Version 2 Release 3

IBM IMS Configuration Manager for z/OS
User's Guide

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

IBM® IMS™ Configuration Manager for z/OS® (also referred to as IMS Configuration Manager) is a tool that you can use to manage IMS parameters on z/OS.

These topics provide instructions for installing, configuring, and using IMS Configuration Manager.

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

• Plan for the installation of IMS Configuration Manager
• Install and operate IMS Configuration Manager
• Customize your IMS Configuration Manager environment
• Diagnose and recover from IMS Configuration Manager problems
• Use IMS Configuration Manager with other z/OS products

You should have a working knowledge in the following areas to use these topics:

• The z/OS operating system
• ISPF
• IMS systems
• Microsoft Windows operating systems

Always check the IMS Tools Product Documentation page for the most current version of this information:

http://www.ibm.com/software/data/db2imstools/imstools-library.html
Part 1. Getting started

These topics provide an overview of IMS Configuration Manager and help you get started.
Chapter 1. IMS Configuration Manager overview

IBM IMS Configuration Manager for z/OS (also referred to as IMS Configuration Manager) is a configuration management tool that you can use to analyze IMS parameters.

Easy to set up and use, IMS Configuration Manager automatically builds an inventory of your IMS topology and allows you to instantly drill down into the parameter details for each and every system.

IMS Configuration Manager helps you to achieve the following benefits:

- Automated mapping of your entire IMS environment.
- Create a common, consistent configuration across your enterprise by identifying inconsistencies.
- A better understanding of your parameter configurations across all the IMS systems in your enterprise.

These benefits can be realized by using these product features:

- Autodiscovery via batch command or via the Common Services Library server. Discover IMSplexes, IMS systems, IMS Connect, Common Service Layer (CSL) components, and parameter configurations.
- Powerful ISPF-based parameter editor.
- Eclipse plug-in for z/OS Explorer with intelligent parameter comparison capabilities.
- History and auditing of changes to parameters.
- Ability to list parameters based on your IMS topology, showing you which members are active on which systems.
- Advanced parameter editing support including context sensitive help for members of the IMS PROCLIB data set.

What's new in IMS Configuration Manager

This topic describes some of the recent developments in IMS Configuration Manager.

New and changed information is indicated by a vertical bar (|) to the left of a change. Editorial changes that have no technical significance are not noted.

IMS V15 PROCLIB member support (PI75644)
Support for new and updated IMS V15 PROCLIB members. See Chapter 13, “PROCLIB members supported by IMS Configuration Manager,” on page 123 for further detail.

Parameter history support in z/OS Explorer (PI75644)
Add support to view PROCLIB member history data in the IMS Configuration Manager Eclipse plug-in for z/OS Explorer. See “Listing active parameter members across your enterprise” on page 68 for further detail.

Product realignment
Refocus IMS Configuration Manager features and associated documentation on IMS parameter management.
What does IMS Configuration Manager do?

IMS Configuration Manager allows you to manage parameters using an ISPF interface and an Eclipse plug-in.

The parameter management features allows you to easily find and edit parameters, coordinate parameter changes across IMSplexes, and ease migration to newer versions of IMS. IMS Configuration Manager helps ensure changes are more reliable by providing syntax and value-checking, context-sensitive help, parameter statement generation, and a history of changes.

The IMS Configuration Manager Eclipse plug-in provides an enterprise-level view of your IMSplexes and systems. The Eclipse plug-in augments the ISPF interface with powerful search and parameter comparison capabilities.

IMS Configuration Manager features and benefits

IMS Configuration Manager makes your IMS environment easier to manage and audit by providing you with utilities for modifying IMS parameters.

Autodiscovery

Use IMS Configuration Manager to automatically reveal and catalog your IMS topology.

Use the autodiscovery feature to perform the following tasks:

• Automatically reveal your IMS topology. Detect IMSplexes, IMS systems (within an IMSplex and without), IMS Connect, Common Service Layer (CSL) components, and system parameter configurations.

• Securely store the results of autodiscovery in an IMS Configuration Manager definitions repository. Use the definitions repository to unify and control all your definitions from a single location.

• Use the DISCOVER batch command to quickly populate the IMS Configuration Manager definitions repository with minimal initial input, or use the Common Services Library server together with the AUTODISCOVER keyword and the Eclipse plug-in to view and analyze your topology in z/OS Explorer.
Consider the following benefits of using autodiscovery:

**Map your IMS environment**
- Quickly identify the topology of your IMS, IMSplex, and IMS Connect environment. Identify differences and inconsistencies across all your global sites, and provide a path forward for simplifying, consolidating, and leveraging your IMS environment.

**Prepare to use IMS Configuration Manager**
- Once your IMS topology is stored in the IMS Configuration Manager definitions repository, you are ready to use the parameter management features of IMS Configuration Manager.

**Related tasks:**
- "Establishing an IMS Configuration Manager definitions repository" on page 22

The IMS Configuration Manager definitions repository is a VSAM key-sequenced data set (KSDS) that contains an inventory of IMS Configuration Manager definitions and parameter change history. To begin using IMS Configuration Manager, you must create a definitions repository and then populate it with definitions using the autodiscovery feature.

**Advanced parameter management**
- The IMS Configuration Manager parameter manager provides the following features.
  - A parameter smart editor that supports most IMS configuration members, including all DFS members.
• Powerful search capabilities to find parameters in any supported member using keywords. For example, identify all members with “DRD” parameters or identify all “IMS V15” parameters, just by entering those terms in a parameter search.

• Parameter listing based on your IMS topology, showing you which members are active on which systems.

• Context-sensitive help makes updating parameters easier and more efficient.

Eliminate confusion and save time
IMS Configuration Manager allows you to quickly and reliably list the relevant PROCLIB parameter members for an IMS system. Use IMS Configuration Manager to identify and work with only those parameter members that are currently in use for a particular system.

