existing volumes are placed at the beginning or end of each volume.

Also, check the names of data sets on the existing volumes; these names must be unique. They must not duplicate names of data sets shipped with your ServerPac order, or with product-specific VSAM data sets or file system data sets that you create when you submit your installation jobs.

In checking for duplicate names, note that a name that includes an SSA prefix is considered to be the same as the name without the prefix. For example, within an existing volume, data sets named 'XYZ' and '*ssa*.XYZ' are considered to be duplicates.

Changing an SMS storage class

When you select a storage class from the Summary of Physical Volumes panel (through line command S), the panel shown in Figure 124 on page 133 is displayed.

```
CPPP605Q  ------------ Modify System Layout ( RF001230 ) ---------------------
COMMAND ==>

ASSIGN a Storage Class


      STORAGE CLASS    :



      NEW STORAGE CLASS  ==>

      The STORCLAS you specify must be defined to SMS, or left blank to
      indicate that the data set is managed by ACS routines.
```

Figure 124. Panel: Assign a storage class

To change the storage class, enter the 1-8 character name of the new storage class. The storage class you choose must be defined in the active SMS configuration before you run the first installation job that allocates a data set on an SMS-managed volume in this storage class.

You can also use ACS routines to override the storage classes that are assigned in the jobs generated by the dialog. In this case, the acceptable values for the storage class you enter are determined by the ACS routines.

Confirming processing requirements

The panel in Figure 125 on page 134 an example of what is displayed if you attempt to exit the Modify System Layout function when problems exist. This panel is tailored to show only the problems that actually exist, so any actual panel displayed would likely show fewer problems. The panel shown in Figure 125 on page 134 would be displayed only if you attempted to exit Modify System Layout when all of the following situations existed:

- At least one physical volume has an invalid device number. The default device number is set to CCUU. You must change each CCUU to a valid hexadecimal device number.
- Problems were encountered with physical volumes.
- SMS is not active on the driving system.

```
CPPP6058  ------------------------------------------------------------------
COMMAND ==>

 ********************************************************************************
 *****                             Warning!                                 *****
 *****                    Configuration Problem Found                       *****
 *****                                                                      *****
 *****     Press ENTER to return to Modify System Layout.                   *****
 *****     Press END or RETURN to save the current values and exit.         *****
 *****                                                                      *****
 ********************************************************************************


Problem Type                What to do:
--------------------------  -------------------------------------------------
Physical Volume             See Physical Volume Summary Display for more info
SMS Subsystem NOT active    Activate SMS subsystem
```

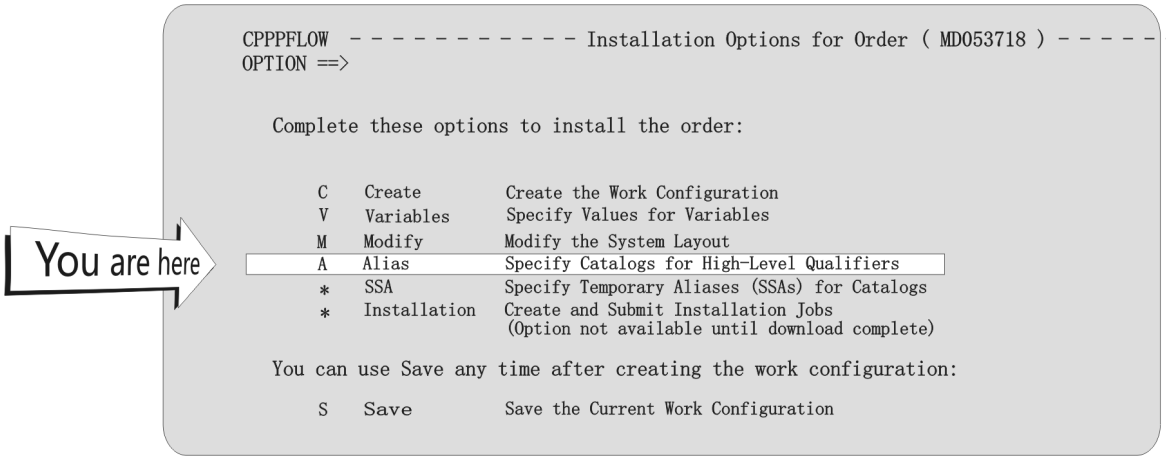
Figure 125. Panel: Confirm processing requirements

To continue working with the configuration, press the ENTER key and correct the problems identified on the panel.

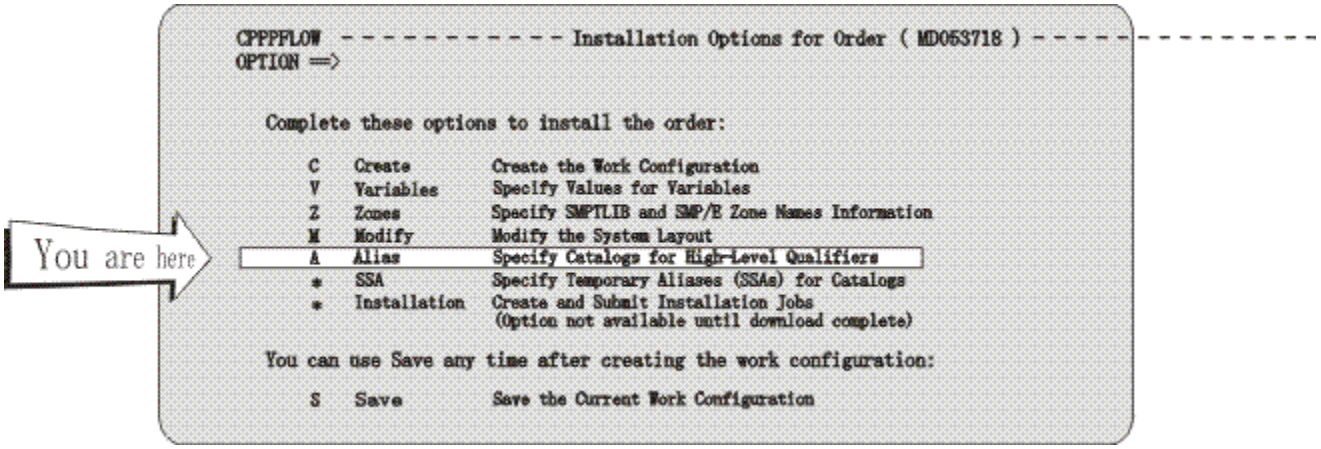
To exit the panel, press the END key. Your subsequent work with the dialog resumes at the Modify System Layout function.

Chapter 9. Defining HLQ-to-catalog relationships

If your order contains only non-SMP/E installable products, you will see the following panel.



For all other orders, you will see the following panel.



From the Installation Menu, enter A to begin the next dialog function, Specify Catalogs for High-Level Qualifiers.

The dialog and the installation process for ServerPac use the standard order of catalog search when defining and locating data sets. Therefore, there must be an alias in the target system master catalog for each high-level qualifier used for data sets that will be cataloged in a user catalog. Also, there must be system-specific aliases (called SSAs) in the driving system master catalog for the temporary high-level qualifiers you will choose when you use the next dialog option.

The Specify Catalogs for HLQ option defines the relationships between high-level qualifiers for target system data sets and target system catalogs. The SSA option defines relationships between the driving system's master catalog and the target system's catalogs. Another way to look at these relationships is:

- There is an alias-to-catalog relationship defined for each intended (final) high-level qualifier.
- There is an SSA relationship defined for each target system master catalog.

Use the Specify Catalogs for HLQ function in the dialog to associate the high-level qualifiers for data sets to be cataloged in user catalogs with the appropriate user catalogs. Use the Specify Temporary Aliases (SSAs) for Catalog function to associate the SSAs you chose to install the ServerPac with the target system's master catalog.

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Before you start, use a worksheet like the following to plan the catalog and alias names, and their relationships.

Catalog	High-level qualifiers

Some data sets must be cataloged in the master catalog because the operating system requires it. Also, ServerPac requires some additional data sets to be cataloged in the master catalog. For a list of the data sets that ServerPac requires to be cataloged in the master catalog, use the dialog's View and Change Facility to create a list of data sets that have the attribute "Master Catalog" (for more information, see “Viewing and changing data sets” on page 96). The list of master catalog data sets is also provided in the appendix "Data Sets in This Order" in *ServerPac: Installing Your Order*.

You can override the master catalog requirement for data sets in your configuration. For more information, see “CHANGE MCAT” on page 181.

How SSAs are used during installation

Many of the data sets in your new order already exist on your driving system. While your order's data sets are intended for creating a new target system, there is a period during installation in which jobs running on your driving system must be able to locate the target system's data sets.

Because many of these data set names already exist in your master catalog, ServerPac requires a way to find the data sets in the normal order of catalog search. This way, jobs on the driving system can locate the target system's data sets without disturbing the operation of the driving system. Without such a method, ServerPac could not build a target system with any data sets that were already cataloged and allocated on your driving system.

In the Specify Temporary Aliases (SSAs) for Catalogs function of the dialog, you define temporary high-level-qualifiers (HLQs) for the target system data sets. During the installation, your order's data sets are cataloged with the temporary HLQs. To direct the catalog entries to the proper catalog, the temporary HLQs are defined as aliases in the driving system's master catalog. Thus, these alternate HLQs are called system-specific aliases or SSAs. Later, during the installation, a job renames the target system's data sets to their true names and an optional job is provided for you to remove the SSAs.

Consider that your driving system always includes the SYS1.LPALIB data set. When you install a z/OS order, this data set must be cataloged and allocated on the new target system as SYS1.LPALIB. Because the data set must be named SYS1.LPALIB at IPL time and its catalog entry must have the same name, ServerPac needs a method of allocating and locating the data set in a catalog other than the current master catalog on the driving system. And, this method must work for all data sets that must be cataloged to be used, including SMS-managed and VSAM data sets.

Generally, ServerPac uses SSAs as listed below:

- ServerPac creates at least one user catalog for your order's data sets. For a z/OS order, one of these catalogs will eventually become the master catalog, but for now it is just a user catalog. (For simplicity, this example uses only one catalog, but any others would also follow the same pattern.)
- ServerPac defines one or more aliases that refer to the user catalog. If, for example, the alias is "FRED," ServerPac defines the alias in the driving system's master catalog (which is the current master catalog), as in the following example:

```
DEFINE ALIAS(NAME(FRED) RELATE(TARGET.MASTER.CATALOG))
```

This action ensures that all new entries starting with the high-level qualifier FRED will be cataloged in the user catalog. In this example, the user catalog is named TARGET.MASTER.CATALOG because that is what this catalog will become later in the install process. At this step in the process, however, TARGET.MASTER.CATALOG is still just a user catalog.

- ServerPac allocates your order's data sets. In this example, ServerPac allocates your order's SYS1.LPALIB data set as FRED.SYS1.LPALIB. Because the data set name begins with FRED, and the alias for FRED points there, the data set is cataloged in TARGET.MASTER.CATALOG.
- ServerPac renames the data sets and renames FRED.SYS1.LPALIB to SYS1.LPALIB. However, the data sets have not been recataloged yet. So, the catalog TARGET.MASTER.CATALOG does not yet have an entry for SYS1.LPALIB. Rather, it still has the entry for FRED.SYS1.LPALIB, which no longer exists. At this point (which exists for only a few minutes while the ALTCAT or RECATDS job is running), the current catalog entries do not allow the data sets to be located through the catalog.
- ServerPac establishes catalog entries that will allow the data sets to be located. Specifically, ServerPac deletes the FRED.* entries from TARGET.MASTER.CATALOG, defines the entries needed to use the data sets from the target system, and then defines an alias for each data set that points to the entry for the data set.

  For data set LPALIB, for example, ServerPac takes the following actions:

```
DELETE -
  FRED.SYS1.LPALIB -
  NOSCRATCH -
  CATALOG(TARGET.MASTER.CATALOG)

DEFINE -
  NONVSAM( -
    NAME(SYS1.LPALIB) -
    VOLUMES(sysres) -
    DEVT(33n0)) -
  CATALOG(TARGET.MASTER.CATALOG)

DEFINE -
  ALIAS( -
    NAME(FRED.SYS1.LPALIB) -
    RELATE(SYS1.LPALIB)) -
  CATALOG(TARGET.MASTER.CATALOG)
```

Even now, TARGET.MASTER.CATALOG is still a user catalog. Up until the time you IPL the new system, you can locate the data sets using the FRED- qualified names. (Even after you IPL the new system, the FRED- qualified names can still be used from the driving system in the Full-System Replacement installation path.)

When you IPL the new system (and afterward), you use TARGET.MASTER.CATALOG as the master catalog and you can locate the data sets by their real names. Later, an optional job will allow you to remove the SSAs.

The installation jobs for your order are described in *ServerPac: Installing Your Order*.

Default catalog structure for full system replacement

Figure 126 on page 138 shows the default catalog structure that you generate on the driving system through a full system replacement installation. The figure shows the driving system's master catalog referencing the target system user catalog T1U and the target system master catalog T1M. The jobs that you run on the driving system use the SSA to find the target system data sets, such as SYS1.LINKLIB. Without the SSA, your jobs would update the driving system data sets.

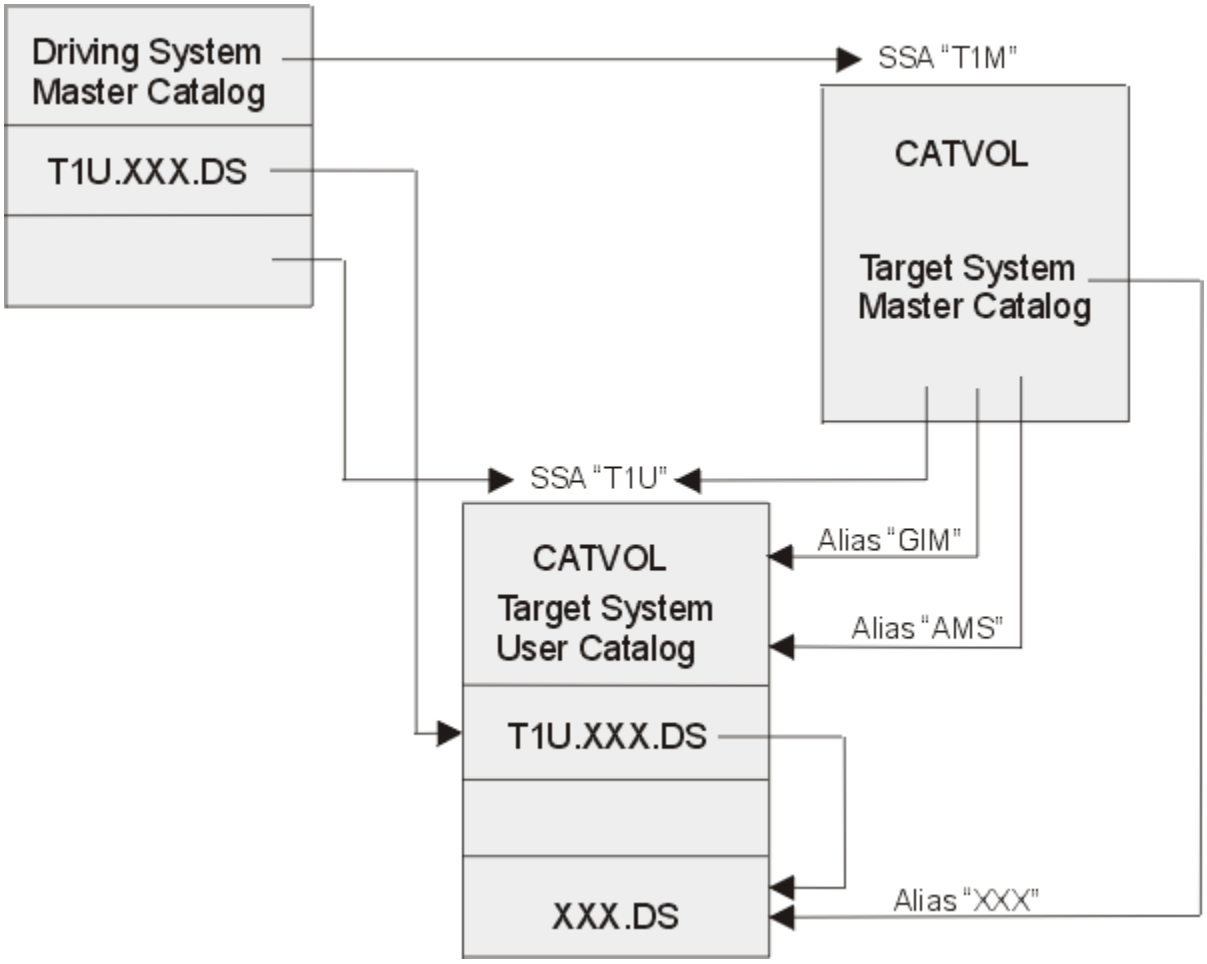


Figure 126. Default catalog structure for full system replacement

Figure 126 on page 138 shows the minimum required system.

Through the SSA option, you can change the default catalog structure. Figure 127 on page 138 shows a structure that includes a second user catalog, "T1n."

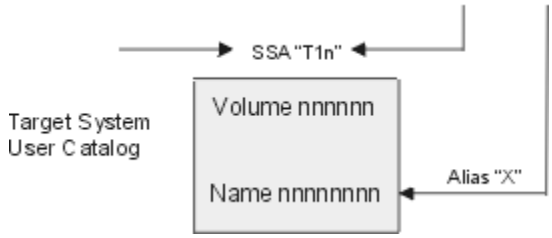


Figure 127. ServerPac installation dialog flow

You modify the default structure by entering X on the SSA panels to refer to a second target system user catalog instead of referring to the IBM-supplied default user catalog.

You must supply these values to identify a catalog:

- The desired data set name for the catalog
- The system-specific alias name referring to this catalog
- The alias referring to this catalog.

- The volume serial for the volume on which the catalog is to reside
- The device type of the volume on which the catalog is to reside.
- The primary and secondary space with which this catalog is to be allocated (in cylinders)

Defining catalog data set names

The Specify Catalogs for HLQ function of the dialog allows you to define a catalog data set name for each alias in your order. Entering option A on the Installation Menu (Figure 3 on page 6) displays the panel shown in Figure 128 on page 139.

```
CPPP6021  -------------- ALIAS to CATALOG ( MD053718 ) ----  ROW 1 TO 9 OF 9
COMMAND ==>                                                  SCROLL ==> PAGE

Define CATALOG Data set Names

Primary Commands:(? SET Locate Find Next Previous SORT CANcel SAVE)
   Line Commands:(Delete Insert Repeat Mcat NoMcat)

     S  Alias    STA Target System Catalog Data Set Name           Type
     -  -------- --- ----------------------------------------  ----
        COB2         ???????.CATALOG
        GIM          ???????.CATALOG
        ICQ          ???????.CATALOG
        CPAC      M  ?MASTER.CATALOG                           MCAT
        ISP          ???????.CATALOG
        ISR          ???????.CATALOG
        NETVIEW      ???????.CATALOG
        SMPE         ???????.CATALOG
        SYS1      M  ?MASTER.CATALOG                           MCAT
*************************** BOTTOM OF DATA ******************************
```

Figure 128. Panel: Define catalog data set names

The catalog names are initially shown as ??????? because they are not yet defined. You can specify the catalog name with which an alias is to be associated by typing over the question marks in the Target System Catalog Data Set Name field. Blank out the rest of the line after the catalog name.

To associate the master catalog with an alias, type over ?MASTER.CATALOG with the actual master catalog name. Then, to use the master catalog for another alias, enter the following command:

```
?MCAT
```

To use a catalog name that is already defined for another alias, enter a question mark (?), followed by the alias name, for example:

```
?SYS1
```

If a data set must be in the master catalog, then all data sets with the same high-level qualifier must be in the master catalog. If you do not want all data sets with that high-level qualifier to be in the master catalog, you can either:

- Rename the data set that must be in the master catalog to use a high-level qualifier that is cataloged in the master catalog (SYS1, for example), or
- Rename the data sets that should **not** be in the master catalog to use a high-level qualifier that will cause them to be cataloged in a user catalog.

For a list of the data sets that ServerPac requires to be cataloged in the master catalog, use the dialog's View and Change Facility to list the data sets having the attribute Master Catalog (for more information, see “Viewing and changing data sets” on page 96). The list of master catalog data sets is also provided in the appendix "Data Sets in This Order" in *ServerPac: Installing Your Order*.

You can override the master catalog requirement for data sets in your configuration. For more information, see “CHANGE MCAT” on page 181.

STA field indicates, for each currently-existing high-level qualifier, which ones must be associated with catalogs because data sets starting with them existed at the conclusion of Modify System Layout, and which of them must be associated with the master catalog. This field can show any of the following values:

Value
Meaning

(blank)
This high-level qualifier can be associated with any catalog. You must associate this high-level qualifier with the master catalog or a user catalog.

M
This high-level qualifier must be associated with the master catalog.

U
This high-level qualifier is not associated with any of the data sets in the work configuration. You created it with the R or I line command on this panel. You must associate it with the desired catalog.

The following primary commands are valid for this panel:

? SET Locate Find Next Previous SORT CANcel SAVE

These are standard commands for panels that display lists. See “Primary commands” on page 9.

CANCEL
This command, abbreviated as CAN, discards any changes that you made since the last checkpoint and exits the Specify Catalogs for HLQ function. (A checkpoint is taken when you enter and exit the function, and after any SAVE command).

SAVE
This command saves any changes that you made and establishes a new checkpoint. (A checkpoint is taken when you enter and exit the function, and after any SAVE command).

The following line commands are valid for this panel:

D
Delete a user-defined alias (only aliases with a status (STA) of "U" can be deleted). You must confirm your delete request on the panel that results. Confirm deletion by entering DELETE in the **COMMAND ==>** field and pressing Enter.

If aliases are already defined (perhaps because you are reinstalling the package) for one or more high-level qualifiers in the driving system's master catalog, the target system's master catalog, or both, the D line command will not delete them. Any previously defined alias entries must be deleted manually.

I
Insert a user-defined alias. You must specify the alias and catalog name on the panel described in “Inserting a user-defined alias” on page 141.

R
Repeat the insertion of a user-defined alias. You must specify the alias name, but the catalog name is copied from the alias on which you entered this command. See “Inserting a user-defined alias” on page 141.

When an order does not contain any aliases that must be cataloged in the master catalog (often, a subsystem order), this panel shows the following line commands only:

M
Associate the high-level qualifier's alias with the master catalog (the Type field is set to MCAT).

N
Delete an existing master catalog association (the Type field is reset to blanks). You can use this command to reverse the effect of entering line command M earlier, if you change your mind.

When you exit the Define Alias to Catalog Relationships function, your changes are automatically saved. The dialog checks to ensure that all aliases are associated with valid catalog data set names. If not, the

panel described in “Confirming processing requirements” on page 141 is displayed to prompt you for a correct name.

When this function completes, the panel shown in Figure 129 on page 141 is displayed.

```
CPPP6021 -------------- ALIAS to CATALOG ( MD053718 ) ------- Row 1 to 2 of 2
COMMAND ==> _                                                 SCROLL ==> CSR

Define CATALOG Data set Names

 Primary Commands:(? SET Locate Find Next Previous SORT CANcel SAVE)
    Line Commands:(Delete Insert Repeat)

        S  Alias    STA Target System Catalog Data Set Name           Type
        -  -------- --- ----------------------------------------  ----
           SPAC         ZOS.CATALOG
           SYS1         ?MASTER.CATALOG                           MCAT


****************************** Bottom of data ********************************
```

Figure 129. Panel: Define catalog data set names (updated)

Inserting a user-defined alias

If you attempt to insert a user-defined alias (line command I), the panel in Figure 130 on page 141 is displayed.

```
CPPP6023  -------------- ALIAS to CATALOG ( MD053718 ) -------------------
COMMAND ==>

INSERT (REPEAT) Alias Details

         ALIAS Name     ==> HARRIGAN

         Catalog DSNAME ==> CATALOG.ICK.GLASS9
```

Figure 130. Panel: Specify alias to catalog

The following fields are required:

ALIAS
The alias to be defined as part of the ServerPac installation process. The alias can be associated with any catalog.

CATALOG
Catalog data set name.

To use the same catalog name as one already defined for another alias, enter a question mark (?) followed by the model alias name, for example:

```
?SYS1
```

To use the master catalog name, enter the following command:

```
?MCAT
```

Confirming processing requirements

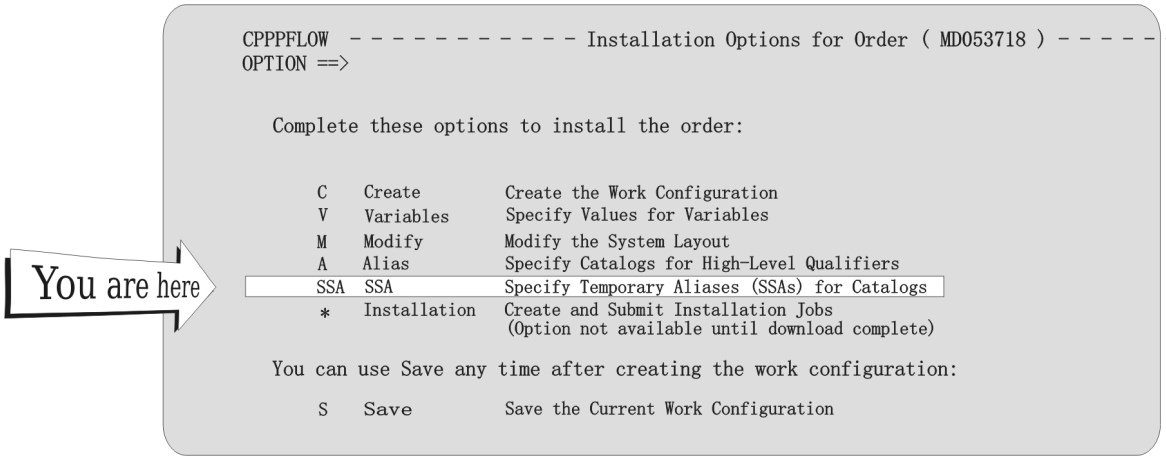
The "Confirm Processing Requirements" panel is displayed if you attempt to exit the Define Alias to Catalog Relationships function while one or both of the following conditions exist:

- At least one alias has not been defined (the Target System Catalog Data Set Name field contains question marks).
- At least one catalog has an invalid data set name.

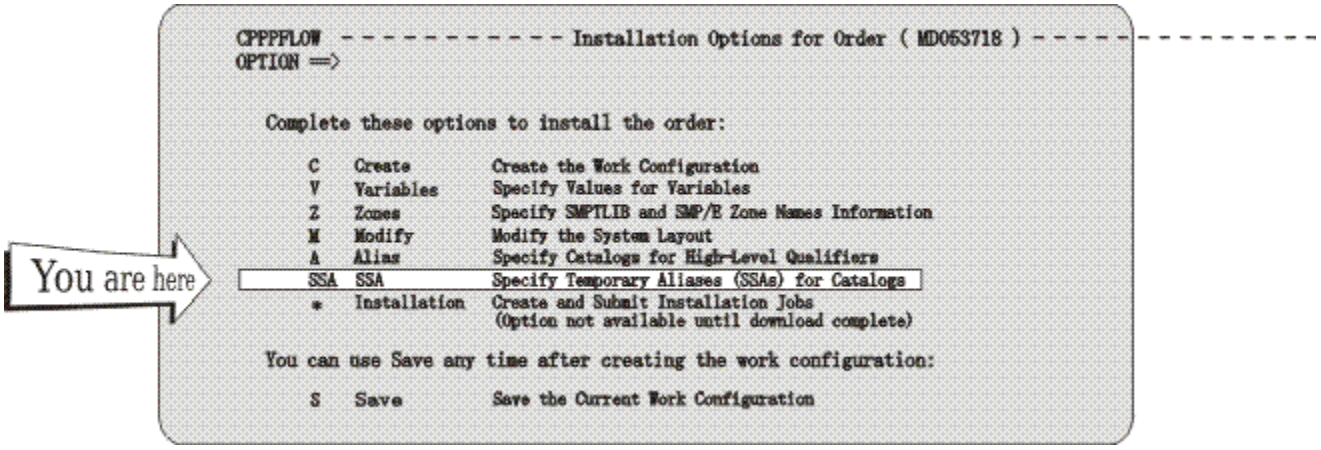
To continue working with the configuration, press Enter. If you press End, you exit the panel, but you will have to return to it before you can continue with the installation.

Chapter 10. Defining system-specific aliases (SSAs)

If your order contains only non-SMP/E installable products, you will see the following panel.



For all other orders, you will see the following panel.



From the Installation Menu, enter SSA to begin the next dialog function, Specify Temporary Aliases (SSAs) for Catalogs.

When you install a z/OS order, you must allocate and catalog many data sets on the driving system. To do so, you must first define one or more system-specific aliases (SSAs) to be prefixed to each of the target system's data set names defined in a particular catalog. SSAs allow the driving system to refer to commonly named data sets on the target system. Choose one alias for each catalog in which you will define new duplicate data set names.

For an example of using SSAs, see “How SSAs are used during installation” on page 136.

The SSAs you choose:

- Must be unique
- Must not exceed 8 characters in length
- Must not match any aliases that are already defined in the master catalog for the driving system or target system
- Must not match any of the high-level qualifiers you choose for the data sets in your order
- Must not contain a pound sign (#) or dollar sign ($), if the SSA is for a UNIX file system data set or the HFSFILE data set.

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Before specifying SSAs for the catalogs, use a worksheet such as the following to plan the catalog names and their associated SSAs.

Catalog name	Associated system-specific aliases

Note:

1. If your order defines data sets whose names conflict with data set names that are already cataloged in the standard order of catalog search, then before you run the installation jobs you must either:
   - Rename data sets to eliminate the conflicts, or
   - Define SSAs for the catalogs in which the order's data sets will reside.
2. For a software upgrade installation, the dialog will not allow you to define a master catalog, so the target system master catalog must exist before you start the installation.
3. To define SSAs, you must be able to update the driving system's master catalog.
4. If you enter N for the Define SSA field, the dialog attempts to allocate and catalog all data sets with that high-level qualifier on the driving system with the data set names that you defined in the Modify System Layout function.

When you leave the Specify Temporary Aliases (SSAs) for Catalogs function, your changes are automatically saved. The dialog checks to ensure that all catalog names either have valid SSA entries or have N specified in the Define SSA field. If not, the panel described in “Confirming processing requirements” on page 148 is displayed.

Selecting the catalog

Use the Catalog Selection List panel (Figure 131 on page 144) to specify an SSA for each catalog. The SSAs you specify here are used to create alias entries for these catalogs in the driving system's master catalog.

```
CPPP6031 ---------------- SSA to CATALOG ( MD053718 ) ------  Row 1 to 5 of 5
COMMAND ==>                                                  SCROLL ==> PAGE

CATALOG Selection List

Primary Commands:(? CANcel SAVE)
Line Commands:(Select)

                                                            Allocate  Define
                                                                   |  |
S Catalog Name                                SSA Name Type VOLume |  | Unit
- --------------------------------------------- -------- ---- ------ -  - ----
  TONY.CATALOG                                ?        UCAT AMHCAT Y  Y 3390
  NET.CATALOG                                 ?        UCAT NETCAT Y  Y 3390
  SMOMP.CATALOG                               ?        UCAT SMCAT  Y  Y 3390
  TSO.CATALOG                                 ?        UCAT TSOCAT Y  Y 3390
  VS4.MASTCAT                                 ?MCAT    MCAT MVSCAT Y  Y 3390
****************************** BOTTOM OF DATA ********************************
```

Figure 131. Panel: Catalog selection list

For a software upgrade installation, the target system's master catalog must already exist (the Allocate Catalog field is set to N and cannot be changed). User catalogs can be new or existing catalogs.

When you first display the Catalog Selection List panel, you might see a message warning you that you have not defined at least one SSA. If you try to exit this panel before completing the SSA definitions, the

message reappears. Whether you receive this message or not, you should ensure that the needed SSA definitions exist and that any SSA definitions inherited from a saved configuration are still valid.

The following primary commands are valid for this panel:

?

This is a standard command for panels that display lists. See “Primary commands” on page 9.

CANCEL
This command, abbreviated as CAN, discards any changes that you have made since the last checkpoint and exits the Specify Temporary Aliases (SSAs) for Catalogs function. (A checkpoint is taken when you enter and exit the dialog, and after any SAVE command).

SAVE
This command saves any changes you made, and establishes a new checkpoint. (A checkpoint is taken when you enter and exit the dialog, and after any SAVE command.)

The following line command is valid for this panel:

S
Selects a catalog, allowing you to specify:

- SSA
- When an SSA is to be used for this catalog, the SSA name
- Whether the catalog is to be allocated
- When the catalog is to be allocated, the unit and volume
- When the catalog is to be allocated, its size

Enter line command S for a data set name on this panel and press Enter to display the next panel, which is described in “Defining SSA and catalog data” on page 145. After you define the SSAs, the dialog displays the Catalog Selection List panel again with the updated SSA information. When you are satisfied with the results, return to the Installation Menu panel (Figure 3 on page 6).

Defining SSA and catalog data

The process you use to define SSAs depends on your installation type: full system replacement or software upgrade. See the section that applies to your installation, as listed below:

- “Defining SSA and catalog data for full system replacement” on page 145
- “Defining SSA data for software upgrade” on page 147.

Defining SSA and catalog data for full system replacement

For a full system replacement, define your SSA and catalog with the panel shown in Figure 132 on page 146.

```
CPPP6033 --------------- SSA to CATALOG ( MD053718 ) -------------------------
COMMAND ==> _

Define SSA and CATALOG Data

          Catalog : TONY.CATALOG
          Type    : UCAT


          Define SSA        ==> Y       ( Y or N )
          Allocate Catalog  ==> Y       ( Y or N )

          SSA Name          ==> SMPESSA

          Catalog Volume    ==> AMHCAT  (? for List of Available Volumes)

          If allocating the catalog, the following information is required:


          Primary Space    ==> 12       (1-999 Cylinders)
          Secondary Space  ==> 12       (1-999 Cylinders)
```

Figure 132. Panel: Define SSA and CATALOG data for full system replacement

In the panel, the fields are listed below:

Catalog
Name of the catalog.

Type
Type of catalog. MCAT indicates a master catalog; UCAT indicates a user catalog.

Define the following fields:

Define SSA
Set this value to Y (yes) to define a new SSA in the driving system's master catalog. Set this value to N (no) if the SSA is already defined in the driving system's master catalog.

If you set the Allocate Catalog field to Y, you must set the Define SSA field to Y.

Allocate Catalog
Specifies whether to allocate the catalog. Set this value to Y (yes) if the catalog does not yet exist on the target system, and is to be allocated. Set this value to N (no) if the catalog already exists on the target system; it cannot be allocated again.

All catalog names must be unique.

SSA Name
Specifies the system-specific alias to be used to locate target system data sets that will be cataloged in the specified catalog. The name you choose must not have an existing alias entry in the driving system's master catalog, and cannot be the same as the high-level qualifier of any data set cataloged in the driving system's master catalog.

Catalog Volume
Specifies the volume serial of the DASD on which the catalog is to reside. For a pop-up list of volumes that exist in the work configuration, enter a question mark (?). Select a volume by entering S before the desired volume serial. You are not required to choose a volume from the list. Any volume serial may be specified; if it does not exist, it is added to the configuration.

If the volume you specified already exists in the work configuration, the unit you specify here must match the unit value you specified previously. Otherwise, a message is displayed to prompt you to resolve the mismatch.

Space
Specifies the primary and secondary space to be allocated to the catalog. See the topic "Determining Catalog Size" in *z/OS DFSMS Managing Catalogs* for information on how much space to allocate for catalogs.

If you did not specify that the catalog is to be allocated (you set the Allocate Catalog field to N), do not enter values for these fields.

Defining SSA data for software upgrade

For a software upgrade installation, two panels are used to define SSAs: one for the master catalog and one for user catalogs.

Note: For software upgrades, if the driving system master catalog is the same as the target system master catalog, do not expect an alias connection to be defined in the driving system master catalog. The connection is not necessary because the driving system master catalog and the target system master catalog are the same catalog.

For the master catalog, define your SSAs with the panel shown in Figure 133 on page 147.

```
CPPP6035  --------------- SSA to CATALOG ( PC000226 ) -------------------------
COMMAND ==>


Define SSAs



          Catalog : MASTER.CATALOG
          Type    : MCAT







          SSA Name       ==> ZORT            (Required)
```

Figure 133. Panel: Define SSA and catalog data (software upgrade) master catalog

In the panel, the fields are described as listed below:

Catalog
Name of the catalog for which an SSA is to be defined.

Type
Type of catalog. Always MCAT, indicating the master catalog.

Define the following field:

SSA Name
Specifies the system-specific alias to be used to locate target system data sets. The name you choose must not have an existing alias entry in the driving system's master catalog, and cannot be the same as the high-level qualifier of any data set cataloged in the driving system's master catalog. For a software upgrade installation, these same restrictions apply to existing entries in the target system's master catalog.