De-skill the process of managing parameters
IMS Configuration Manager provides help and validation for the offline management of parameters. Using IMS Configuration Manager, your changes become safer, you have context-sensitive help for each and every parameter, and if you make a mistake you can revert to a historical version.

Enterprise-wide system and parameter management
The IMS Configuration Manager Eclipse plug-in provides an enterprise-level view of your resources and parameters and allows you to control and manage systems.

Use the Eclipse plug-in to perform the following tasks:
• Centralize and consolidate your system and IMSplex configurations.
  Automatically reveal your IMS topology using the AUTODISCOVER keyword and the Common Services Library server.
• View IMS systems, resources, and parameters.
• Compare parameters across multiple systems.
• Submit type-2 commands and view the output.
• Use filters to highlight transactions matching certain attributes.
• Identify transactions that can perform commands.
• Identify transactions with a zero queue count.
• List all active parameter members across your enterprise and drill down to parameter values.
• Export data to external spreadsheet applications for further analysis.

Figure 2. Comparing parameters using the plug-in
Consider the following benefits of using the Eclipse plug-in:

**Simplify your IMS environment**
Quickly identify the topology of your IMS, IMSplex, and IMS Connect environment. Instantly highlight differences and inconsistencies across all your global sites, and provide a path forward for simplifying, consolidating, and leveraging your IMS environment.

**Make your configuration easier to analyze**
The IMS Configuration Manager Eclipse plug-in and the autodiscovery feature makes it simpler to interrogate your parameter configuration. Use the Eclipse plug-in to:
- Rapidly compare consolidated IMS parameter values across multiple IMS systems and IMSplexes.
- Quickly search for key values, highlight differences, and apply filtering to further refine the result.
- Identify which parameter values are in a JCL override and which are in PROCLIB member.
- List and review live IMS system resources and conduct cross-system comparisons.
- Submit IMS type-2 commands, view formatted responses, and compare response output between multiple systems.
- Save commonly used parameter, resource, and command queries for later use.
- Export result sets to external spreadsheet applications for additional analysis or record keeping.

**IMS Configuration Manager components**
The main components of IMS Configuration Manager include the IMS Configuration Manager definitions repository, the ISPF dialog, the Eclipse plug-in, and the batch command interface.

**IMS Configuration Manager definitions repository**
The IMS Configuration Manager definitions repository is a VSAM key-sequenced data set (KSDS) that contains configuration information for your IMS environment.

You can use the IMS Configuration Manager definitions repository in the following ways:
- Import definitions into the IMS Configuration Manager definitions repository using autodiscovery.
- Browse and edit the contents of the IMS Configuration Manager definitions repository using the IMS Configuration Manager ISPF dialog or the Eclipse plug-in.

**Related tasks**: “Establishing an IMS Configuration Manager definitions repository” on page 22
The IMS Configuration Manager definitions repository is a VSAM key-sequenced data set (KSDS) that contains an inventory of IMS Configuration Manager definitions and parameter change history. To begin using IMS Configuration Manager, you must create a definitions repository and then populate it with definitions using the autodiscovery feature.
ISPF dialog

The IMS Configuration Manager ISPF dialog provides you with the ability to view systems and parameters.

The following figure shows the Primary Menu of the IMS Configuration Manager ISPF dialog.

![IMS Configuration Manager - Primary Option Menu](image.png)

Figure 3. The IMS Configuration Manager Primary Menu

Related concepts:
- “Using the ISPF dialog” on page 18

The IMS Configuration Manager ISPF dialog is used to view IMSplexes, IMS systems, and parameters and provides access to the IMS Configuration Manager definitions repository. The dialog uses the default Common User Access (CUA) attributes.

Eclipse plug-in

The IMS Configuration Manager Eclipse plug-in provides you with a consolidated view of your systems and IMSplexes.

![IMS Configuration Manager Eclipse plug-in](image.png)

Figure 4. The IMS Configuration Manager Eclipse plug-in

You can use the Eclipse plug-in to compare parameters across multiple systems, list all active parameter members across your enterprise, and export data to external spreadsheet applications for further analysis. The Common Services Library server provides core IMS Configuration Manager services to the Eclipse plug-in.

Related tasks:
The IMS Configuration Manager plug-in for IBM Explorer for z/OS (z/OS Explorer) provides a graphical user interface (GUI) to some of the functions provided by the IMS Configuration Manager ISPF dialog. The plug-in communicates with IMS Configuration Manager via Common Services Library server, which is supplied with IBM Common Services Library for z/OS (Common Services Library).

**Batch commands**

The batch utility (GPLUTIL) allows you to maintain your IMS Configuration Manager definitions repository.

**Related reference:**

Chapter 14, “IMS Configuration Manager batch utility (GPLUTIL),” on page 127

The IMS Configuration Manager batch utility allows you to perform IMS Configuration Manager functions in batch.

**Importing**

The IMS Configuration Manager batch utility (GPLUTIL) allows you to import existing definitions into your IMS Configuration Manager definitions repository.

The following batch commands can be used to import definitions:

**DISCOVER**

Automatically discovers your IMSplexes, IMS systems, IMS Connect, and Common Service Layer (CSL) members and creates corresponding definitions in your IMS Configuration Manager definitions repository.

**MAINT**

Create IMSplex, IMS, IMS Connect, and CSL members using a series of sub-commands.

**Editing**

The IMS Configuration Manager batch utility (GPLUTIL) allows you to edit objects stored in your IMS Configuration Manager definitions repository.

The following batch commands can be used to edit the contents of the IMS Configuration Manager definitions repository:

**MAINT**

Edit IMSplex, IMS, IMS Connect, and Common Service Layer (CSL) members stored in an IMS Configuration Manager repository.

**COPY**

Copies definitions within an IMS Configuration Manager definitions repository, or from one IMS Configuration Manager definitions repository to another.