For user catalogs, define your SSAs with the panel shown in Figure 134 on page 147.

```
CPPP6036 --------------- SSA to CATALOG ( PC000226 ) -------------------------
COMMAND ==> _

Define SSA and CATALOG Data

          Catalog : TONY.CATALOG
          Type    : UCAT

          SSA Name ==> SMPESSA     (Required)

          Allocate Catalog ==> (Y or N)


 If allocating the catalog, the following information is required:


          Catalog Volume   ==> AMHCAT    (? For List of Available Vols)
          Primary Space    ==> 1         (1-999 Cylinders)
          Secondary Space  ==> 1         (1-999 Cylinders)
```

Figure 134. Panel: Define SSA and catalog data (software upgrade)

In the panel, the fields are described in the following list:

Catalog
Name of the catalog for which an SSA is to be defined.

Type
Type of catalog. Always UCAT, indicating a user catalog.

Define the following fields:

SSA Name
Specifies the system-specific alias to be used to locate target system data sets that will be cataloged in the specified catalog. The name you choose must not have an existing alias entry in the driving system's master catalog, and cannot be the same as the high-level qualifier of any data set cataloged in the driving system's master catalog. For a software upgrade installation, these same restrictions apply to existing entries in the target system's master catalog.

Allocate Catalog
Specifies whether to allocate the catalog. Set this value to Y (yes) if the catalog does not yet exist on the target system, and is to be allocated. Set this value to N (no) if the catalog already exists on the target system; it cannot be allocated again.

Catalog Volume
If you specify that the catalog is to be allocated (that is, you set the Allocate Catalog field to Y), use the Catalog Volume field to specify the volume serial of the DASD on which the catalog is to reside. For a pop-up list of volumes that exist in the work configuration, enter a question mark (?). Select a volume by entering S before the desired volume serial. You are not required to choose a volume from the list. Any volume serial may be specified; if it does not exist, it is added to the configuration.

If the volume you specified already exists in the work configuration, the unit you specify here must match the unit value you specified previously. Otherwise, a message is displayed to prompt you to resolve the mismatch.

If you did not specify that the catalog is to be allocated (you set the Allocate Catalog field to N), do not enter a value for this field.

Space
Specifies the primary and secondary space to be allocated to the catalog, if the catalog does not yet exist on the target system and must be allocated. See the topic "Determining Catalog Size" in *z/OS DFSMS Managing Catalogs* for information on how much space to allocate for catalogs.

If you did not specify that the catalog is to be allocated (you set the Allocate Catalog field to N), do not enter values for these fields.

Confirming processing requirements

If, when you try to exit the Specify Temporary Aliases (SSAs) for Catalogs function, the dialog detects an invalid catalog alias definition or (for a software upgrade installation) that there is not at least one catalog alias defined, the panel shown in Figure 135 on page 148 is displayed.

```
CustomPac ---------------- SSA to CATALOG ( MD053718 ) ------------------------
COMMAND ==>

Confirm Processing Requirements



                   Some Catalog to SSA Relationships have not
                           been defined OR were Invalid



        Press the ENTER key to continue editing the table

        Press the END or RETURN key to save the current values and
           EXIT, Processing will resume at this function
```

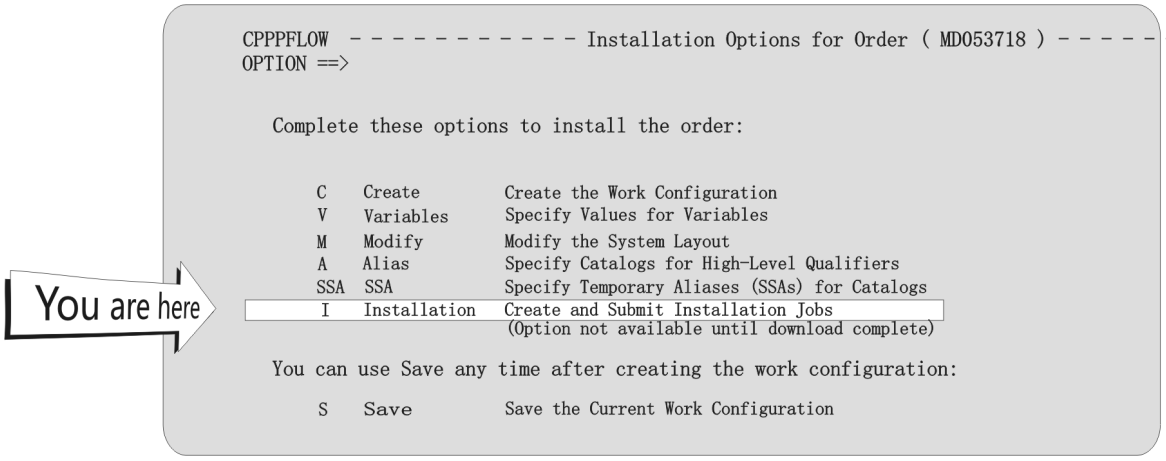
Figure 135. Panel: Confirm processing requirements

To continue working with the configuration, press Enter.

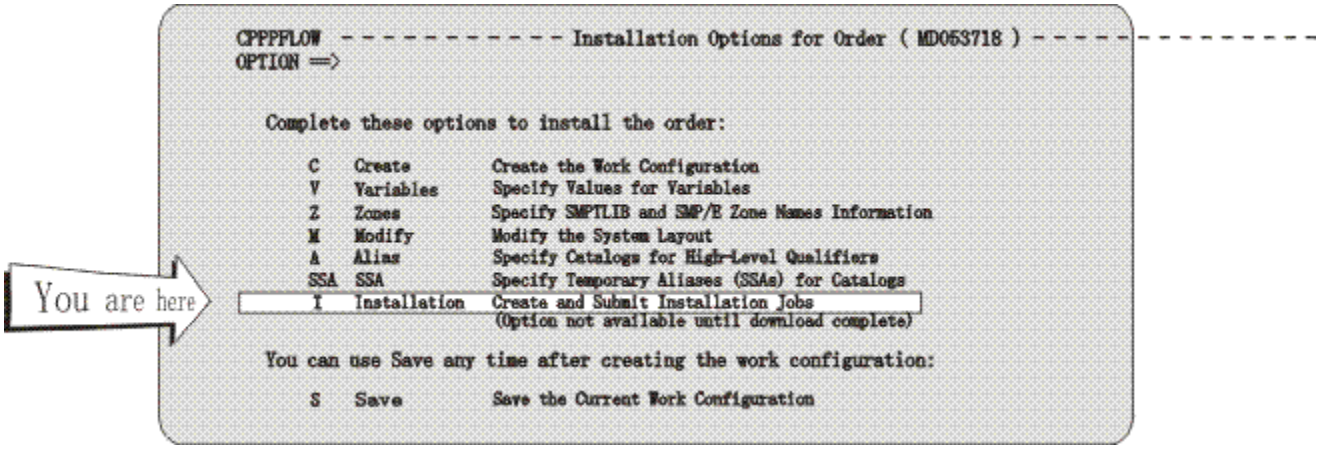
To exit the function, press End. Subsequent processing of the dialog resumes at the Specify Temporary Aliases (SSAs) for Catalogs function.

Chapter 11. Submitting the installation jobs

If your order contains only non-SMP/E installable products, you will see the following panel.



For all other orders, you will see the following panel.



From the Installation Menu, enter I to begin the next dialog function, Create and Submit Installation Jobs. The Job Selection List is displayed (Figure 136 on page 152), showing the installation jobs, plus any additional jobs you might have defined.

Note: The I option is not selectable until the order has been successfully downloaded.

You can use the GENSKEL command to tailor all of the installation jobs at one time. When GENSKEL completes, the dialog saves the jobs in a backup data set. You can select the jobs from the backup data set through line command B (rather than line command S). GENSKEL saves you time during installation, and frees your TSO/E session for other tasks while the jobs are being tailored. For more information, see “Using GENSKEL to generate the installation jobs” on page 154.

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```
CPPP6121 -------------- Installation JOBs ( MD053718 ) ---------- Row 1 of 159 ------
COMMAND ==>                                                    SCROLL ==> HALF

JOB Selection List                                             SS$( EXCLUDE )

Primary Commands:(? SET Locate Find Next Previous GENskel OFile OList SUMmary
                  SS$ VARedit)
   Line Commands:(Backup Delete Edit Insert Log Output Select SS-block Vars)

S      Description                              STEP     MC STAtus     RC
-- --- ---------------------------------------  -------- -- ---------- ----
   SRC DEFAULT JOBCARD

==> INSTALLATION JOBS
   DOC RUNNING INSTALLATION JOBS
   DOC DIALOG VERIFY
   DOC INSTALLATION SETUP JOBS
   JOB INITIALIZE REQUIRED DASD                 OFFLINIT 00
   DOC DEFINE CATALOGS AND RESTORE
   JOB RACF PROFILES ON DRIVING SYSTEM          RACFDRV  00
   JOB DEFINE CATALOGS                          DEFCAT   00
   JOB DEFINE SYSTEM-SPECIFIC ALIASES           DEFSSA   00
   JOB ALLOCATE AND CATALOG DS                  ALLOCDS  00
```

Figure 136. Panel: Job selection list

At this stage of the installation process, your primary source of information is *ServerPac: Installing Your Order*. This chapter supplements the information in that book. When you have finished running the installation jobs and verification programs (IVPs) described in *ServerPac: Installing Your Order*, you continue with Chapter 12, “Saving the configuration,” on page 163.

The panel displays the jobs and documentation that are required to install your order, based on the installation type that you chose earlier in the installation (full system replacement or software upgrade).

The "Jobs used to install the ServerPac" table in *ServerPac: Installing Your Order* lists all of the jobs and indicates the installation type to which they apply (full system replacement or software upgrade).

The job selection list includes the maximum return code ("MC") of the "STEP," the status of the "STEP" and the actual return code of the "STEP." For a system abend, the RC field shows "SYST."

As Figure 136 on page 152 shows, the installation jobstream has three types of "components," as listed below:

SRC
Identifies the default job statement (or "source data"). The source data always appears first in the jobstream. You can browse it by selecting it, or edit it through ISPF EDIT using the 'E' line command.

DOC
Identifies a part of the tailored documentation for your order. You can browse the documentation by selecting it.

JOB
Identifies an installation job for your order. If you enter S for the job, the dialog displays the job, tailored according to your work configuration. You can submit the job for execution.

If you include the job within a set of block Select (SS) line commands, the dialog tailors all the included "STEPs" into a single job and displays it.

If you enter B for the job (and have run GENSKEL), the dialog displays the previously-tailored job.

You can always edit a job and submit it, no matter how you select it. Note, however, that your changes will be saved only if you follow these steps:

- Use the ISPF EDIT CREATE command to save the altered job, or
- Use the ISPF EDIT REPLACE command to create a BACKUP member, or
- Edit an IBM-supplied job in the backup library (SCPPBENU), or
- Edit a user-supplied job in the skeleton library (SCPPSENU).

The following primary commands are valid for this panel:

? SET Locate Find Next Previous

These are standard commands for panels that display lists. See “Primary commands” on page 9.

GENSKEL
This command generates the installation jobs for your order and stores them in the SCPPBENU data set. Of these jobs, the Job Selection List panel displays only those jobs that apply to your order's installation type (full system replacement or software upgrade). For more information, see “Using GENSKEL to generate the installation jobs” on page 154.

OFILE
This command writes a list of the installation jobs to a user-defined file (see page “OFILE” on page 196).

OLIST
This command, writes a list of the installation jobs to the ISPF LIST data set.

SUMMARY
This command, abbreviated as SUM, displays the processing log, which is a list of the jobs that were submitted from the jobstream and their return codes. If output logging is active, you can browse the job output (see “Displaying the processing log” on page 155).

SS$
This command controls whether user-defined jobs are included with any file-tailored jobs that you select through line command SS. On the panel, the "SS$( )" field shows the current status of this setting. For example, Figure 136 on page 152 shows SS$(EXCLUDE) to indicate that user-defined jobs will not be selected by block select (SS) commands. To change this setting to its other value (INCLUDE), enter the SS$ command.

VAREDIT
This command, abbreviated as VAR, invokes the Specify Values for Variables function (described in Chapter 6, “Defining installation variables,” on page 59). All variables are reloaded on exit from this function; changes to data values are available for immediate use.

The following line commands are valid for this panel:

B
Back-up command. This command displays backup members you have created by running GENSKEL or saved by using the BACKUP or REPLACE command after selecting the job with the Select line command. You can edit the job and submit it for execution. Any modifications you make will be saved. See “Using line command B” on page 156.

D
Delete command. Use this command to delete any user-defined job (you cannot delete IBM-supplied jobs). You must confirm your DELETE request. The job is deleted, but the processing log entries, if any, remain. See “Deleting a user-defined job” on page 160.

E
Edit command. Use this command if you want to edit the SRC member or any user-defined job. Your changes are saved when you exit ISPF Edit. See “Editing a user-defined job” on page 159.

I
Insert command. Use this command to insert user-defined jobs, if any, into the jobstream. See “Inserting a user-defined job” on page 157.

L
Log command. Use this command to display the processing log for the selected job, which contains a list of executions of the job and their return codes (the job might have been run more than once because of previous processing failures). If output logging is active, you can browse the job output. This command uses the same processing as the SUMMARY primary command (see “Displaying the processing log” on page 155).

O

Activate output logging. Use this command to display the job output through ISPF Browse. The maximum return code from the job is shown in the RC field. If output logging is not active, only the processing status of the job is reported (for example, 'ON OUTPUT QUEUE').

S

Select command. Use this command to file tailor a component in foreground mode. Use of this command depends on the type of component that you have selected, as follows:

For JOB components:

- The job is tailored and displayed. The default job statement is automatically inserted before the STEP JCL (unless it is a user-defined job and the MAX return code field is blank).
- You can submit the job for execution using the ISPF Submit command (for more information, see “Using line command S” on page 156.
- To file tailor jobs in background mode (batch), use the GENSKEL primary command.

For DOC or SRC components:

- The data is tailored and displayed (through ISPF Browse).

SS

Block Select. Use this command to select a block of jobs (mark the start and end of the block of jobs with the SS command pair). The marked block can contain any kind of component, but only JOB components are selected. If user-defined jobs are contained in the block, they are selected only if the current setting of the SS$ command indicates INCLUDE. The job is tailored and displayed for edit. The default job statement is automatically inserted before the first step JCL. You can submit the job for execution.

Do not use the block selection method for steps with a blank MC field.

V

VARS command. Use this command to see the CustomPac variables (those prefixed with F) that are relevant for the selected job. See Chapter 6, “Defining installation variables,” on page 59.

If you change the value of any of the variables, and you used GENSKEL previously, you must rerun GENSKEL to tailor the jobs with the updated values.

For information about running the jobs in the Job Selection List, see *ServerPac: Installing Your Order*.

Using GENSKEL to generate the installation jobs

When you enter the GENSKEL primary command from the Job Selection list panel, the panel shown in Figure 137 on page 154 is displayed.

```
CPPP6126 -------------- Installation JOBS ( MD053718 ) ----------------
COMMAND ==>

GENERATE File Tailored Installation Jobs


         This function generates a BATCH job which will file tailor
         ALL Installation Jobs in one pass, and save the jobs to the
         BACKUP dataset.

         If a job already exists in the backup dataset

         REPLACE Job  ==> Y   (Y or N)

         Note:  After submitting the GENSKEL job, you must exit
         the dialog to release GENSKEL processing. Also,
         to avoid dataset contention, you may not invoke
         the dialogs until the GENSKEL job has completed.
```

Figure 137. Panel: Generate file-tailored installation jobs

You must tailor each of the installation jobs before you submit them. You can use the GENSKEL command to tailor installation jobs in the background. GENSKEL generates the installation jobs for your order, and

stores them in the backup data set (SCPPBENU). Having the installation jobs stored in SCPPBENU allows you to review them, if desired, after the order is installed.

File-tailored jobs might already exist in the SCPPBENU data set. Specify whether GENSKEL is to replace these jobs or preserve them. Set the Replace Job field to Y to replace jobs; set the field to N to preserve them.

Press Enter to generate the GENSKEL job. Then, submit the job with the SUBMIT command. Exit the dialogs until the GENSKEL job completes.

For your convenience, the Job Selection List panel displays only the installation jobs that apply to your order's installation type (full system replacement or software upgrade). To view the entire set of jobs generated by GENSKEL, including jobs that are not needed for your installation type, check the SCPPBENU data set. (The GENSKEL output lists all generated jobs in the SYSPRINT output data set.) To access these jobs, enter line command B on the Installation Jobs display.

Selecting job output logging

When you submit a job for execution, the job number is written to a processing log.

You can capture the job output by having it written to data set SCPPOENU. Doing so requires that you set the installation variable synonym OUTPUT LOGGING to YES. The jobname also needs to be the users id plus a character.

The process for setting installation variables is described in Chapter 6, “Defining installation variables,” on page 59.

If data set SCPPOENU runs out of space, rename it, and allocate a new one with more space. Copy the renamed data set into the new SCPPOENU data set and then delete the original.

Displaying the processing log

If you enter the SUMMARY primary command at the Job Selection List, the Processing Log panel is shown (Figure 138 on page 155). This panel lists the jobs that were submitted from the jobstream and their respective return codes. If output logging is active, you can browse the job output.

```
CPPP6125  -------------- Installation JOBs ( MD053718 ) -----  ROW 1 TO 6 OF 6
COMMAND ==>                                                   SCROLL ==> PAGE

Processing LOG

PRIM Cmds:(? SET Locate First Next Previous SORT)
LINE Cmds:(Output)

       S  STEPname  JOB name job ID     RC   UserID    DATE stamp
       -  --------  -------- ---------  ----  --------  -----------------
          CPPUPDT   CE59526S JOB29412         CE59526   03/05/11 10:21:03
          RESTORE   CE59526A JOB27452         CE59526   03/05/08 22:52:09
          ALLOCDS   CE59526Z JOB25783         CE59526   03/05/07 18:47:10
          RACFDRV   CS59526A JOB22763         CS59526   03/05/05 16:54:47
          OFFLINIT  CS59526A JOB22478         CS59526   03/05/05 15:40:31

****************************** Bottom of data ********************************
```

Figure 138. Panel: Processing log

The following primary commands are valid for this panel:

?, SET, F, L, N, P, SORT

These are standard commands for panels that display lists. See “Primary commands” on page 9.

The following line commands are valid for this panel:

O

Output. Displays the job output through ISPF Browse and shows, in the RC field, the highest return code for the job. If output logging is not active, this command shows only the processing status of the job (for example, “ON OUTPUT QUEUE”).

Using line command B

If you enter line command B for a job in the Job Selection List, the panel in Figure 139 on page 156 is displayed.

```
CPPPEDIF - BACKUP MEMBER(OFFLINIT) ------------------------- COLUMNS 001 072
COMMAND ==>                                                  SCROLL ==> HALF
****** **************************** TOP OF DATA ******************************
000100 //STOB4A00 JOB (7928),'PROGRAMMER NAME',
000200 //         CLASS=S,MSGCLASS=K,MSGLEVEL=(1,1)
000300 //*
000600 //*--------------------------------------------------------------------
000700 //* GDE: SERVERPAC INSTALLATION
000800 //* DOC: INITIALIZE ALL NEEDED DASDS.
000900 //*
001000 //*      BEFORE RUNNING THIS STEP, BE SURE THAT THE FOLLOWING
001100 //*      DEVICES HAVE BEEN PUT OFFLINE :
001200 //*        A00
001300 //*        B00
001400 //*        C00
001500 //*      AFTER HAVING COMPLETED THIS STEP, BE SURE THAT ABOVE
001600 //*      DEVICES ARE PUT ONLINE.
001700 //*
001800 //* NOTE: THIS JOBS REQUIRES AN OPERATOR RESPONSE FOR EACH DASD TO BE
001900 //*       INITIALIZED .
002000 //*
002100 //* MRC: THE MAXIMUM EXPECTED RETURN CODE IS: 0
002200 //*--------------------------------------------------------------------
002300 //OFFLINIT EXEC PGM=ICKDSF,COND=(4000,LT)
```

Figure 139. Panel: Edit backup member

This edit session acts directly on the named member in the backup library (SCPPBENU).

If you delete all of the records from the member, you cannot exit the panel until you enter the CANCEL primary command. An empty member is not allowed in the backup library.

Standard editing commands have the following effects when entered for a backup job:

CANCEL
Ends the edit session without saving your changes.

END/RETURN
Ends the Edit session and saves your changes. If the backup member has no records, the command is ignored, and you must use the CANCEL command.

REPLACE
Saves your changes from the edit session in the backup member. If a backup member does not exist, one is created. If a backup member already exists, the member is replaced.

SAVE
If the backup member has no records, this command is ignored.

SUBMIT
The job is submitted for execution and the job number is written to the processing log.

Using line command S

If you enter line command S for a job or doc in the Job Selection List, the panel in Figure 140 on page 157 is displayed.

```
CPPPEDIF  - JOBSTREAM(DEFCAT) ------------------------------ COLUMNS 001 072
COMMAND ==>                                                  SCROLL ==> HALF
****** ***************************** TOP OF DATA ******************************
000001 //USER     JOB (ACCTNUM,EXP),'PROGRAMMER NAME',
000202 //         CLASS=S,MSGCLASS=K,MSGLEVEL=(1,1)
000003 //*
000004 //JOBLIB   DD DISP=SHR,DSN=CUSTNAME.AD000115.LOADLIB
000005 //*
000006 //*--------------------------------------------------------------------
000007 //* GDE: SERVERPAC INSTALLATION
000008 //* DOC: DEFINE THE TARGET SYSTEM'S CATALOG(S) INTO THE DRIVING
000009 //*      SYSTEM'S MASTER CATALOG.
000010 //*
000011 //*      IMPORT/CONNECT EVENTUAL TARGET SYSTEM USER CATALOG(S) INTO
000012 //*      THE TARGET SYSTEM'S MASTER CATALOG.
000013 //*
000014 //* MRC: THE MAXIMUM EXPECTED RETURN CODE IS: 0
000015 //*
000016 //*--------------------------------------------------------------------
```

Figure 140. Panel: Edit jobstream

This ISPF Edit session allows you to edit the job before submitting it. If you make changes, you can save the job in the backup data set by using the BACKUP or REPLACE command as described below. To reselect a job you have edited and saved in the backup data set, use the **B** line command to select it on the previous panel, rather than the **S** line command.

In this session, ISPF edit commands work as expected, with the exceptions of End, Replace, Save and Submit. The effects of these commands are described, as in the following list:

END
Ends the edit session, but does not save your changes.

REPLACE
Replaces an existing backup member (created by the BACKUP command; see below).

SAVE
Is disabled.

SUBMIT
Submits the job for execution (as expected), but also tells the dialog that the job was submitted, for tracking purposes.

Besides the ISPF Edit commands, you can use the dialog's BACKUP command to save the contents of this edit session in a new member of the backup library, SCPPBENU. When you end the session, the new member is shown in the STEP column in the dialog.

If the member already exists, the BACKUP command is rejected with the message "'BACKUP MEMBER EXISTS". (To replace an existing backup member, use the REPLACE command.)

The BACKUP command creates members in the SCPPBENU library only. You cannot use BACKUP to create members in other libraries. You can, however, use the ISPF Edit Create command to do so.

Working with user-defined jobs

Besides working with the IBM-supplied jobs, you can add your own jobs to the installation job stream; see the following sections:

- “Inserting a user-defined job” on page 157
- “Editing a user-defined job” on page 159
- “Deleting a user-defined job” on page 160.

Inserting a user-defined job

When you attempt to insert a user-defined job into the jobstream, the panel in Figure 141 on page 158 is displayed.

```
CPPP6122 -------------- Installation JOBs ( MD053718 ) --------
COMMAND ==>

INSERT a USER Defined JOB


      User STEP Name   ==> $
                           :
             User Names are ALWAYS a $ plus 1 to 7 characters


      Max Return Code  ==> 00

      Data Description ==>
```

Figure 141. Panel: Insert a user-defined job

Fill in the following fields:

Step Name
Specifies the name by which the job is to be known (this is not the jobname). The name must be unique. Otherwise, the dialog displays a "duplicate" message.

The first character must be a dollar sign ($), so the dialog inserts the $ character ahead of the data entry field. For the rest of the member name, you can use up to 7 valid characters: alphabetic, numeric, or national (@,#, or $).

MAX Return Code
Specifies the maximum expected return code for the step. If you specify a value in the range 00-99, the default JCL job statement is automatically inserted before the step when you select the file from the Job Selection List (through line command S).

If you leave the value blank, the dialog assumes that the user-defined job already includes a valid job statement and does not insert a job statement.

Data Description
Enter a meaningful description of the step.

A scan of the skeleton library (SCPPSENU) is made. If the STEP name you wish to use does not exist as a current member of the library, EDIT processing is invoked to allow creation of source JCL for the step. (See “Editing a user-defined job” on page 159).

If a member currently exists which has the same name as the step name you wish to use, it is possible that:

- It is an old version
- It is a previously deleted user-defined job, but physical delete of the skeleton member was specified as no.

You must determine the cause. To assist you, the dialog displays the member, for example:

```
 BROWSE -- STOB4.MD053718.SCPPSENU($IDCAMS) --------- LINE 00000000 COL 001 080
 COMMAND ===>                                              SCROLL ===> PAGE
******************************** TOP OF DATA ***********************************
//STEP001 EXEC PGM=IDCAMS                                              00000100
//*                                                                    00000200
//*     ************************************************************   00000300
//*     * THIS JOB REPROS THE TEST LOGS FOR THE PREVIOUS SYSTEM  *      00000400
//*     * TO STOBB'S USERID DATASETS, THEN DELETES THEM          *      00000500
//*     *                                                        *      00000600
//*     * THE TEST LOGS CONTAIN INSTALLATION VERIFICATION DATA   *      00000700
//*     ************************************************************   00000800
//*                                                                    00000900
//SYSPRINT DD  SYSOUT=*                                                00001000
//*                                                                    00001100
//SYSIN    DD  *                                                       00001200
  REPRO    INDATASET(SYSSTOBB.TESTLOG.AYNUK) +                         00001300
           OUTDATASET(STOB4.TESTLOG.AYNUK)                             00001400
                                                                       00001500
  REPRO    INDATASET(SYSSTOBB.TESTLOG.ALIUK) +                         00001600
****************************************************************************** 001700
*  CPP0612001W User JOB $IDCAMS EXISTS as a member of the File Tailo&cont;
ring* 001800
* &cont;
 Library, REVIEW The Contents of the Member                      &cont;
    * 001900
****************************************************************************** 002000
******************************** BOTTOM OF DATA ********************************
```

Figure 142. Panel: Browse existing user job

You must confirm that the member in the skeleton library can be used as source for the step user-defined job (Figure 143 on page 159). Do so by entering USE in the COMMAND ==> field and pressing enter.

```
 CPPP6123 -------------- Installation JOBs ( MD053718 ) ---------------
 COMMAND ==>

 INSERT a USER Defined JOB

                               W A R N I N G


                 The JOB you have tried to insert EXISTS as a
                         member in the SOURCE Library
                    You must verify this member can be used


           Confirm the Member can be USED, Type USE and press ENTER

           Press the END or RETURN key to CANCEL the INSERT request
```

Figure 143. Panel: Insert a user-defined job - confirmation

When confirmed, EDIT processing is invoked to allow changes to the source JCL for the step (see “Editing a user-defined job” on page 159).

Editing a user-defined job

If you enter line command E for a user-defined job in the Job Selection List, the panel in Figure 144 on page 160 is displayed.

```
CPPPEDIF - SOURCE MEMBER($IDCAMS) -------------------------- COLUMNS 001 072
COMMAND ==>                                                  SCROLL ==> HALF
****** **************************** TOP OF DATA ******************************
000100 //STEP001 EXEC PGM=IDCAMS
000200 //*
000300 //*     ************************************************************
000400 //*     * THIS JOB REPROS THE TEST LOGS FOR THE PREVIOUS SYSTEM  *
000500 //*     * TO STOBB'S USERID DATASETS, THEN DELETES THEM          *
000600 //*     *                                                        *
000700 //*     * THE TEST LOGS CONTAIN INSTALLATION VERIFICATION DATA   *
000800 //*     ************************************************************
000900 //*
001000 //SYSPRINT DD  SYSOUT=*
001100 //*
001200 //SYSIN    DD  *
001300   REPRO    INDATASET(SYSSTOBB.TESTLOG.AYNUK) +
001400            OUTDATASET(STOB4.TESTLOG.AYNUK)
001500
001600   REPRO    INDATASET(SYSSTOBB.TESTLOG.ALIUK) +
001700            OUTDATASET(STOB4.TESTLOG.ALIUK)
001800
001900   DELETE   SYSSTOBB.TESTLOG.AYNUK
002000   DELETE   SYSSTOBB.TESTLOG.ALIUK
****** **************************** BOTTOM OF DATA ****************************
```

Figure 144. Panel: Edit source member

This edit session acts directly on the job source member.

Do not create a job statement for a user-defined job. When you later select the job from the Job Selection List (Figure 136 on page 152), the dialog will automatically insert a job statement in the job.

If you delete all of the records from the member, you cannot exit from the panel unless you enter the CANCEL primary command. An empty member is not allowed in the skeleton library.

Standard editing commands have the following effects when entered for job source:

CANCEL
The edit session is ended; nothing is saved.

END/RETURN
If the member has no records, the command is ignored, and you must use the CANCEL command.

SAVE
If the member has no records, the command is ignored.

SUBMIT
This command is disabled. To submit a job, you must first select it from the Job Selection List panel. See Figure 136 on page 152

Deleting a user-defined job

If you enter line command D to delete a user-defined job, the panel in Figure 145 on page 160 is displayed.

```
CPPP6124 -------------- Installation JOBs ( MD053718 ) -----------------------
COMMAND ==>

DELETE a USER Defined JOB

                            $IDCAMS

            JOB : COPY TEST LOGS FOR PREVIOUS INSTALL

            Delete Member from the Skeleton Library ==> N


     You MUST Confirm DELETION By Typing DELETE and pressing ENTER

     Press the END or RETURN key to CANCEL the DELETE request
```

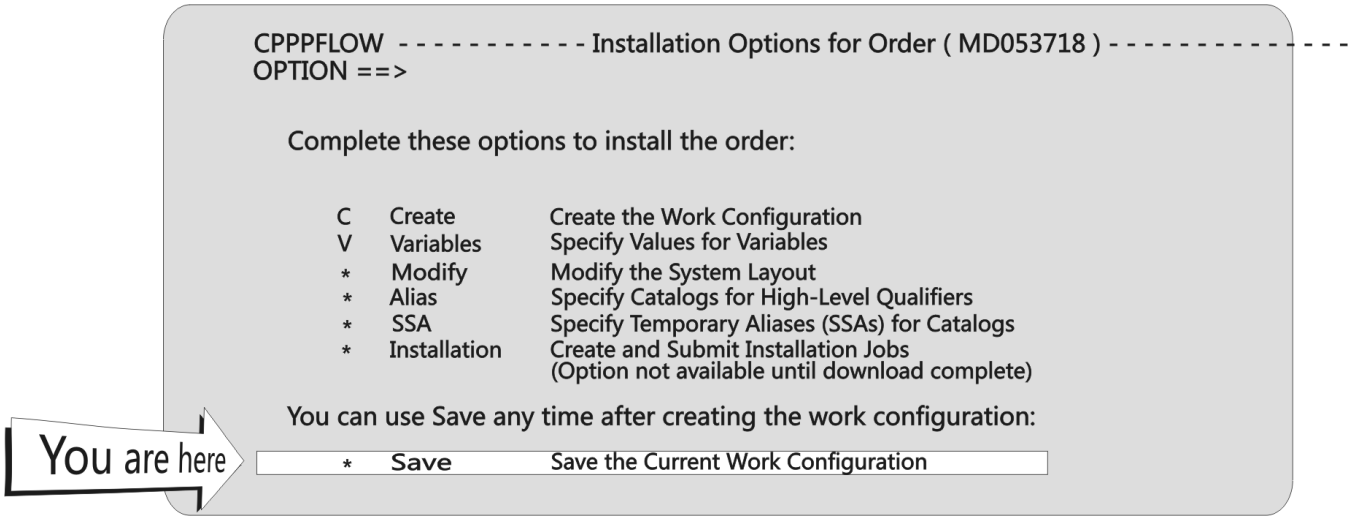
Figure 145. Panel: Delete a user-defined job - confirmation

To confirm your request, enter DELETE in the `COMMAND ==>` field and press Enter.

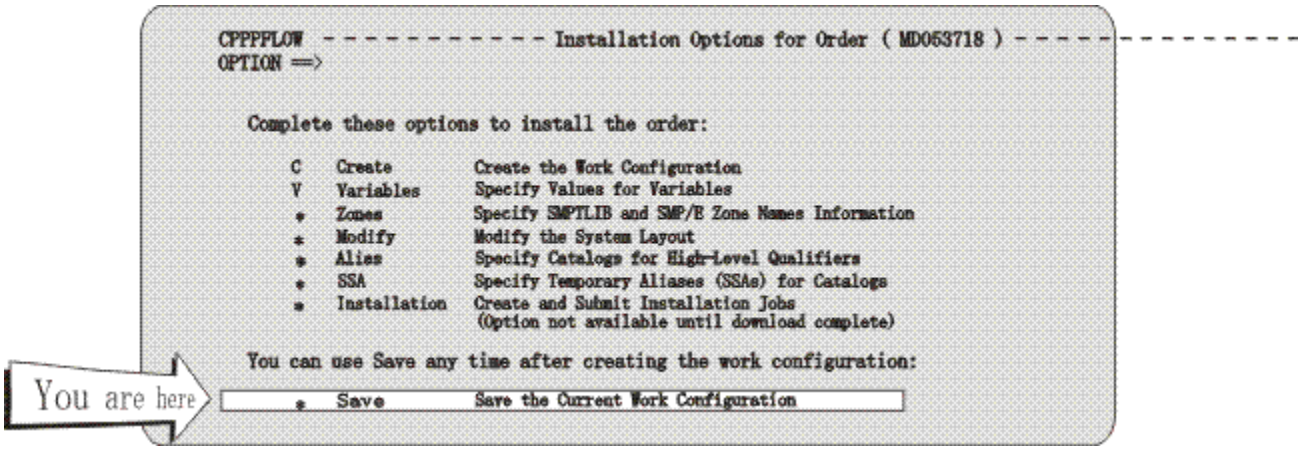
By default, the physical skeleton from the skeleton library (SCPPSENU) is retained; only the entry for the job in the control table is deleted, to allow the job to be re-inserted at a later stage. To delete the physical skeleton, specify Y in the Delete Skeleton field.

Chapter 12. Saving the configuration

If your order contains only non-SMP/E installable products, you will see the following panel.



For all other orders, you will see the following panel.



After you install a ServerPac order, use the Save the Current Work Configuration function of the dialog to save your work configuration. Doing so can help you save time in installing subsequent ServerPac orders. Rather than manually re-entering all of the data required for each new order, you can merge the saved configuration with the new order and avoid much of the data entry.

For example, while installing your order, you might have chosen to customize the shipped configuration. You might have:

- Merged it with a saved work configuration
- Changed the values of variables
- Added your own user variables and installation jobs
- Changed data set names
- Changed the space allocated for data sets
- Assigned data sets to physical volumes
- Merged data sets
- Changed the catalog configuration.

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To keep these settings available for a future order, save the configuration.

Another, equally important reason to save a configuration is to take a checkpoint to which one can return. You can use the Save command at any time after the work configuration is created. If you wish to preserve the work configuration in a particular state (for example, to be able to return to that state if a subsequent step goes awry), you can save it. You can save it more than once; each time you save it, the previously saved copy is overlaid. To return to the saved state, recreate the configuration and select the saved configuration for merging. The work configuration will then reflect the saved configuration. However, you must re-select each previously-completed option on CPPPFLOW, in turn, before being able to return to the option in use when the configuration was last saved.

Figure 146 on page 164 shows the panel that you use to save the work configuration. To display this panel, select option S (Save the Current Work Configuration) from the Installation Menu.

```
CPPP6041 -------------- SAVE Configuration ( MD053718 ) ----------------------
COMMAND ==> _

Specify SAVE Library

Enter the High Level Qualifier and the Volume Serial or Storage
      Class of the Library to which the Order Configuration will be saved

      Data Set HLQ   ==> CPP.MD053718.CONFIG

      Volume Serial  ==>          (Blank for SMS-managed data sets)
       - or -
      STORCLAS       ==>          (Blank for non-SMS-managed data sets)

        The default qualifier used is 'OrderHLQ'.
        You may enter a Comment to identify the Configuration. This
        is recommended if you use a qualifier other than the default.