**Service updates and support information**

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

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

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

Information on the web

The IMS Tools Product Documentation web page provides current product documentation that you can view, print, and download. To locate publications with the most up-to-date information, refer to the following web page:

http://www.ibm.com/software/data/db2imstools/imstools-library.html

You can also access documentation for many IMS Tools from IBM Knowledge Center:

http://www.ibm.com/support/knowledgecenter

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

http://www.redbooks.ibm.com

The Data Management Tools Solutions website shows how IBM solutions can help IT organizations maximize their investment in IMS databases while staying ahead of today’s top data management challenges:


Receiving documentation updates automatically

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4. Click Continue to specify the types of updates that you want to receive.
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**Accessibility features**

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

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

• Use assistive technologies such as screen readers and screen magnifier software. Consult the assistive technology documentation for specific information when using it to access z/OS interfaces.

• Customize display attributes such as color, contrast, and font size.

• Operate specific or equivalent features by using only the keyboard. See the following publications for information about accessing ISPF interfaces:
  – z/OS ISPF User's Guide, Volume 1
  – z/OS TSO/E Primer
  – z/OS TSO/E User's Guide

These guides describe how to use the ISPF interface, including the use of keyboard shortcuts or function keys (PF keys), include the default settings for the PF keys, and explain how to modify their functions.
Chapter 2. Installation

These topics explain how to install and configure the IMS Configuration Manager ISPF dialog and Eclipse plug-in. The Eclipse plug-in is installed into the Common Services Library server client.

Hardware and software prerequisites

Before you install and configure IMS Configuration Manager, make sure that your environment meets the following minimum hardware and software requirements.

To install IMS Configuration Manager, you use SMP/E and standard RECEIVE, APPLY, and ACCEPT processing. For complete information about installation requirements, prerequisites, and procedures for IMS Configuration Manager, see the IMS Configuration Manager Program Directory.

Hardware prerequisites

IMS Configuration Manager V2.3 operates on any hardware configuration that supports the required software.

Software prerequisites

Installation requirements and operating system
• z/OS, V1.13 or later (5694-A01)

Mandatory operational requirements
• One of the following IMS versions:
  – IMS, V13.1 (5635-A04)
  – IMS, V14.1 (5635-A05)
  – IMS, V15.1 (5635-A06)
• IBM Common Services Library for z/OS, V1.1

IMS Configuration Manager libraries

The components of the IMS Configuration Manager dialog are delivered in these libraries.

SGPLEXEC
  REXX EXECs

SGPLLINK
  Executable load modules

SGPLSAMP
  Sample utility programs and user macros

SGPLMENU
  ISPF messages

SGPLPENU
  ISPF panels

SGPLSENU
  ISPF skeleton JCL
Recommended ISPF setup

You can use ISPF standard facilities to customize the dialog. These recommendations help you use IMS Configuration Manager efficiently.

Screen size and scrolling

Set the screen size for your terminal session to 32 lines. IMS Configuration Manager panels are optimized for 32 lines, but accommodate 24 lines by scrolling with the Backward function key (F7) and the Forward function key (F8).

Point-and-shoot fields

Point-and-shoot fields perform an action when you select them. For example, when you select a column heading in a list of PROCLIB members, IMS Configuration Manager sorts the list by that column.

Tabbing to point-and-shoot fields

To make it easier to select point-and-shoot fields, you can include them in the tabbing order when you press the Tab key to skip between fields:

1. Enter the ISPF SETTINGS command to display the ISPF Settings panel.
2. Select Tab to point-and-shoot fields as shown in Figure 6 on page 16

Highlighting point-and-shoot fields

The dialog uses the default CUA attributes. However, it is recommended that you set the color of point-and-shoot fields to distinguish them from other fields:

1. Enter the ISPF CUAATTR command.
2. Scroll to the Point-and-Shoot panel element, and then enter a color name (for example, YELLOW, as shown in the following figure).

To make these fields even more distinct, you can also set their highlight attribute to REVERSE (reverse video).
Displaying the command line and long messages

IMS Configuration Manager uses both long and short messages. ISPF displays short messages at the upper right of a panel, next to the panel title. ISPF usually displays long messages in a pop-up window. However, if a long message is less than the screen width, then, by default, ISPF displays it adjacent to the command line.

Recommendation: Set the command line to appear at the top of the screen and set long messages to display adjacent to the command line, not in a pop-up. This avoids the potential for message windows to overlay data entry fields and make the field help inaccessible.

To optimize ISPF settings for IMS Configuration Manager:
1. Enter the ISPF SETTINGS command to display the ISPF Settings panel.
2. Ensure Command line at bottom and Long message in pop-up are not selected, as shown in the following figure:
Starting IMS Configuration Manager with GPLOREXX

To start the IMS Configuration Manager ISPF dialog, run the GPLOREXX initialization module.

**About this task**

You can start IMS Configuration Manager by first installing IMS Configuration Manager libraries statically within your ISPF library setup (see “Static setup” on page 17), or you can start IMS Configuration Manager dynamically (see “Dynamic setup”). Optionally, you can add IMS Configuration Manager to an ISPF menu.

GPLOREXX accepts four parameters:

- **prefix** The data set prefix for IMS Configuration Manager data sets. For example, \texttt{GPL.V2R3M0}. Alternatively, specify \texttt{NODYNAM} to tell IMS Configuration Manager to use the existing allocation settings.

- **lang** Identifies the national language. The default is \texttt{ENU} (U.S. English). Currently, IMS Configuration Manager only supports U.S. English.

- **PASSAPPL** Optional. Overrides the enforcement of the default IMS Configuration Manager application \texttt{NEWAPPL(GPLO)}. IMS Configuration Manager uses the invoking application's APPL specification.