                     ==> DEBBIE'S Z/OS REL.5 SET-UP WITH RECOMMENDED LAYOUT

        MASTER HLQ is  : CPPMASTR
```

Figure 146. Panel: Save configuration

Enter the high-level qualifiers for the saved work configuration (up to 35 characters, including the periods). To identify the saved configuration, use your order qualifier as one of the specified qualifiers, along with something meaningful (such as CONFIG or SAVECFG).

To your specified qualifiers, the dialog appends one of the following low-level qualifiers to the data sets in the saved configuration:

SCPPSENU
For skeleton libraries.

SCPPTENU
For table libraries.

For example, if the order qualifiers are CPP.MD053718, a good high-level qualifier to use for the saved configuration would be:

```
CPP.MD053718.CONFIG
```

and the two libraries that are used to save the configuration are as follows:

```
CPP.MD053718.CONFIG.SCPPSENU
CPP.MD053718.CONFIG.SCPPTENU
```

For the Volume Serial or STORCLAS fields, enter the serial number of the DASD volume or a valid storage storage class (for SMS-managed data sets) to be used to allocate the configuration data sets.

If you use ACS routines, ensure that these routines permit the allocation of the dialog data sets, SCPPSENU and SCPPTENU on the specified Volume Serial or STORCLAS. Or, preallocate these data sets

before saving the configuration. Otherwise, your SAVE command might fail with a dynamic allocation error. For information about writing ACS routines, see *z/OS DFSMSdfp Storage Administration*.

Enter a meaningful description in the comment field. Include the release level of the product that you installed. For example:

```
DEBBIE'S Z/OS REL.5 SET-UP WITH RECOMMENDED LAYOUT
```

During your next installation of a ServerPac order, you will find the description of the saved configuration displayed on the Select Configuration panel as shown in “Creating the configuration” on page 44.

If the saved configuration data sets do not exist, the dialog prompts you to confirm that the data sets can be automatically allocated.

You can save only one configuration for an order. If a saved work configuration exists, the dialog prompts you to confirm that the configuration can be deleted (see Figure 147 on page 165). Processing cannot continue until you allow the existing configuration to be deleted.

```
CPPP6042 -------------- SAVE Configuration ( MD053718 ) ----------------------
COMMAND ==>

DELETE an EXISTING Configuration


  A Saved Configuration already exists in Library

       CPP.MD053718.CONFIG

  This must be  DELETED  before SAVE can continue


     You MUST Confirm DELETION By Typing DELETE and pressing ENTER

     Press the END or RETURN key to CANCEL the DELETE request
```

Figure 147. Panel: Deleting an existing configuration - confirmation

To confirm that the configuration can be deleted, enter DELETE in the COMMAND ==> field and press Enter.

Chapter 13. Working with orders

This section describes the tasks that need to be done when working with orders.

Selecting an order

Figure 148 on page 167 shows the Order Selection panel, which allows you to specify the orders to be displayed. This panel is displayed when Option D is selected from CPPPPOLI

```
CPPP607B  ---------------- Select Orders to Display ---------------------------
COMMAND ==>



                            Display Orders by Status:


                            Received ==> Y    (Y or N)
                             Started ==> Y    (Y or N)
                           Installed ==> Y    (Y or N)
                           **Error** ==> Y    (Y or N)
```

Figure 148. Panel: Order selection

To display only those orders having a specific status, specify a Y for each status type to be included in the order display list and an N for each status type to be excluded from the order display list.

Any field left blank defaults to Y. If all status fields are specified as Y (the default), all orders are shown.

The available status selections are:

Received
This status is set when the order can be selected on the order list panel. For orders delivered on DVD, this is after the RECEIVE job has run. For orders that are downloaded, this is after the first phase of the download has been completed.

Started
This status is set when the work configuration has been created. You can still make changes to an order that is in the started status.

Installed
This status is set after the installation jobs for the order have been run. You cannot change an order that is in the installed status.

****Error****
This status is set when the RECEIVE job fails and the failure is detected by the job. (It cannot be set if the job is canceled, abends, or ends due to a system failure.) When an order's status is **Error**, examine the output of the RECEIVE job, correct the problem, and resubmit the job.

If no orders meet your selection criteria, a message is displayed and the panel allows you to enter a different selection.

Displaying an order

When you complete the Select Orders to Display panel, a list of orders that matches your selection criteria is displayed in the Order List panel (Figure 149 on page 168). (This panel is also displayed if you enter Option I on panel CPPPPOLI.)

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```
CPPP6071  ------------------------ ORDER LIST --------------------- Row 1 of 2
COMMAND ==>                                                 SCROLL ==> HALF

Primary Commands: (? SET Locate Find Next Previous OFile SORT VErbose)
   Line Commands: (Select Edit Delete Products Report Output)

                                                                  --- Last Change --
 S  Order   System Name SREL Package  Build Date   Status    User       Date
 - -------- ----------- ---- -------- ---------- ---------- -------- ----------
   JE000001  SYSNAME1   Z038 SERV     2002/10/23 Started    TONY     2003/05/09
   JE000002             Z038 SERV     2002/11/05 Received   NANCY    2003/04/03
   JE000003             Z038 SERV     2002/11/05 Installed  WAYNE    2003/04/03
   JE000007             Z038 SERV     2004/07/04 **Error**  JOHN     2003/07/24
******************************** Bottom of data ********************************
```

Figure 149. Panel: Order list (terse mode)

The Order List panel indicates the status of your orders with one of the following status codes (in the Status column):

Received
This status is set when the order can be selected on the order list panel. For orders delivered on DVD, this is after the RECEIVE job has run. For orders that are downloaded, this is after the first phase of the download has been completed.

Started
This status is set when the work configuration has been created.

Installed
This status is set once the installation jobs for the order have been run.

****Error****
This status is set when the RECEIVE job fails and the failure is detected by the job. (It cannot be set if the job is canceled, abends, or ends due to a system failure.) When an order's status is **Error**, examine the output of the RECEIVE job, correct the problem, and resubmit the job.

The following primary commands are valid for this panel:

? SET Locate Find Next Previous OFile SORT VErbose

These are standard commands for panels that display lists. See “Primary commands” on page 9.

OFILE

This command, abbreviated as OF, writes the list of orders to a user-defined file (see page “OFILE” on page 196).

The following line commands are valid for this panel:

D
Delete. Deletes an order from the order inventory. You will prompted to confirm the deletion.

E
Edit. Allows an existing order to be edited. Only the order's System Name, Status, and Comment fields are editable.

P
Products. Displays the products, elements, and features in the order, including the individual program names and numbers, their versions, and the number of FMIDs in each product, element, or feature.

R
Report. Displays a panel on which you can request a report that writes all information associated with an order and its products and features to a data set. The panel prompts you for information about the report data set.

S
Select. Select an order for installation.

O
Output. Displays a panel that lists the installation jobs you have submitted. You can use this panel to display any associated job output for a selected installation job.

Editing an order

Figure 150 on page 169 shows the panel that is displayed when you select an order for editing through line command E on the Order List panel.

```
CPPP6074  ---------------------- Order Details -------------------------------
COMMAND ==>

                Order Number : JE000001
                Package Type : SERV
             Production Date : 2004/08/31
                       SREL : Z038 ( MVS       )
               Customer Name : IBM Corp.
             Customer Number : 1234567

             Last Changed On : 2004/09/01
             Last Changed By : DAVID

                    Status ==> S  (Started, Received, Installed, **Error**)
              System Name ==> SYSA
                 Comments ==> z/OS R6

     Last Saved Configuration:

               Description ==> Z/OS R4 ORDER #1
                Qualifiers ==> DAVID.DO000277.CONFIG4
```

Figure 150. Panel: Editing an order

Update the order information in the panel and press Enter to save the changes. You can change only the Status, System Name, and Comment fields, and (if they appear), the Description and Qualifiers fields under Last Saved Configuration. You cannot change the other fields.

The "Last Saved Configuration:" text, the two data entry fields that follow it, the content of those fields, and their descriptions are displayed only when there is a saved configuration for the order. When there is a saved configuration, they appear regardless of the order's status.

The fields are described in the following list:

Order number
This value is supplied by IBM.

Package type
Package type of the order. Valid values are:

CPP
ProductPac

CRMO
Selected Follow-On Service

CRS
RefreshPac

EXP
SubSystem ServerPac or SystemPac Full Volume Dump format

EXPDD
SystemPac Dump by Data Set format

FPAC
FunctionPac

HCHK
Health Check

OMIS
OMIS

SERV
ServerPac

Production date
Production date. The date is in the format:

```
YYYY/MM/DD
```

SREL
System release of the order. These are the SRELs defined by IBM:

MULT
Multiple SRELs

P115
Db2

C150
CICS

P115
IMS

Z038
MVS (represents a z/OS order)

P004
NCP

Customer name
Your company name.

Customer number
Your customer number.

Last changed on
You cannot change this field. This is the date the status field was last changed. It is updated automatically whenever the status field is changed.

Last changed by
You cannot change this field. This is the user ID of the person or program that last changed the status field. It is updated automatically whenever the status field is changed.

Status
The current install status of the order. Possible values are:

R
Received

S
Started

I
Installed

E
Error

Note:

1. No data entry value is allowed for a status of **Error**, which can be displayed, but not set.
2. Orders having a status of "Finalized," which could be set using prior levels of the dialog, are displayed as "Installed."
3. For the meaning of each status code, see “Selecting an order” on page 167.
4. You must confirm the change in status (see “Verifying the status of an order” on page 174). The normal status sequence is:

- Received → Started
- Started → Installed

System name
This optional field is reserved for your use; it is not set by IBM. You can put whatever you want here or leave it blank.

Comment
This is an optional, user-defined field. You can change it at any time.

Description
This is an optional, user-defined field. You can change it at any time.

Qualifiers
This is an optional, user-defined field. You can change it at any time.

Deleting an order

From the Order List panel, you can delete an order by entering line command D. The figure below shows the panel that is displayed.

```
CPPP6073 CMD ------------------- ORDER DETAILS -------------------------------
COMMAND ==>

DELETE an Order


                                ORDER DETAILS


              Order Number: RD002460     Customer No: 0999998
              Profile     :              PAC Type   : EXP
              SREL        : P115         System Name:



                     WHEN YOU DELETE THE ORDER ITS RELATED
                         DATA SETS WILL ALSO BE DELETED

          You MUST Confirm DELETION By Typing DELETE and pressing ENTER

          Press the END or RETURN key to CANCEL the DELETE request
```

Figure 151. Panel: Deleting an order

This panel will notify you that when the order is deleted, the data sets associated with the order will also be deleted. You must confirm it by typing DELETE on the command line and pressing ENTER. You can cancel delete request by pressing the END or RETURN key.

Displaying the products and features of an order

From the Order List panel (Figure 149 on page 168), you can view the products, elements, and features of a particular order by entering line command P. Figure 152 on page 172 shows the panel that is displayed.

```
CPPP6076  ---------------- ORDER DETAILS ( MD053718 ) -------- ROW 1 TO 6 OF 6
COMMAND ==>                                                   SCROLL ==> PAGE

Shipped PRODUCTS/FEATURES

PRIM Cmds:(? SET Locate Find Next Previous SORT OFile)
LINE Cmds:(Fmids)

     S Product/Feature Name                     PGM#     VERsion FMID#
     - ---------------------------------------- -------- ------- -----
     F C/C++ NO DEBUG                           5647-A01  020500     8
       COBL LB CMP DBG ENU 1.04.0               5668-958  010400     8
       DFSMS DSS/HSM                            5647-A01  020500     2
       DFSORT                                   5647-A01  020500     8
       z/OS BASE                                5647-A01  020500   110
 ***************************** Bottom of data ****************************
```

Figure 152. Panel: Shipped products/features

This panel shows the products, features, and elements in the order, including the individual program names and numbers, their versions, and the number of distinct FMIDs in each product or feature. FMID# will have a value of 0 for non SMP/E installable products.

The following primary commands are valid for this panel:

?, SET, Locate, Find, Next, Previous, SORT

These are standard commands for panels that display lists. See “Primary commands” on page 9.

OFILE

This command, abbreviated as OF, writes a list of the products and features to a user-defined file (see page “OFILE” on page 196).

The following line command is valid for this panel:

F

Displays the FMIDs for a product or feature. See “Displaying the FMIDs for a product or feature” on page 172.

Displaying the FMIDs for a product or feature

From the panel shown in Figure 152 on page 172, you can view the FMIDs for a particular product or feature by entering line command F. If the PROCLVL is less than "23.00.00", the CPPP6079 panel is displayed as shown in Figure 153 on page 172; if the PROCLVL is equal to or more than "23.00.00", the CPPP607D panel is displayed as shown in Figure 154 on page 173.

FMIDs will not be displayed for non SMP/E installable products by entering line command F.

```
CPPP6079  -------------- ORDER DETAILS ( MD053718 ) -------- Row 1 to 1 of 1
COMMAND ==>                                                  SCROLL ==> PAGE

Shipped FMIDs for PRODUCT/FEATURE C/C++ NO DEBUG

Primary Commands: (? Find Next Previous)
   Line Commands: (NONE)

        FMID
        ------- ------- ------- ------- ------- ------- ------- -------
        HCKVB00 HLB4701 HLC4731 HTV4721 H24P111 JCKVB03 JLB4702 JTV4722
***************************** Bottom of data ******************************
```

Figure 153. Panel: Shipped FMIDs for a product/feature

```
CPPP607D  -------------- ORDER DETAILS ( MD053718 ) ------ Row 1 to 22 of 86
COMMAND ==>                                                 SCROLL ==> PAGE

Shipped FMIDs for PRODUCT/FEATURE Z/OS V1 BASE

PRIM Cmds:(? SET Find Locate Next Previous)
LINE Cmds:(NONE)

     FMID     Description

     EDU1H01  ICKDSF - Device Support Facilities - Base
     EER3500  EREP
     EMI2220  MICR/OCR
     ETI1106  TIOC
     FDU1H07  ICKDSF - Device Support Facilities - ISMF/MODS
     FDU1H08  ICKDSF - Device Support Facilities - ISMF/ENU
     HBB7720  BCP BASE
     HBCNC00  SMP/E Planning and Migration Assistant Software Info Base
     HBCNC0B  SMP/E Planning and Migration Assistant
     HBD6602  Bulk Data Transfer Base
     HBKM300  BookManager Read/MVS Base
     HBKP300  BookManager Build/MVS Base
     HBKQ310  Library Server
     HCMG110  OS/390 UNIX System Services Connection Manager Base
     HCM1710  Hardware Configuration Manager
     HCPT360  Cryptographic Services - System SSL Base
     HCRY2A0  Cryptographic Services - OCSF Base
     HCR7720  Cryptographic Services - ICSF
     HCS7720  Hardware Configuration Definition Base
     HDZ11K0  Data Facility System Managed Storage Base
     HDZ11VC  Network File System Client
     HDZ11VS  Network File System Server
***************************** Bottom of data ********************************
```

Figure 154. Panel: Shipped FMIDs for a product/feature

The following primary commands are valid for these panels:

?, SET, Find, Locate, Next, Previous

These are standard commands for panels that display lists. See “Primary commands” on page 9.

Requesting an order report

From the Order Information panel (Figure 149 on page 168), you can request that a report (order data; products, elements, and features; FMIDs) for an order be written to a data set by entering line command R. Figure 155 on page 173 shows the panel that is displayed.

```
CPPP6077 -------------------- ORDER INFORMATION -----------------------------
COMMAND ==>

REPORT File Details

   Send REPORT to ISPF LIST Dataset ==> ?    (Y or N)

        OR

   Enter Details of the Dataset to which the Report will be Written.

   Dataset Name  ==> MD053718.PRINT

   DISPosition   ==> NEW     (NEW, MOD, OLD or SHR)

   When Allocated NEW        (DSORG=PS,RECFM=FB,LRECL=80)

   Volume Serial ==> WORK14 (Default=SYSDA)
```

Figure 155. Panel: Specify a report data set

Specify a fully qualified data set name {without quotation marks} and volume serial for the output of the report data set.

If the data set is a PDS, you must also specify a member name. Also, the output data set must have an LRECL of 80 bytes.

Specify the data set's allocation disposition;

OLD
An existing data set is to be used

SHR
An existing data set is to be used

NEW
A new data set is to be allocated and cataloged

MOD
If it exists, a sequential data set is to have the report appended to it. If it does not exist, a new sequential data set will be created and the report will be written to it.

If the specified data set already exists and you specified a disposition of NEW, or the data set name implies a change to the DSORG attribute (for example, the data set is DSORG=PS and you specify a member name), the data set is deleted and re-allocated. Here, you must confirm that the existing data set can be deleted by entering DELETE on the command line and pressing the Enter key. Or, you can use the END or RETURN keys to cancel the delete request.

Also, you can also choose to browse the report when it is created.

Verifying the status of an order

Figure 156 on page 174 shows the panel that is displayed when you attempt to change to the status of an order. This can occur, for example, if you edit the status field (see “Editing an order” on page 169) .

```
CPPP607C -------------------- ORDER  INFORMATION ----------------------------
COMMAND ==>

STATUS CHANGE REQUESTED

                                STATUS ATTRIBUTES

                            Old Status : STARTED

                            New Status : RECEIVED

          You MUST Confirm UPDATE By Typing STATUS and pressing ENTER

          Press the END or RETURN key to CANCEL the UPDATE request
```

Figure 156. Panel: Status verification

The normal status sequence is:

- Received → Started → Installed

You requested a status change that does not follow the normal status sequence. This is allowable, but you must confirm it by typing STATUS on the command line and pressing Enter. You can cancel the status change request by pressing End.

Appendix A. Primary command reference

This section lists the primary commands and their syntax diagrams.

BACKUP

Purpose

When issued from a selected job in the 'Job Selection list' panel the BACKUP command will save the content of that selected JOB in a new member of the backup library, SCPPBENU.

Syntax

BACKUP

Parameters

None.

Results

When the session ends, the new member is copied into the SCPPBENU data set.

Restrictions

1. The BACKUP command creates members only in the SCPPBENU library. You cannot use BACKUP to create members in other libraries. You can, however, use the ISPF Edit CREATE command to do so.
2. If the member already exists, the BACKUP command is rejected. To replace an existing backup member, use the REPLACE command.

Examples

To save the contents of the current edit session in a new member of the backup library, select the JOB from the "Job Selection list" panel and enter BACKUP. You will see message "CREATE BACKUP DEFERRED". Once you end the session the new member is copied into the backup library, SCPPBENU.

CHANGE

Purpose

CHANGE is a powerful command that you can use to make changes to many data sets at once. Using CHANGE is much faster than making changes to individual data sets in the dialog, so you should use it whenever possible to save time.

The following syntax diagram shows the primary keywords for the CHANGE command. Each of these keywords is separately documented, along with their unique parameters, in the following sections.

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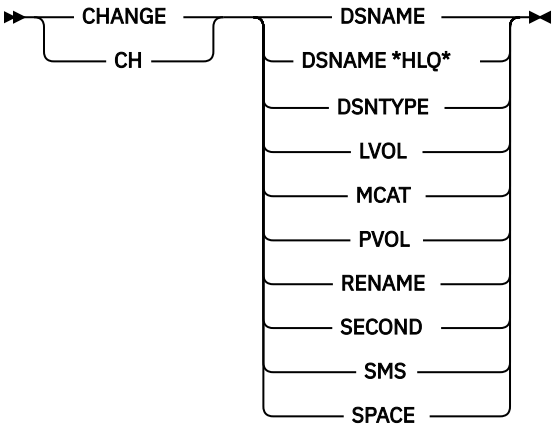
Syntax

CHANGE



Parameters

DSNAME
Renames one or more data sets. See “CHANGE DSNAME” on page 177 for details.

DSNAME *HLQ*
Changes the high-level qualifier for one or more data sets. See “CHANGE DSNAME *HLQ*” on page 178 for details.

DSNTYPE
Allows changing between PDS and PDSE or HFS and zFS data sets. See “CHANGE DSNTYPE” on page 179 for details.

LVOL
Reassigns one or more data sets to a different logical volume. See “CHANGE LVOL” on page 180 for details.

MCAT
Overrides the dialog's requirement for one or more data sets to be defined in the system's master catalog. See “CHANGE MCAT” on page 181 for details.

PVOL
Reassigns one or more data sets to a different physical volume. See CHANGE PVOL for details.

RENAME
Overrides for one or more data sets the dialog's restriction on renaming the data set. See “CHANGE RENAME” on page 183 for details.

SECOND
Change secondary allocation of data sets with shipped value of 0. See “CHANGE SECOND” on page 184 for details.

SMS
Changes the SMS management status of one or more data sets. See “CHANGE SMS” on page 185 for details.

SPACE
Changes the space attributes for one or more data sets. See “CHANGE SPACE” on page 188 for details.

Processing

The general procedure for using the CHANGE command is:

1. Decide which data sets you want to change

2. Pick a characteristic of those data sets for which you can display a list of desired data sets. You will probably want to pick a characteristic that eliminates as many unwanted data sets as possible.
3. Enter the desired CHANGE command on the resulting display list
4. Based on the parameters specified on the CHANGE command, the dialog checks the data sets in the current display list and returns a candidate list of data sets that are eligible to be changed by the command. At this point, changes are only simulated; no data sets have actually been changed.
5. Determine whether to:
   - Commit the changes as shown in the display (by pressing Enter or End)
   - Exclude particular data sets from the candidate list before committing the changes (by identifying the data sets to be excluded with the X line command and then pressing Enter or End), or
   - Cancel the change request (by entering the ISPF CANCEL command and pressing Enter).
6. Unless you cancel the change request, the CHANGE command will apply the specified change to all selected data sets (that is, all the data sets on the list that you did not exclude).

Note: The CHANGE command may be abbreviated as CH.

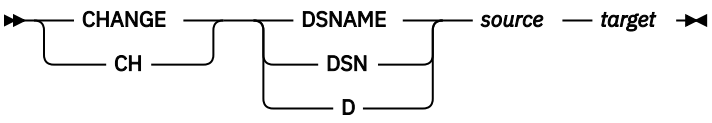
CHANGE DSNAME

Purpose

You can use the CHANGE DSNAME command to modify a string of characters in a data set name. Only data sets that are allowed to be renamed are displayed in the candidate list that results from a CHANGE DSNAME command. For information about unrenameable data sets, see the CHANGE RENAME command. The dialog checks the new data set name to ensure that it is a valid data set name and conforms to ServerPac standards.

Syntax

CHANGE DSNAME



Parameters

source
Specifies the character string to be replaced.

target
Specifies the new character string.

Restrictions

1. Only data sets that are allowed to be renamed are displayed in the candidate list that results from a CHANGE DSNAME command. Unrenameable data sets cannot be renamed unless you first override this attribute with the CHANGE RENAME command (see “CHANGE RENAME” on page 183).
2. For each order you install, choose unique names for the order's SMP/E data sets (those beginning with SMP*), for example, SMPPTS and SMPLTS.

   For the CSI data sets, IBM recommends that you choose names that are unique throughout your entire installation or enterprise, not merely within your driving system's environment. The CSI data sets include:

   - SMPE global CSI

- SMPE target CSI
- SMPE DLIB CSI

Examples

Use care in entering the CHANGE DSNAME command because it replaces all occurrences of the source string in the names of your data sets. For example, assume that you want to rename data set CBC.SCBCMOD1 to XXX.SCBCMOD1. If you enter the CHANGE DSNAME command, as in the following example:

```
CH DSN CBC XXX
```

the resulting data set name is XXX.SXXXMOD1, which is probably not what you wanted. Here, to make the correct change, you must include the period (.) with the source string, as in the following example:

```
CH DSN CBC. XXX.
```

The resulting data set name is XXX.SCBCMOD1.

CHANGE DSNAME *HLQ*

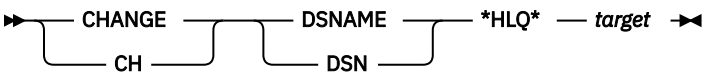
Purpose

You can use the CHANGE DSNAME *HLQ* command to change the high-level qualifiers of renameable data sets.

To change the high-level qualifiers of data sets, enter the CHANGE DSNAME *HLQ* command from any data set list panel. From the resulting display, exclude any data sets that you do not want to change and press Enter. The high-level qualifiers in the list are changed to the new high-level qualifier.

Syntax

CHANGE DSNAME *HLQ*



Parameters

target
specifies the new high-level qualifier of the data sets.

Restrictions

1. Only data sets that are allowed to be renamed are displayed in the candidate list that results from a CHANGE DSNAME *HLQ* command. Unrenameable data sets cannot be renamed unless you first override this attribute with the CHANGE RENAME command (see “CHANGE RENAME” on page 183).
2. If you change the high-level qualifier of a data set, you might need to re-establish its catalog and SMS relationships.

Examples

Assume that in a data set list you have created, some data sets begin with JOAN.* and some begin with WAYNE.*. You can use one command to change all of these data sets to use the same high-level qualifier (for example, JOHN.*) as is the following example:

```
CH DSN *HLQ* JOHN
```

The CHANGE DSN *HLQ* command also allows you to change single high-level qualifiers to multiple high-level qualifiers. For example, assume that you want to change all of the listed data sets to use the high-level qualifiers SYS9.MARNA.*. To do so, display the desired data sets and enter the CHANGE DSN *HLQ* command, as in the following example:

```
CH DSN *HLQ* SYS9.MARNA
```

CHANGE DSNTYPE

Purpose

You can use the CHANGE DSNTYPE command to convert your shipped order's data sets to a different format:

- PDS data sets to PDSE data sets
- PDSE data sets to PDS data sets (This can be done only for data sets that were originally PDS data sets)
- HFS data sets to zFS data sets
- zFS data sets to HFS data sets

The main advantage of using a PDSE over a partitioned data set is that a PDSE uses DASD space more efficiently. The size of a PDS directory is fixed, regardless of the number of members in it, while the size of a PDSE directory is flexible and expands or contracts to fit the stored members. Also, PDSEs do not need to be compressed. PDSEs offer other functional benefits, too, such as the ability to store program objects or data. For a complete description of PDSEs and their restrictions, see *z/OS DFSMS Using Data Sets*.

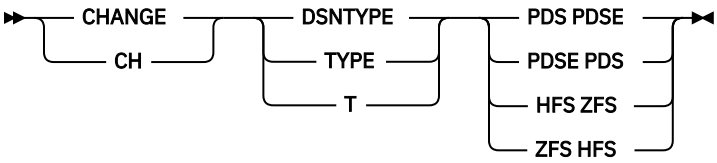
A zFS data set is a VSAM Linear Data Set (LDS), which offers some performance and file sharing features not available in HFS.

The dialog displays only those data sets that are allowed to be changed. The dialog does not, for example, allow you to change your order's PDSE data sets to PDS data sets, because they contain members that cannot be loaded into a PDS. You can change a PDSE data set to a PDS only if the PDSE was originally shipped as a PDS data set.

You can use the dialog's View and Change Facility to display a list of data sets that can be changed. In View and Change, select "Switchable" and then select "Yes" to get the list.

Syntax

CHANGE DSNTYPE



Parameters

PDS PDSE
specifies that PDS data sets should be converted to PDSE data sets.

PDSE PDS
specifies that PDSE data sets should be converted back to PDS data sets.

HFS ZFS
specifies that HFS data sets should be converted to ZFS data sets. Data set types of multiple data sets can be changed from HFS to ZFS.

ZFS HFS
specifies that zFS data sets should be converted to HFS data sets.

Restrictions

1. The following system data sets cannot be converted to PDSE format:
   - SYS1.NUCLEUS
   - SYS1.SVCLIB
   - Data sets listed in the LPALST*xx* member of parmlib
   - Data sets in the parmlib concatenation used for IPL.
   - Master JCL data sets, such as:
     - Procedure libraries concatenated to IEFPDSI or IEFJOBS
     - SYS1.UADS
   - Db2 DBRM data sets.
2. A data set's type cannot be changed if any of the following are true:
   - The data set was originally shipped as a PDSE
   - Record format (RECFM) is U
   - Logical volume is IPLVOL.
3. The dialog does not enforce all product requirements. You must determine whether data sets are allowed to be in a different format before changing them.

Examples

To change PDS data sets to PDSE data sets, enter the CHANGE DSNTYPE command, as in the following example:

```
CH TYPE PDS PDSE
```

To change HFS data sets to zFS data sets, enter the CHANGE DSNTYPE command, as in the following example:

```
CH TYPE HFS ZFS
```

Multiple data sets can be changed from type HFS to ZFS. The panel CPPP6050 will be displayed with a warning message indicating the zFS data set size is greater than 4 GB (if there is any such data set in the system) and must use an SMS Data Class that supports extended addressability, so that you can exclude some of the candidate data sets in the list. If you want to continue with the zFS file system data type, then panel CPPP60E3 will be displayed to collect SMS information. If there are no data sets with size greater than 4 GB, then the warning message will not be displayed.

But for a z/OS V2R1 Driving System, if a data set is not SMS managed, it will not be changed to SMS managed. Panel CPPP60E7 will be displayed to collect the Data Class. If a data set is SMS managed, panel CPPP60E3 will be displayed to update SMS information and to collect SMS Data Class.

CHANGE LVOL

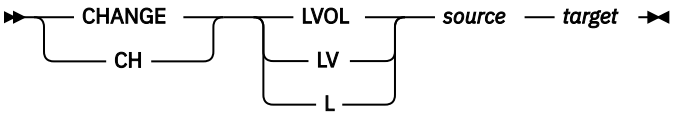
Purpose

You can use the CHANGE LVOL command to reassign data sets to a different logical volume. The dialog displays only those data sets that are allowed to be reassigned.

If you specify an existing logical volume for the target, the device attributes are inherited from the target. If you specify an undefined logical volume for the target, the device attributes are inherited from the source.

Syntax

CHANGE LVOL



Parameters

source
Specifies the logical volume to which the data sets are currently assigned.

target
Specifies the logical volume to which the data sets are to be re-assigned.

Restrictions

1. You cannot assign non-SMS-eligible data sets to logical volumes that are assigned to a storage class.
2. You cannot assign SMS-required data sets to logical volumes that are assigned to physical volumes.
3. The following logical volume names will be rejected if specified as either a *source* or *target* name:

   CSIVOL
   Reserved for the CSI data sets that are used to hold the DLIB and target zones for the ordered features and elements.

   IPLVOL
   Reserved for data sets that must reside on the IPL volume.

Examples

Assume that for all data sets in the current Display List, you want to change logical volume RES001 to RES999. Enter the following command:

```
CH L  RES001  RES999
```

CHANGE MCAT

Purpose

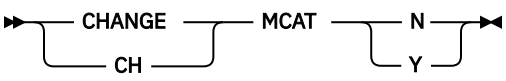
The installation dialog requires some data sets to be defined in the target system's master catalog. The CHANGE MCAT command can be used to override the dialog's requirements.

Attention: This command has no effect on any operating system restrictions, so injudicious use of CHANGE MCAT might result in an unusable system.

Note: A Master Catalog attribute of 'No' just means that the dialog does not require that data set to be defined in the target system's master catalog. It will not prevent you from doing so.

Syntax

CHANGE MCAT



Parameters

N
Override the master catalog requirement for selected data sets

Y
Restore the master catalog requirement for selected overridden data sets

Restrictions

You cannot change data sets having a Master Catalog attribute of 'No', unless they were originally shipped with an attribute of 'No'.

Examples

To override the master catalog requirement for data sets in your configuration, take these actions:

- Use the dialog's View and Change Facility to display data sets with a Master Catalog attribute of Yes.
- From the list of master catalog data sets, enter the CHANGE MCAT command, as in the following example:

```
CH MCAT N
```

- Exclude any data sets that you do not want to change (through line command X) and press Enter.
- Press Enter or End to refresh the display. The overridden data sets are removed from the list.

To view the overridden data sets in your configuration, return to the selection list for master catalog data sets and display data sets having a Master Catalog attribute of 'Overridden'.

To reverse the preceding action, display the data sets having a Master Catalog value of 'Overridden.' Then, enter the CHANGE MCAT command, as in the following example:

```
CH MCAT Y
```

After excluding any data sets that you do not want to change, and press Enter. Then, press Exit to refresh the display. The changed data sets are removed from the list.

CHANGE PVOL

Purpose

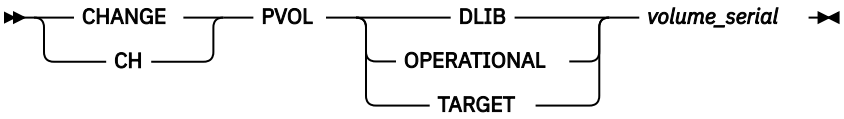
You can use the CHANGE PVOL command to reassign data sets to a different DASD volume. If the volume serial you enter is known to the dialog, the data sets are assigned to it. If there is enough space remaining on the volume for the data sets, no other actions are needed.

If the volume serial that you enter is **not** known to the dialog, then:

- If DYNAMIC DASD INFO is set to Yes (the default), the dialog tries to dynamically retrieve the physical attributes of the device. If this is successful, the Global Change Candidate List panel (CPPP6050) is displayed.
  - If the dialog cannot dynamically retrieve the device information, but the dialog expects the device to be offline, the dialog accepts the input on the command and displays the Global Change Candidate List panel. The dialog will not require the volume to be online, but will recheck volume availability during some operations and, if the volume has become available, it will verify the volume's attributes and correct them, if necessary.
  - If the dialog does not expect the device to be offline, then you must either press the Enter key to tell the dialog that the device is expected to be offline and to accept the input and display the Global Change Candidate List panel, or press the End key to discard the input and cancel the command.
- If DYNAMIC DASD INFO is set to No, the device type is set to 3390-9 and the device number is set to CCUU.

Syntax

CHANGE PVOL



Parameters

DLIB
Specifies that distribution library data sets are to be reassigned. DLIB can be abbreviated as D.

OPERATIONAL
Specifies that operational data sets are to be reassigned. OPERATIONAL can be abbreviated as O or OP.

TARGET
Specifies that target library data sets are to be reassigned. TARGET can be abbreviated as T or TARG.

volume_serial
Specifies the physical volume to which the data sets are to be reassigned.

Restrictions

You cannot use this command to reassign SMS-managed data sets or data sets that must reside on the IPL volume.

Examples

To assign operational data sets to *volume_serial* OPRVOL, enter:

```
CH PVOL OPERATIONAL OPRVOL
```

CHANGE RENAME

Purpose

The installation dialog marks some data sets as being *unrenameable* to prevent them from being renamed by a CHANGE DSNAME command. Only data sets that are allowed to be renamed are displayed in the candidate list for a CHANGE DSNAME command. You can use the CHANGE RENAME command to override the dialog's settings to make such data sets renameable.

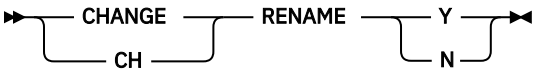
Data sets that normally cannot be renamed include the following data sets:

- CSSLIB
- LINKLIB
- LPALIB
- MIGLIB
- NUCLEUS
- PROCLIB
- SVCLIB

Attention: This command has no effect on any data set naming requirements that might be imposed by the operating system or by a product, so injudicious use of CHANGE RENAME might result in an unusable system.

Syntax

CHANGE RENAME



Parameters

Y
Override the "unrenameable" attribute for selected data sets

N
Restore the "unrenameable" attribute for selected overridden data sets

Restrictions

Unlike other changes you make to data sets, the dialog does not preserve the "overridden" value when you later save the configuration for use with future orders.

Examples

To make selected data sets renameable, enter the dialog's View and Change Facility and display the data sets in the configuration with a renameable attribute of NO. From any data set list, enter the CHANGE RENAME command, as in the following example:

```
CH RENAME Y
```

Then, exclude any data sets that you do not want to rename and press Enter. The data sets that you did not exclude will have their renameable attribute changed to "Overridden." When the data set display is updated, the data sets whose renameable attribute you overrode will no longer be displayed (because they no longer match the original display criteria). If did not exclude any data sets, this will result in an empty display list.

To reverse the preceding action, display only the data sets having a renameable attribute value of "overridden." Then, enter the CHANGE RENAME command, as in the following example:

```
CH RENAME N
```

If you issued a CHANGE DSNAME or CHANGE DSNAME *HLQ* command and did not find a data set you wanted on the candidate list, it might be because the desired data set was not renameable. In this case, you could:

1. Return to the original data set list (from the change candidate list for CHANGE DSNAME)
2. Issue CHANGE RENAME Y to get a new change candidate list
3. Select the desired data set (by excluding the others) and press Enter
4. Return to the original data set list (from the change candidate list for CHANGE RENAME)
5. Reissue the original CHANGE DSNAME or CHANGE DSNAME *HLQ* command.

CHANGE SECOND

Purpose

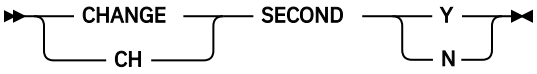
ServerPac ships the link list data sets with no secondary space allocations. The CHange SECOND command allows you to override this and allocate secondary space for these data sets. Only the data sets in the list that were originally shipped with no secondary are eligible to have secondary space allocation changed. This command has no effect on data sets with shipped secondaries. For instance, if you use the CHange SECOND Y command to allocate secondary spaces for data set that were shipped with no secondary space, you can subsequently use the CHange SECOND N command to restore the no secondary

attribute. You cannot, however, use this CHange SECOND N command to restore the no secondary attribute for data sets that were shipped with secondary space allocated.

You can eXclude data sets from this list.

Syntax

CHANGE SECOND



Parameters

Y
Override the no secondary attribute for selected data sets. When you issue the CH SECOND Y command, secondary space is set to a value that is 10% of the primary for the selected data sets shipped with no secondary space.

N
Restore the no secondary attribute for selected overridden data sets.

Restrictions

You can only use these commands with data set that were shipped with no secondary space allocated.

Examples

To override the no secondary attribute for a data set, enter the CHange SECOND command, as in the following example:

```
CH SECOND Y
```

Then, exclude any data sets for which you do not want to change the secondary space attribute and press Enter.

To reverse the preceding action, display only the data sets having a secondary space attribute value of "overridden." Then, enter the CHANGE SECOND command, as in the following example:

```
CH SECOND N
```

CHANGE SMS

Purpose

You can use the CHANGE SMS command to change the SMS management status, as well as the Data Class, Storage Class and Management Class of data sets in your work configuration.

As of the time this book was written, orders shipped from IBM contain no SMS-managed data sets. In most cases, however, the dialog allows you to modify the *SMS status* of a particular data set to indicate that SMS is to manage the data set.