- **low-level qualifiers** Optional. Overrides the default low-level qualifiers for the six IMS Configuration Manager data sets. All six qualifiers must be specified in the correct order, enclosed in brackets and separated by commas. For example: \texttt{(EXEC,LINKLIB,MESSAGE,PANEL,SKELETON,TABLE)}

**Dynamic setup**

The simplest way to start the IMS Configuration Manager ISPF dialog is to allow the startup REXX exec, GPLOREXX, to dynamically allocate the IMS Configuration Manager libraries. This is known as \textit{dynamic setup}.}

Figure 6. Recommended ISPF settings
To start IMS Configuration Manager and have the IMS Configuration Manager libraries dynamically set up when the dialog is started, do the following tasks:

1. On the TSO command processor panel (ISPF option 6), enter:
   
   ```
   EX 'prefix.SGPLEXEC(GPLOREXX)' 'prefix lang'
   
   For example:
   EX 'GPL.V2R3M0.SGPLEXEC(GPLOREXX)' 'GPL.V2R3M0 ENU'
   
   If the qualifier for your installation data sets is not GPL.V2R3M0, then alter the command accordingly.
   ```

2. To add IMS Configuration Manager to an ISPF menu, set &ZSEL to:
   
   ```
   CMD(EX ''prefix.SGPLEXEC(GPLOREXX)'' ''prefix lang'') NOCHECK
   
   NOCHECK is specified to support the entry of concatenated commands through the direct option (trail). Also specify on the calling panel:
   
   &ZTRAIL=.TRAIL
   ```

   **Note:** Dynamic setup requires that the supplied library names are retained. These are listed under "IMS Configuration Manager libraries" on page 13.

**Static setup**

If you prefer not to have the IMS Configuration Manager libraries dynamically allocated each time you start the ISPF dialog, you can instead add the libraries to the appropriate ISPF concatenations in your TSO logon procedure. This is known as static setup.

To install the IMS Configuration Manager libraries statically within your ISPF library setup, do the following tasks:

1. Include the library `prefix.SGPLEXEC` in your SYSEXEC or SYSPROC concatenation. This library contains the required EXECs. It is allocated during installation with fixed-block record format and record length 80 bytes (RECFM=FB, LRECL=80).

   You must put these libraries in the SYSEXEC concatenation. However, if you want to put them in SYSPROC, it must have a record length of 80 bytes. Ensure that all libraries contained in your concatenations are in the same record format with the same block size or are in the order of decreasing block size.

2. Add the remaining libraries to your ISPF library setup:
   - Include the link/load module library `prefix.SGPLINK` in the ISPLLIB concatenation.
   - Include the message library `prefix.SGPLMENU` in the ISPMLIB concatenation.
   - Include the panel library `prefix.SGPLPENU` in the ISPPLIB concatenation.
   - Include the skeleton library `prefix.SGPLSENU` in the ISPSLIB concatenation.
   - Include the table library `prefix.SGPLTENU` in the ISPTLIB concatenation.

3. On the TSO command processor panel, enter:
   
   ```
   %GPLOREXX 'NODYNAM lang'
   ```

4. To add IMS Configuration Manager to an ISPF menu, set &ZSEL to:
   
   ```
   CMD(%GPLOREXX ''NODYNAM lang'') NOCHECK
   ```

**Overriding the default application**

You can override the default IMS Configuration Manager application, GPLO.
Procedure

Use the PASSAPPL parameter in the ISPF menu &ZSEL setting:
For example:
CMD(EX ''prefix.SGPLEXEC(GPLOREXX)'' ''prefix lang PASSAPPL'') NOCHECK NEWAPPL(GPLZ)

IMS Configuration Manager will then use GPLZ as the application rather than the default.

Overriding the data set low-level qualifier

You can override the IMS Configuration Manager data set low-level qualifiers by specifying the required qualifiers as the last parameter in the ISPF menu &ZSEL setting.

Procedure

Specify the required qualifiers as the last parameter in the ISPF menu &ZSEL setting. All six qualifiers must be specified in the correct order, enclosed in brackets and separated by commas.
For example:
CMD(EX ''prefix.SGPLEXEC(GPLOREXX)'' ''prefix lang (EXEC,LNK,MSG,PNL,SKL,TBL)'')

IMS Configuration Manager will then use the following libraries:

prefix.EXEC
    REXX EXECs
prefix.LNK
    Executable load modules
prefix.MSG
    ISPF messages
prefix.PNL
    ISPF panels
prefix.SKL
    ISPF skeletons JCL
prefix.TBL
    ISPF input tables

Using the ISPF dialog

The IMS Configuration Manager ISPF dialog is used to view IMSplexes, IMS systems, and parameters and provides access to the IMS Configuration Manager definitions repository. The dialog uses the default Common User Access (CUA) attributes.

Related concepts:
"ISPF dialog" on page 8

The IMS Configuration Manager ISPF dialog provides you with the ability to view systems and parameters.

Related tasks:
“Establishing an IMS Configuration Manager definitions repository” on page 22

The IMS Configuration Manager definitions repository is a VSAM key-sequenced data set (KSDS) that contains an inventory of IMS Configuration Manager definitions and parameter change history. To begin using IMS Configuration Manager, you must create a definitions repository and then populate it with definitions using the autodiscovery feature.

Navigating

To navigate the ISPF dialog, you perform a combination of actions.

Navigating involves the following actions:
- Selecting menu options
- Entering line actions (one- to three-letter commands) next to items in lists
- Entering primary commands on the command line
- Pressing function keys
- Selecting an option from the action bar menu

At any point, you can find out what actions are available to you:
- To display a pop-up menu of available line actions, enter / (a forward slash) next to a list item.
- To get help on the available commands, open the Help menu, and then select Command Help.
- To get help on the available function keys, open the Help menu, and then select Keys Help.

Prompt (F4)

Some entry fields have a Prompt action that allows you to complete the field by selecting a value from a pop-up list of valid values.

Prompt fields are indicated by a plus sign (+) at the end of the field. To display the pop-up list, move the cursor to the field and press the Prompt function key (F4). A list of available values is displayed from which you can select one or more depending on the circumstance.

Prompt fields are automatically completed if you enter enough characters to make the value unique. For example, a field with allowed values YES, NO, NEVER, is automatically completed if you enter Y, N0, NE.

Action bar

An action bar is available at the top of panels to assist with navigation and function.