Use valid SMS storage classes for any data sets that you assign to SMS management, and ensure that these classes are defined before running installation jobs that allocate SMS-managed data sets. For information on assigning SMS storage classes, see “Changing an SMS storage class” on page 133.

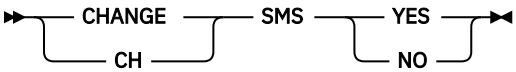
Also, when you later examine the installation jobs, ensure that the SMS attributes assigned by the installation jobs are acceptable and will allow the system to be used if you plan to IPL it.

If you use SMS to manage the data sets in your order configuration, the user ID that you later use to submit the installation jobs requires at least READ access to the FACILITY class profile for STGADMIN.IGG.DIRCAT.

To see which data sets in your configuration are eligible for SMS-management, use the dialog's View and Change Facility.

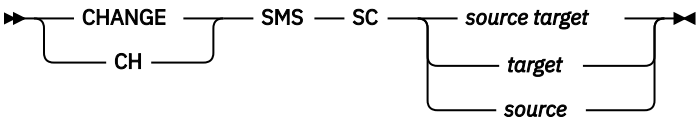
Syntax for changing SMS Management status

CHANGE SMS



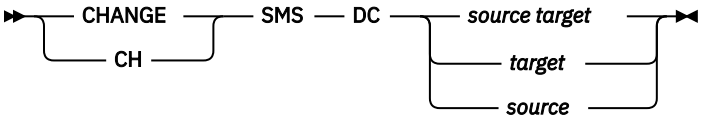
Syntax for changing Storage Class

CHANGE SMS SC



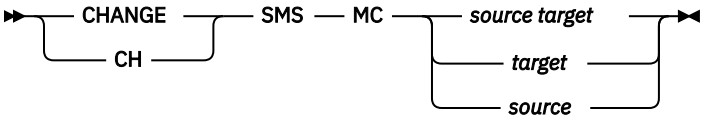
Syntax for changing Data Class

CHANGE SMS DC



Syntax for changing Management Class

CHANGE SMS MC



Parameters

YES
Adds unmanaged data sets to SMS management. YES can be abbreviated as Y and is accepted in any combination of uppercase and lowercase letters.

NO
Removes from SMS management any data sets in the candidate list that are currently managed by SMS. NO can be abbreviated as N and is accepted in any combination of uppercase and lowercase letters.

source target
Specifies that a storage, data, or management class of source should be converted to target.

target
Specifies that data sets with no class should be converted to target storage, data, or management class.

source
Specifies that the data sets with source storage, data, or management class should be converted to no class.

Restrictions

1. You cannot assign data sets that reside on the IPLVOL logical volume to SMS-managed logical volumes.
2. You cannot use the dialog to assign catalogs to SMS management. To use SMS to manage your catalogs, you must take one of the following actions:
   - Modify the ServerPac installation jobs to allocate SMS-managed catalogs
   - Use pre-allocated SMS-managed catalogs
   - Have your ACS routines redirect the allocation of the catalogs to SMS-managed volumes.
3. Be aware that the dialog allows you to change the SMS status for all eligible data sets, regardless of whether such changes make the best sense for your particular installation. Therefore, it is important that you carefully consider the consequences of using SMS to manage your target data sets and operational data sets.
   - For a full system replacement, SMS-managed data sets on your driving system are not easily accessible from the target system before you run the CATCVTM and CATCONV installation jobs. These jobs are described in *ServerPac: Installing Your Order*.
   - SMS-managed data sets on your target system are not easily accessible from the driving system after you run the DELDSN and DELSSA clean-up jobs. These jobs are described in *ServerPac: Installing Your Order*.
   - When you re-assign a data set to SMS management, the dialog does not automatically remove the VOLUME parameter from JCL in all the jobs that allocate or locate the data set. Depending on your SMS configuration, you might have to remove the VOLUME parameter from jobs that allocate or locate SMS-managed data sets.

Examples

To add unmanaged data sets to SMS management, enter the CHANGE SMS command, as in the following example:

```
CH SMS Y
```

This command activates SMS management for any data sets in the candidate list that are not already managed by SMS.

To remove data sets from SMS management, enter the CHANGE SMS command, as in the following example:

```
CH SMS N
```

This command removes from SMS management any data sets in the candidate list that are currently managed by SMS.

To change a source storage class, data class, or management class to a target storage class, data class, or management class, enter the CHANGE SMS SC, DC, or MC as in the following example:

```
CH SMS SC source target
CH SMS DC source target
CH SMS MC source target
```

To change the source storage class, data class, or management class to blank, enter the CHANGE SMS SC, DC, or MC as in the following example:

```
CH SMS SC source
CH SMS DC source
CH SMS MC source
```

On blanking the storage class, it would mean the data sets are managed by SMS ACS routines.

To change the data sets which do not have any assigned storage class, data class, or management class to a target storage class, data class, or management class, enter the CHANGE SMS SC, DC, or MC, as in the following example:

```
CH SMS SC target  *, or CH SMS SC
CH SMS DC target  *, or CH SMS DC
CH SMS MC target  *, or CH SMS MC
```

CHANGE SPACE

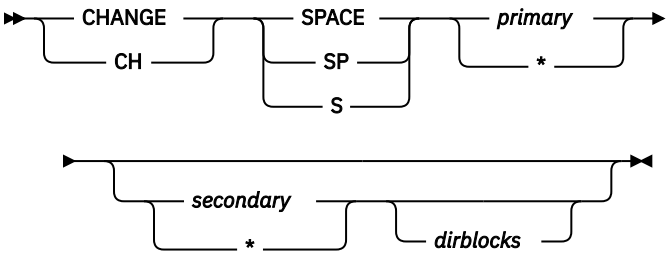
Purpose

You can use the CHANGE SPACE command to change the following values for data sets:

- Amount of primary space
- Amount of secondary space
- Number of directory blocks needed (only for partitioned data sets).

Syntax

CHANGE SPACE



Parameters

primary
Specifies the percentage by which to increase or decrease the current primary space value. The following values are valid:

- To increase the space, specify an integer from +1 through +100 (the prefixed plus sign is optional).
- To decrease the space, specify an integer from -1 through -50 (the prefixed minus sign is required).
- To leave the primary space unchanged while changing other space values, specify an asterisk (*).

secondary
Specifies the percentage by which to increase or decrease the current secondary space value, or specifies a fixed percentage of primary space on which to base the amount of secondary space. The following values are valid:

- To increase the space, specify an integer from +1 through +100 (the prefixed plus sign is optional).
- To decrease the space, specify an integer from -1 through -50 (the prefixed minus sign is required).
- To define the amount of secondary space as a percentage of primary space, specify an integer from P0 through P100 (the prefixed P is required). This amount is based on the current primary space value and will not be recalculated if the primary space is later changed.
- To set secondary space to zero, specify P0.

- To leave the secondary space unchanged while changing other space values, specify an asterisk (*).

IBM recommends increasing the primary space allocation when you use P0.

dirblocks
Specifies the percentage by which to increase or decrease the current number of directory blocks. The following values are valid:

- To increase the space, specify an integer from +1 through +100 (the prefixed plus sign is optional).
- To decrease the space, specify an integer from -1 through -50 (the prefixed minus sign is required).

Restrictions

1. For IBM-supplied data sets, you cannot decrease the primary space allocation to less than the original, shipped amount. If you attempt to do so, the dialog uses the shipped amount instead.
2. For user-defined data sets, you cannot decrease the primary space allocation to less than it was when you first defined it. You can increase the amount, but you cannot reduce it unless you delete the data set and redefine it with a smaller space allocation.
3. If the shipped secondary space allocation for a data set is zero, it means that secondary space is not allowed for the data set. This allocation must remain at zero.
4. You cannot decrease the number of directory blocks for a data set to a value that is less than its original, shipped value. If you attempt to do so, the dialog uses the shipped value instead.

Examples

To increase primary space 25 percent, enter:

```
CH S  25        (or CH S  +25 )
```

To increase the secondary space by 20 percent, enter:

```
CH S  * 20      (or CH S  * +20)
```

To remove the secondary space altogether (for example, for link list eligible data sets), enter the following command:

```
CH S * P0
```

Assume that for all data sets in the current display list, you want to increase the number of directory blocks by 40 percent. Enter the following command:

```
CH S * * 40
```

Assume that for all data sets in the current display list, you want to increase the primary space by 20 percent and the secondary space by 50 percent. Enter the following command:

```
CH S  20 50      (or CH S  +20 +50)
```

Assume that for all data sets in the current display list, you want to decrease the primary space by 10 percent and increase the secondary space by 25 percent. Enter the following command:

```
CH SPACE  -10 25     (or CH S  -10 +25)
```

Assume that for all data sets in the current display list, you want to decrease the primary space by 15 percent and set the secondary space to 40 percent of the primary space amount. Enter the following command:

```
CH SP -15 P40
```

Assume that for all data sets in the current display list, you want to set the secondary space to 30 percent of the primary space amount. Enter the following command:

```
CH S * P30
```

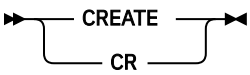
CREATE

Purpose

Use the CREATE command on the Select Configuration panel (described in “Creating the configuration” on page 44) to create a new work configuration from the shipped configuration and any desired saved configurations. The CREATE command processing merges eligible UNIX file system data sets in the shipped configuration when they were merged in a saved configuration and you selected that saved configuration to be merged with the shipped configuration.

Syntax

CREATE



Parameters

None for the CREATE command itself. You can, however, use the Select line command to identify the desired saved configurations that the CREATE command is to use when creating the new configuration.

Restrictions

Saved configuration selection is restricted to those created in the current release or up to three prior releases. For example, if your shipped configuration was created in Dialog Level 18, you can merge it with a saved configuration created in Dialog Level 15, 16, 17, or 18, but you cannot merge it with a saved configuration from Dialog Level 14.

Results

The Select Configuration panel (shown in Figure 34 on page 45) is displayed with the message "Work Configuration Created" if the configuration was successfully created.

FIND

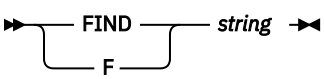
Purpose

The FIND command searches the field specified on the SET command for a character string that matches a specified string. FIND searches from the top of the panel to the bottom. There are two steps to using the FIND command:

1. Enter SET with the desired field.
2. Enter FIND with the desired character string.

Syntax

FIND



Parameters

string
specifies the character string to be found.

Note:

1. FIND is not case-sensitive; both *string* and the field contents are treated as uppercase characters. For example, FIND treats ‘SERV’ as a match for ‘serv’.
2. *string* can begin in any character position of the field; it can be imbedded in the field. For example, FIND treats ‘SER’ as a match for ‘SERV’.
3. FIND has only one comparison operator, EQ, which is also the default.

Results

The FIND command searches the field specified on the SET command for a character string that matches the specified *string*. FIND searches from the top of the panel to the bottom. If a match is found, the panel entry that contains *string* is displayed at the top of the scrollable area.

Examples

1. To search the Customer Name field for ‘FINANCIAL’, enter:

```
SET  CUST
F    FINANCIAL
```

2. If the string contains blanks, enclose it your search argument in quotation marks. For example, the following is a search for ‘AND SHIP’.

```
SET  CUST
F    'and Ship'
```

FINDCOMP

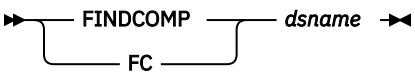
Purpose

If you forget where a particular data set is after you merge it, you can use the FINDCOMP (Find Component) primary command on the Select Values to Display panel to find it among your merged data sets. The FINDCOMP command allows you to search for a data set by either its shipped name or its new name if you renamed the data set during a subsequent phase of the installation.

If you specify a data set that is not a component of a merged data set, the dialog displays the message "component not found."

Syntax

FINDCOMP



Parameters

dsname
Specifies the name of the data set that you want to find.

To search on a fully qualified data set name, enter the complete name of the data set. The dialog displays the name of the merged data set that contains the specified data set.

To search on a partially qualified data set name, enter the first few characters of the data set name and a wildcard (*). The dialog displays a pop-up list of data sets — the "Data Set Selection List" — that match the specified argument.

Examples

For example, entering

```
FC SYS1.M*
```

results in a list of all component data sets beginning with 'SYS1.M,' allowing you to select the desired data set with line command S to obtain the name of the merged data set.

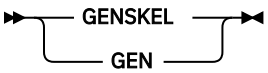
GENSKEL

Purpose

Use the GENSKEL command to tailor all of the installation jobs at one time in the background (rather than individually in the foreground). GENSKEL saves you time during installation and frees your TSO/E session for other tasks while the jobs are being tailored. When GENSKEL completes, the dialog saves the jobs in a backup data set. You can then review and submit jobs from the backup data set. For more information, see “Using GENSKEL to generate the installation jobs” on page 154.

Syntax

GENSKEL



Parameters

None. You supply information needed for the job generation on panels displayed by GENSKEL.

Results

GENSKEL generates the installation jobs for your order and stores them in the SCPPBENU data set.

Examples

Enter GENSKEL to display the panels used to generate the installation jobs.

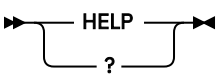
HELP

Purpose

The HELP command invokes the dynamic help, if available, for the current panel.

Syntax

HELP



Parameters

None.

Results

Invokes the dynamic help facility for the current dialog functions (if available).

Examples

If you want more information about the current dialog function, enter ? to invoke the dynamic help facility.

LOCATE

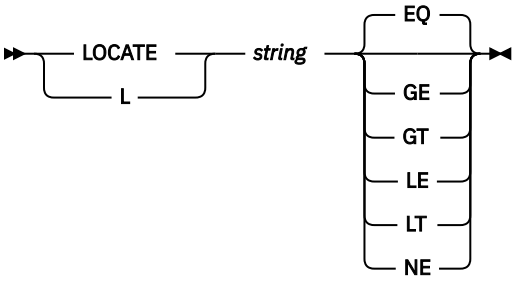
Purpose

The LOCATE command searches the field specified on the SET command for a character string that satisfies the comparison operator. LOCATE searches from the top of the panel to the bottom. There are two steps to using the LOCATE command:

1. Enter SET with the desired field.
2. Enter LOCATE with the desired character string and (optionally) the desired comparison operator.

Syntax

LOCATE



Parameters

string
specifies the character string to be located.

Note:

1. The locate command is case-sensitive. For example, ‘SERV’ does not match ‘serv’.
2. You cannot use LOCATE to find substrings of larger strings. That is, LOCATE does not treat ‘SER’ as a match for ‘SERV’.

comparison operator
The optional comparison operators are displayed in the following list:

Operator
Meaning

EQ
Equal to. EQ is the default value.

GE
Greater than or equal to

GT
Greater than

NE
Not equal to

LE
Less than or equal to

LT
Less than

Results

The LOCATE command searches the field specified on the SET command for a character string that satisfies the comparison operator. LOCATE searches from the top of the panel to the bottom. If a match is found, the panel entry that contains *string* is displayed at the top of the scrollable area.

Examples

1. The following example searches the Package Type field for a character string that matches 'SERV'.

```
SET  P
L    SERV
```

2. The following example searches the SREL field for any character string that does not match 'Z038'.

```
SET  SR
L    Z038 NE
```

3. To search for a string that contains blanks, enclose the search argument in quotation marks. For example, to search the Customer Name field for 'legal services', enter:

```
SET  CUST
L    'legal services'
```

MERGE

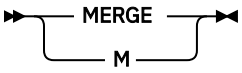
Purpose

Use the MERGE command to merge eligible selected data sets with the merge target data set you selected on a list data set panel. You can also use the MERGE command to merge eligible selected UNIX file system data sets with the merge target UNIX file system data set you selected on a list of data set panel. MERGE is a two-step process:

1. Use the line Merge command from a Data Set List panel such as CPPP605U (Figure 81 on page 98) to select the merge target data set.
2. Select one or more file system data sets from the Data Set Merge Candidates panel such as CPPP605M (Figure 88 on page 105) or CPPP605V (Figure 89 on page 106) to be merged with the target data set, type the primary MERGE command on the panel command line, and press Enter.

Syntax

MERGE



Parameters

None. You select the data set(s) to be merged with the target data set from the merge data set candidate list provided.

Restrictions

These restrictions apply only to merging UNIX file system data sets. Any eligible file system data set is allowed to be a merge target data set. UNIX file system data sets are eligible to be merge component data sets when the merge target data set is either an HFS or zFS data set and the following criteria are met:

- The merge allowed flag is set to Y in the logical volume table for the data set
- The data set is one of the following data sets:
  - The same data set type as the merge target
  - An HFS or zFS data set that is marked as switchable, or
  - The merge target data set has a lower-level mount point.

Results

Eligible selected data sets are merged with the target data set.

Examples

1. A configuration contains the following three UNIX file system data sets at the specified mount points:

   File system data set
   Mount point

   OMVS.A
   /usr/lpp/a

   OMVS.AB
   /usr/lpp/a/b

   OMVS.ABC
   /usr/lpp/a/b/c

   If you select OMVS.A as the merge target on panel CPPP605U, OMVS.AB and OMVS.ABC are displayed as candidates on panel CPPP605V. You can select either OMVS.AB, or both OMVS.AB and OMVS.ABC as valid merge candidates. You cannot, however, select OMVS.ABC as the sole merge candidate because OMVS.AB has an intermediate mount point between OMVS.ABC and the merge target.

   If you select OMVS.AB as the merge target on panel CPPP605U, OMVS.ABC is displayed as the only merge candidate on panel CPPP605V and is the only valid selection.
2. A configuration contains the following three data sets:

   - sys1.data
   - sys1.abcd
   - sys1.efgh

   If you select data set sys1.data as the merge target on panel CPPP605U (Figure 81 on page 98), sys1.abcd and sys1.efgh are displayed as eligible merge candidates on panel CPPP605M (Figure 88 on page 105). You can select either or both of the data sets listed using the **S**elect command. Once you have made your selection, enter the primary **M**erge command to merge the data sets.

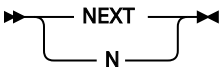
NEXT

Purpose

Use the NEXT command to repeat the last FIND or LOCATE command, searching forward.

Syntax

NEXT



Parameters

None.

Results

If a match is found, the panel entry that contains the character string is displayed at the top of the scrollable area

Examples

If you had previously entered the following commands:

```
SET  SR
L    Z038 NE
```

Then NEXT would search forward in the SREL field for any character string that does not match ‘Z038’.

OFILE

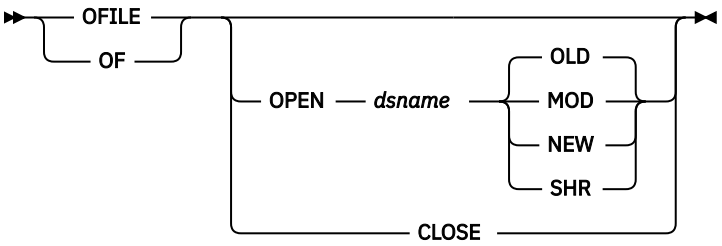
Purpose

The OFILE command writes the currently displayed data set list to a user-defined file. There are three steps to using the OFILE command:

1. Enter OFILE with the OPEN keyword to dynamically allocate the user file and open it
2. Enter OFILE without any keywords to send the list of data sets to the file.
3. Enter OFILE with the CLOSE keyword to close the file and free the dynamic allocation.

Syntax

OFILE



Parameters

dsname
is a fully-qualified data set name (enclosed in single quotation marks). If you do not enclose the data set name in quotes, your TSO/E PROFILE PREFIX is used as the high-level qualifier.

CLOSE
Specifies that the data set identified by *dsname* is to be closed and to free the dynamic allocation. CLOSE can be abbreviated as C.

OPEN
Specifies that the data set identified by *dsname* is to be dynamically allocated and opened for output by the OFILE command.

OLD
Specifies that the data set identified by *dsname* is an existing data set that is to be overwritten with the new data set list. OLD is the default.

MOD
Specifies that the data set identified by *dsname* is either an existing data set, to which the new data set list is to be appended, or a new data set, to which the list will be written.

NEW
Specifies that the data set identified by *dsname* is a new data set, which will be allocated and cataloged.

SHR
Specifies that the data set identified by *dsname* is an existing data set that is to be overwritten with the new data set list.

Results

The output data sets written by OFILE are in fixed block (FB) format with a record length (LRECL) of 120 bytes. The record format is displayed in the following table:

Columns	Field size	Description
1–44	44	Data set name
45	01	Data set merged flag
46	01	Data set changed flag
47–50	04	Record format (RECFM)
51–54	04	Data set organization (DSORG)
55–59	05	Logical record length (LRECL)
60–64	05	Reserved for IBM use
65–70	06	Logical volume
71–78	08	Physical volume or SMS storage class
79–82	04	Device number
83–90	08	Generic or esoteric unit name
91–98	08	Device type
99–102	04	Space required (in cylinders)
103–120	18	Reserved for IBM use

When the OFILE command is issued from panel CPPP6071, however, the output data set is written in (VB) format with a LRECL of 7086.

Examples

Here are the three steps required to send the list of data sets to a new file:

1. Enter `OFILE OPEN "MY.OFILE.TEXT" NEW` to open a new file "MY.OFILE.TEXT".
2. Enter `OFILE` without any keywords to send the list of data sets to "MY.OFILE.TEXT".
3. Enter `OFILE CLOSE` to close and free "MY.OFILE.TEXT".

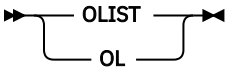
OLIST

Purpose

This command, abbreviated as OL, writes the list of data sets to the ISPF LIST data set. For more information about ISPF LIST data sets, see *z/OS ISPF User's Guide Vol I*.

Syntax

OLIST



Parameters

None.

Results

Same as OFILE output.

Examples

Enter OLIST to write the list of data sets to the ISPF LIST data set.

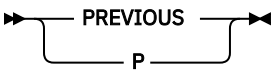
PREVIOUS

Purpose

Use the PREVIOUS command to repeat the last FIND or LOCATE command, searching backwards.

Syntax

PREVIOUS



Parameters

None.

Results

If a match is found, the panel entry that contains the character string is displayed at the top of the scrollable area

Examples

If you had previously entered the following commands:

```
SET  SR
L    Z038 NE
```

Then PREVIOUS would search backwards in the SREL field for any character string that does not match ‘Z038’.

REPLACE

Purpose

When issued from a selected job in the "Job Selection list" panel, the REPLACE command saves the contents of the selected JOB into an existing member of the backup library, SCPPBENU.

Syntax

REPLACE

Parameters

None.

Results

When the session ends, the member is replaced into the SCPPBENU data set.

Restrictions

The REPLACE command replaces members in the SCPPBENU library only. You can, however, use the ISPF Edit CREATE command to create members in other libraries.

Examples

To save the contents of the current edit session into an existing member of the backup library, select the JOB from the "Job Selection list" panel and enter REPLACE. The message "REPLACE BACKUP DEFERRED" appears. When the session ends, the new member is replaced in the backup library, SCPPBENU.

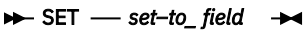
SET

Purpose

The SET command specifies the field to be acted on by the FIND and LOCATE primary commands. The SET command is not available on some panels.

Syntax

SET



Parameters

set–to_ field
specifies the column heading or synonym for the field to which the FIND and LOCATE primary commands are to apply. The available *set–to_ fields* vary from panel to panel.

Note: Some column headings have synonyms that you can use with the SET command. Synonyms are identified in uppercase letters in the column heading. See “Examples” on page 200 for an example of using synonyms with the SET command.

Results

The column heading for the current SET field is displayed in turquoise. Subsequent FIND and LOCATE commands will operate on the current SET field.

Examples

Enter SET OID if you want the FIND command to find an order number on the panel.

SORT

Purpose

For panels with sortable fields, the SORT command specifies the field by which the display should be sorted and, optionally, whether the sorted field should be displayed in ascending or descending order.

Syntax

SORT

Parameters

sort field
specifies the column heading or synonym for the field by which the display is to be sorted. The available *sort fields* vary from panel to panel.

Note: Some column headings have synonyms that you can use with the SORT command. Synonyms are identified in uppercase letters in the column heading. See "Examples" on page 200 for an example of using synonyms with the SORT command.

A or D
specifies the order in which the specified field is to be sorted:

A
Sort the display by the specified field in ascending order

D
Sort the display by the specified field in descending order

Note:

1. If neither A nor D are specified, the display will be sorted using the sequence that was pre-programmed for the specified field.
2. Usually, the Date field is pre-programmed so that the most recent date is shown first, with earlier dates following in descending order.

Results

The SORT command sorts the display by the specified field in ascending or descending order. The column heading for the current SORT field is displayed in yellow.

Examples

Suppose you want to sort the panel shown in Figure 157 on page 201 by customer name in ascending order.

```
 CustomPac ----------- Sample Panel Display MODE(TE) -------  ROW &cont;
1 TO 12 OF 99
 COMMAND ==>                                                   SC&cont;
ROLL ==> PAGE

 Primary Commands:(? SET Locate Find Next Previous SORT VErbose)
 Line Commands:(Browse Delete Edit Select)

 S Order ID  Pack  SREL  CUSTomer                                STAtus
 - --------  ----  ----  ---------------------------------      ------
   MD010001  SERV  Z038  HERMANS ASSURANCE, LTD.                 R
   MD010022  CRS   C150  EELLS ARCHITECTURAL DESIGN              R
   MD010023  SERV  Z038  T. HOOD USABILITY, INC.                 F
   MD010032  EXPDD Z038  LAMASTRO CONTAINERS AND SHIPPING        R
   MD010048  SERV  Z038  DAYNE-TRONICS                           R
   MD010057  EXPDD Z038  ESMAT TECHNICAL SUPPORT                 R
   MD010059  SERV  Z038  EELLS ARCHITECTURAL DESIGN              R
   MD010068  SERV  Z038  HARRIGAN MANAGEMENT CORP.               R
   MD010069  SERV  C150  WALLE BUILDING AND SUPPLY CO.           A
   MD010070  CPP   Z038  B-MAZURIK FINANCIAL SERVICES           R
   MD010083  CPP   Z038  CORNELL LEGAL SERVICES                  F
   MD010101  CPP   Z038  LANDER O'BRIEN PARTNERSHIP              I
```

Figure 157. Sample panel for SORT example

To do this, enter:

```
SORT CUST A
```

where CUST is the synonym for the Customer field and A specifies ascending order. Likewise, you could sort this panel by the Order ID field in descending order with this command:

```
SORT OID D
```

SUMP

Purpose

Use the SUMP command to displays the Summary of Physical Volumes panel, which lists the physical volumes that are referred to by your system. Use this panel to change device numbers and device types. This panel is described in “Displaying a summary of physical volumes” on page 130.

Syntax

SUMP

Parameters

None.

Results

The Summary of Physical Volumes panel is displayed.

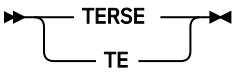
TERSE

Purpose

Use the TERSE command to display the panel with only one line of information for each item. Terse display mode remains active until you enter a VERBOSE command. TERSE is valid only for panels that have both a terse and verbose mode.

Syntax

TERSE



Parameters

None.

Results

The panel is displayed with only one line of information for each item.

Examples

See Figure 4 on page 9 and Figure 5 on page 9 for examples of a panel in terse and verbose mode.

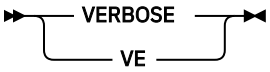
VERBOSE

Purpose

Use the VERBOSE command to display the panel with multiple lines of information for each item. Verbose display mode remains active until you enter a TERSE command. VERBOSE is valid only for panels that have both a terse and verbose mode.

Syntax

VERBOSE



Parameters

None.

Results

The panel is displayed with more than one line of information for each item.

Examples

See Figure 4 on page 9 and Figure 5 on page 9 for examples of a panel in terse and verbose mode.

Appendix B. Diagnostic messages

This appendix describes the CustomPac installation dialog messages.

The message number has the following format:

- Program prefix (CPP)
- Four-digit CustomPac program number
- Three-digit message number within the specific program
- Severity

  I
  Information

  W
  Warning

  E
  Error

  S
  Severe error

CPP0149009S Allocation failed for dataset *dsname*

Explanation

The dialog could not allocate data set *dsname*. The data set's volume is offline or no default volume/unit setup has been defined for the system on which the dialog is running.

System programmer response

Manually preallocate the data set or vary the volume online.

CPP0149117S RC from LISTDSI=17, System or user abend occurred.

Explanation

The dialog encountered an internal error when you attempted to save the 'create configuration report' output. As a result, the system did not save your report configuration data.

System programmer response

Check your order's work configuration for a LOG report data set from a previous order. If an older LOG report data set exists, delete the data set and retry the operation. If this problem persists, contact IBM Support for assistance.

CPP0601001E Configuration is INCOMPLETE or CORRUPTED

Explanation

You requested that a merged configuration be created, but the saved configuration SCPPTENU library does not contain all of the tables needed for a full saved configuration, or the library is corrupted. The library is missing one or more of the following members:

- CPPDEVT
- CPPITBL
- CPPVTBL

System programmer response

If the work configuration that you used to create the saved configuration is still available, take these actions:

1. Ensure that the order's status is "S" (started). If not, change the order's status to "S" on panel CPPP6074 (entered by using line command E from CPPP6071, after getting the list by selecting Option "O" (orders) on CPPPPOLI).
2. Resave the order.
3. Use the newly-saved configuration for the merge.

CPP0601002E In addition to the MASTER configuration, ONLY ONE Saved Configuration is allowed for MERGE, De-Select those not required

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Explanation

You selected more than one saved configuration to be merged with the shipped order configuration, which is not allowed.

System programmer response

Select only one saved configuration to be merged with the order.

CPP0601003I Config Request CANCELLED

Explanation

You requested that the configuration is to be created, however one or both of the following conditions exist:

- A configuration already exists.
- You attempted to create a merged configuration.

These conditions required confirmation, which was refused.

System action

The configuration was not created.

System programmer response

None.

CPP0601004I WORK Configuration Created

Explanation

The order's work configuration has been created successfully.

System programmer response

None.

CPP0601005E Data set NOT Allocated '*dsname*', *sys-msg*

Explanation

You attempted to create a merged configuration, however the saved or master configuration library could not be allocated.

System programmer response

Determine why the library (*dsname*) was not allocated. See message *sys-msg*. If the data set has been deleted, restore it from your system backups.

CPP0601006I Report output has been saved in data set '*dsname*'

Explanation

You used the SAVE command to save the output of the Create Configuration process in the specified data set, *dsname*.

System programmer response

None.

CPP0601007E A JES element must be selected for its zones to be merged.

Explanation

You specified that a JES element's SMP/E zones were to be merged with the BCP zones, but you did not select the JES element for installation. You must select the JES element for installation if you plan to merge its zones.

System programmer response

Do either of the following:

- If you want to install the JES element, select it for installation and determine whether to merge its zones with the BCP zones.
- If you do not want to install the JES element, do not choose the option to merge its zones.

For considerations about merging JES zones, see “Selecting a JES for the configuration” on page 41.

CPP0601008E Yes or No (Y/N) must be selected for each merge option. Only one Y is acceptable.

Explanation

You selected one or both of the JES elements for installation, but did not specify Y or N for all the merge options available for its SMP/E zones.

System programmer response

Specify Y or N for all the merge options available for the SMP/E zones. Specify only one Y because the merge options are mutually exclusive.

For considerations about merging JES zones, see “Selecting a JES for the configuration” on page 41.

CPP0601009E Configuration selected for merge is not supported.

Explanation

You chose a saved configuration from a level of the dialog that is no longer supported. Only configurations

saved within three releases of the current dialog are supported.

System action

Saved configuration is not selected.

System programmer response

Do either of the following:

- Select a supported level of a saved configuration.
- Choose to base the new configuration on the shipped configuration only.

CPP0602001E NOT a Valid Catalog Data Set Name

Explanation

You entered a catalog data set name that is not valid.

System programmer response

Correct the catalog data set name.

CPP0602002S Catalog information for at least one entry is INVALID or NOT DEFINED

Explanation

At least one alias is associated with an invalid catalog data set name or the catalog data set name has not yet been defined.

System programmer response

Enter a valid catalog data set name for all aliases.

CPP0602003I Changes to the TABLE have been SAVED

Explanation

Your changes to the order's alias-to-catalog relationships have been saved.

System programmer response

None.

CPP0602004I Processing CANCELLED by User *<changes>*

Explanation

You entered the CANCEL command; your changes to the order's alias-to-catalog relationships were discarded.

<changes> might show more information, such as the message: "CHANGES TO THE TABLE WERE NOT SAVED".

System programmer response

None.

CPP0602005E DELETE Request Refused, This Alias Is NOT USER DEFINED, It is Needed By CustomPac to Install Your Package

Explanation

You attempted to delete an HLQ that was not user-defined in the alias option. You can delete only user-defined aliases.

System programmer response

To get rid of a shipped HLQ, you must use Modify System Layout to rename all the data sets that use it.

CPP0602006W Catalog Connection FORCED to MCAT, Either Alias MUST be in Master Catalog or Master Catalog DSNAME Specified

Explanation

The catalog data set name you specified is the master catalog's data set name. Or, one or more data sets named using this high-level qualifier must be cataloged in the master catalog. All of the data sets beginning with this high-level qualifier will be cataloged in the master catalog.

CPP0602007I Changes to the Alias-to-Catalog Relationships REQUIRE you to Re-evaluate your SSA to Catalog Relationships

Explanation

Changes that you have made to the order's alias-to-catalog relationships require you to synchronize your changes with the SSA-to-catalog relationships.

System programmer response

Repeat the Define SSA-to-Catalog Relationships function.

CPP0602008E Only ONE Master Catalog Can be Defined

Explanation

You have already defined a data set name for the master catalog. You cannot have a master catalog with more than one catalog data set name.

System programmer response

If you wish to use a different catalog data set name for the master catalog, enter line command N for the catalog data set name that is marked as the master catalog. Then, enter line command M for the correct catalog data set name to mark it as the master catalog.

CPP0602009E Command "*option*" is INVALID for this Alias

Explanation

You entered a line command, where *option* is M or N as follows:

- M - Mark master catalog
- N - Unmark master catalog.

However, the catalog target for the selected alias would conflict with what is expected by CustomPac. You cannot change this entry because the installation dialog requires it to be in the master catalog.

System programmer response

Review your change request.

CPP0602010E You Cannot Change the Catalog Name for this Line Command

Explanation

You entered a line command and also changed the catalog data set name, which caused a command conflict. The original catalog data set name has been retained.

System programmer response

Enter the line command with the catalog data set name unchanged.

CPP0602014E The DRIVER catalog CANNOT be specified as the TARGET master catalog.

Explanation

The variable named *OLD MASTERCAT*, which is the name of the Driving System Catalog, cannot match the Target System Master Catalog defined under the Alias panel.

System programmer response

Verify this variable in the Variables panel and if necessary, update it to the Master Catalog name on the Driving System. You should then be able to go back to the Alias panel and update the Master Catalog to your desired value.

CPP0602017W The MCAT name is not the same as OLD MASTERCAT name identified in the V option. Please ensure you have entered the correct MCAT name.

Explanation

For the Software Upgrade installation path, it is expected that the Master catalog name is same as Driving System Master Catalog. Please verify the catalog name. If it is different than the Driving System Master Catalog, unpredictable results may occur.

System action

None.

System programmer response

Use the Full System Replace installation path if you want to use a separate Master Catalog, otherwise use Master Catalog name as per Variable OLD MASTERCAT value.

CPP0603002S SSA Information for at least one entry is INVALID or NOT DEFINED

Explanation

At least one catalog data set name has not yet been associated with an SSA (system-specific alias), or the catalog definition has not been supplied.

System programmer response

Enter a valid SSA or catalog definition for all catalog data set names.

CPP0603003E If Catalog is to be Allocated, then the SSA must be defined

Explanation

You specified that the catalog is to be allocated, but have not specified an SSA (system-specific alias) for the catalog.

System programmer response

Supply an SSA so that the selected catalog can be accessed by the driving system through the master catalog of the target system.

CPP0603004I Changes to the TABLE have been SAVED

Explanation

Your changes to the order's SSA-to-catalog relationships have been saved.

System programmer response

None.

CPP0603005I Processing CANCELLED by User *<changes>*

Explanation

You entered the CANCEL command; your changes to the order's SSA-to-catalog relationships were discarded.

<changes> might show more information, such as the message: "CHANGES TO THE TABLE WERE NOT SAVED."

System programmer response

None.

CPP0603006E Cannot Change Catalog VOLSER unless you also ALLOCate the Catalog

Explanation

You specified that the catalog is not to be allocated, but you have changed the DASD volume serial. This action caused a conflict of information.

System programmer response

To allocate the catalog, set the ALLOC CATALOG field to Y.

CPP0603007E You are trying to allocate a CATALOG without SSA definition. This is allowed ONLY for SUB-Systems and FunctionPac.

Explanation

You did not specify an SSA definition. An SSA definition can be omitted only for a subsystem or FunctionPac installation.

System programmer response

Specify an SSA definition.

CPP0603011E SSA name is TOO long. This catalog has a data set (*dsname*) with a length of *length*, which limits the SSA to *max-length* characters.

Explanation

During SSA assignment, it was detected that the combined length of the SSA name specified, plus the data set associated with this SSA, exceeded the maximum of 44 characters. The name of the data set with the longest name is identified by *dsname*. Based on this length, the length of the SSA cannot be longer than *max-length* characters.

System programmer response

Shorten the length of the SSA definition to the specified maximum, or return to the Modify System Layout function of the dialog and change the name of the data set so that the combined length of data set and SSA does not exceed 44 characters.

CPP0603012W Conflicting units stored for *volume*. This must be resolved to proceed beyond the SSA option. Press Enter to continue.

Explanation

The unit specified for volume *volume* does not match the value that was previously specified for this volume when defining or altering another SSA. Only one unit should be specified for any particular volume.

System action

None.

System programmer response

You must resolve this mismatch before you can proceed beyond the SSA dialog option. Press Enter or End to accept the unit specified or select a different unit. If you accept a mismatched unit, you must resolve the mismatch. Specify the same unit for all entries for the same volume.

CPP0604001S Configuration is INCOMPLETE or CORRUPTED

Explanation

The order configuration SCPPTENU library does not contain all tables needed for a full work configuration, or is corrupted.

At least one of the following tables is missing from the library:

NEWDEVT
Device types table

NEWITBL
Installation jobs table

NEWVTBL
Installation variables table

System programmer response

Review the order configuration SCPPTENU library.

CPP0604002E You CANNOT Save to the ORDER Configuration Library

Explanation

The high-level qualifiers that you have specified plus one of the low-level qualifiers would result in a data set name that is the same as your order configuration libraries.

The order configuration libraries have the following low-level qualifiers:

- SCPPSENU
- SCPPTENU

For example, suppose that you received your order into the following libraries:

- STOB4.MD000277.SCPPSENU
- STOB4.MD000277.SCPPTENU

and you specified a high-level qualifier of STOB4.MD000277.

System programmer response

Specify a different high-level qualifier.

CPP0604003E HLQ Specified is NOT available, it is Used by Order *ordernum*

Explanation

The high-level qualifiers that you have specified are used by another order *ordernum*.

System programmer response

Save the configuration to a unique set of configuration libraries. Specify the high-level qualifiers for the order configuration libraries.

CPP0604004E Data set NOT Allocated '*dsname*', *system-message*

Explanation

The saved order configuration libraries could not be allocated.

System programmer response

Review the message *system-message* to determine why data set *dsname* was not allocated.

System programmer response

None.

CPP0604005I SAVE Request CANCELLED

Explanation

The saved configuration libraries already contain a valid configuration. To continue with the save request, the older configuration must be deleted. This required confirmation, which was refused. As a result, nothing was saved.

System programmer response

None.

CPP0604006I SAVE Request SUCCESSFUL

Explanation

The work configuration was successfully copied to a saved or master configuration.

System programmer response

None.

CPP0604018E Enter EITHER a volume serial or a STORCLAS.

Explanation

On the SAVE Configuration panel, either:

- You entered a volume serial and a STORCLAS, or,
- You did not enter a volume serial or a STORCLAS.

Data is required in one of these fields.

System action

None.

System programmer response

Enter data in one, and only one, of these two fields. For a non-SMS-managed data set, enter the volume serial for an online volume and leave the STORCLAS field blank. For an SMS-managed data set, specify a STORCLAS that is defined on your system, and leave the Volume Serial field blank.

CPP0604019E **Not enough space on volume *volser*. *nnnnn* cylinders free, *nnnnn* cylinders required.**

Explanation

The volume you specified does not have enough space for the data set size you specified. The volume serial you specified, the volume free space, and the amount of space you specified are contained in the message.

System action

None.

System programmer response

If you specified more space than is required, try specifying less space. Otherwise, specify a volume with enough free space to allocate the data set.

CPP0604020E **Volume not found online. Specify an online volume.**

Explanation

The volume you specified is not online.

System action

None.

System programmer response

Either specify an online volume, or use the VARY command to bring the specified volume online.

CPP0604021I **Configuration libraries exist. SORCLAS of *dsname* is *storclas1*. STORCLAS updated from *storclas2* to *storclas1***

Explanation

The storage class you specified do not match with the storage class of the existing configuration data set. The STORCLAS field on the SAVE Configuration panel is updated with the actual STORCLAS value of the configuration data set.

System action

None.

System programmer response

None.

CPP0604022I **Configuration libraries exist. Volume Serial of dsname is *volser1*. Volume Serial updated from *volser2* to *volser1***

Explanation

The volume you specified do not match with the volume of the existing configuration data set. The Volume Serial field on the SAVE Configuration panel is updated with the actual volume of the configuration data set.

System action

None.

System programmer response

None.

CPP0605001I **CustomPac LVT has been INITIALIZED With SHIPPED Values**

Explanation

All data sets were restored to their original, shipped values. Any customization that you might have done has been lost.

System programmer response

None.

CPP0605002I **RESTORE Confirmation has been denied, SHIP Command will NOT be Executed**

Explanation

Your request for all data sets to be restored to their original, shipped values was canceled because you did not confirm your request.

System action

The data sets remain at their current values.

System programmer response

None.

CPP0605003I Changes to the TABLE have been SAVED

Explanation

Your changes for the logical volume table have been saved to the order table library.

System programmer response

None.

CPP0605004I Processing CANCELLED by User *<changes>*

Explanation

You entered the CANCEL command; your changes to the logical volume table were discarded.

<changes> might show more information, such as the message: "CHANGES TO THE TABLE WERE NOT SAVED."

System programmer response

None.

CPP0605005S At least one physical volume has problems which need to be resolved.

Explanation

One or more of the specified volumes has a problem that you must resolve before you can continue with the installation. In the panel, these volumes are indicated by '*nnn*<<*n*' and an associated message.

System programmer response

See the description of the associated message.

If you have completed the ServerPac installation, you may get this message if you return to the Modify System Layout option and have used "Initialize Volume" of 'N' for your physical volumes. In this case, you must set "Initialize Volume" to 'Y' to end the option without error. Setting the option to 'Y' will stop the Modify System Layout process from checking space on the volumes.

If the remaining installation options still appear as incomplete with an asterisk ('*') after exiting the Modify System Layout process, you must reselect and exit each completed option on CPPPFLOW in turn to return to the Installation Screen. Review the completed options to make sure that they are still correct.

CPP0605006I VOLUME is NOT Available, It is Already Defined to CustomPac

Explanation

You attempted to assign a physical volume by changing the volume serial number, but the volume serial number you entered is already defined to CustomPac.

System programmer response

Assign the physical volume to a volume serial number that is not defined to CustomPac.

CPP0605007I ADDRESS is NOT Available, It is Already Defined to CustomPac

Explanation

You attempted to assign a physical volume by changing the device address, but the device address you entered is already defined to CustomPac.

System programmer response

Assign the physical volume to a device address that is not defined to CustomPac.

CPP0605008E Missing or invalid device type.

Explanation

The device type you specified for the volume was not defined to the dialog, or you did not specify a device type for the volume when one was required.

System action

None.

System programmer response

Depending on the value that you specified for the DYNAMIC DASD INFO variable, do one of the following:

- If DYNAMIC DASD INFO is set to YES, the dialog attempts to retrieve information about devices dynamically. To allow this action to complete, either make the device for the specified volume available (for example, vary it online) or specify a valid device type.

- If DYNAMIC DASD INFO is set to NO, either specify a valid device type or use the Device Type Table option of the Modify System Layout function to define a device of the correct type and return to this panel to specify the device type.

To see the list of currently-defined devices, enter a question mark (?) in the Device Type field or enter the DEVT command on the command line and press Enter.

CPP0605009E PHYSICAL VOLUME(*p-vol*) is NOT an IPL Pack, BUT the LOGICAL VOLUME(*l-vol*) Contains IPL DATA SETS

Explanation

You attempted to assign a logical (*l-vol*) to a different physical volume (*p-vol*), but the logical volume contains data sets that must reside on the system IPL volume. The physical volume is not the system IPL volume, so you cannot use it with this logical volume.

System programmer response

Assign the logical volume to the physical volume that is the system IPL volume.

CPP0605010E PHYSICAL VOLUME(*p-vol*) IS an IPL Pack, BUT the LOGICAL VOLUME(*l-vol*) Does NOT Contain IPL DATA SETS

Explanation

You attempted to assign a logical volume (*l-vol*) to a physical volume that is the system IPL volume (*p-vol*). However, the logical volume contains data sets that do not reside on the system IPL volume.

You cannot use the system IPL volume for this logical volume. The system IPL volume is reserved for data sets that must reside on the system IPL volume.

System programmer response

Assign the logical volume to a different physical volume.

CPP0605011E LOGICAL VOLUME(IPLVOL) is RESTRICTED, It CANNOT be ASSIGNED, or be the Target of an ASSIGNMENT

Explanation

Logical volume IPLVOL is a reserved logical volume that contains data sets that must reside on the system IPL volume. Therefore, you cannot use IPLVOL as the source or target of an assignment.

System programmer response

Correct and resubmit your assignment request.

CPP0605013W PHYSICAL VOLUMES are Referenced that DO NOT have a valid DEVICE ADDRESS (CCUU) Assigned, << RUN THE SUMP COMMAND >>

Explanation

Some data sets are mapped to physical volumes that do not have a valid device number (CUU). A physical volume must have a valid hexadecimal device number.

System programmer response

Enter the SUMP command and assign valid device numbers.

CPP0605014E DUPLICATE DATA SET NAME, Data set Name is Already Used by CustomPac

Explanation

You attempted to use an existing data set name, which is not allowed.

System programmer response

Specify a different data set name.

CPP0605015E DUPLICATE DATA SET NAME, Data set Name is an ORIGINAL SHIPPED Data set Name

Explanation

You attempted to use the original, shipped data set name of another data set, which is not allowed.

System programmer response

Specify a different data set name.

CPP0605017E INVALID BLKSIZE, Data Set is UNBLOCKED, RECFM is F .. BLKSIZE must be LRECL

Explanation

You specified a DCB RECFM of F, but the BLKSIZE is not the same as the LRECL. For RECFM=F data sets, the BLKSIZE must be the same as the LRECL.

System programmer response

Reset the BLKSIZE to match the LRECL.

CPP0605018E INVALID BLKSIZE, Data Set is UNBLOCKED, RECFM is V .. BLKSIZE must be LRECL + 4

Explanation

You specified a DCB RECFM of V, but the BLKSIZE is not the same as the LRECL + 4. For RECFM=V data sets, the BLKSIZE must be the same as the LRECL + 4.

System programmer response

Reset the BLKSIZE to match the LRECL + 4.

CPP0605019E INVALID BLKSIZE, RECFM is F .. BLKSIZE must be a MULTIPLE of the LRECL

Explanation

You specified a DCB RECFM of F, but the BLKSIZE is not a multiple of the LRECL. For RECFM=F data sets, the BLKSIZE must be a multiple of the LRECL.

System programmer response

Reset the BLKSIZE to a multiple of the LRECL.

CPP0605022W High Level Qualifier has CHANGED, You MUST Re-Evaluate the ALIAS to CATALOG and SSA to CATALOG Relationships

Explanation

You changed the high-level qualifier of the data set. The new high-level qualifier is not defined in the Alias-to-Catalog Table.

System programmer response

Rerun the Alias-to-Catalog and SSA-to-Catalog functions.

CPP0605023E Missing or invalid device type.

Explanation

Either the device type you specified for the volume was not defined to the dialog, or you did not specify a device type for the volume when one was required.

System action

None.

System programmer response

Do **one** of the following:

- If you have the DYNAMIC DASD INFO variable set to YES, to indicate that the dialog should retrieve information about devices dynamically, you must either make the device for the specified volume available (for example, vary it online) or specify a valid device type. You can enter a question mark (?) in the Device Type field or enter the DEVT command on the command line and press Enter to see the list of currently-defined devices.
- If you have the DYNAMIC DASD INFO variable set to NO, you must either specify a valid device type or use the Device Type Table option of Modify System Layout to define a device of the correct type and then return to this panel to specify it. You can enter a question mark (?) in the Device Type field or enter the DEVT command on the command line and press Enter to see the list of currently-defined devices.

CPP0605024I Data set Profile UPDATED

Explanation

You changed the data set profile. Your changes are stored in a temporary table until you save them or complete the Modify System Layout function of the installation dialog.

System programmer response

None.

CPP0605026E INVALID RECFM

Explanation

You entered an invalid record format.

System programmer response

Enter a valid RECFM (U, FB, FA, FM, FS, VB, VA, VM, VS).

CPP0605027E LOGICAL VOLUME(CSIVOL) IS RESTRICTED, It CANNOT be Assigned, or be the Target of an ASSIGNMENT

Explanation

Logical volume CSIVOL is reserved; you cannot use it as the source or target of an assignment (you can, however, assign CSIVOL to another physical volume).

System programmer response

Correct your assignment request and resubmit it.

CPP0605028S INVALID Data Set Name OR INVALID Symbolic Syntax

Explanation

You attempted to change the data set name using a symbolic variable, but after symbolic substitution, the resulting data set name does not pass syntax checking.

System programmer response

Either the fixed portion of the data set name is invalid, or the symbolic variable is in error. To correct the symbolic variable, return to the V (Define Installation Variables) function of the dialog and reassign the variable.

CPP0605029E Symbolics are NOT ALLOWED for the High level or Low level Qualifiers

Explanation

You cannot use symbolics for high-level qualifiers or low-level qualifiers.

System programmer response

Use symbolics for the middle level qualifiers only.

CPP0605031E Global CHANGE, Incorrect Option.

Explanation

You entered the CHANGE command with an incorrect option.

The following options are valid: DSN, LV, TYPE, SPACE, SMS, RENAME, PVOL, MCAT, SECOND.

System programmer response

Enter a valid change command. For correct syntax, see “Making changes to data sets” on page 101.

CPP0605032E Global CHANGE, Missing Parameter(s)

Explanation

Your entered the CHANGE command without specifying one or more required parameters.

The following parameters are valid: DSN, LV, TYPE, SPACE, SMS, RENAME, PVOL, MCAT, SECOND.

System programmer response

Reenter the command, including all required parameters. For examples, see “Making changes to data sets” on page 101.

CPP0605033E Global CHANGE, Unknown Parameter(s) "*parm*"

Explanation

You entered the CHANGE command with one or more incorrect parameters, which are indicated by *parm*.

System programmer response

Enter the command with valid parameters. For examples, see “Making changes to data sets” on page 101.

CPP0605034I Global CHANGE, NO Data matched your Selection Criteria

Explanation

The data set list was searched to apply your changes, but no matching data sets were found.

System programmer response

Review your change requirements.

CPP0605035I Global CHANGE was CANCELLED by user or all changes were excluded

Explanation

The data set list was searched to apply your changes and some matches were found. However, you entered the CANCEL command or excluded all data sets from the candidate list. Therefore, no changes were made.

System programmer response

None.

CPP0605036E Global CHANGE, Incorrect Parameter "*parm*"

Explanation

The CHANGE command parameter shown in *parm* is incorrect.

System programmer response

Correct the parameter and enter the CHANGE command again.

CPP0605037E Global CHANGE, Value OUT OF RANGE "*parm*"

Explanation

The CHANGE SPACE parameter shown in *parm* contains a value that is outside the allowable range.

System programmer response

Correct the parameter and enter the CHANGE command again.

CPP0605038I GLOBAL CHANGE, ALL Data that Matched Your selection Criteria resulted in Invalid Substitution, Nothing Changed

Explanation

The data set list was searched to apply your changes. Some data sets were found to match your selection criteria, but the CHANGE command would cause an invalid substitution. Therefore, no changes were made.

For example, suppose you entered the following:

```
      CH DS AB DAPPLET
```

and a data set was named SYS1.CABS. If the change were applied, it would result in SYS1.CDAPPLETS, which would be an invalid substitution because CDAPPLETS is an invalid data set name.

System action

The system ignores your request.

System programmer response

Review your change requirements.

CPP0605040E INVALID Data set Name or Data set Name Not Defined

Explanation

The OFILE OPEN data set name you have entered is not valid.

System programmer response

Correct the OFILE OPEN data set name.

CPP0605041E INVALID Member Name

Explanation

You entered the OFILE OPEN command with an incorrect member name.

System programmer response

Reenter the command with the correct member name.

CPP0605042E INVALID Data set DISPosition or NOT Supplied (OLD, SHR, NEW, MOD)

Explanation

The OFILE OPEN data set disposition is not valid, or the default of OLD was used and the data set does not exist.

System programmer response

Correct the OFILE OPEN data set disposition. You can use OLD, SHR, NEW, or MOD. By default, the disposition is OLD.

CPP0605043E INVALID Data set DISPosition NEW and MOD are NOT allowed for a MEMBER

Explanation

The OFILE OPEN data set disposition was NEW or MOD, and you specified a member as part of the data set name. You must use OLD or SHR if you specify a member name.

System programmer response

Correct the OFILE OPEN data set disposition.

CPP0605044E Data set ATTRIBUTES are INCOMPATIBLE with the OFILE Command

Explanation

The OFILE data set has DCB attributes that are incompatible with the output record.

System programmer response

Review the DCB attributes of the data set you are trying to use for the output of the OFILE command. The OFILE data set must be compatible with RECFM=F LRECL=120.

CPP0605045I Data set OPEN SUCCESSFUL

Explanation

The OFILE output data set is open and available for your use.

System programmer response

To write the data set list to the OFILE data set, enter the OFILE command without parameters.

CPP0605046E Data set OPEN FAILED

Explanation

The OFILE output data set was not allocated or failed to open correctly.

System programmer response

If you attempted to open the data set as NEW, verify that the data set does not already exist. If you tried to open the data set as SHR or OLD, verify that the data set exists and is not in use by another user or job.

Also, review the DCB attributes of the data set that you are attempting to use for the output of the OFILE command. The OFILE data set must be compatible with RECFM=F LRECL=120.

CPP0605047I OFILE Output Data set IS ACTIVE '*dsname*'

Explanation

The OFILE output data set *dsname* is open and available for your use.

System programmer response

None.

CPP0605048I Data set CLOSED

Explanation

The OFILE output data set is now closed, and can be accessed by other users or jobs.

System programmer response

None.

CPP0605049E Data set OPERATION INVALID or NOT DEFINED (OPEN CLOSE)

Explanation

You entered the OFILE command incorrectly.

System programmer response

Reenter the OFILE command correctly, as displayed in the following list

- To open the OFILE data set, enter OFILE OPEN *data set.name disposition*
- To write the OFILE data set, enter OFILE without parameters
- To close the OFILE data set, enter OFILE CLOSE

CPP0605050I OFILE Output Data set is NOT ACTIVE (Use OPEN)

Explanation

You entered the OFILE write output data set command, but the output data set is not open.

System programmer response

Use the OFILE OPEN command to open the output data set. Enter OFILE OPEN *data set.name disposition*.

CPP0605051I Data set List SAVED to '*dsname*'

Explanation

The data set list has been written to data set *dsname*.

System programmer response

Close the output data set through the OFILE CLOSE command.

CPP0605052I Data set List SENT to ISPF LIST Data Set

Explanation

The data set list has been written to the ISPF list data set.

System programmer response

You can dynamically close the ISPF list data set through the ISPF LIST command. Otherwise, the data set is freed when your ISPF session is ended.

CPP0605053E INVALID command Parameters, Specify 'USER, SHIPPED, or MERGED' (Can be abbreviated to U, S, or M)

Explanation

You entered the SUMD primary command to display the Summary of Data Sets panel. However, you included an incorrect filter with the SUMD command.

Valid filters are displayed in the following list:

(blank)
Display all data sets.

M
Display only merged data sets.

S
Display shipped data sets and merged data sets.

U
Display only user-defined data sets.

System programmer response

Reenter the SUMD command. To filter the display output, specify a valid filter (U, S, or M) after the SUMD command.

CPP0605055S Actual device type attributes do not match those specified.

Explanation

You specified a device type or device number that does not match the volume's actual device type or device number.

System action

None.

System programmer response

Specify the correct information for the volume, including its device type and device number.

CPP0605057W Volume (*volume*) largest free space overallocated.

Explanation

The combined size of the data sets to be allocated on this volume is greater than the size of the largest free extent on the volume.

In the panel, the volume is indicated by 'EXT<<W'.

System action

Processing continues.

System programmer response

To ensure that all data sets fit on the volume, do one or both of the following:

- Consolidate the free space on the volume into a smaller number of extents. (For example, run the DFSMSdss DEFRAG command to create a smaller number of free extents.) This might create a large enough free space extent to allocate the data sets currently assigned to this volume.
- Reduce the number of data sets defined in the configuration that are identified to be allocated on the volume. For example, move some of the existing data sets on the volume to another volume; or, if they are not needed, delete them.

CPP0605058S Volume (*volume*) information not retrievable.

Explanation

Information about the volume *volume* could not be retrieved.

In the panel, the volume is indicated by 'VOL<<S'.

System action

The dialog prevents you from installing the order until you resolve this condition.

System programmer response

Ensure that the specified volume has been initialized, has a VTOC index, and is online. If so, rebuild the volume's VTOC index through the ICKDSF BUILDIX command and try again to use the volume.

If the DYNAMIC DASD INFO variable was set to "Y" and it is acceptable for volumes to be offline, select each volume (with the Select line command) in turn and respond to the resulting CPP0605087W message.

If this message persists after you rebuild the VTOC index, contact IBM for support.

CPP0605059S Volume (*volume*) is overallocated.

Explanation

The number of cylinders to be allocated on volume *volume* exceeds the total number of cylinders for the volume.

In the panel, overallocated physical volumes are indicated by 'OVR<<S'.

System action

The dialog prevents you from installing the order until you resolve this condition.

System programmer response

There are several ways to resolve this condition:

- Specify another volume that has greater capacity.
- Use the SUMP command to select a device type that has a larger capacity.
- Move data sets from the overallocated volume to another physical volume, or add a new volume for the data sets. See the topic, "Recommended Data

Set Placement" in *z/OS Planning for Installation* for assistance in determining which data sets to move.

- If this message is displayed after you have run the ALLOCDS job (as described in *ServerPac: Installing Your Order*), and you have not changed the data set layout since last using the Modify System Layout function, you can resolve the condition by resetting the 'Initialize Volume' field from N to Y.
- If the volume resides on a device with a reconfigurable size (and the DYNAMIC DASD INFO variable is set to Yes), exit the panel, reconfigure the volume, and retry the operation.

For help in changing the device type or moving a data set to another physical volume, see the descriptions that accompany Figure 123 on page 132.

To add another volume, use the dialog's View and Change facility (or the CH PVOL command) to move the data sets to another volume. If DYNAMIC DASD INFO is set to Yes and the volume is online, the dialog will determine how full the new volume is. If it is set to No, and the volume already exists in the configuration, the dialog will determine how full the new volume is. Otherwise, the new volume will have to be defined (on panel CPPP625D or CPPP605J).

CPP0605060I Driving System DFP level is *dfplevel*.

Explanation

This message identifies the level of DFSMSdfp being used on the driving system.

System action

None.

System programmer response

None.

CPP0605061E SPACE value CANNOT be LESS than SHIPPED VALUE.

Explanation

You attempted to decrease the space for a shipped data set to less than its original, shipped amount. This action is not allowed.

System action

Your request is ignored.

System programmer response

Resubmit your request, specifying an amount of space that is equal to, or greater than, the original, shipped amount.

CPP0605062E DIRECTORY blocks CANNOT be LESS than SHIPPED VALUE.

Explanation

You attempted to decrease the number of directory blocks for a shipped data set to less than its original, shipped number. This action is not allowed.

System action

Your request is ignored.

System programmer response

Resubmit your request, specifying a number of directory blocks that is equal to, or greater than, the original, shipped number.

CPP0605065W The configuration contains one or more PDSE or HFS data sets. SMS activation is required on the driving system.

Explanation

The shipped configuration contains one or more PDSE or HFS data sets. These data sets cannot be allocated because SMS is not active on the driving system. SMS must be active in at least a null configuration.

System action

Dialog processing stops.

System programmer response

To complete the Modify System Layout option, you can do either of the following:

- Reset all PDSE data sets in the configuration to PDS data sets, if the PDSE data sets are eligible to be converted (for details, see “CHANGE DSNTYPE” on page 179).
- Exit the installation dialog and activate SMS on the driving system. Return to the dialog at the Modify System Layout option.

CPP0605069E Invalid combination of data set types specified for the CHANGE TYPE command.

Explanation

You entered the CHANGE DSNTYPE command incorrectly. This command allows changing between PDS and PDSE data sets, and between HFS and zFS data sets. Other combinations are not allowed (for example, changing a PDS to a zFS).

System action

The system ignores your request.

System programmer response

Use the correct syntax of the CHANGE DSNTYPE command. For information, see Appendix A, “Primary command reference,” on page 175.

CPP0605071E Only Y(es) and N(o) allowed for CHANGE SMS Command

Explanation

You entered a CHANGE SMS command without a valid operand. The only operands allowed for CHANGE SMS are Y, YES, N and NO. Other operands are not supported.

System action

Command is not accepted.

System programmer response

Enter the command with a valid operand.

CPP0605072E Physical Volume and Storage Class are mutually exclusive.

Explanation

You entered both a physical volume and a storage class for the logical volume being assigned. Only one may be specified.

System programmer response

Specify either a physical volume or a storage class, but not both.

CPP0605073E All data sets on a logical volume must be either SMS-managed or unmanaged. Change either the logical volume or the value of SMS-managed.

Explanation

Mixing SMS-managed data sets and non-SMS data sets on the same logical volume is not allowed. A volume can be either SMS-managed or unmanaged, but not both.

System action

Modify System Layout cannot be completed.

System programmer response

To complete Modify System Layout, do either of the following:

1. Change the logical volume name to specify a volume whose SMS status matches the data set's SMS status
2. Change the volume's SMS status to match the data set's SMS status.

CPP0605074E Logical Volume *to-vol* does not match SMS-managed status of logical volume *from-vol*

Explanation

You entered the command: CH LVOL *from-vol to-vol*, but the data sets represented by logical volume *from-vol* have different SMS attributes than the data sets represented by logical volume *to-vol*. The change request is ignored.

System programmer response

Ensure that the data sets represented by *from-vol* and *to-vol* have matching SMS attributes, and enter the CHANGE command again.

CPP0605075E Physical Volume OR Storage Class is required.

Explanation

Neither a physical volume nor a storage class was assigned. You must assign the logical volume to either a physical volume or a storage class before leaving this panel.

System programmer response

Assign either a physical volume or a storage class to this logical volume.

CPP0605076E Name not allowed. Specify SM*xxxx* for SMS-managed logical volumes. Do not specify SM*xxxx* for unmanaged volumes.

Explanation

You attempted to rename a logical volume. However, the name you chose violates one or more of the following naming conventions for logical volumes:

- For SMS-managed data sets, logical volume names must start with the letters SM and be 3 to 8 characters long.
- For non-SMS-managed data sets, logical volume names must not begin with the letters SM and must be 6 characters long.

If you want to change the SMS management status of a logical volume, you must apply the change to the individual data sets on the volume or through the SUML command for the entire logical volume.

System action

The operation is disallowed.

System programmer response

Specify a valid name, according to the logical volume naming conventions, or change the SMS management status of the volume, if appropriate.

CPP0605077E Invalid syntax. The correct syntax is: CH PVOL TARGET|DLIB| OPERATIONAL *new_volume*

Explanation

You entered the CHANGE PVOL command incorrectly.

System action

None.

System programmer response

Use the correct syntax, as shown in the text of the message. For an example of how to enter the CHANGE PVOL command, see CHANGE PVOL.

CPP0605078E Invalid syntax. The correct syntax is: CH RENAME Y|N

Explanation

You entered the CHANGE RENAME command incorrectly.

System action

None.

System programmer response

Use the correct syntax, as shown in the text of the message. For an example of how to enter the CHANGE RENAME command, see Appendix A, “Primary command reference,” on page 175.

CPP0605079E Data set *dsname* would exceed 44 characters.

Explanation

The CHANGE command you specified would cause one or more data set names to exceed the maximum allowable length of 44 characters. The first of the data set names that would have exceeded 44 characters is shown.

System action

None.

System programmer response

Enter a CHANGE command that does not attempt to create data set names longer than 44 characters. VSAM and zFS data sets are restricted to 40 characters. Non-VSAM and zFS data sets are restricted to 42 characters.

CPP0605080E Unmatched or too many SS selections. Two or no SS selections allowed.

Explanation

Your SS block commands are mismatched. Enter them in pairs.

System action

None.

System programmer response

Enter the select command, as listed below:

- To display a single data set, enter one S command.
- To display data sets for a range of values, use a pair of block select commands. That is, enter SS next to the first value and SS next to the last value.
- To display data sets for a range of values, and for values outside the range, use a pair of SS commands to select the largest range, and individual S commands to select the additional values for which data sets are to be displayed.

CPP0605081I No values were found to display.

Explanation

Your search resulted in no matches.

System action

None.

System programmer response

None.

CPP0605082E No value was selected.

Explanation

You entered the LIST primary command, but did not specify a value to display.

System action

None.

System programmer response

Select a value before entering the LIST command.

CPP0605083E Invalid syntax. The correct syntax is: CH MCAT Y|N

Explanation

You entered the CHANGE MCAT command incorrectly.

System action

None.

System programmer response

Use the correct syntax, as shown in the text of the message. For an example of how to enter the CHANGE MCAT command, see “CHANGE MCAT” on page 181.

CPP0605084E Physical Volume *volume* is already in use as a Storage Class.

Explanation

When assigning a logical volume to a physical volume, you entered a physical volume name that matches an existing SMS storage class name, which is not allowed.

System action

None.

System programmer response

Specify a physical volume name that is not the same as the name of a storage class.

CPP0605085E Storage Class *storage-class* is already in use as a Physical Volume.

Explanation

When assigning a logical volume to a physical volume, you entered an SMS storage class name that matches an existing physical volume, which is not allowed.

System action

None.

System programmer response

Specify a storage class name that is not the same as the name of a physical volume.

CPP0605086I Device information updated

Explanation

The dialog successfully retrieved device information for the volume for which you specified the volume serial. The device type and device number were set from the retrieved information. If you entered "No" in the "Initialize Volume" field, available space on the volume was set using the amount of free space actually found.

System action

None.

System programmer response

None.

CPP0605087W Device information could not be retrieved for volume *volume*.

Explanation

Because the `DYNAMIC DASD INFO` variable was set to `Yes`, the dialog attempted to retrieve device information for the volume for which you specified the volume serial. However, the information could not be retrieved.

System action

None.

System programmer response

If the volume does not exist or is intentionally offline, press the Enter key to bypass the warning. Then, use Option V (Physical Volume Summary) from the Modify System Layout Options panel to specify a device that has been defined in the Device Type Table. To display defined devices or to define a new device, select Option T (View and change device type table) from the Modify System Layout Options panel. If the required device is not defined, exit the panel, define the device, and then retry the operation.

If the volume should be online, ensure that:

- The correct volume serial is specified on the panel.
- The volume is online and available (for example, not pending offline or boxed). If the volume is not online and available, exit the panel and make the volume available. Then, retry the operation.
- The device and control unit are working correctly. For example, check the system log for IOS000I messages that might indicate a problem.

If these actions do not resolve the problem, contact IBM for assistance.

CPP0605088W Device number found for *volume1* conflicts with the device number found for *volume2*. Respecify volume serial or press Enter to continue.

Explanation

You entered a volume serial on the panel while the `DYNAMIC DASD INFO` variable was set to `Yes`. The dialog retrieved the information for the volume, but found that its device number matches a device number already specified for another volume in the configuration.

System action

None.

System programmer response

Do either of the following:

- Respecify the volume serial.
- Press Enter to continue. The device number for the other volume will be set to CCUU. When you complete the panel, use Option V on the Modify System Layout Options panel to correct the device number for the other volume.

CPP0605089E Missing or invalid device number.

Explanation

Either the device number you specified for the volume was invalid, or you did not specify a device number for the volume when one was required.

System action

None.

System programmer response

Do either of the following:

- If you have the DYNAMIC DASD INFO variable set to YES, to indicate that the dialog should retrieve information about devices dynamically, either make the device for the specified volume available (for example, vary it online) or specify a valid device number.
- If you have the DYNAMIC DASD INFO variable set to NO, specify a valid device number.

CPP0605090E Invalid syntax. The correct syntax is CH SECOND Y|N.

Explanation

You typed an incorrect syntax statement for a CHange SECOND command.

Note: Reviewers please note: We try to avoid the use of the word invalid in messages. Incorrect syntax would be better.

System action

No change is made to the data sets.

System programmer response

Reissue the command with the correct syntax.

CPP0605091E Reserved space cannot be greater than *amount*.

Explanation

The value you entered for the reserved space exceeds the amount available on the volume. At least one cylinder must remain unreserved on the volume after the VTOC and VTOC index have been allocated.

System action

None.

System programmer response

Enter a smaller amount of reserved space, or increase the volume's size.

CPP0605092I PDS data sets when changed to PDSE with no secondary space specified will automatically be assigned (10% of primary).

Explanation

When you change a PDS data set with no secondary space to a PDSE data set, ServerPac automatically allocates a secondary space that is 10% of the primary space to the PDSE data set.

System action

The system automatically assigns the secondary space to the switched data set.

System programmer response

None.

CPP0605093I PDSE data sets when changed back to PDS will have their automatic assigned secondary space (of 10% primary) removed.

Explanation

When you change a PDS data set with no secondary space to a PDSE data set, ServerPac automatically allocates a secondary space that is 10% of the primary space to the PDSE data set. If you then change the PDSE data set back to a PDS data set, ServerPac automatically removes the secondary space that it previously allocated.

System action

The system automatically removes the secondary space.

System programmer response

None.

CPP0605094E PDSE data sets must have secondary space specified between 1 and 65536.

Explanation

The secondary space was not correctly specified.

System action

None.

System programmer response

Specify the secondary space between 1 and 65536.

CPP0605097W Your order is already started. To use the changes you made, rerun the installation jobs.

Explanation

The ALLOCDS job has run during ServerPac installation and your order is in the STARTED status. Your changes will only be effective when you rerun the installation jobs.

System action

None.

System programmer response

Rerun the installation jobs.

CPP0605098I The zone name changes will not be propagated when changed again because zone name is not a part of data set name.

Explanation

The new data set name does not include the zone name. When a zone name change occurs, the data set name will not change.

System programmer response

None.

CPP0605099I Data set name includes the zone name, thus subsequent zone name changes will be propagated to this data set.

Explanation

The new data set name includes the zone name. When a zone name change occurs, the data set name will change accordingly.

System programmer response

None.

CPP0605100I Data set is renamed. The zone name remains unchanged.

Explanation

The HLQ of your data set is successfully changed and the zone name remains unchanged.

System programmer response

None.

CPP0605109E Logical Volume IPLVOL cannot be placed on the same physical disk used by the Standalone Dump Bootstrap.

Explanation

You attempted to assign logical volume IPLVOL to the physical volume that is to be used for the standalone dump program. You cannot place the IPL text and the standalone dump program on the same physical volume.

The standalone dump program is placed on the physical volume that contains the data set SYS1.PAGEDUMP.

System programmer response

Specify a different physical volume.

CPP0605110E Logical Volume *l-vol* Cannot be placed on the same physical disk as the System IPL Volume.

Explanation

The physical volume you specified already has logical volume IPLVOL assigned to it. However, the logical volume you attempted to assign to the same physical volume contains data set SYS1.PAGEDUMP.

The standalone dump program must be installed on the physical volume that contains this data set. You cannot have IPL text and the stand alone dump program on the same physical volume.

System programmer response

Specify a different physical volume.

CPP0605150W The configuration contains SMS-managed data sets. SMS activation is required on the driving system.

Explanation

The work configuration contains one or more SMS-managed data sets. These data sets cannot be allocated because SMS is not active on the driving system.

System programmer response

To complete Modify System Layout, do either of the following:

- Change the SMS-managed data sets in the configuration to unmanaged data sets
- Exit the dialog, activate SMS on the driving system, return to Modify System Layout, and continue.

CPP0605200I Data Set merge request successful

Explanation

The component data sets that you selected on the Merge Candidates panel were successfully merged with the target data set.

System programmer response

None.

CPP0605201I Merged data set is now the target for a merge action

Explanation

You have selected a data set to be the target of a data set merge action.

System programmer response

None.

CPP0605202E UNMERGE line command is not allowed for a target data set

Explanation

You attempted to completely unmerge a merged data set. However, the pop-up display permits you to unmerge only individual component data sets.

System programmer response

To completely unmerge a merged data set, you can do either of the following:

- From the current pop-up display:
  1. Enter a U for every component data set.
  2. Press Enter.
- From the Summary of Data Sets panel (you must first exit the pop-up):
  1. Enter a U for the data set to be unmerged.
  2. Press Enter.

CPP0605203W **Merged data set was unmerged. Therefore, you must re-evaluate the alias-to-catalog and SSA-to-catalog relationships**

Explanation

You have unmerged a component data set from a merged data set, causing it to revert to the high-level qualifier it had before it was merged. Therefore, the data set's alias-to-catalog and SSA-to-catalog relationships are also changed.

System programmer response

Reestablish the data set's alias-to-catalog and SSA-to-catalog relationships. For more information, see Chapter 9, “Defining HLQ-to-catalog relationships,” on page 135 and Chapter 10, “Defining system-specific aliases (SSAs),” on page 143.