To select an option in the action bar, move the cursor to it and press Enter. A pull-down menu of choices is displayed. To select one, either move the cursor to it, or type the number of your selection, then press Enter.

The action bar options in IMS Configuration Manager are:

File Table

File choices are New, Save, Saveas, Cancel, or Exit. File is available on all panels, but with only some of the choices depending on the function of the panel.
Settings
Used to turn Save and Cancel confirmations on or off in your profile settings bypassing the Primary Menu. Settings is available on system definition and member edit panels.

View
Controls the contents displayed in the member list; whether the members are from the PROCLIB, the IMS Configuration Manager definitions repository, or both, or only supported members. View is available from the IMS All Members and PROCLIB member lists.

Help
Displays product help information, described in “Online help” on page 21. Help is available on all panels.

Function keys
Function keys are used extensively throughout the IMS Configuration Manager dialog.

Until you are familiar with IMS Configuration Manager, it might be helpful to display the function key labels. To display function key labels, enter the ISPF command PFSHOW ON. To hide labels, enter PFSHOW OFF.

These are the function keys that are available in IMS Configuration Manager:

Help (F1)
Displays help information for panels and keywords.

Split (F2)
Splits the ISPF screen at the cursor position.

Exit (F3)
Exits the current panel and saves the changes. Also, on parameter member edit panels, swaps from standard ISPF edit to assist mode.

Prompt (F4)
Displays a selection list of available choices for an entry field. A plus sign (+) adjacent to a field or column heading indicates that prompt is available.

Preview (F5)
Swaps from assist mode to standard ISPF edit.

Resize (F6)
Removes or restores the window border.

Backwards (F7)
Scrolls the list of data backwards.

Forwards (F8)
Scrolls the list of data forwards.

Swap (F9)
Swaps between screens when in ISPF split-screen mode.

Left (F10)
Scrolls a section of the panel left to see more data.

Right (F11)
Scrolls a section of the panel right to see more data.

Cancel (F12)
Cancels the panel without saving changes.
Online help

IMS Configuration Manager help is context-sensitive, that is, the information displayed is appropriate to the position of the cursor when you request help.

F1 function key

Function key F1 is the default key to request help.

Extended help is available from the command line of every panel. Move the cursor to the command line and press F1 or enter the HELP command.

Field help is available on every input field. Move the cursor to the field and press F1.

Reference phrases are used to indicate that more information is available on a topic. By default, they are white and highlighted. You can use the ISPF command SETTINGS to change the attributes of reference phrases to ensure that they are easily distinguished from the surrounding text. When a help window is displayed, press the Tab key to move the cursor to a reference phrase then press F1. A pop-up window displays additional information on the topic.

Action bar help

Help in the action bar provides the following types of information to help you use IMS Configuration Manager:

Extended Help
The help information for the currently displayed panel. This describes what the panels does, and the fields that appear on the panel.

Command Help
The commands available on this panel.

Keys Help
The function keys available on this panel. The list shows the default function key assignments, but you can reassign them using the ISPF KEYS and KEYLIST commands.

About IMS Configuration Manager
Information about this release of IMS Configuration Manager.

Parameter help

On the parameter member edit panels, IMS Configuration Manager provides context-sensitive help about the parameter values. It describes the parameter’s relevance to the IMS version and control region type of the IMS system, and provides release-dependent default values and allowed values.

Setting IMS Configuration Manager ISPF profile options

The IMS Configuration Manager profile allows you to set options such as whether to have a delete confirmation, and what job statement information to use when generating JCL from the dialog.

Procedure
1. From the IMS Configuration Manager Primary Menu, select option 0 Profile. The Personal Profile panel is displayed.
2. Edit your profile options as required. Press the Help function key (F1) for additional information.
3. Press the Exit function key (F3) to save the new settings.

Establishing an IMS Configuration Manager definitions repository

The IMS Configuration Manager definitions repository is a VSAM key-sequenced data set (KSDS) that contains an inventory of IMS Configuration Manager definitions and parameter change history. To begin using IMS Configuration Manager, you must create a definitions repository and then populate it with definitions using the autodiscovery feature.

Procedure

1. On the IMS Configuration Manager Primary Menu, specify the fully qualified data set name of the IMS Configuration Manager definitions repository in the Definitions Repository field. The IMS Configuration Manager definitions repository stores your IMS definitions for use in IMS Configuration Manager.

   Note: To use an existing IMS Configuration Manager definitions repository, overtype the data set name, or press the Prompt function key (F4) to select from a list of previously defined data sets.

2. Select option 4 Discovery.

3. Complete the fields on the Define Definitions Repository panel as required. Press the Help function key (F1) for additional details on each field. If you have selected Edit IDCAMS command, review and modify the output and then enter the command EXEC. Otherwise, press Enter.

4. To create the definitions repository, press Enter. The definitions repository is created and the Autodiscovery panel is displayed.

5. Complete the fields on the Autodiscovery panel. The following options are available:
Discover IMSplexes and member systems
Select this option to discover all systems across your IMS topology that are part of an IMSplex. If you wish to limit autodiscovery to one or more IMSplexes (optional), enter their names in the spaces below. Alternatively, use a mask to discover all IMSplexes beginning with a particular prefix. For example, to limit autodiscovery to all IMSplexes with the prefix PLX, enter PLX*.

Note: If you are working with an existing definitions repository and it already contains IMSplex definitions, you can press PF4 to select a single IMSplex for re-discovery and update.

Discover systems that are not part of an IMSplex
Select this option to discover all systems on specific LPARs that are not part of an IMSplex. To use this option, you must also enter the names of the LPARs in the spaces provided.

Note: If you have more LPARs than the number of spaces provided, simply run the autodiscover utility again for the additional LPARs.

6. On the command line, enter EDIT to review, edit, and then submit the generated JCL, or enter SUB to submit the job immediately without review. To reset the display, enter RESET.

Results
After you have submitted the JCL, the discovery job searches your IMS topology and stores the results in the IMS Configuration Manager definitions repository.