CPP0605204E **Filesystem *data set 1* cannot be merged because filesystem *data set 2* has an intermediate mount point.**

Explanation

You selected a file system data set (*data set 1*) to be merged into another file system data set. However, a third file system data set (*data set 2*) has a mount point that is hierarchically in between the first two data sets. For example, a data set with a mount point /a/b/c cannot be merged into a data set having mount point /a if another unmerged data set has a mount point of /a/b. In this example, /a would be the mount point of the merged target data set,/a/b/c would be the mount point of the data set you selected to cause the message to be issued, and /a/b would be the mount point of the third data set.

System action

None.

System programmer response

Either:

- Deselect the data set you selected for merging, or
- Select the data set described in the message text in addition to the one you selected for merging.

Note: This message may appear more than once if you choose the second option above and there are one or more other data sets with intermediate mount points.

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CPP0605205E **EXPAND line command may only be used on a merged data set**

Explanation

You have attempted to display the component data sets of a data set that has no component data sets. Only a merged data set has component data sets.

System programmer response

Limit your expansion selections to merged data sets.

CPP0605206I **Merged data set has been unmerged**

Explanation

You have successfully unmerged a merged data set of all of its component data sets.

System programmer response

None.

CPP0605207I **Component data set unmerged**

Explanation

You have successfully unmerged the selected component data set from the merged data set. The merged data set is left with at least one remaining component data set.

System programmer response

None.

CPP0605208I **Last component data set unmerged; therefore, the merged data set is unmerged**

Explanation

You have successfully unmerged the last component data set from the merged data set.

System programmer response

None.

CPP0605209E **Selected data set *dsname* is not valid for merge processing.**

Explanation

The data set you selected (*dsname*) is not eligible for merging.

System programmer response

Review the rules for merging data sets in "Merging and unmerging data sets" on page 104.

CPP0605210E Select at least one data set with the SELECT line command when entering the MERGE primary command

Explanation

You have entered the Merge command for a target data set without selecting component data sets for the target data set.

System programmer response

Enter an 'S' to the left of one or more data sets to select them for merging with the target data set.

CPP0605211E Member conflict exists between two data sets. Data set *dsname1* is merged. Data set *dsname2* is not merged.

Explanation

A data set that you have selected is ineligible for merging because it contains a member name that matches a member of a data set that was previously merged into the target data set.

System action

The data set is not merged. Merge processing continues with the next selected data set.

System programmer response

Review your selection.

CPP0605212E No candidate data sets exist for merging with the target data set

Explanation

You selected a target data set for merging, but no data sets are eligible for merging with it.

System action

The data set is not merged. Merge processing continues with the next selected data set.

System programmer response

Review your selection. The rules for merging data sets are described in "Merging and unmerging data sets" on page 104.

CPP0605213E UNMERGE line command may only be used on a merged data set

Explanation

You have attempted to unmerge a data set that is not a merged data set.

System action

The UNMERGE command is ignored.

System programmer response

Review your selection. If appropriate, choose a different data set for unmerging.

CPP0605214I Component data set has been merged into *merged-dsname*

Explanation

The selected data set has been successfully merged into data set *merged-dsname*.

System action

None.

System programmer response

None.

CPP0605215E Component data set not found

Explanation

The string you entered on the FINDCOMP command does not match any component data sets.

System action

None.

System programmer response

Review your selection.

CPP0605216E Filesystem *data set 1* could not be unmerged because component filesystem *data set 2* includes its mount point.

Explanation

You selected a file system data set to be unmerged from a target file system data set. However, a third file system data set has a mount point that is hierarchically below the first two data sets. For example, a data set with a mount point /a/b cannot be unmerged from a data set having mount point /a if another merged data set has a mount point of /a/b/c. In this example, /a would be the mount point of the merge target data set, /a/b would be the mount point of the data set you selected to cause the message to be issued, and /a/b/c would be the mount point of the third data set.

System action

None.

System programmer response

Either:

- Deselect the data set you selected for unmerging, or
- Unmerge the data set, *data set 2*, first, before unmerging *data set 1*.

Note: This message may appear more than once if you choose the second option above and there are one or more other data sets with dependant mount points.

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CPP0605217W Remerge attempt canceled. Filesystem data set *data set* is unmerged.

Explanation

You attempted to merge another filesystem into an existing file system data set, but the new component could not be merged because an intermediate filesystem mount point existed. The result is an unmerged filesystem due to the error not being corrected.

System programmer response

Either:

- Leave the filesystems unmerged, or
- Retry the merge command, ensuring that you select all filesystems with intermediate mount points.

Note: This message may appear more than once if you choose the second option above and there are one or more other data sets with dependant mount points.

.

CPP0605218E Delete not allowed for IBM-shipped data sets.

Explanation

You attempted to delete an IBM shipped data set. The IBM supplied data set must be available to your order.

System action

The data set is not deleted.

System programmer response

Review your selection.

CPP0605220E Duplicate DDDEF name. DDDEF name is already used by CustomPac.

Explanation

You attempted to use an existing DDDEF name, which is not allowed.

System action

Dialog processing stops

System programmer response

Specify a unique DDDEF name.

CPP0605221E Duplicate mount point path. The mount point path is already used by CustomPac.

Explanation

You attempted to use an existing mount point path, which is not allowed.

System action

Dialog processing stops

System programmer response

Specify a unique mount point path name.

CPP0605222E Invalid Zone nickname value.

Explanation

The zone nickname you specified for the data set is not defined in the Zones table. The zone nickname for the data set must be defined on the 'Define SMPTLIB and Zone Names' panel.

System action

Dialog processing stops

System programmer response

Change the zone nickname to one of the zone nicknames that is defined on the "Define SMPTLIB and Zone Names" panel. You can get the list of valid zone nicknames by typing ? and pressing ENTER against the "Zone Nickname" field on "Define a USER Data Set" panel and then selecting one of the available zones. The "Zone Nickname" field will be populated with the selected zone nickname.

CPP0605223E Delete request failed. *dsname* contains merged data sets.

Explanation

The user-defined data set *dsname* contains merged data sets and cannot be deleted.

System action

The user-defined data set *dsname* is not deleted.

System programmer response

To delete the user-defined data set *dsname*, you have to first completely unmerge the merged user-defined data set. Enter a U against the *dsname* data set to unmerge it and then enter a D to delete it.

CPP0605224E Dialog does not support single qualifier data set. Enter data set name with more than one qualifier.

Explanation

You attempted to use a data set name which contains only single qualifier, which is not supported by the dialog.

System programmer response

Specify a data set name with more than one qualifier.

CPP0605225E Data set name is too long. This data set will be allocated with SSA *ssa_name*, which limits the data set to *data_set_length* characters

Explanation

The length of the data set along with the SSA name exceeds the allowable limit, which is 44 characters.

ssa_name
The user input from the SSA panel (SSA name that user provides).

data_set_length
The length of the data set which will be calculated dynamically depending on the length of SSA.

System programmer response

Provide the SSA name such that the data set name along with the SSA name should not exceed 44 characters.

CPP0605226W Target data set will be SMS managed after the merge

Explanation

When an SMS managed data set is merged into a non SMS managed target data set, the user is notified that the target data set will be SMS Managed.

System programmer response

None.

CPP0605228E There are data set name conflicts that need to be resolved. Go to the SUMMARY OF DATA SETS panel for more information.

Explanation

One or more of the data sets in the configuration has a problem that you must resolve before you can continue with the installation. In the Summary Of Data Sets panel, these data sets are indicated by 'WARN' and an associated message. This message is applicable only for Product ServerPac orders.

System programmer response

See the description of the associated message.

CPP0605229E Data set name already exists in your master catalog; you need to rename them.

Explanation

You are installing a Product ServerPac order and the data sets indicated by ‘WARN’ are already cataloged in the driving system master catalog.

System programmer response

Rename the data sets indicated by ’WARN’ to a name which is not already cataloged in the driving system master catalog.

CPP0605230W **You have already run ALTCAT, which has updated your master catalog, so you should not make any changes on this panel.**

Explanation

You are installing a Product ServerPac order and after running the ALTCAT job, you are going back into the Modify System Layout option.

System programmer response

Do not make any changes to the data set attributes, as the data sets have already been allocated and altered.

CPP0605232I **z/OS UNIX file systems greater than 3.6 GB are in the order. Please review the SMS classes and IYO for more information.**

Explanation

The product order contains z/OS UNIX file systems greater than 3.6 GB.

System programmer response

Review the Data Class populated under SMS Classes (CPPP605R panel). You must ensure that the large zFS file systems are allocated using a data class with extended addressability.

CPP0605233E **Data Class is required for SMS managed ZFS data set larger than 4 GB**

Explanation

Data Class is required for SMS managed ZFS data set larger than 4 GB

System programmer response

Provide a valid Data Class and Storage Class if you want to change the HFS file system greater than 4 GB to zFS.

CPP0605237I **Data set type changed to HFS and the merge request was successful.**

Explanation

This message is displayed when you selected the option to change the target zFS dataset (greater than 4 GB) to HFS in panel CPPP60E1, when the target zFS file system exceeded 4 GB while merging.

System programmer response

No action is necessary.

CPP0605238I **SMS Classes updated and the merge request was successful.**

Explanation

This message is displayed when you select the option "1 - Review and change SMS Classes" on V2R1 driving system or option "1 - Change file system(s) to be SMS Managed with a Data Class" on V1R13 driving system ' in panel CPPP60E1, when the target zFS filesystem exceeded 4 GB while merging.

System programmer response

No action is necessary.

CPP0605240I **Data set attribute change cancelled by User. Data set not converted to zFS.**

Explanation

Request to change a UNIX file system greater than 4 GB, which is allocated as HFS to zFS, is cancelled by the User without providing valid Data Class and Storage class.

System programmer response

Provide a valid Data Class and Storage Class if you want to change the HFS file system greater than 4 GB, to zFS.

CPP0605241E **Global change command for SMS classes can only be used when selecting a single class from the Class Selection view.**

Explanation

If the user selects few classes like both Storage Class and Data Class using block command (SS/SS) or multiple line command ('S') and issues the Global Change command, it will not be executed.

System programmer response

Use only single line command ('S') to select either Storage Class/Data Class or Management Class.

CPP0606002E ***devname*** **is an IBM Supplied Device Type and CANNOT be DELETED**

Explanation

You attempted to delete a device *devname*. This is a standard IBM device definition, which must be available to your order.

System action

This device is not deleted.

System programmer response

Review your selection.

CPP0606003E ***devname* is an IBM Supplied Device Type and CANNOT be UPDATED**

Explanation

You attempted to update a device *devname*. This is a standard IBM device definition, which must be available to your order.

System action

This device is not updated.

System programmer response

Review your selection.

CPP0606004E ***devname* is Assigned to at Least One Physical Volume and CANNOT be *action***

Explanation

You attempted to delete or update a device, *devname*, which is currently referenced by data sets in the logical volume table.

System action

Your request is ignored.

System programmer response

Review your selection.

CPP0606005E ***devtype* is NOT a Known IBM Device Type, Enter the IBM DASD Family Name that is Being Emulated ... EG. 3390**

Explanation

You attempted to insert a new device name and specified that this device name emulates the IBM device that belongs to the DASD family *devtype*. However, ServerPac does not support this DASD family.

System programmer response

Enter a valid DASD family name, such as 3390-9.

CPP0606006E ***devtype* is Already a DEFINED Device, Byte/Trk and Trks/ Cylinder have been FORCED to use the Existing Defined Values**

Explanation

You attempted to change the DASD family emulated by the selected device name to *devtype*. However the bytes per track and tracks per cylinder are not correct for this DASD family.

System action

These attributes are reset to the correct values.

CPP0607001E **INVALID Production DATE**

Explanation

You entered a date with an incorrect format. The date must be in the format DD/MM/YY.

System programmer response

Resubmit the request with the correct date format.

CPP0607002I **OUTPUT Command is NOT AVAILABLE for NON-IBM Orders**

Explanation

You entered the OUTPUT command for a non-IBM order. Non-IBM orders are not installed using the installation dialog; there is no information to display.

CPP0607003I **OUTPUT Command is NOT AVAILABLE for an Order with Status(RECEIVED)**

Explanation

You entered the OUTPUT command for an order in RECEIVED status. However, there is no information to display because the installation jobs have not been run.

CPP0607004E **Order *ordernum* is IBM Supplied, it Cannot be Deleted**

Explanation

You attempted to delete an IBM-supplied order *ordernum*. You cannot delete an IBM-supplied order after you have received it.

System programmer response

To delete the order, receive it again with the replace option.

CPP0607005I Order is Customer Added, it Has NO Product Information

Explanation

You attempted to display the product information for a customer added order. However, such orders have no product information.

CPP0607006I Order has NO Product Information

Explanation

The order you selected has no product information to display.

CPP0607007I Order is Customer Added, it Cannot be Installed

Explanation

You attempted to install a customer added order through the installation dialog. However, you cannot install such orders through the dialog.

CPP0607008W Order *ordernum* is IN USE By Another User, Try Again Later

Explanation

The order you are attempting to install, *ordernum*, is currently in use by another user or session.

System programmer response

Try again later.

CPP0607010W This order cannot be selected because its status is "Installed." To change the status, use Edit.

Explanation

On the Order List panel, you entered a Select line command for an order whose status was set to Installed. Only orders with a status of Received, Started, or **Error** may be selected.

System action

None

System programmer response

To change the order's status, use the Edit line command to display the "ORDER DETAILS" panel, and set the status to Received or Started.

CPP0607011I Delete Of Report Data set was Cancelled by User

Explanation

You attempted to print the details of an order. However one or both of the following conditions occurred:

- You specified a disposition of NEW, but the report data set already exists.
- The DCB attributes of the report data set have changed

These conditions require that the existing report data set be deleted. This required confirmation, which was refused.

System programmer response

Review the report data set.

CPP0607012E Report Data set NOT Deleted, ERROR ENCOUNTERED, RETURN CODE WAS *rc_code*

Explanation

The dialog cannot delete the report data set. The TSO/E DELETE command issued return code *rc_code*.

System action

The report is not deleted.

System programmer response

Review the return code. A list of possible causes follows:

- Data set is in use by another user.
- Data set is protected by a security product
- Data set is cataloged but does not exist on the cataloged volume.
- Data set is archived by a storage product.

Specify a different report data set name and try the request again.

CPP0607013I Report Written to *dsname*

Explanation

The order information was successfully written to the specified report data set *dsname*.

System programmer response

None.

CPP0607014E Report Data set NOT Allocated, *reason*

Explanation

The dialog could not allocate the report data set. In the message, *reason* is one of the following:

- Allocate failed
- Error processing data set
- Invalid data set name
- Missing data set name
- Protected data set
- Unavailable data set
- Unknown return code
- Volume not on system

System action

The report is not produced.

System programmer response

Review the return code. A list of possible causes follows:

- Data set is in use by another user.
- Data set is protected by a security product
- Data set is cataloged but does not exist on the cataloged volume.
- Data set is archived by a storage product.

Correct the problem. Or, specify a different report data set name and try the request again.

CPP0607015E Report NOT Produced, DCB of Report File is NOT Compatible with the Report Record.

Explanation

The DCB of the report data set is not compatible with the report record. The report is written using fixed length 80 byte records.

System action

The report is not produced.

System programmer response

Check the DCB of the report data set. The LRECL must be one of the following:

- LRECL=80, if an FB file is used
- LRECL=84 or greater, if a VB file is used.

CPP0607016E Report Data set is PARTITIONED, a DISPosition of MOD is INVALID

Explanation

Your report data set is partitioned; you cannot specify a disposition of MOD with a PDS.

System programmer response

Review the report data set disposition.

CPP0607017I Synchronization DELETE has Completed Successfully *ordernum*

Explanation

The order you have selected, *ordernum*, has been deleted by another user.

System action

When you entered the installation dialog, a table was created for the current orders. It is possible that, while you were logged on:

- New orders were received
- Old orders were updated or deleted.

These changes are not automatically available to you within the current invocation of the installation dialog.

System programmer response

Periodically, enter the REFRESH primary command to reflect any changes made by other users to the order database.

CPP0607018I Synchronization UPDATE has Completed Successfully *ordernum*

Explanation

The order you have selected, *ordernum*, has been updated by another user.

System action

When you entered the installation dialog, a table was created for the current orders. It is possible that, while you were logged on:

- New orders were received

- Old orders were updated or deleted.

These changes are not automatically available to you within the current invocation of the installation dialog.

System programmer response

Review your request, and resubmit if still required. Periodically, enter the REFRESH primary command to reflect any changes made by other users to the order database.

CPP0607019I Installation Dialogs Version DATE *version*

Explanation

This message indicates the current version of the installation dialog.

System programmer response

None.

CPP0607020E Status Of '*status*' is NOT VALID for the Selected Order

Explanation

You attempted to change the status of an order to *status*, which is not valid for the order.

System programmer response

Choose a valid status code from the following list:

I
Installed

R
Received (not valid for a customer-added order).

S
Started

CPP0607021I NO Orders in the Order Inventory, INSERT Forced or press END to Cancel Processing

Explanation

The order inventory does not contain any orders, the insert facility has been forced so that you can define a customer added order.

System programmer response

Define a customer added order or press the End key to cancel processing.

CPP0607022I NO Orders Matched Your Selection Criteria

Explanation

The order inventory was searched for orders with a status that matched your selection criteria, none were found, there is nothing to display.

System programmer response

Review your selection criteria.

CPP0607023I No orders have been received yet. Use the Receive option to receive an order.

Explanation

You selected either the Install or Display option on the CustomPac Order Management Menu. However, because no orders have been received yet, there are none to install or display.

System programmer response

Use the Receive option to receive an order. After it has been received, the Install and Display options will be available.

CPP0607024I NO Orders Waiting to be Installed

Explanation

There are no orders to be installed.

System programmer response

If you wish to reinstall an order, use the Order Information option to reset the order's status to RECEIVED.

CPP0607025I Change of Status CANCELLED by User

Explanation

You attempted to change the status of an order which would have caused a 'jump' in status. This required confirmation, which was refused. The status was not changed.

System programmer response

None.

CPP0607026E Field Value Cannot be Changed UNLESS the Order Number is ALSO Changed

Explanation

When copying an order, you must maintain the association between the order number and its related field values in the Order panel. For example, you cannot keep the same order number, but change the SREL.

You have changed at least one of the following fields and have not changed the order number:

- Profile number
- SREL
- PAC type
- Customer number
- Customer name

System programmer response

If you wish to use the values you have entered in the fields, you must change the order number. Or, press End to cancel your copy request.

CPP0607030E Message and Help Inventories for this order must be converted to VSAM.

Explanation

The Message Inventory data set (SCPPEENU) and Help Inventory data set (SCPPHENU) for the order you selected are not VSAM data sets. The dialog requires that both data sets be VSAM.

System action

None

System programmer response

Convert the data sets to VSAM data sets. There is a sample job to convert them to VSAM in the CPPCVINV member of the SYS1.*order_number*.DOCLIB data set you use to change them to VSAM.

CPP0607040E Invalid data set name, or data set name not specified

Explanation

The OFILE OPEN data set name you specified is not valid.

System programmer response

Correct the OFILE OPEN data set name.

CPP0607041E Invalid member name

Explanation

You entered the OFILE OPEN command with an incorrect member name.

System programmer response

Reenter the command with the correct member name.

CPP0607042E Invalid data set disposition, or none supplied (OLD, SHR, MOD, NEW)

Explanation

The OFILE OPEN data set disposition is not valid, or the default of OLD was used and the data set does not exist.

System programmer response

Correct the OFILE OPEN data set disposition. You can use OLD, SHR, NEW, or MOD. By default, the disposition is OLD.

CPP0607043E Invalid data set disposition, NEW and MOD are not allowed for a member

Explanation

The OFILE OPEN data set disposition was NEW or MOD, and you specified a member as part of the data set name. You must use OLD or SHR if you specify a member name.

System programmer response

Correct the OFILE OPEN data set disposition.

CPP0607044E Data set attributes are not compatible with the OFILE command

Explanation

The OFILE data set has DCB attributes that are incompatible with the output record.

System programmer response

Review the DCB attributes of the data set you are trying to use for the output of the OFILE command. The OFILE data set must be compatible with RECFM=F LRECL=120.

CPP0607045I Data Set open successful

Explanation

The OFILE output data set is open and available for your use.

System programmer response

To write the data set list to the OFILE data set, enter the OFILE command without parameters.

CPP0607046E Data Set open failed

Explanation

The OFILE output data set was not allocated or failed to open correctly.

System programmer response

If you attempted to open the data set as NEW, verify that the data set does not already exist. If you tried to open the data set as SHR or OLD, verify that the data set exists and is not in use by another user or job.

Also, review the DCB attributes of the data set that you are attempting to use for the output of the OFILE command. The OFILE data set must be compatible with RECFM=F LRECL=120.

CPP0607047I OFILE data set is active '*dsname*'

Explanation

The OFILE output data set *dsname* is open and available for your use.

System programmer response

None.

CPP0607048I Data Set closed

Explanation

The OFILE output data set is now closed, and can be accessed by other users or jobs.

System programmer response

None.

CPP0607049E Data Set operation invalid or not specified (OPEN CLOSE)

Explanation

You entered the OFILE command with an invalid operation.

System programmer response

Reenter the OFILE command correctly, as in the following list:

- To open the OFILE data set, enter OFILE OPEN *data set.name disposition*
- To write the OFILE data set, enter OFILE without parameters
- To close the OFILE data set, enter OFILE CLOSE

CPP0607050I OFILE data set is not active (use OPEN)

Explanation

You entered the OFILE write output data set command, but the output data set is not open.

System programmer response

Use the OFILE OPEN command to open the output data set. Enter OFILE OPEN *data set.name disposition*.

CPP0607051I Order details saved to '*dsname*'

Explanation

The data set list has been written to data set *dsname*.

System programmer response

Close the output data set through the OFILE CLOSE command.

CPP0607052I Order details sent to ISPF list data set

Explanation

The data set list has been written to the ISPF list data set.

System programmer response

You can dynamically close the ISPF list data set through the ISPF LIST command. Otherwise, the data set is freed when your ISPF session is ended.

CPP0607053I FMIDs are not applicable for non SMP/E products

Explanation

You have used the line command F for non SMP/E installable products. FMIDs are not applicable for them.

System programmer response

None.

CPP0608001E Order *ordernum* Already Exists on the Order Inventory and Cannot be Re-Added

Explanation

The order you are receiving, *ordernum*, already exists on the order inventory.

System action

An existing order cannot be re-added.

System programmer response

Check that the batch job to receive the order has not already been run, maybe because of a system failure it has been re-started. Check the order using the Order Information function of the installation dialog. You might have to rerun the Order Receive function, specifying a REPLACE of the current order.

CPP0608002I Order *ordernum* Has been Added to the Order Inventory

Explanation

The order you are receiving, *ordernum*, has been successfully added to the Order Inventory.

System programmer response

None.

CPP0608003I Order *ordernum* has been Deleted, it will be REPLACED by the Received Order

Explanation

You are receiving an order that will replace an existing order.

System action

The existing order is deleted before the new order is added.

System programmer response

None.

CPP0608004I Order *ordernum* Was Specified as REPLACE, but was not found on the Order Inventory. A NEW Order will be Added

Explanation

You specified that an existing order, *ordernum*, was to be replaced by the received order, but the existing order was not found in the order inventory.

System action

The received order is added as a new order.

System programmer response

None.

CPP0608005E Table *table-id* Does NOT Exist in the Order SCPPTENU Table Library

Explanation

The table *table-id*, which forms part of your order shipment, is missing from the SCPPTENU library.

table-id can be either of the following:

CPPOTBL
Order information table

CPPNTBL
Products table

System action

The order cannot be installed.

System programmer response

Check the receive job to ensure the order libraries were allocated correctly and were loaded with data.

If you cannot resolve the problem, contact IBM for assistance.

CPP0608006E Product *prodname*, Already Exists on the Order Inventory for the Current Order and Cannot be Re-Added

Explanation

Product *prodname* already exists in the order inventory of the order you are installing. You cannot re-add an existing product for the same order.

System action

None.

System programmer response

Check that the batch job to receive the order has not already been run (perhaps, it was restarted after a

system failure). Check the order using the Order Information function of the installation dialog. You might need to rerun the Order Receive function, specifying a replacement the current order.

CPP0608007I Product *prodname* Has been Added to the Order Inventory

Explanation

For the received order, product *prodname* was added to the order inventory.

System programmer response

None.

CPP0608008I Order has NO Products for Package *pac-type*

Explanation

Your received order has no products; this situation is normal situation when *pac-type* is one of the following:

- CRMO
- OMIS
- SFS

System programmer response

If you expected your order to have products, contact IBM for assistance.

CPP0608009E Order Number *ordernum1* Passed to Program Does NOT Match the Order Number *ordernum2* From the Order Table CPPOTBL.

Explanation

The order number you specified for receive processing *ordernum1* does not match the order number *ordernum2* shipped by IBM in the order table CPPOTBL.

System programmer response

Try again to receive the order, specifying the correct order number.

CPP0610001E Invalid ORDER Number, MUST be 2 Alpha plus 6 Numeric Characters

Explanation

You entered an incorrect order number.

System programmer response

Enter the IBM order number. This must be two alphabetic characters (A-Z), plus six numeric (0-9) characters.

CPP0610002E MEMBER name is not Allowed

Explanation

You entered a member name as part of the qualifier or data set name, this is not allowed.

System programmer response

Correct your entry by removing the member name.

CPP0610005I RECEIVE Job NOT SUBMITTED

Explanation

You pressed the END key while using the Generate Jobstream panel. Doing so cancels the generation of the installation jobs.

System action

The receive job was not submitted.

System programmer response

To generate the receive job, press Enter in the Generate Jobstream panel.

CPP0610006I RECEIVE Of Order CANCELLED

Explanation

One of the following conditions exists:

- Existing order records were found, and you entered the cancel command while in the Order Selection panel.
- Existing order data sets were found which needed to be deleted. This required confirmation, which you refused.

System action

The order was not received.

System programmer response

None.

CPP0610007I RECEIVE Job SUBMITTED

Explanation

The receive job was correctly generated and automatically submitted to the JES execution queue.

System programmer response

None.

CPP0610009E HLQ is used for an existing Order, Specify another HLQ

Explanation

You entered the same high-level qualifier (HLQ) for more than one order, which is not allowed.

System programmer response

Enter a unique HLQ that you can use to allocate the order libraries. IBM recommends that you include your order number as part of the qualifier to ensure that it is unique.

CPP0610014E Order qualifiers must be different from master dialog qualifiers.

Explanation

The qualifier or qualifiers you entered for the order's dialog data sets was the same as the qualifiers for the master dialog data sets. The master and order dialog data sets must have different qualifiers.

System action

None

System programmer response

Choose a different qualifier for the order's data sets. IBM recommends using the order number as one of the qualifiers for the order's data sets and naming the master data sets without using an order qualifier.

CPP0610016E Server name or address format not valid. Specify a fully-qualified server name or a valid server address.

Explanation

You entered an invalid address or a server name.

System action

None

System programmer response

Either enter the name of a server or specify a valid IPV4, IPV6, or mixed-style address.

The valid format for URLs is documented in RFC 959 and RFC 1123. ServerPac supports only the entry of the *hname* part of the URL.

IPV6 addresses are fully documented in RFC 1884, and have the general format: *xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx*, where each *xxxx* value is the character representation of a hexadecimal sixteen-byte value (for example, FFFF represents X'FFFF').

IPV4 addresses are in the general form *nnn.nnn.nnn.nnn*, where each *nnn* value is a decimal number from 0-255. Mixed-style addressing is documented in the same topic of the RFC, and has the general format: *xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:nnn.nnn.nnn.nnn*, where *xxxx* and *nnn* are defined as above.

Abbreviated forms (as described by the RFC) are also acceptable.

CPP0610018E Enter EITHER a volume serial or a STORCLAS.

Explanation

On the Receive An Order Options panel, either:

- You entered a volume serial and a STORCLAS, or,
- You did not enter a volume serial or a STORCLAS.

Data is required in one of these field.

System action

None

System programmer response

Enter data in one, and only one, of these two fields. For a non-SMS-managed data set, enter the volume serial for an online volume and leave the STORCLAS field blank. For an SMS-managed data set, specify a STORCLAS that is defined on your system, and leave the Volume Serial field blank.

CPP0610019E Not enough space on volume *volser*. *nnnnn* cylinders free, *nnnnn* cylinders required.

Explanation

The volume you specified does not have enough space for the data set size you specified. The volume serial you specified, the volume free space, and the amount of space you specified are contained in the message.

System action

None

System programmer response

If you specified more space than is required, try specifying less space. Otherwise, specify a volume with enough free space to allocate the data set.

CPP0610020E Volume not found online. Specify an online volume.

Explanation

The volume you specified is not online.

System action

None

System programmer response

Either specify an online volume, or use the VARY command to bring the specified volume online.

CPP0610021I Table in use. Try again in a few minutes.

Explanation

One of the tables used on this panel is in use by another user or batch job.

System action

None

System programmer response

Wait a few minutes and try again. If the condition persists, determine which user or batch job is using the master dialog tables. Get the user or job to release the tables and then try again.

CPP0610022E This data set already exists.

Explanation

You entered 'Y' for "Allocate a new file system data set," but the data set name you specified already exists.

System action

None

System programmer response

Do one of the following:

- Specify a unique name for the new data set
- Delete or rename the existing data set and then return to the panel and proceed
- Specify "N" for "Allocate a new file system data set" to use the existing data set.

CPP0610023E The target directory must be the same as the mount point or a subdirectory of the mount point.

Explanation

The target directory cannot be created in the path specified by the mount point.

System action

None

System programmer response

Specify a target directory that is either the same as the mount point or a subdirectory of the mount point.

CPP0610024E Enter EITHER an FTP.DATA file name or a data set name.

Explanation

On the Specify Secure FTP Options panel, either:

- You entered both a File Name and a Data set name, or
- You did not enter a File Name or a Data set name.

System action

None

System programmer response

You must enter a value in either the File Name field or the Data set name field. For a z/OS UNIX file, enter the directory path and file name and leave the Data set name field blank. If your FTP.DATA file is in a data set, specify a valid data set name or a member name, and leave the File Name field blank.

CPP0611001E Cannot Change the Variable Contents, The Variable is CUSTOMISED

Explanation

You attempted to change the value of a customized variable. These variables, as shipped by the CustomPac build process, contain fixed data, such as the order number. You cannot change the values of customized variables.

System action

None; the original value is used.

CPP0611002E You are NOT Allowed to Change the Variable Contents when a Line Command is Issued, Contents Preserved

Explanation

You entered a line command and also attempted to change the data value of the variable, which caused a command conflict. The data value was not changed.

System action

None.

System programmer response

Enter the line command with the data value unchanged.

CPP0611003E INVALID Status *status*

Explanation

You entered the SHOW command with an incorrect status. Valid status values are:

*****
All status values

C
CUSTOMIZED

D
DEFAULT

E
ERASED

I
INSERTED

P
PRE-DEFINED

U
USER-DEFINED

System programmer response

Reenter the SHOW command with a valid status value.

CPP0611004E Literal "==>" is RESERVED for use by CustomPac, It Cannot be used in a User Defined Variable

Explanation

You used the literal ==> within the Synonym field when defining a User Defined variable. This literal is reserved for use by CustomPac.

System programmer response

Change the contents of the Synonym field so that it does not contain the literal ==>.

CPP0611005I RESTORE Request Successful

Explanation

You restored the variable to its shipped value.

System programmer response

None.

CPP0611006I RESTORE Request Cancelled

Explanation

You requested that the variable be restored to its shipped value. This was not done, however, because you did not confirm your request.

System programmer response

None.

CPP0611007I Changes to the TABLE have been SAVED

Explanation

Your changes to the installation variables were saved.

System programmer response

None.

CPP0611008I Processing CANCELLED by User *<changes>*

Explanation

You entered the CANCEL command. Your changes to the installation variables were discarded.

<changes> might show more information, such as the message: "CHANGES TO THE TABLE WERE NOT SAVED".

System programmer response

None.

CPP0611009E Enter an acceptable value for *synonym*.

Explanation

The value you entered for the variable displayed on the panel is not allowed. It is displayed in the Current Value field.

System action

None.

System programmer response

Enter one of the acceptable values listed on the panel.

CPP0611010E Enter value for *synonym*.

Explanation

You entered a blank or null value for the variable displayed on the panel. This field cannot be left blank.

System action

None.

System programmer response

Enter one of the acceptable values listed on the panel.

CPP0611011E Variable value exceeds the maximum allowable length.

Explanation

The length of the variable value mentioned in the 'Installation Variables' panel exceeds the maximum allowable length.

System action

Provide the length of the variable within the allowable limit.

System programmer response

Enter one of the acceptable values listed on the panel.

CPP0612001W User JOB *member-name* EXISTS as a member of the File Tailoring Library, REVIEW The Contents of the Member

Explanation

You attempted to insert a user-defined job into the order skeleton library. However, a member already exists with the same name as the one you are trying to add. The contents of the existing member are displayed.

System action

This is not necessarily an error. It may be that the job previously existed, but was deleted without physically deleting the member.

System programmer response

Review the contents of the member. Determine whether to use the existing member as the target of your inserted job. You will be prompted at a later stage to confirm that this member is to be used.

CPP0612002W User JOB *member-name* EXISTS (with NO records) as a member of the File Tailoring Library

Explanation

You attempted to insert a user-defined job into the order skeleton library. However, a member already exists with the same name as the one you are trying to add. An attempt was made to display the contents of the member, but it contained no records.

System action

This might not be an error. The job might have existed previously, but was deleted without physically deleting the member.

System programmer response

Determine whether to use the null member as the target for the inserted job.

CPP0612003E Command is Only Valid for JOBs

Explanation

You entered a line command for an entry that is not a job. The command is valid for jobs only.

System programmer response

Review your selection.

CPP0612004I This JOB Does NOT Exist in the Backup Data set

Explanation

You requested that the job stored in the backup library be used. However, the job does not exist in the backup library.

System programmer response

Review your selection.

CPP0612005S JOBCARD NOT FOUND OR INVALID

Explanation

You attempted to file tailor a job, but the jobcard member is missing or incorrect.

System programmer response

For the name of the jobcard member, check installation variable F90GXX04. If the jobcard member exists in the order skeleton library, the skeleton probably contains incorrect file tailoring commands. In particular, look for < & | > in the jobcard programmer name field.

CPP0612006S SEVERE ERROR Encountered Whilst Attempting to File Tailor JOB/DOC (STEP=*stepname*)

Explanation

An error was encountered during file tailoring of a job for step *stepname*.

System programmer response

Review the skeletons that you used to create the job. It is unlikely that the problem lies in a shipped CustomPac skeleton, so look first at user-defined jobs. In particular, look for < & | > characters, which have a special meaning to ISPF.

CPP0612007E INVALID Parameter '*parm*', Command Format is 'SS$', 'SS$ INCLUDE' or 'SS$ EXCLUDE'

Explanation

You entered the SS$ command with an incorrect parameter, which is indicated by *parm*.

The following parameters are valid:

- SS$ (which reverses the current value)
- SS$ EXCLUDE
- SS$ INCLUDE

System programmer response

Enter the command with a valid parameter.

CPP0612008E NO Other Commands may be entered when the "SS" Block Command is being used

Explanation

You entered line command SS to select a sequence of jobs to build the installation jobstream, but you also entered other line commands, which caused a command conflict.

System programmer response

Review your selection.

CPP0612009I "SS" Block Command Processed, BUT NO JOBs were Selected

Explanation

You entered line command SS to select a sequence of jobs to build the , but the sequence contained no jobs. Or, you specified EXCLUDE for the SS$ command and the sequence contained only user-defined jobs.

System programmer response

Review your selection.

CPP0612010I ENTER a Matching "SS" Command to Complete the Block Command Pair

Explanation

You entered line command SS to select a sequence of jobs to build the installation jobstream, but you did not specify an ending SS command.

System programmer response

Enter an ending SS line command.

CPP0612011I "SS" Command Conflicts with a Previous "SS" Command, DELETE ONE

Explanation

You entered line command SS to select a sequence of jobs to build the installation jobstream, but you specified more than one pair of SS commands, which caused a command conflict.

System programmer response

Review your selection.

CPP0612012I NO Job Output Found in the Output Library

Explanation

You entered the SUMMARY command before running any jobs. There is no output to browse.

System programmer response

None.

CPP0612013W A BACKUP Member ALREADY Exists for this JOB

Explanation

The job you selected for file tailoring has a backup member in the SCPPBENU data set.

System programmer response

Submit the job. Or, press the End key and enter line command B to display the backup version of the job.

CPP0612014E ERROR Storing Output in SCPPOENU

Explanation

The TSO/E OUTPUT command encountered an error while storing the held output for the selected job. Possible causes include:

- The output from the job is too large. You entered line command SS to create a job with multiple steps.
- The output library SCPPOENU is full or has run out of directory blocks.
- The held output is incomplete.

System programmer response

If you have a spool browsing utility, use it to investigate.

If you use ISPF Option 3.8, it is possible that the error that caused this message will force an error in that utility also.

CPP0612015E ERROR Browsing Output in SCPPOENU

Explanation

An error occurred while trying to browse the member in SCPPOENU that contains the held job output from the selected job.

System programmer response

This error has several possible causes:

- An error occurred while storing the held job output.
- The member that contains the job output exists, but is zero length (contains no records).

CPP0612016E A Member Name is NOT Allowed

Explanation

You entered the GENSKEL command, and on one of the subsequent panels, you specified an ISPF library name with a member name in parentheses. This is not allowed.