What to do next
To see what the autodiscovery process has found, return to the primary option menu and select option 1 IMSplexes or option 2 Systems.

Related concepts:
The IMS Configuration Manager definitions repository is a VSAM key-sequenced data set (KSDS) that contains configuration information for your IMS environment.

The IMS Configuration Manager ISPF dialog is used to view IMSplexes, IMS systems, and parameters and provides access to the IMS Configuration Manager definitions repository. The dialog uses the default Common User Access (CUA) attributes.

Use IMS Configuration Manager to automatically reveal and catalog your IMS topology.

Related reference:

This JCL uses the DISCOVER batch command to automatically discover IMS components for use in IMS Configuration Manager.

## Installing Common Services Library server

If you want to use the IMS Configuration Manager plug-in for IBM Explorer for z/OS (z/OS Explorer), you need to install Common Services Library server on z/OS. The plug-in uses Common Services Library server to communicate with IMS Configuration Manager.

### About this task

Common Services Library server is a component of IBM Common Services Library for z/OS, V1.1 (Common Services Library), a no-charge product.

Other products also use Common Services Library server. If you have already installed the same release of Common Services Library server to support another product, you do not need to install the server again: skip the following procedure, and configure your existing server to support IMS Configuration Manager. You can either start separate instances of the server configured for each product, or you can configure the server to support more than one product.

### Procedure

To install Common Services Library server:

1. Get Common Services Library from IBM.
2. Follow the instructions in the Common Services Library Program Directory.

Common Services Library server consists of members in the following two target libraries:

- **SFUNLINK**
  - Contains Common Services Library server load modules. Must be APF-authorized.

- **SFUNSAMP**
  - Contains sample Common Services Library server startup JCL and configuration files.

Common Services Library server introduces no installation prerequisites beyond those required by IMS Configuration Manager.
What to do next

Verify that you have successfully installed Common Services Library server.

Verifying installation of Common Services Library server

You should verify that Common Services Library server starts before you configure it to support the IMS Configuration Manager plug-in.

About this task

The following procedure describes how to start Common Services Library server. This procedure is independent of IMS Configuration Manager. Later procedures describe how to configure the server to work with IMS Configuration Manager.

Procedure

1. Copy the following three members from the Common Services Library server sample library SFUNSAMP to a data set of your choice, and then edit the copies according to the comments inside each member.

   **FUNSRVST**
   
   Startup JCL:
   ```
   //SERVER EXEC PGM=FUNSRV,
   //     PARM=('BPECFG=FUNBPECF,FUNCFG=FUNCONFG') 1
   //*
   //STEPLIB DD DISP=SHR,DSN=FUNHLQ.SFUNLINK 2
   //PROCLIB DD DISP=SHR,DSN=MY.FUN.PROCLIB 3
   ```

   1 The PARM parameter specifies the member names of the two configuration files required by Common Services Library server. These members must be in the concatenation specified by the PROCLIB DD statement (3). In this example, both members belong to the same data set, MY.FUN.PROCLIB.

   2 In this example, FUNHLQ is the high-level qualifier of the data set where you have installed the Common Services Library server load module library, SFUNLINK.

   3 The PROCLIB DD statement specifies the location of the Common Services Library server configuration files.

   **FUNBPECF**
   
   IMS Base Primitive Environment (BPE) configuration parameter file. Common Services Library server uses BPE services. The BPE configuration file defines the BPE execution environment settings for the server.
   
   Unless you have a specific requirement to set different tracing options, use the sample member as supplied.

   **FUNCONFG**
   
   Common Services Library server configuration file.
   
   You must edit the sample member to specify your own site-specific values for the following parameters:

   **SERVER_NAME**
   
   The name of this Common Services Library server.

   **TCP_PORT**
   
   The TCP/IP port number on which the server listens for messages from the IMS Configuration Manager plug-in.
For the other parameters, you can either use the default values or specify values according to your site-specific requirements.

2. Submit the startup JCL.

3. View the JESMSGLG job output data set.
   If Common Services Library server started successfully, the JESMSGLG data set contains the following message:
   
   FUN3226I Server start completed

4. Stop the server.
   For example, enter the following MVS™ operator command:
   
   F jobname,SHUTDOWN

**What to do next**

Configure the Common Services Library server startup JCL and Common Services Library server configuration file to support the IMS Configuration Manager plug-in.

**BPECFG: Common Services Library server BPE configuration file**

You need to configure the Common Services Library server by setting options in the BPECFG file.

The BPECFG file can specify the following parameters. For an example file, see member FUNBPECF of the Common Services Library server sample library SFUNSAMP.

Unless you have a specific requirement to set different tracing options, use the sample member as supplied.

**LANG=ENU**

The language of BPE and IMS component message text. ENU is for US English, which is currently the only supported language. This parameter is required.

**TRCLEV=(type,level,component,PAGES=num_pages)**

The trace level for a trace table and, optionally, the number of storage pages allocated for the trace table.

The supported values of *type* are:

**BPE**  Sets tracing options for the BPE.

**FUN**  Sets tracing options for Common Services Library server. It is recommended that you leave these trace levels at high.

**FUNCFG: Common Services Library server configuration file**

You need to configure the Common Services Library server by setting parameters in the FUNCFG file.

The FUNCFG file can contain the following parameters. For an example configuration file, see member FUNCONFG in the Common Services Library server sample library SFUNSAMP.

**SERVER_NAME=name**

1 - 8 alphanumeric character server name. The name must be unique across the sysplex. This is a required parameter.
PRODUCT=prd
A 3-character product code representing a product to be supported by the server. For example, GPL for IMS Configuration Manager. A server can support multiple products. Specify a PRODUCT parameter for each product. If you do not specify any products, then you will only have access to basic server administration functions.

TCP_NAME=name
A 1 - 8 character name of the TCP/IP stack. If this parameter is omitted or blanks are specified, the server uses the default TCP/IP stack.

TCP_PORT=port
The TCP/IP port number that the server listens on: 1 - 65535. This parameter is required. Consult your network administrator to identify a suitable (not in use) port.

TCP_THREADS=threads
The maximum number of threads that can accept client connections concurrently: 0 - 64. The default is 16.

TCP_MAXSOC=sockets
The maximum number of TCP sockets available for concurrent client connections: 50 - 2048. The default is 50.

TCP_IPV6=Y|N
Whether the server supports IPv6 clients. Specify Y to allow IPv6 clients to connect to the server. Your TCP/IP stack must be configured for IPv6; if it is configured to also allow IPv4 clients, then the server will support both. The default is N: the server supports only IPv4 clients, regardless of the stack configuration.

CCSID=ccsid
Specifies the coded character set identifier (CCSID) for the server: 1 - 65533. The CCSID must specify a single-byte character set (SBCS) that is supported by z/OS Unicode Services. The special identifiers 0, 65534, and 65535 are not supported. The default is 37.

CCSID2=ccsid2
The client CCSID assumed for session data translation if a CCSID specification isn't given in the client-server communication. Default: 819 (ISO 8859-1 ASCII) if not specified.

The CCSID must represent a single byte character set (SBCS) that is supported by z/OS Unicode Services. The special identifiers 0, 65534, and 65535 are not supported.

IRM_EXIT(ID(identifier),NAME(routine_name),ID2HEX(hex_string))
IRM message exit specification.

Instructions the Common Services Library server to route IRM messages with a matching IRM_ID to the nominated IRM message exit routine in order to facilitate IRM request support.

IRM_EXIT has the following parameters:

ID(identifier)
The 8-character IRM identifier.

NAME(routine_name)
The name of the IRM message exit.
ID2HEX(hex_string)
Optional, secondary 8-character IRM identifier specified in a 16-character hexadecimal string representation.

If ID2HEX is not specified the Common Services Library server generates the secondary identifier string by translating the given 8-character EBCDIC identifier (ID) to ASCII. For example, ID("HWSCSL") will have a value of ID2HEX(2A48575343534C2A) generated by default.

Multiple IRM_EXIT parameter definitions may be specified.

SAF_CLASS=class
The 1 - 8 character SAF security class name, used for product access authorization. If this parameter is omitted or explicitly set to blanks, then product access authorization is not performed.

SDA_BARLIM=kilobytes
The Session Data Area (SDA) bar limit size in kilobytes: 64 - 4096. An SDA is used to hold any incoming client request data and subsequently any outgoing client response data generated for the request. An SDA of a length that exceeds the SDA_BARLIM will reside above the bar. If this parameter is omitted, the default is 2048 kilobytes.

SDA_MAXLEN=megabytes
The Session Data Area (SDA) maximum length in megabytes: 4 - 100. An SDA is used to hold incoming client request and outgoing client response data. A client request with data that exceeds the SDA_MAXLEN will fail. If this parameter is omitted the default is 32 megabytes.

Common Services Library server security
Common Services Library server can check whether users are authorized to use a product. Common Services Library server performs actions according to the authority of the client user ID.

Access authorization for basic server functions

In addition to the products that are specified by the PRODUCT parameter in the Common Services Library server configuration file, Common Services Library server starts its own default product, with product code FUD, that provides basic functions such as verifying connections with clients. If the Common Services Library server configuration file specifies a SAF_CLASS parameter, the server performs a security check for that default product using the following general resource profile:

FUNPRD.FUD

If the user has at least READ access for this resource profile, Common Services Library server allows access to the basic functions.

Users of the GPL plug-in must have at least READ access to this resource profile.

Product access authorization

Products running under Common Services Library server manage authorization internally, within the constraints of the Common Services Library server environment.
Optionally, Common Services Library server can restrict access to each product. If the Common Services Library server configuration file specifies a SAF_CLASS parameter, the server performs a security check using the following general resource profile:

FUNPRD,product

where product is one of the 3-character product codes specified by the PRODUCT parameter in the Common Services Library server configuration file. For example, GPL is the product code for IMS Configuration Manager.

If the user has at least READ access for this resource profile, Common Services Library server allows access to that product. Otherwise, Common Services Library server denies access to that product.

Users of the GPL plug-in must have at least READ access to this resource profile.

Client user ID authentication

Common Services Library server authenticates the client user ID when a client establishes a connection with the server. Client request threads running in the target product are associated with the user ID of the connected client.

Starting Common Services Library server

To start Common Services Library server, you submit an MVS batch job.

Procedure

1. Customize the JCL in the FUNSRVST member of the Common Services Library server sample library SFUNSAMP.
2. Submit the batch job.

Stopping Common Services Library server

To stop an instance of Common Services Library server, you stop the corresponding MVS batch job.

Procedure

Enter one of the following MVS operator MODIFY (F) or STOP (P) commands:

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>F jobname,SHUTDOWN</td>
<td>Quiesce the server before shutting down. The server rejects new client request threads and shuts down when all active client request threads have completed.</td>
</tr>
<tr>
<td>F jobname,SHUTDOWN FORCE</td>
<td>Force the server to shut down immediately, cancelling any active client request threads. You can upgrade a quiesce shut down to a forced shut down; see the following command SHUTDOWN FORCE command.</td>
</tr>
<tr>
<td>Option</td>
<td>Description</td>
</tr>
<tr>
<td>------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td><code>P jobname</code></td>
<td>Quiesce the server before shutting down. This STOP command is a shorthand</td>
</tr>
<tr>
<td></td>
<td>alternative to <code>F jobname, SHUTDOWN</code>, with the following difference: the</td>
</tr>
<tr>
<td></td>
<td>server will not respond to subsequent MODIFY commands, so you cannot</td>
</tr>
<tr>
<td></td>
<td>upgrade this request to a forced shut down.</td>
</tr>
</tbody>
</table>

where `jobname` refers to the batch job for the instance of the server that you want to stop.