System programmer response

Specify the library name without specifying a member.

CPP0612017I GENskel Command Cancelled by USER

Explanation

You entered the GENSKEL command to file tailor the installation jobs in batch mode; however, you ended GENSKEL processing prematurely by pressing the END key.

System programmer response

To tailor the installation jobs in batch mode, enter the GENSKEL command.

CPP0612020I Job removed from selection list and is deleted from the skeleton data set.

Explanation

You deleted a user-defined job from the system. The dialog's Job Selection List panel is updated to show the deletion. Also, the job is deleted from the skeleton data set (SCPPSENU) in which it resided.

System programmer response

None.

CPP0612021I Job removed from selection list, but is retained in the skeleton data set.

Explanation

You deleted a user-defined job from the dialog's Job Selection List panel. The job is retained in the skeleton data set (SCPPSENU) because you did not request deletion of the job.

To delete a user-defined job, you must specify Y in the Delete Skeleton field when you confirm your deletion request (you cannot delete an IBM–supplied job).

System programmer response

None, unless you also want to delete the job itself. Here, you must edit the SCPPSENU data set to remove the job.

CPP0612022W Job removed from selection list, but could not be deleted. Data set is in use or allocated by another job or user.

Explanation

You deleted a job from the Job Selection List, but the dialog could not delete the job from the SCPPSENU data set. A possible cause is that another user or job is currently accessing the SCPPSENU data set. To process this request, the dialog requires exclusive access to the SCPPSENU data set.

System programmer response

If you want to delete the job, exit the dialog and edit the SCPPSENU data set to remove the job.

CPP0612040E INVALID Data set Name or Data set Name Not Defined

Explanation

The OFILE OPEN data set name you have entered is not valid.

System programmer response

Correct the OFILE OPEN data set name.

CPP0612041E INVALID Member Name

Explanation

You entered the OFILE OPEN command with an incorrect member name.

System programmer response

Reenter the command with the correct member name.

CPP0612042E INVALID Data set DISPosition or NOT Supplied (OLD, SHR, NEW, MOD)

Explanation

The OFILE OPEN data set disposition is not valid, or the default of OLD was used and the data set does not exist.

System programmer response

Correct the OFILE OPEN data set disposition. You can use OLD, SHR, NEW, or MOD. By default, the disposition is OLD.

CPP0612043E INVALID Data set DISPosition NEW and MOD are NOT allowed for a MEMBER

Explanation

The OFILE OPEN data set disposition was NEW or MOD, and you specified a member as part of the data set name. You must use OLD or SHR if you specify a member name.

System programmer response

Correct the OFILE OPEN data set disposition.

CPP0612044E Data set ATTRIBUTES are INCOMPATIBLE with the OFILE Command

Explanation

The OFILE data set has DCB attributes that are incompatible with the output record.

System programmer response

Review the DCB attributes of the data set you are trying to use for the output of the OFILE command. The OFILE data set must be compatible with RECFM=F LRECL=120.

CPP0612045I Data set OPEN SUCCESSFUL

Explanation

The OFILE output data set is open and available for your use.

System programmer response

To write the data set list to the OFILE data set, enter the OFILE command without parameters.

CPP0612046E Data set OPEN FAILED

Explanation

The OFILE output data set was not allocated or failed to open correctly.

System programmer response

If you attempted to open the data set as NEW, verify that the data set does not already exist. If you tried to

open the data set as SHR or OLD, verify that the data set exists and is not in use by another user or job.

Also, review the DCB attributes of the data set that you are attempting to use for the output of the OFILE command. The OFILE data set must be compatible with RECFM=F LRECL=120.

CPP0612047I OFILE Output Data set IS ACTIVE '*dsname*'

Explanation

The OFILE output data set *dsname* is open and available for your use.

System programmer response

None.

CPP0612048I Data set CLOSED

Explanation

The OFILE output data set is now closed, and can be accessed by other users or jobs.

System programmer response

None.

CPP0612049E Data set OPERATION INVALID or NOT DEFINED (OPEN CLOSE)

Explanation

You entered the OFILE command incorrectly.

System programmer response

Reenter the OFILE command correctly, as in the following list:

- To open the OFILE data set, enter OFILE OPEN *data set.name disposition*
- To write the OFILE data set, enter OFILE without parameters
- To close the OFILE data set, enter OFILE CLOSE

CPP0612050I OFILE Output Data set is NOT ACTIVE (Use OPEN)

Explanation

You entered the OFILE write output data set command, but the output data set is not open.

System programmer response

Use the OFILE OPEN command to open the output data set. Enter OFILE OPEN *data set.name disposition*.

CPP0612051I Installation Job List SAVED to *dsname*

Explanation

You used the dialog's OFILE primary command to write a list of the installation jobs to the user-defined file, *dsname*.

System programmer response

To close the output data set, use the OFILE CLOSE command.

CPP0612052I Installation Job List SENT to ISPF LIST Data Set

Explanation

You used the dialog's OLIST primary command to write a list of the installation jobs to the ISPF LIST data set.

System programmer response

To close the ISPF list data set now, use the ISPF LIST command. Otherwise, the data set will be released when you end the ISPF session.

CPP0612099S A JOB WAS SUBMITTED BUT THE SUBMIT TRAP COULD NOT INTERPRET THE DATA.

Explanation

On submission, your job issued a message that could not be read by the dialog.

System action

The Installation Jobs function of the dialog cannot run.

System programmer response

If you have a SUBMIT exit active, disable it, or submit the job outside of the dialog. Otherwise, contact IBM for assistance in determining the actual message text and cause of failure.

CPP0615001I Order *ordernum* Status Set to INSTALLED

Explanation

The status of order *ordernum* is now set to INSTALLED. You cannot reenter the dialog for this order until you reset its status to RECEIVED.

System programmer response

None.

CPP0615002I Order *ordernum* Status is Already INSTALLED or FINALIZED

Explanation

The status of order *ordernum* was already set to INSTALLED or FINALIZED. You cannot re-enter the dialog for this order unless you reset its status to RECEIVED.

System programmer response

None.

CPP0616001S LIBRARY(*library-name*) Version Member *member-name* Does NOT Exist

Explanation

In the Upgrade Installation Dialog panel, you specified Starter SET "N", which requires that version members already exist from a previous upgrade. However, library *library-name* does not contain a version member *member-name*.

System programmer response

In the Upgrade Installation Dialog panel, specify Starter SET "Y" to create the version member.

CPP0616005S LIBRARY(*library*) Version Reference to Member *member-name*, Which DOES NOT EXIST

Explanation

The version member in *library* references a member *member-name*, which does not exist. The order cannot be installed.

System programmer response

If the *library* is one of your CustomPac master libraries, it may be corrupted. You might have to restore it from your system backups.

Receive the order again. If the problem reoccurs, contact IBM for assistance.

CPP0616006E A Member Name is NOT Allowed

Explanation

You defined the data set name of one of your installations ISPF libraries, but have included a member name as part of the data set name. A member name is not allowed.

System programmer response

Enter the data set name without the member name.

CPP0616007I Version UPGRADE Cancelled, Order Can NOT be Installed Until the Upgrade Has Completed

Explanation

The order you are trying to install requires that the installation dialog be upgraded to a later version. However, you canceled the upgrade.

System action

You cannot install the order unless you the allow the upgrade to complete.

System programmer response

Review your reasons for cancelling the upgrade. Select INSTALL again, or contact IBM for assistance.

CPP0616009E Invalid DATE, must be YYYYMMDD . . . YYYY must be 1994 or Greater . . . MM and DD must be valid and compatible

Explanation

You specified the date incorrectly, for example:

- You did not enter the full year, such as 2003
- The month and day are not valid
- You entered a date earlier than January 1, 1994.

System programmer response

Specify a valid date in the format YYYYMMDD. Or, specify an "*" (asterisk) to use the current date.

CPP0616010I Installation Dialogs Version Date *version*.

Explanation

The current version of the installation dialog is displayed.

System programmer response

None.

CPP0621001S First parameter *parm* is invalid. Processing stopped.

Explanation

An invalid parameter, *parm*, was specified for the CPPERCDS exec.

System action

Processing stops.

System programmer response

If the failure occurred in the VERIFY job, ensure that CHECK is the first parameter that is passed to the CPPERCDS exec. If the failure occurred in the RECATDS job, ensure that CREATE is the first parameter that is passed to the CPPERCDS exec.

Rerun the step that invokes exec CPPERCDS.

CPP0621002E High level qualifier *hlq* cannot be defined in both existing catalog *oldcat* and catalog *configcat* in the configuration.

Explanation

High level qualifier, *hlq*, is currently defined in a user catalog, *oldcat*, that does not match the name of the catalog in your configuration, *configcat*.

System action

Processing continues.

System programmer response

Do one of the following:

- If the high-level qualifier is defined in the correct existing catalog, use the Alias option of the installation dialog to change the catalog name identified for this high-level qualifier.
- If the high-level qualifier is to be defined in the configuration catalog, delete the alias that points to the high-level qualifier in the driving system.

Restart the job that contains the step that failed.

CPP0621003S The entry for target system master catalog *tmcat* could not be read successfully from *dmcat*.

Explanation

Access method services issued a nonzero return code when CPPERCDS attempted to retrieve the entry for the target system master catalog.

In the message, the variables are:

tmcat
Target system master catalog name

dmcat
Driving system master catalog name

System action

Processing stops.

System programmer response

Determine whether the driving system's master catalog contains an entry for the target system master catalog. If no entry exists, use the access method services IMPORT CONNECT command to create an entry for the target system master catalog.

If an entry exists for the target system master catalog, run the access method services VERIFY command for the driving system master catalog. If VERIFY detects problems, resolve the problems before continuing. Otherwise, contact IBM for assistance.

CPP0621004E High level qualifier *hlq* cannot be in both existing target system master catalog *tmcat* and catalog *configcat* in the configuration.

Explanation

High level qualifier, *hlq*, is currently defined in the master catalog, *tmcat*, which does not match the name of the catalog in your configuration, *configcat*.

System action

Processing continues.

System programmer response

Do one of the following:

- If the high-level qualifier is defined in the correct existing catalog, use the Alias option of the installation dialog to change the catalog name for the high-level qualifier to match the name that was returned from the existing catalog entry.
- If the high-level qualifier is to be defined in the configuration catalog, delete or move the data sets having this high-level qualifier from the master catalog.

Rerun the step that invokes exec CPPERCDS.

CPP0621005I **New high level qualifier *hlq* is associated with catalog *configcat* in the configuration.**

Explanation

High level qualifier, *hlq*, is new. In the message, *configcat* is the name of the configuration catalog.

System action

Processing continues.

System programmer response

Take any actions required for a new high-level qualifier at your installation, such as creating a new security system definition.

CPP0621006E **Device type *oldunit* for data set *dsname* in catalog *configcat* does not match configuration volume device type *configunit* for physical volume *configvol*.**

Explanation

Unit in the catalog entry does not match the unit specified in the configuration for the specified physical volume.

In the message, the variables are listed below:

oldunit
Device type from existing catalog entry

dsname
Data set name

configcat
Configuration catalog name

configunit
Unit from configuration

configvol
VOLSER from configuration

System action

Processing continues.

System programmer response

Do one of the following:

- If the unit value in the configuration for the volume on which this data set resides is incorrect, use the installation dialog to change it.

  Observe the following:

  – If this message was issued by the VERIFY job, you must file tailor all jobs again. If you used the GENSKEL primary command to file tailor the jobs, use GENSKEL again. Rerun the step that invokes exec CPPERCDS.

  – If this message was issued by the RECATDS job, rerun the installation jobs starting with the VERIFY job. Otherwise, subsequent job steps will fail.

- If the unit value is changing in the catalog entry, determine whether the change affects data set entries in catalogs on an active system. If so, determine whether to make copies of the affected catalogs and then change the copies.

  For information about making copies of catalogs, see *z/OS DFSMS Managing Catalogs*.

CPP0621007E **Volume *oldvol* for data set *dsname* in catalog *configcat* does not match configuration volume *configvol*.**

Explanation

The VOLSER in the catalog entry does not match the VOLSER specified in the configuration.

In the message, the variables are listed below:

oldvol
VOLSER from existing catalog entry

dsname
Data set name

configcat
Configuration catalog name

configvol
VOLSER from configuration

System action

Processing continues.

System programmer response

Do the following:

- If the volume in the configuration on which this data set resides is incorrect, use the installation dialog to change it.

  Observe the following:

  – If this message was issued by the VERIFY job, you must file tailor all jobs again. If you used the GENSKEL primary command to file tailor the jobs, use GENSKEL again. Rerun the step that invokes exec CPPERCDS.

  - If this message was issued by the RECATDS job, rerun the installation jobs starting with the VERIFY job. Otherwise, subsequent job steps will fail.
- If the volume value is changing in the catalog entry, determine whether the change affects data set entries in catalogs on an active system. If so, determine whether to make copies of the affected catalogs and then change the copies.

  For information about making copies of catalogs, see *z/OS DFSMS Managing Catalogs*.

CPP0621008E **Volume *oldvol* for data set *dsname* in catalog *configcat* does not match symbol *symvol* that was defined in P2IMAP for physical volume *configvol*.**

Explanation

An existing data set entry is indirectly cataloged. The symbol that is specified in the existing data set entry does not match the symbol specified in P2IMAP for the physical volume on which this data set resides.

In the message, the variables are listed below:

oldvol
VOLSER from existing catalog entry

dsname
Data set name

configcat
Configuration catalog name

symvol
Symbol for extended indirect cataloging

configvol
VOLSER from configuration.

System action

Processing continues.

System programmer response

Do one of the following:

- If the symbol specified in P2IMAP is incorrect, edit the P2IMAP member of the *orderhlq*.SCPPSENU data set and correct the symbol. Rerun the step that invokes exec CPPERCDS.
- If the symbol specified in P2IMAP is correct, the catalog entry is changing. Determine whether the change affects any data set entries in catalogs on an active system. If so, determine whether to make copies of the affected catalogs and then change the copies.

  For information about making copies of catalogs, see *z/OS DFSMS Managing Catalogs*.

CPP0621009E **Data set *dsname* in catalog *configcat* was indirectly cataloged using symbol *oldvol*. However, the catalog entry will be changed from indirect because no symbol was defined for physical volume *configvol* in P2IMAP.**

Explanation

Indirect cataloging is used for existing entry *dsname*. However, a symbol was not specified in P2IMAP for the physical volume on which this data set resides. As a result, the data set entry is no longer cataloged with indirect referencing.

In the message, the variables are listed below:

dsname
Data set name

configcat
Configuration catalog name

oldvol
VOLSER from existing catalog entry

configvol
VOLSER from configuration

System action

Processing continues.

System programmer response

Do one of the following:

- If the physical volume in the P2IMAP member of the *orderhlq*.SCPPSENU data set requires a symbol, add one. Rerun the step that invokes exec CPPERCDS.
- If no symbol is required, determine whether the change to direct catalog referencing affects any data set entries in catalogs on an active system. If so, determine whether to make copies of the affected catalogs and then change the copies.

  For information about making copies of catalogs, see *z/OS DFSMS Managing Catalogs*.

CPP0621010S **The entry for target system master catalog *tmcat* could not be read successfully from *tmcat*.**

Explanation

Access method services issued a nonzero return code when CPPERCDS attempted to retrieve the entry for the target system's master catalog, *tmcat*.

System action

Processing stops.

System programmer response

Ensure that the volume on which the target system master catalog resides is online and available. If so, run the access method services VERIFY command for the target system's master catalog. If VERIFY detects problems, correct the problems before continuing. Otherwise, contact IBM for assistance.

CPP0621011S The user catalog entry for *configcat* could not be read successfully from the target system master catalog *tmcat*.

Explanation

Access method services issued a nonzero return code when CPPERCDS attempted to retrieve the user catalog entry for the configuration catalog.

In the message, the variables are listed below:

configcat
Configuration catalog name

tmcat
Target system master catalog name

System action

Processing stops.

System programmer response

Determine whether the target system's master catalog contains a user catalog entry for the configuration catalog. If no entry exists, use the access method services IMPORT CONNECT command to create an entry for the user catalog. Rerun the step that invokes exec CPPERCDS.

If an entry exists for the user catalog, run the access method services VERIFY command for the driving system master catalog. If VERIFY detects problems, correct the problems before continuing. Otherwise, contact IBM for assistance.

CPP0621012S Symbol *symvol* is not valid for a non-IPL volume.

Explanation

Either '******' or &SYSR1 was specified for a physical volume that is not the IPL volume. *symvol* is the symbol that is used for indirect catalog referencing.

System action

Processing stops.

System programmer response

Edit the P2IMAP member of the *orderhlq*.SCPPSENU data set and specify the correct symbol. Rerun the step that invokes exec CPPERCDS.

CPP0621013S Symbol *symvol* is not valid for physical volume *configvol*.

Explanation

An invalid symbol was specified.

In the message, the variables are listed below:

symvol
Symbol for indirect catalog referencing

configvol
VOLSER in configuration.

The following syntax is checked for the symbol:

- If the first character is an asterisk, the value must be six asterisks (******).
- If the first character is an ampersand, the value must be between two and six characters long. The second character must be an alphabetic. Each subsequent character must be alphanumeric.

System action

Processing stops.

System programmer response

Edit the P2IMAP member of the *orderhlq*.SCPPSENU data set and specify a valid symbol. Rerun the step that invokes exec CPPERCDS.

CPP0621014S Physical volume *configvol* is not defined in P2IMAP.

Explanation

Physical volume was not defined. *configvol* is the volume's VOLSER.

System action

Processing stops.

System programmer response

Edit the P2IMAP member of the *orderhlq*.SCPPSENU data set and add any necessary entries for volumes that were defined in your configuration and their

associated symbols. Rerun the step that invokes exec CPPERCDS.

CPP0621015S The user catalog entry for *configcat* could not be read successfully from the driving system master catalog *dmcat*.

Explanation

Access method services issued a nonzero return code when CPPERCDS attempted to retrieve the user catalog entry for the configuration catalog.

In the message, the variables are listed below:

configcat
Name of the configuration catalog

dmcat
Name of the driving system's master catalog.

System action

Processing stops.

System programmer response

Determine whether the driving system's master catalog contains a user catalog entry for the configuration catalog. If no entry exists, use the access method services IMPORT CONNECT command to create an entry for the user catalog. Rerun the step that invokes exec CPPERCDS.

If an entry exists for the user catalog, run the access method services VERIFY command for the driving system master catalog. If VERIFY detects problems, correct the problems before continuing. Otherwise, contact IBM for assistance.

CPP0621016S The entry for *configcat* could not be successfully read from *configcat*.

Explanation

Access method services issued a nonzero return code when CPPERCDS attempted to retrieve the entry for the configuration catalog, *configcat*.

System action

Processing stops.

System programmer response

Ensure that the volume on which the configuration catalog resides is online and available. If so, run access method services VERIFY command against the configuration catalog. If VERIFY detects problems, correct the problems before continuing. Otherwise, contact IBM for assistance.

CPP0621017S Data set SCPPSENU does not contain the P2IMAP member.

Explanation

Member P2IMAP is not accessible.

System action

Processing stops.

System programmer response

Rerun the P2IMAP step in the VERIFY job. Then, rerun the step that invokes exec CPPERCDS.

CPP0621018S Two parameters must be specified.

Explanation

Two parameters were not specified as input to CPPERCDS.

System action

Processing stops.

System programmer response

Ensure that two parameters are specified on the invocation of exec CPPERCDS. Then, rerun the step that invokes exec CPPERCDS.

CPP0621019I A new indirect catalog entry is being created for data set *dsname* in user catalog *configcat*.

Explanation

A new indirect catalog entry is being created for data set *dsname* in user catalog, *configcat*.

System action

Processing continues.

System programmer response

Determine whether the indirect catalog entries should exist in the specified user catalog. If not, select the Alias Option of the dialog and change the name of the catalog for this data set high-level qualifier to the name of the master catalog. Then, rerun the step that invokes exec CPPERCDS.

CPP0621020S ISPF Table access error performing *task*.

Explanation

ISPF issued a high return code when CPPERCDS invoked it through ISPF table command, *task*.

System action

Processing stops.

System programmer response

Contact IBM for assistance.

CPP0621021S The entry for the driving system master catalog *dmcat* could not be successfully read.

Explanation

Access method services issued a nonzero return code when CPPERCDS attempted to retrieve information about the driving system's master catalog, *dmcat*.

System action

Processing stops.

System programmer response

Determine whether the driving system's master catalog name is correct. If so, run the access method services VERIFY command for the driving system's master catalog. If VERIFY detects a problem, correct it before continuing. Otherwise, contact IBM for assistance.

If the driving system master catalog name is incorrect, do the following:

- Use the VAR primary command in the Install option of the installation dialog.
- Find the prompt for the driving system master catalog (OLD CAT).
- Enter the correct driving system master catalog name.

You must file tailor the job again (through line command S or the GENSKEL primary command) to use the new master catalog name. Also, file tailor any other jobs that use this variable. Rerun the job that failed.

CPP0621022E An existing SMS-managed data set named *dsname* was found in catalog *configcat*.

Explanation

A data set in the configuration has the same name as an existing SMS-managed data set, which is cataloged in the configuration catalog. A subsequent job step will uncatalog the existing SMS-managed data set, making it inaccessible.

System action

Processing continues.

System programmer response

You must do either of the following:

- Rename the data set in the configuration
- Rename the existing SMS-managed data set.

If you change the configuration, you must rerun the installation jobs you created through the installation dialog. If you used the GENSKEL command to file tailor the jobs, you must use GENSKEL again before rerunning the jobs.

CPP0621023E Data set *dsname* in catalog *configcat* was indirectly cataloged using symbol *oldvol*. However, this data set is SMS-managed in the configuration.

Explanation

The catalog entry for this data set will be changed to a direct entry in a later jobstep because SMS-managed data sets cannot have indirect catalog entries.

System action

Processing continues.

System programmer response

If you want the existing data set *dsname* to remain indirectly cataloged, do one of the following:

- Rename the existing data set.
- Rename the data set in the configuration.
- Change the data set in the configuration from SMS-managed to non-managed. Then, in member P2IMAP, define the symbol for the volume on which this data set is to reside.

Determine whether the change affects data set entries in catalogs on an active system. If so, determine whether to make copies of the affected catalogs and then change the copies.

If you change the configuration, you must rerun the installation jobs you created through the installation

dialog. If you used the GENSKEL command to file tailor the jobs, you must use GENSKEL again before rerunning the jobs.

CPP0621024E **A non-SMS entry was found for data set *dsname* in catalog *configcat*, but this data set is SMS-managed in the configuration.**

Explanation

The catalog entry for this data set will be changed to an SMS-managed entry in a later job step.

System action

Processing continues.

System programmer response

If you want the existing data set to remain accessible through the catalog, you must do either of the following:

- Rename the existing data set
- Rename the data set in the configuration.

If you change the configuration, you must rerun the installation jobs you created through the installation dialog. If you used the GENSKEL command to file tailor the jobs, you must use GENSKEL again before rerunning the jobs.

CPP0623001I **Report output has been saved in data set '*dsname*'**

Explanation

The current level of the CustomPac installation dialog is displayed.

System programmer response

None.

CPP0624001E **Unexpected return code or reason code from the Catalog Search Interface. Catalog Return Code *return_code*, Catalog Reason Code *reason_code*.**

Explanation

The CPPEDSN program called the DFSMSdfp Catalog Search Interface (CSI), which encountered an unexpected return code or reason code from catalog processing. The catalog return and reason codes are shown in the message text.

System action

CPPEDSN sets the return code to 8 and continues.

System programmer response

For the meaning of the return code and reason code in this message, see the description of message IDC3009I in *z/OS MVS System Messages, Vol 6 (GOS-IEA)*. Correct the problem and follow the failing job's restart instructions.

CPP0624002E **Unexpected catalog entry found for *data_set_name* in catalog *catalog_name***

Explanation

The CPPEDSN program found a catalog entry with the same name as a data set that is to be allocated. Because there is already an entry for data set *data_set_name* in catalog *catalog_name*, it would not be possible to catalog this data set if it were to be allocated.

System action

CPPEDSN sets the return code to 8 and continues.

System programmer response

Either the data set exists and is cataloged, or it does not exist and there is a catalog entry for it. The data set cannot already exist on the volume on which it is to be allocated, nor can there be a catalog entry for the data set in the catalog to be used to allocate the new data set.

Use one of the following methods to resolve this error condition:

- If the existing data set cannot be renamed or deleted along with its catalog entry, or the existing catalog entry cannot be deleted, do the following:
  - Use the installation dialog to rename the new data set, change its SSA, or specify a different catalog for the data set's SSA or high-level qualifier.
  - If you previously used the GENSKEL command to tailor all of the jobs at one time, rerun the GENSKEL command.
  - Rerun the installation jobstream from the beginning.
- If the existing data set can be renamed or deleted along with its catalog entry, or the existing catalog entry can be deleted, correct the problem (for example, by renaming the data set and its catalog entry, or deleting it) and follow the failing job's restart instructions.

CPP0624003E **Data set *data_set_name* to be allocated has already been allocated on volume *volume*.**

Explanation

The CPPEDSN program checked the volume on which the data set identified in the message was to be allocated, and found that a data set with the same name already exists on the volume.

System action

CPPEDSN sets the return code to 8 and continues.

System programmer response

Do one of the following:

- If the data set can be renamed or deleted, do so and follow the failing job's restart instructions.
- If the data set cannot be renamed or deleted, take the following steps:
  - Use the installation dialog to rename the new data set.
  - If you previously used the GENSKEL command to tailor all of the jobs at one time, rerun the GENSKEL command.
  - Rerun the installation jobstream from the beginning.

CPP0624004E **Unexpected return code or reason code from the Catalog Search Interface. GPR 15 = *value*, CSI Return Code *return_code*, CSI Reason Code *reason_code***

Explanation

The CPPEDSN program called the DFSMSdfp Catalog Search Interface (CSI), which returned an unexpected value in general purpose register 15, or with an unexpected return code or reason code in the CSI return work area.

System action

CPPEDSN sets the return code to 8 and continues.

System programmer response

For the meanings of the contents of general purpose register 15, and the return code and reason code from Catalog Search Interface, see the "Catalog Search Interface User's Guide" appendix in *z/OS DFSMS Managing Catalogs*. Correct the problem and follow the failing job's restart instructions.

CPP0625001E **Specified device is unknown. Press Enter to respecify or enter ? to display a list of known device types.**

Explanation

The device you entered in the Default Device Type field has not been defined to the installation dialog.

System action

None.

System programmer response

Take one of the following actions, as appropriate:

- **Specify a different device type:** Press Enter; specify a valid device type in the Default Device Type field.
- **Query the list of defined device types:** Specify a question mark (?) in the Default Device Type field and press Enter. From the resulting list of devices, select a device type and press Enter.
- **Define the device type to the dialog:** Return to the Modify System Layout Options panel. Select Option D (or enter DEVT on the command line). Add the device type to the list of device types and press Enter. On return to the Automatic Data Set Assignment panel, repeat your scope selection for data set assignment (ALL, NEW, or PARTIAL), enter the device type in the Default Device Type field, and press Enter.

CPP0625002E **This option cannot be used because all the target and DLIB data sets in the configuration are SMS-managed.**

Explanation

SMS-managed data sets are not eligible for automatic data set assignment. Because all target and DLIB data sets in this configuration are managed by SMS, you cannot use the Create a Recommended System Layout option.

System action

None.

System programmer response

Select an option other than Create a Recommended System Layout.

CPP0625003E **Option not available for lower-level orders.**

Explanation

Automatic Data Set Assignment cannot be used for this order. Because the order was created before the automatic assignment option was added to the dialog, the order lacks information required for automatic assignment.

System action

None.

System programmer response

None.

CPP0625004E Initialize Volume was set to "No" for *volume*, but the volume could not be accessed.

Explanation

The dialog attempted to retrieve used space from the volume *volume* for which "Initialize Volume" was specified, however, one or more of these volumes could not be accessed. If the volume is offline, for example, its used space cannot be retrieved.

System action

None.

System programmer response

Take one of the following actions, as appropriate:

- Return to the previous panel and vary the needed volumes online. Retry this operation.
- Change "Initialize Volume" to YES for this volume and continue. The dialog will not attempt to retrieve free space information from the volume.

Use caution in resetting volumes from Initialize Volume NO to Initialize Volume YES. Doing so causes the volume to be initialized by the installation jobs.

CPP0625005E Duplicate volume specified. Enter the name of a volume that is not in the configuration.

Explanation

The volume you specified already exists in the configuration.

System action

None.

System programmer response

Specify a new volume for the configuration.

CPP0625007E Only one Move, Before, or After is allowed.

Explanation

You entered more than one MOVE command, or you entered the MOVE command with both the BEFORE and AFTER parameters.

System action

None.

System programmer response

Enter a single MOVE command with either BEFORE or AFTER specified, but not both.

CPP0625008E One or more volumes could not be accessed. The volumes are marked with * in the Existing Data column.

Explanation

The dialog attempted to access volumes with existing data to determine how much space was left on them. However, one or more of these volumes was inaccessible. These volumes are indicated by an asterisk (*) in the panel under the heading, Existing Data.

When a volume with existing data is not accessible, the dialog cannot determine the amount of used space on the volume. As a result, the dialog displays only the amount of space required for the data sets being assigned to the volumes, plus any reserved space. If the data sets allocated to the volume will not fit on the volume (because of a lack of free space), the ALLOCDS job might fail to allocate some data sets. Subsequently, these allocation failures cause the RESTORE job to fail with a JCL error.

System action

None.

System programmer response

To avoid potential overallocation errors when the ALLOCDS job runs, it is recommended that you investigate the cause of this message and ensure that there is enough space on the volumes to contain the order's data sets. Leave this panel and return to the Modify System Layout Options panel to resolve the problems with the affected volumes (for example, vary

the volumes online). Then, return to this panel and continue.

CPP0625009E A volume can be moved only within volumes of the same type.

Explanation

Your attempt to move a volume through line command M was rejected. Doing so would place the volume in a group of volumes of another type, which is not allowed.

System action

None.

System programmer response

You can move a volume only among other volumes of the same type. For example, you can move a target volume before or after other target volumes, but not into a group of DLIB volumes or BOTH volumes.

To move a volume into a group of volumes of a different type, you must first change the volume's type to the other type (target, DLIB, or BOTH) through the CHANGE PVOL command (see CHANGE PVOL). You can then move the volume within the group of volumes with that type.

CPP0625010E The IPL volume cannot be excluded or moved.

Explanation

You cannot exclude the IPL volume from automatic data set assignment.

System action

None.

System programmer response

None.

CPP0625011E Insert not allowed on this line.

Explanation

You cannot enter line command I on this line. When NEW is specified, line command I is allowed only at the end of a list (that is, on the line for the last target, DLIB, or operational volume).

System action

None.

System programmer response

Use the correct syntax, as shown in the text of the message.

CPP0625012E Sum of Reserved Space and Existing Data exceeds volume threshold.

Explanation

You specified reserved space or Initialize Volume "NO", or both, for the volume. However, the total amount of space exceeds the volume's space utilization threshold, as shown in the panel "Current Volume Configuration."

System action

None.

System programmer response

Do one or more of the following, as appropriate:

- Increase the size of the volume by specifying a different device type
- If the volume has reserved space, reduce the amount of reserved space
- If the volume has existing data, move some or all of these data sets to other volumes.

CPP0625013E Incomplete selection. Specify M(move) with either B(efore) or A(fter).

Explanation

You entered line command M, B, or A alone.

System action

None.

System programmer response

To move a volume among volumes of the same type, enter line command M (Move) for the volume to be moved, and line command B (Before) or A (After) to place the volume in a new position.

CPP0625014I Automatic data set assignment complete.

Explanation

Your assignment of data sets in the work configuration to DASD volumes completed successfully.

System action

None.

System programmer response

None.

CPP0625015I **No data sets found on volume *volume_name*.**

Explanation

You entered line command L to list the data sets on volume *volume_name*. However, the volume contains no data sets.

System action

None.

System programmer response

None.

CPP0625016E **(YOU CHANGED THE DEFAULT DEVICE TYPE.) *dsname* requires *nnnnnnn* cylinders and cannot fit on volume *volume name*.**

Explanation

During an automatic data set assignment, the dialog could not place data set *dsname* on the next available volume *volume name* because doing so would have exceeded the volume's space utilization threshold. At the time of the error, there had been no other data sets assigned to the volume.

System action

None.

System programmer response

Take one or more of the following actions, as necessary:

- If you specified reserved space for the volume, reduce the amount of reserved space.
- If you specified Initialize Volume NO for the volume, move some of the existing data sets to other volumes.
- If you increased the size of data set *dsname*, reduce the size of the data set.
- Increase the size of the volume by specifying a different device type.

When you have resolved the problem, reenter the CREATE command to create the configuration.

CPP0625017E **99 *volume type* volumes exist. Unable to create more volumes.**

Explanation

Ninety-nine volumes of type TARGET, DLIB, or BOTH already exist. This is the maximum number of volumes permitted for a type. More data sets remain to be assigned to this type, however these data sets cannot fit on the existing volumes, and the dialog cannot create additional volumes.

System action

None.

System programmer response

Take one or more of the following actions to resolve the problem:

- Increase the size of one or more volumes
- Reduce the size of the data sets to be assigned by the dialog
- Reduce the number of data sets to be assigned by the dialog
- If you specified Reserved Space, reduce the amount of Reserved Space specified for one or more volumes
- If you specified Initialize Volume NO, move some data sets to volumes that are not eligible for automatic data set assignment.

When you have resolved the problem, reenter the CREATE command to create the configuration.

CPP0625018E **No more *volume type* volume names available. Unable to create more volumes.**

Explanation

The dialog could not create another volume in the series indicated by *volume type* because all of the possible volume names for this series have been used.

System action

None.

System programmer response

A configuration should not occupy all of the volumes in any volume series (Target, DLIB, or BOTH). To resolve this problem, do either of the following:

- Determine why automatic data set assignment is creating so many volumes. For example, the default volume size specified might be smaller than intended, or the primary space allocation specified for some of the data sets in the configuration might have been inadvertently increased by a large amount.
- If you think the configuration should occupy a large enough number of volumes for this message to be issued, rename one or more volumes in the series identified in the message text. These volumes will be named TARGnn, DLIBnn, or BOTHnn. However, you should be aware that there is also a limit on the number of sequence numbers in each series. See message CPP0625017E for information about the sequence number limit. Therefore, renaming one or more volumes might only change which limit is encountered.

When you have resolved the problem, enter the CREATE command to create the configuration.

CPP0625019E All IPLVOL data sets could not be placed on first Target volume.

Explanation

The dialog attempted to place the IPL volume data sets on the first target volume. Doing so, however, would exceed the volume's space utilization threshold.

System action

None.

System programmer response

The data sets required on the IPL volume are usually not very large and should fit easily on any supported device type. To resolve this problem, do the following:

- Display the IPLVOL logical volume. This volume contains all of the data sets that must be placed on the first target volume.
- If you have placed other data sets on the IPLVOL logical volume, move some or all of them to different logical volumes.
- If you have increased the primary space for data sets on the IPLVOL logical volume, either specify less primary space for these data sets or increase the size of the first volume in the configuration.

When you have resolved the problem, enter the CREATE command to create the configuration.

CPP0625020E Enter EITHER Default Device or Model-After Volume

Explanation

You either entered no values for the default device type or model-after volume or entered both of them on the panel. You must enter one, and only one, value.

System action

None.

System programmer response

Specify only one default device type or one model-after volume.

CPP0625021E Volume not found.

Explanation

The Model after Volume was not found. If the `DYNAMIC DASD INFO` variable is set to `Yes`, the volume was not available. If it was set to `No`, the volume does not exist in the current configuration. In either case, the information needed to use the volume's device as a model is not available.

System action

None.

System programmer response

If the `DYNAMIC DASD INFO` variable is set to `Yes`, either enter a default device type rather than a model-after volume, or exit the panel and ensure that:

- The volume is online and available
- The correct volume serial was specified
- The device and control unit are working correctly.

Then, select the option again.

Otherwise, if the `DYNAMIC DASD INFO` variable is set to `No`, either enter a default device type rather than a model-after volume, or specify a volume that is already defined in the current configuration.

CPP0625086I Device information updated

Explanation

The dialog successfully retrieved device information for the volume for which you specified the volume serial. The device type and device number were set from the retrieved information. If you entered "No" in the "Initialize Volume" field, available space on the volume was set using the amount of free space actually found.

System action

None.

System programmer response

None.

CPP0625087W Device information could not be retrieved for volume *volume*.

Explanation

Because the DYNAMIC DASD INFO variable was set to Yes, the dialog attempted to retrieve device information for the volume for which you specified the volume serial. However, the information could not be retrieved.

System action

None.

System programmer response

If the volume does not exist or is intentionally offline, press the Enter key to bypass the warning. Then, use Option V (Physical Volume Summary) from the Modify System Layout Options panel to specify a device that has been defined in the Device Type Table. To display defined devices or to define a new device, select Option T (View and change device type table) from the Modify System Layout Options panel. If the required device is not defined, exit the panel, define the device, and then retry the operation.

If the volume should be online, ensure that:

- The correct volume serial is specified on the panel.
- The volume is online and available (for example, not pending offline or boxed). If the volume is not online and available, exit the panel and make the volume available. Then, retry the operation.
- The device and control unit are working correctly. For example, check the system log for IOS000I messages that might indicate a problem.

If these actions do not resolve the problem, contact IBM for assistance.

CPP0625088W Device number found for *volume1* conflicts with device number found for *volume2*. Respecify volume serial or press Enter to continue.

Explanation

You entered a volume serial on the panel while the DYNAMIC DASD INFO variable was set to Yes. The dialog retrieved the information for the volume, but found that its device number matches a device number already specified for another volume in the configuration.

System action

None.

System programmer response

Do either of the following:

- Re-specify the volume serial
- Press Enter to continue. The device number for the other volume will be set to CCUU. When you complete the panel, use Option V on the Modify System Layout Options panel to correct the device number for the other volume.

CPP0626003W Member *member-name* has no SSI Information.

Explanation

The indicated member has no SSI information in its directory entry. All of the IBM-supplied modules in the SCPPLOAD data set should have SSI information.

System action

None.

System programmer response

Remove any non-IBM modules from SCPPLOAD. If this message is issued for an IBM-supplied module, contact IBM for assistance.

CPP0627001I The level of SMP/E is *vv.rr.mm*.

Explanation

This message identifies the level of SMP/E installed on your system. In the message, *vv.rr.mm* indicates the following:

- *vv* is the SMP/E version
- *rr* is the SMP/E release
- *mm* is the SMP/E modification level.

System action

None.

System programmer response

None.

CPP0627002S Unrecognized parameter.

Explanation

The CHKSMPLV program was called with an unrecognized parameter.

System action

CPPSMPLV ends with return code 12.

System programmer response

Contact IBM for assistance.

CPP0627003E GIMAPI ended with an unexpected return code. The return code was *return-code*.

Explanation

The CHKSMPLV called the SMP/E authorized programming interface routine, GIMAPI, which returned a non-zero return code. In the message, *return-code* is the GIMAPI return code.

System action

CPPSMPLV ends with return code 8.

System programmer response

Check the following sources for information related to the problem:

- Contents of the GIMAPI message buffer in the SYSPRINT data set.
- Messages in the job log.

If this information is not sufficient for resolving the problem, contact IBM for assistance.

CPP0628001S Unable to ALLOCATE*dataset-name* RC=*return-code*

Explanation

The dialog could not access the master SCPPLOAD data set *dataset-name*.

System action

The dialog ends with the return code shown in this message.

System programmer response

Contact IBM for assistance.

CPP0628002E ISPF Dialog error *function-name* RC=*return-code*

Explanation

An ISPF dialog error has occurred.

System action

The dialog ends with the return code shown in this message.

System programmer response

Contact IBM for assistance.

CPP0639001I CustomPac ZONE Table has been INITIALISED With SHIPPED Values

Explanation

You have restored all DLIB and target zone names to the original, shipped values. Any customization that you might have done has been discarded.

System programmer response

None.

CPP0639002I RESTORE Confirmation has been denied, SHIP Command will NOT be Executed

Explanation

You requested that all DLIB and target zone names be restored to their shipped values. No names were restored, however, because you did not confirm your request.

System programmer response

None.

CPP0639003I Changes to the TABLE have been SAVED

Explanation

Your changes to the zone configuration have been saved.

System programmer response

None.

CPP0639004I Processing CANCELLED by User *<changes>*

Explanation

You entered the CANCEL command; your changes to the zone configuration were discarded.

<changes> might show more information, such as the message: "CHANGES TO THE TABLE WERE NOT SAVED."

System programmer response

None.

CPP0639005I No changes were made to the TABLE.

Explanation

You pressed the END key to exit from the Define Installation Variables function of the installation dialog. No changes were saved.

System programmer response

None.

CPP0639006E DUPLICATE Zone Name

Explanation

You attempted to rename a DLIB or target library zone to a name that is already used for another zone. Duplicate zone names are not allowed. The cursor indicates the first occurrence of the duplicate zone name.

System action

Dialog processing stops.

System programmer response

Change the zone name to a unique name.

CPP0639007I The zone name changes will not be propagated because zone name is not a part of data set name.

Explanation

The data set name does not contain the zone name. When the zone name is changed, the data set name will not change.

System programmer response

If you want the subsequent zone name updates to be propagated, ensure that the data set name contains the zone name in one of the qualifiers.

CPP0639008I Zone name has been changed and successfully propagated to your operational SMP/E data sets.

Explanation

The operational SMP/E data sets are changed to include the zone name you specified.

System programmer response

None.

CPP0639009E The Zone name changes will not be propagated to #x. data set(s) such as #LDSN., which exceeds the allowed length.

Explanation

The #x of SMP/E operational data sets exceed the allowed length. The data sets, which do not exceed the limit, are propagated to contain the zone name you changed while the data set(s), which exceed the limit, are not renamed.

System programmer response

Shorten the data set(s) name with the Modify System Layout Options panel. You can refer to the Online help. If you want the subsequent zone name updates to be propagated, ensure that the data set name contains your changed zone name in one of the qualifier. Once you hit the allowed length limit, ensure the final length of data set name(s) with SSA Option panel.

CPP0639010S The Install flag for at least one entry is INVALID or NOT DEFINED.

Explanation

At least one component is associated with an invalid Install flag or the Install flag has not yet been defined.

System programmer response

Enter a valid Install flag for all components.

CPP0639011E NOT a Valid Install flag

Explanation

You entered an Install flag that is not valid.

System programmer response

Correct the Install flag.

CPP0639012E The Install flag for this component must be Y because it is a required component that must be installed.

Explanation

The Install flag for mandatory components cannot be changed to a value other than Y.

System programmer response

Do not change the Install flag for mandatory components to a value other than Y.

CPP0639013E Zone names already exist in Global CSI, enter a unique name.

Explanation

This message is applicable only for Product ServerPac orders. You selected to use an existing Global CSI and the shipped zone names are already present in the existing Global CSI.

System programmer response

Rename the shipped DLIB and Target zone names on panel CPPP6391 to new names which does not exist in the Global CSI you selected.

CPP0639014E Error from Call of GIMAPI, RC=rc and CC=cc

Explanation

This message is applicable only for Product ServerPac orders. You selected to use an existing Global CSI and the attempt to query the CSI using the GIMAPI program was unsuccessful. Return code and condition code of the GIMAPI processing are indicated on the message.

System programmer response

Make sure you specified the correct Global CSI data set name, and that the data set is not being used by another user.

CPP0639015E Global CSI entered does not exist, enter correct Global CSI.

Explanation

This message is applicable only for Product ServerPac orders. You selected to use an existing Global CSI and the Global CSI you entered does not exist on your system.

System programmer response

Make sure you specified the correct Global CSI data set name which is already present on your system.

CPP0639016W You have already run GZNMRG, so you should not make any changes on this panel.

Explanation

This message is applicable only for Product ServerPac orders. You selected to use an existing Global CSI, ran the GZNMRG job and returned to the Zones option.

System programmer response

When you select to use an existing Global CSI data set for installing the Product ServerPac order, the GZNMRG job merges the shipped Global CSI into the existing Global CSI you specified. Do not make any changes to the zone names on the panel.

CPP0670001E The XML output data set could not be opened.

Explanation

The CPPXMLG program could not open the XML output data set.

System action

CPPXMLG processing ends. The content of the XML output data set is not valid.

Programmer response

Ensure that the XML output data set has been allocated, and that the XMLGNR8 job is running under a user ID that has UPDATE access (or higher) to the output data set. If the problem persists, contact IBM for assistance.

CPP0670002E The *table-name* table could not be read.

Explanation

The CPPXMLG program could not read table *table-name*.

System action

CPPXMLG processing ends. The content of the XML output data set is not valid.

Programmer response

Ensure that data set SCPPTENU is concatenated to ISPTLIB in the BUILDXML step of the XMLGNR8 job. Also ensure that the XMLGNR8 job is running under a user ID that has READ access (or higher) to the SCPPTENU data set. If the problem persists, contact IBM for assistance.

CPP0670003E Call to *program-name* failed.

Explanation

The CPPXMLG program could not call program *program-name*.

System action

CPPXMLG processing ends. The content of the XML output data set is not valid.

Programmer response

Contact IBM for assistance.

CPP0670004E Bad return code from *program-name*.

Explanation

The CPPXMLG program called program *program-name*, which ended with a return code that is higher than the value allowed by CPPXMLG. The called program might have issued a message to further explain the error.

System action

CPPXMLG processing ends. The content of the XML output data set is not valid.

Programmer response

- If the called program issued a message to further explain the error, respond as that message indicates. If the problem persists, contact IBM for assistance.
- If the called program did not issue a message, contact IBM for assistance.

CPP0670005E SMP/E API call failed.

Explanation

The CPPXMLG program attempted to call the SMP/E authorized program interface (API), but the call failed.

System action

CPPXMLG processing ends. The content of the XML output data set is not valid.

Programmer response

Determine whether the joblog contains any messages that describe the failure. If so, respond as the messages indicate. Otherwise, contact IBM for assistance.

CPP0670006E Unknown data set organization.

Explanation

The CPPXMLG program could not create an XML tag to describe a data set or file, because the program does not recognize the organization of the data set or file.

System action

CPPXMLG processing ends. The content of the XML output data set is not valid.

Programmer response

- If you added the data set or file during the Modify System Layout function of the dialog, ensure that its organization is supported. The supported organizations are:
  - PS (sequential)
  - PO (PDS or PDSE)
  - VSAM
  - HFS
  - zFS

  If the organization of the data set or file is not supported, you must change its organization (through the Modify System Layout function), or remove the data set or file from the order configuration. If you entered the GENSKEL command, you must rerun this command to update the installation jobs for the changed configuration.

  If the organization of the data set is supported, contact IBM for assistance.
- If the data set or file was supplied by IBM, contact IBM for assistance.

CPP0670007E Bad parameter list passed to *program-name*.

Explanation

Program *program-name* was called with no parameters or with an unrecognized parameter.

System action

program-name returns control to its caller with return code 12.

Programmer response

Contact IBM for assistance.

CPP0670008E *package-type* is not supported.

Explanation

Package type *package-type* is not supported by the package routine called by the CPPXMLG program.

System action

The package routine returns control to the CPPXMLG program with return code 8.

Programmer response

If you are running the CPPXMLG program for a supported package type, contact IBM for assistance.

CPP0670009W No <SOFTWAREELEMENT> found for *SOFTWAREFEATURE-name*

Explanation

A SOFTWAREELEMENT could not be built for this SOFTWAREFEATURE. For an SMP/E-installed product, this condition occurs when program CPPXMLG cannot find the required SYSMOD entry in the order's target zones. CPPXMLG searched the zones for a SYSMOD entry with a status of APPLIED that matches an FMID subentry in the FEATURE entry for which this <SOFTWAREFEATURE> is being built.

System action

CPPXMLG sets the return code to 4.

Programmer response

If the feature is included in the package and was installed through SMP/E, contact IBM for assistance.

CPP0670010E The DTD input data set could not be opened.

Explanation

The CPPXMLG program could not open the DTD input data set.

System action

CPPXMLG processing ends. The content of the XML output data set is not valid.

Programmer response

Ensure that ddname DTDFILE refers to member, DTD, in data set SCPPSENU.

CPP0670011W *type* zone *zone-name* could not be opened.

Explanation

CPPXMLG could not open the indicated zone, even though a ZONEINDEX entry for it was found.

System action

None.

Programmer response

If you want to create a product definition file to describe this zone's products, ensure that the SMP/E CSI data set containing this data is available and can be allocated. Otherwise, ignore this message.

CPP0670012E Lower-level order tables are not supported. CPPXMLG terminated.

Explanation

CPPXMLG must be run with the same level of ServerPac data it was shipped with, or a higher level. CPPXMLG does not support lower-level data.

System action

None.

Programmer response

Run an appropriate level of CPPXMLG for the tables to be processed.

CPP0670013W Unsupported DBCS data encountered in a PRODUCT entry needed to create tag for DDDEF name *dddef-name*.

Explanation

CPPXMLG read the DESCRIPTION field of a PRODUCT entry in order to construct the file ID for a product's data sets. The product's description contains double-byte character set (DBCS) characters, which are not supported.

System action

None.

Programmer response

None.

CPP0670014E FUNCTION SYSMOD *sysmod-name* found APPLIED in more than one target zone.

Explanation

While attempting to identify the target zone for a product, CPPXMLG found the same function sysmod applied in more than one target zone.

System action

None.

Programmer response

In the CPPXMLIN data set, do not specify more than one target zone having a function sysmod in APPLY status.

CPP0670015E Data set *dsname* has conflicting APF and RECFM attributes.

Explanation

CPPXMLG found a data set that has a defined record format, but which must be APF-authorized. Only RECFM=U data sets can be APF-authorized.

System action

None.

Programmer response

Contact IBM for assistance.

CPP0670016E Unknown CPPXMLIN control statement *statement-name* found. Control statement follows: *text*

Explanation

CPPXMLG did not recognize the control statement shown.

System action

None.

Programmer response

Check the syntax of the control statement.

CPP0670017E Invalid value specified for *statement-name*. Control statement follows: *text*

Explanation

CPPXMLG encountered a control statement with an incorrect value specified.

System action

None.

Programmer response

Check the CPPXMLIN data set for the erroneous control statement. Correct the statement and rerun the job that you use to execute program CPPXMLG.

CPP0670018E Zone name too long on TARGETZONE statement: *zone-name*

Explanation

CPPXMLG encountered a zone name that exceeds the 7 character limit on a TARGETZONE control statement.

System action

None.

Programmer response

Check the CPPXMLIN data set for the incorrect TARGETZONE control statement. Correct the zone name and rerun the job that you use to execute the CPPXMLG program.

CPP0670019W Duplicate DDDEF name for product *product-name* found in zone: *zone-name* The first DDDEF name found was used.

Explanation

CPPXMLG encountered a DDDEF name for the same product in two different zones. CPPXMLG used the DDDEF encountered in the first target zone specified on a TARGETZONE control statement, or the DDDEF encountered in the first DLIB zone associated with the first zone specified on a TARGETZONE statement.

System action

None.

Programmer response

If the DDDEFs in both zones are for the same product and the same data set, no action is required. For example, if the JES2 zone has a DDDEF for the MACLIB data set in the BCP zone, the DDDEFs would both refer to the same product's data set.

If the DDDEFs in both zones are for different levels of the same product or represent different data sets, remove one of the TARGETZONE control statements from the CPPXMLIN data set and rerun the program that you use to execute CPPXMLG.

CPP0670020E Expected continuation not found after control statement starting with *text*.

Explanation

A continuation character (+) was found after the control statement indicated in the message. However, the remainder of the control statement was not found in the CPPXMLIN data set before the next control statement or the end of the data set was encountered.

System action

None.

Programmer response

Add the remainder of the control statement or remove the continuation character.

CPP0670021W No PRIME control statement found in CPPXMLIN data set.

Explanation

A CPPXMLIN data set, other than a dummy data set, was allocated but no PRIME control statement was found. Any other control statements in CPPXMLIN data set are ignored. CPPXMLG will run in package mode.

System action

None.

Programmer response

If you did not want CPPXMLG to run in priming mode, disregard the message. If you want CPPXMLG to run in priming mode, add a PRIME control statement to the beginning of the CPPXMLIN data set and rerun CPPXMLG.

CPP0670022E Priming mode was specified, but the first CPPXMLIN control statement was not PRIME.

Explanation

CPPXMLG found a PRIME control statement in the CPPXMLIN data set, but it was not the first control statement, or, the PRIME control statement was missing and other data is present in the data set. The PRIME control statement must be the first control statement in the CPPXMLIN data set.

System action

None.

Programmer response

If you do not want CPPXMLG to run in priming mode, disregard the message. Otherwise, move the PRIME control statement so that it appears first in the CPPXMLIN data set and rerun CPPXMLG.

CPP0670023W No target zones were processed.

Explanation

No TARGETZONE statements were found in the CPPXMLIN data set, and, therefore, none were processed.

System action

None.

Programmer response

If you intended to include TARGETZONE statements in the CPPXMLIN data set, add the statements and rerun CPPXMLG. Otherwise, disregard this message.

CPP0670024E Zone not found in ZONEINDEX: *zone-name*

Explanation

The named target zone was specified on a TARGETZONE control statement. However, there was no ZONEINDEX entry for the specified target zone in the global zone.

System action

None.

Programmer response

Do one of the following:

- Specify a global zone containing a ZONEINDEX entry for the specified target zone on the SMPCSI DD statement

- Specify a target zone for which there is a ZONEINDEX entry on the TARGETZONE control statement
- Add a ZONEINDEX entry to the global zone for the specified target zone
- Remove the TARGETZONE control statement.

CPP0670025E Duplicate CPPXMLIN control statement *text* found.

Explanation

CPPXMLG encountered a duplicate statement in the CPPXMLIN data set.

System action

None.

Programmer response

Remove the duplicate statement from CPPXMLIN and re-run the job.

CPP0670026E NO valid zones were available to process.

Explanation

CPPXMLG did not find any zones to process in the CPPXMLIN data set.

System action

None.

Programmer response

If you ran the XMLGNR8 job in package mode, ensure that the required zone can be opened. If you ran CPPXMLG job in priming mode, ensure that the TARGETZONE statement is specified correctly and that the required zone can be opened.

CPP0670027E Missing CPPXMLIN control statement. Control statement follows: *text*

Explanation

CPPXMLG did not find the required statement in the CPPXMLIN data set.

System action

None.

Programmer response

Check the syntax of the required statement to ensure that it is coded correctly.

CPP0670028W The CPPXMLIN input data set could not be opened.

Explanation

CPPXMLG could not open the CPPXMLIN data set. CPPXMLG continues processing in package mode.

System action

None.

Programmer response

For package mode, either ignore the message or remove the CPPXMLIN DD statement. For priming mode, edit the CPPXMLIN data set, adding the control statements required for priming mode processing.

CPP0670029W DLIBZONE statement ignored since no targetzones available to process.

Explanation

The DLIBZONE statement is being ignored because no target zones are available for processing.

System action

None.

Programmer response

You have specified that related DLIB zones are to be processed, however, no valid target zones exist to be processed. Check that the target zones have been correctly specified in the CPPXMLIN control statements and the zones are correctly defined in the CSI.

CPP0670030E Targetzone name was specified but Dlibzone found with that name in ZONEINDEX: *zone-name*.

Explanation

TARGETZONE name zone was specified as a zone to be processed, however, a DLIB zone was found with that name in ZONEINDEX.

System action

CPPXMLG processing ends. The content of the XML output data set is not valid.

Programmer response

Either correct the spelling of the TARGETZONE name to be processed in the CPPXMLIN control statement or in the CSI definitions.

CPP0670091W Warnings have been issued by GIMAPI; messages follow:

Explanation

The CPPXMLG program called the SMP/E authorized program interface (API), which issued warning messages.

System action

None.

Programmer response

For information, see *z/OS SMP/E Messages, Codes, and Diagnosis*. Respond as the messages indicate. Otherwise, contact IBM for assistance.

CPP0670092E Errors were encountered by GIMAPI; messages follow:

Explanation

The CPPXMLG program has called the SMP/E authorized program interface (API), which has issued error messages.

System action

CPPXMLG processing ends. The content of the XML output data set is not valid.

Programmer response

Contact IBM for assistance.

CPP0699001S Flow Table CPPFLOW NOT Found in Order Table Library

Explanation

The table CPPFLOW, which forms part of your order shipment, was not found in the SCPPTENU library. As a result, the order is not installable.

System programmer response

Check the receive job to make sure the order libraries were allocated correctly and were loaded with data. If you cannot resolve the problem, contact IBM for assistance.

CPP0699002I Your driving system supports EAV volumes. However, the CustomPac Dialogs do not support these volumes.

Explanation

Although z/OS V1R10 or higher supports EAV, the CustomPac Dialogs cannot use EAV as the target volumes to install the orders.

System programmer response

Make sure that no EAV is used as the target volume.

CPP0995001S DDname *ddname* Is NOT a Partitioned Dataset

Explanation

The data set that is allocated to DDname *ddname* is not a partitioned data set. This utility only supports the conversion of partitioned data sets.

System programmer response

Report this problem to IBM.

CPP0995002S DDname *ddname* Has an incompatible RECFM

Explanation

The data set allocated to DDname(SYSUT1) is not RECFM=FB, or the data set allocated to DDname(SYSUT2) is not RECFM=VB.

System programmer response

Report this problem to IBM.

CPP0995003S DDname *ddname* Has an Incompatible LRECL

Explanation

The data set allocated to DDname(SYSUT1) is not LRECL=80, or the data set allocated to DDname(SYSUT2) has an LRECL < 72.

System programmer response

Report this problem to IBM.

CPP9999901X Unsupported SERVICE (*service-call*)

Explanation

This message is issued by the CPPCMSG interface.

The program calling the interface has specified an incorrect service *service-call*.

System programmer response

Report this problem to IBM.

CPP9999902X FILE (*file-name*) MISSING DD STATEMENT

Explanation

The CPPCMSG interface cannot open the file *file-name* because it is missing a DD statement.

System action

The system responds in either of two ways, depending on when the error occurred, as listed below:

- If the problem occurred during an INIT service call, the message inventory is not allocated.
- If the problem occurred during an MSG service call, the ddname to which the message is to be written is not allocated, and a PL/1 ONCODE(1016) abend occurs.

System programmer response

Note which dialog function you were using, and, if possible, the sequence of events that caused the message to be issued. Report the problem to IBM.

CPP9999903X FILE (MSGINV) CORRUPT, NO Module Table Record

Explanation

The message inventory is corrupted and is unusable. You cannot install the order until this problem is corrected.

System programmer response

Note which dialog function you were using, and, if possible, the sequence of events that caused the message to be issued. Report the problem to IBM.

CPP9999904X INIT Failed for UNKNOWN Module (*module-name*)

Explanation

The calling program specified a module that is not defined to the message inventory.

System programmer response

Note which dialog function you were using, and, if possible, the sequence of events that caused the message to be issued. Report the problem to IBM.

CPP9999905X STACK Overflow Condition for STACK *stack-name*

Explanation

This message is issued by the CPPCMSG interface.

One of the internal stacks used by the message interface is not large enough.

System programmer response

Report this problem to IBM.

CPP9999906X RESTORE Failed, SAVE STACK is empty

Explanation

This message is issued by the CPPCMSG interface.

The program calling the interface has specified a RESTORE service call, however no preceding SAVE has taken place. There is nothing to restore.

System programmer response

Report this problem to IBM.

CPP9999907X Invalid Output Destination (*output-destination*)

Explanation

This message is issued by the CPPCMSG interface.

The program calling the interface has specified a service call that specifies an incorrect output destination.

System programmer response

Report this problem to IBM.

CPP9999908X Unknown MESSAGE (*message-id*) Issued By MODULE (*module-name*)

Explanation

The calling program specified a message ID that is not defined in the message inventory.

System programmer response

Note which dialog function you were using, and, if possible, the sequence of events that caused the message to be issued. Report the problem to IBM.

CPP9999909E Valid options are "F" or "S"

Explanation

You entered an incorrect value for the installation type.

System action

Dialog processing stops.

System programmer response

For the installation type, enter in the Option field either 'F' for a full system replacement or 'S' for a software upgrade, and press Enter. For information about these installation types, see Chapter 5, “Creating a work configuration for the order,” on page 39).

CPP9999910E Valid values are "Y" or "N"

Explanation

You specified an incorrect value.

System action

None; the panel values are not processed.

System programmer response

Specify a valid value.

CPP9999911E Valid characters A-Z, 0-9, #, @, $. The first cannot be 0-9.

Explanation

You specified an incorrect value.

System action

None; the panel values are not processed.

System programmer response

Specify a valid value.

CPP9999950I Module was Compiled On *compile-date*

Explanation

You entered the COMP primary command to display the date and time at which this module was compiled.

System programmer response

None.

CPP9999951W INVALID Primary Command "*command-name*"

Explanation

The command shown is not a valid primary command for the current panel, or it contains incorrect syntax.

System programmer response

Enter a valid command.

CPP9999952W INVALID Line Command "*command-name*"

Explanation

The line command shown is not valid for the row being selected.

System programmer response

Enter a valid command.

CPP9999953E Invalid PARM Information *parm*.

Explanation

The external PARM information *parm* supplied to the program was missing or in error.

System programmer response

Report this problem to IBM.

CPP9999954I Table REFRESHED

Explanation

The current panel was refreshed.

System programmer response

None.

CPP9999955I Field NOT KNOWN *field-name*

Explanation

You entered a SET command for a field that is not available on the current panel.

System programmer response

Enter a valid SET command.

CPP9999956I SORT Completed

Explanation

Your SORT command has completed successfully.

System programmer response

None.

CPP9999957I SET Successful for field *field-name*

Explanation

Your SET command has completed successfully; the field has been set.

System programmer response

None.

CPP9999958I Display MODE now set to "*mode-name*"

Explanation

You changed the display mode of the current panel to *mode-name*.

Display modes are explained, as listed below:

TE
Terse mode; only summary information is shown.

VE
Verbose mode; all information is shown.

System programmer response

None.

CPP9999961I Data FOUND

Explanation

You entered a LOCATE, FIND, NEXT or PREVIOUS command for the current SET field and the search string was found. The matching list entry is positioned at the top of the scrollable area.

System programmer response

None.

CPP9999962I Data NOT FOUND

Explanation

You entered a LOCATE or FIND command for the current SET field, but no matches were found.

System programmer response

None.

CPP9999963I BOTTOM of Table

Explanation

You entered a NEXT command for the current SET field. The list was searched from the last entry with a match to the 'bottom of table,' but no other matches were found.

System programmer response

To resume the search from the top of the list, enter the NEXT command again.

CPP9999964I TOP of Table

Explanation

You entered a PREVIOUS command for the current SET field. The list was searched from the last entry that matched to the 'top of table,' but no other matches were found.

System programmer response

To resume the search from the bottom of the list, enter the PREVIOUS command again.

CPP9999965I NO Search Criteria

Explanation

You entered a LOCATE, FIND, NEXT or PREVIOUS command for the current SET field, but you did not specify any search criteria.

System programmer response

Enter the command again with search criteria.

CPP9999966E Ending QUOTE is missing

Explanation

You entered a LOCATE or FIND command for the current SET field. However, the search criteria you specified contains embedded blanks and you did not enter a closing quotation mark.

System programmer response

Add an ending quotation mark to the search criteria.

CPP9999967I NO Data Updated By User

Explanation

You displayed a panel with changeable values. However, you either:

- Ended processing without changing any data.
- Continued processing, using the displayed data.

System programmer response

None.

CPP9999968I Synchronization DELETE Has Completed Successfully *text*

Explanation

You attempted to delete a data object that was already deleted. The display of the data was created when you invoked the function, and is likely now unsynchronized with the physical database. This is not an error. The data object has been deleted from your display (synchronized).

text might show more information.

System programmer response

None.

CPP9999969I Synchronization INSERT Has Completed Successfully *text*

Explanation

You attempted to insert a data object that has already been created. The display of the data was created when you invoked the function, and is likely now unsynchronized with the physical database. This is not an error. The data object created has been inserted in your display (synchronized).

text might show more information.

System programmer response

None.

CPP9999970I DELETE Request Successful *text*

Explanation

You successfully deleted the data object. *text* might show more information.

System programmer response

None.

CPP9999971I DELETE Request Cancelled *text*

Explanation

Your request to delete the data object was canceled for one of the following reasons:

- You did not confirm your request.
- You ended the request by pressing the END key.

text might show more information.

System programmer response

None.

CPP9999973I INSERT Request Successful *text*

Explanation

You successfully inserted or created the data object. *text* might show more information.

System programmer response

None.

CPP9999974I INSERT Request Cancelled *text*

Explanation

Your request to insert or create the data object was canceled for one of the following reasons:

- You did not confirm your request.
- You ended the request by pressing the END key.

text might show more information.

System programmer response

None.

CPP9999976I UPDATE Request Successful *text*

Explanation

Your attempt to update or edit the data object was successful. *text* might show more information.

System programmer response

None.

CPP9999977S UPDATE Request Cancelled *additional text*

Explanation

You canceled an update to the work configuration, either by pressing the End key or by responding negatively to a request for confirmation. If there is additional text, it includes more information:

Device type *nnnn-nnn*
indicates that the device type that was not added to the device type table.

System programmer response

None.

CPP99999791 This Already EXISTS, DUPLICATES are Not Allowed

Explanation

You attempted to insert or create a data object that already exists. Duplicate data objects are not permitted.

System programmer response

None.

CPP9999985S MULTIPLE Selection is NOT Available, ONLY the FIRST Selection is VALID (ALL OTHER Selections have been CLEARED)

Explanation

You selected more than one data object, which is not allowed in this display.

System action

Only the first data object is selected; the other selections are ignored.

System programmer response

Review the selection.

CPP9999987E Enter a valid volume serial.

Explanation

The volume serial entered on the panel is not valid.

System action

None

System programmer response

Specify a valid volume serial. A volume serial has 1 through 6 alphanumeric, national ($, #, @), or special characters. There are special rules for specifying special characters. For more information, see *z/OS MVS JCL Reference*.

CPP9999988E INVALID Primary Command "*command-name*"

Explanation

The command shown is not a valid primary command for the current panel, or the command has invalid syntax.

System programmer response

Enter a valid command.

CPP9999990I NO Dynamic HELP Available

Explanation

You requested help for a panel that does not have any help information.

System programmer response

Contact IBM for assistance.

CPP9999991I Date(*date*) Time(*time*)

Explanation

You entered the TIME or DATE primary command. The current time and date are displayed.

System programmer response

None.

CPP9999992W Table *table-id* Not Found

Explanation

The currently executing dialog function required access to table *table-id*, which was not found.

System programmer response

Exit the dialog. Log off, log on again, and retry the failing function. If the problem persists, contact IBM for assistance.

CPP9999993I Enque for Table *table-id* Failed, this is NOT Normally a Problem, the Table May be IN USE by Another User

Explanation

The currently executing dialog function requires access to table *table-id*, which is in use by another user. This is not usually a problem.

System programmer response

Wait until the other user has finished using the table.

CPP9999994S Table *table-id*, INPUT/OUTPUT Library (*library-name*) Was NOT Allocated

Explanation

The currently executing dialog function could not access table *table-id* because library *library-name* was not allocated.

System programmer response

Exit the dialog. Log off, log on again, and retry the failing function. If the problem persists, contact IBM for assistance.

CPP9999996S Unexpected DIALOG ERROR

Explanation

The currently running dialog function detected an ISPF error while issuing a program call.

System programmer response

Exit the dialog. Log off, log on again, and retry the failing function. If the problem persists, report the following information to IBM:

- The sequence of events leading to the error.
- A screen print of the displayed information.

Appendix C. Accessibility

Accessible publications for this product are offered through IBM Documentation (www.ibm.com/docs/en/zos).

If you experience difficulty with the accessibility of any z/OS information, send a detailed message to the Contact the z/OS team web page (www.ibm.com/systems/campaignmail/z/zos/contact_z) or use the following mailing address.

IBM Corporation
Attention: MHVRCFS Reader Comments
Department H6MA, Building 707
2455 South Road
Poughkeepsie, NY 12601-5400
United States

Accessibility features

Accessibility features help users who have physical disabilities such as restricted mobility or limited vision use software products successfully. The accessibility features in z/OS can help users do the following tasks:

- Run assistive technology such as screen readers and screen magnifier software.
- Operate specific or equivalent features by using the keyboard.
- Customize display attributes such as color, contrast, and font size.

Consult assistive technologies

Assistive technology products such as screen readers function with the user interfaces found in z/OS. Consult the product information for the specific assistive technology product that is used to access z/OS interfaces.

Keyboard navigation of the user interface

You can access z/OS user interfaces with TSO/E or ISPF. The following information describes how to use TSO/E and ISPF, including the use of keyboard shortcuts and function keys (PF keys). Each guide includes the default settings for the PF keys.

- *z/OS TSO/E Primer*
- *z/OS TSO/E User's Guide*
- *z/OS ISPF User's Guide Vol I*

Dotted decimal syntax diagrams

Syntax diagrams are provided in dotted decimal format for users who access IBM Knowledge Center with a screen reader. In dotted decimal format, each syntax element is written on a separate line. If two or more syntax elements are always present together (or always absent together), they can appear on the same line because they are considered a single compound syntax element.

Each line starts with a dotted decimal number; for example, 3 or 3.1 or 3.1.1. To hear these numbers correctly, make sure that the screen reader is set to read out punctuation. All the syntax elements that have the same dotted decimal number (for example, all the syntax elements that have the number 3.1)

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are mutually exclusive alternatives. If you hear the lines `3.1 USERID` and `3.1 SYSTEMID`, your syntax can include either `USERID` or `SYSTEMID`, but not both.

The dotted decimal numbering level denotes the level of nesting. For example, if a syntax element with dotted decimal number 3 is followed by a series of syntax elements with dotted decimal number 3.1, all the syntax elements numbered 3.1 are subordinate to the syntax element numbered 3.

Certain words and symbols are used next to the dotted decimal numbers to add information about the syntax elements. Occasionally, these words and symbols might occur at the beginning of the element itself. For ease of identification, if the word or symbol is a part of the syntax element, it is preceded by the backslash (\) character. The `*` symbol is placed next to a dotted decimal number to indicate that the syntax element repeats. For example, syntax element `*FILE` with dotted decimal number 3 is given the format `3 \* FILE`. Format `3* FILE` indicates that syntax element `FILE` repeats. Format `3* \* FILE` indicates that syntax element `* FILE` repeats.

Characters such as commas, which are used to separate a string of syntax elements, are shown in the syntax just before the items they separate. These characters can appear on the same line as each item, or on a separate line with the same dotted decimal number as the relevant items. The line can also show another symbol to provide information about the syntax elements. For example, the lines `5.1*, 5.1 LASTRUN, and 5.1 DELETE` mean that if you use more than one of the `LASTRUN` and `DELETE` syntax elements, the elements must be separated by a comma. If no separator is given, assume that you use a blank to separate each syntax element.

If a syntax element is preceded by the % symbol, it indicates a reference that is defined elsewhere. The string that follows the % symbol is the name of a syntax fragment rather than a literal. For example, the line `2.1 %OP1` means that you must refer to separate syntax fragment `OP1`.

The following symbols are used next to the dotted decimal numbers.

? indicates an optional syntax element
The question mark (?) symbol indicates an optional syntax element. A dotted decimal number followed by the question mark symbol (?) indicates that all the syntax elements with a corresponding dotted decimal number, and any subordinate syntax elements, are optional. If there is only one syntax element with a dotted decimal number, the ? symbol is displayed on the same line as the syntax element, (for example `5? NOTIFY`). If there is more than one syntax element with a dotted decimal number, the ? symbol is displayed on a line by itself, followed by the syntax elements that are optional. For example, if you hear the lines `5 ?, 5 NOTIFY`, and `5 UPDATE`, you know that the syntax elements `NOTIFY` and `UPDATE` are optional. That is, you can choose one or none of them. The ? symbol is equivalent to a bypass line in a railroad diagram.

! indicates a default syntax element
The exclamation mark (!) symbol indicates a default syntax element. A dotted decimal number followed by the `!` symbol and a syntax element indicate that the syntax element is the default option for all syntax elements that share the same dotted decimal number. Only one of the syntax elements that share the dotted decimal number can specify the ! symbol. For example, if you hear the lines `2? FILE, 2.1! (KEEP), and 2.1 (DELETE)`, you know that `(KEEP)` is the default option for the `FILE` keyword. In the example, if you include the `FILE` keyword, but do not specify an option, the default option KEEP is applied. A default option also applies to the next higher dotted decimal number. In this example, if the `FILE` keyword is omitted, the default `FILE(KEEP)` is used. However, if you hear the lines `2? FILE, 2.1, 2.1.1! (KEEP)`, and `2.1.1 (DELETE)`, the default option KEEP applies only to the next higher dotted decimal number, `2.1` (which does not have an associated keyword), and does not apply to `2? FILE`. Nothing is used if the keyword `FILE` is omitted.

*** indicates an optional syntax element that is repeatable**
The asterisk or glyph (*) symbol indicates a syntax element that can be repeated zero or more times. A dotted decimal number followed by the * symbol indicates that this syntax element can be used zero or more times; that is, it is optional and can be repeated. For example, if you hear the line `5.1* data area`, you know that you can include one data area, more than one data area, or no data area. If you hear the lines `3* , 3 HOST, 3 STATE`, you know that you can include `HOST, STATE`, both together, or nothing.

Notes:

1. If a dotted decimal number has an asterisk (*) next to it and there is only one item with that dotted decimal number, you can repeat that same item more than once.
2. If a dotted decimal number has an asterisk next to it and several items have that dotted decimal number, you can use more than one item from the list, but you cannot use the items more than once each. In the previous example, you can write HOST STATE, but you cannot write HOST HOST.
3. The * symbol is equivalent to a loopback line in a railroad syntax diagram.

+ indicates a syntax element that must be included

The plus (+) symbol indicates a syntax element that must be included at least once. A dotted decimal number followed by the + symbol indicates that the syntax element must be included one or more times. That is, it must be included at least once and can be repeated. For example, if you hear the line 6.1+ data area, you must include at least one data area. If you hear the lines 2+, 2 HOST, and 2 STATE, you know that you must include HOST, STATE, or both. Similar to the * symbol, the + symbol can repeat a particular item if it is the only item with that dotted decimal number. The + symbol, like the * symbol, is equivalent to a loopback line in a railroad syntax diagram.

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