**Common Services Library server administrative functions**

Common Services Library server provides administrative functions that allow you to control the server and the products it runs.

The Common Services Library server accepts operator commands to perform many operations. The format of the command is:

`F servername, command`

Where the commands include the following

**DISPLAY PRODUCT** `product_code`

Displays information about a particular product.

**RESTARTIP**

Restarts the TCP/IP layer.

**SHUTDOWN**

Shuts down the server, waiting for any products to complete their functions.

**SHUTDOWN FORCE**

Forces shut down even if some products have not responded.

**START PRODUCT** `product_code`

Starts a product with the given code.

**STOP PRODUCT** `product_code`

Stops a product with the given code.

**Installing the plug-in**

The IMS Configuration Manager plug-in for IBM Explorer for z/OS (z/OS Explorer) provides a graphical user interface (GUI) to some of the functions provided by the IMS Configuration Manager ISPF dialog. The plug-in communicates with IMS Configuration Manager via Common Services Library server, which is supplied with IBM Common Services Library for z/OS (Common Services Library).

**Before you begin**

- Install Common Services Library server on z/OS.
About this task

The following figure shows how the environment required to run the plug-in spans systems.

Figure 9. IMS Configuration Manager plug-in environment

Procedure

1. Configure Common Services Library server to support IMS Configuration Manager:
   a. Add the parameter PRODUCT/GPL to the Common Services Library server configuration file, FUNCFG.
   b. Customize the server startup job to include the IMS Configuration Manager link library and IMS RESLIB in the STEPLIB concatenation. Add each IMS Configuration Manager definitions repository you want to view with the IMS Configuration Manager Eclipse plug-in. In the following example, replace label placeholders as required:


```plaintext
//FUNSRV JOB (ACCOUNT), 'NAME'
//SERVER EXEC PGM=FUNSrv,
//  PARM=('BPECFG=BPECONFG,FUNCFG=FUNCONFG')
//*
//STEPLIB DD DISP=SHR,DSN=FUNHLQ.SFUNLINK
//  DD DISP=SHR,DSN=PRDHHQ.SGPLLINK
//  DD DISP=SHR,DSN=IMSHLQ.SDFSRESL
//PROCCLIB DD DISP=SHR,DSN=FUNHLQ.SFUNSAMP  <--- BPE and FUN config.
//GPLC4NTL DD * --- GPL product control parms
REPOSITORY NAME=MYREPOS1,
  DESC=(A CONFIGURATION REPOSITORY), +
  DSN=REP.HLQ +
REPOSITORY NAME=MYREPOS2,
  DESC=(ANOTHER REPOSITORY), +
  DSN=REP.HLQ +
/*
//GPLPRINT DD SYSOUT=*
```

where:

1. The IMS Configuration Manager link library.

   Note: The IMS Configuration Manager link library, and all other libraries in the STEPLIB, must be APF-authorized to successfully start the Common Services Library server.

2. The IMS RESLIB.

3. One or more IMS Configuration Manager definitions repositories you want to view in the IMS Configuration Manager Eclipse plug-in.

   Note: Duplicate IMSplex member systems must not exist across multiple IMS Configuration Manager definitions repositories. Any
duplicate IMSplex member system will be reported at start-up time and the corresponding definitions repositories will be closed. See “GPL7312E” on page 102.

2. Install z/OS Explorer and the IMS Configuration Manager Eclipse plug-in on your PC. For the most up to date information, visit the Install Eclipse Tools page on the IBM developerWorks website.

Related concepts:
“Eclipse plug-in” on page 8
The IMS Configuration Manager Eclipse plug-in provides you with a consolidated view of your systems and IMSplexes.

Chapter 7, “Key features of the Eclipse plug-in,” on page 65
The IMS Configuration Manager Eclipse plug-in has several powerful features that can help you improve your understanding of your environment.

Related tasks:
“Enabling autodiscovery in Common Services Library server” on page 34
Enabling the optional autodiscovery feature in the Common Services Library server instructs IMS Configuration Manager to automatically detect IMS systems and update the IMS Configuration Manager definitions repository with the definitions each time the server starts. This is an optional feature that can be used to quickly refresh your definitions repository on a periodic basis or when changes have been made to your topology.

Getting started with z/OS Explorer
This topic explains how to get started with z/OS Explorer and the IMS Configuration Manager Eclipse plug-in.

Before you begin

For large IMS topologies, the IMS Configuration Manager Eclipse plug-in can often present large amounts of parameter, resource, or type-2 command response data from requests whose scope extends across many IMS systems and IMSplexes. If when using the IMS Configuration Manager Eclipse plug-in with z/OS Explorer you encounter an out of memory condition where the Java™ heap space has been exhausted due to large volumes of data being returned, try increasing the maximum Java heap size to rectify the issue. To do this:

1. Open the zosexplorer.ini file (or eclipse.ini file as applicable) located in the z/OS Explorer installation directory.
2. If present, remove option -XX:MaxPermSize=xxxx.
3. On a new line, add option -Xms256M. This sets the minimum heap size to 256 MB.
4. On a new line, add option -Xmx4096M. This sets the maximum heap size to 4096 MB.
5. Save the file and restart your z/OS Explorer.

If you continue to receive out of memory errors after this change, increase the maximum value as required and try again. To monitor the heap size, select Window > Preferences > General and then select Show heap status.

Procedure
1. Double-click the z/OS Explorer shortcut.
2. Select Window > Open Perspective > Other.
3. Select IMS Configuration Manager, and then click OK.
4. Follow the prompts to complete the **User ID** and **Password** fields using the TSO credentials you normally use when using the IMS Configuration Manager ISPF dialog.

**What to do next**

The first time that the IMS Configuration Manager Eclipse plug-in is run, none of your systems are displayed. See “[Connecting to a Common Services Library server](#)” to connect the IMS Configuration Manager Eclipse plug-in with one or more running instances of the Common Services Library server.

**Related concepts:**

Chapter 8, “Exploring your environment,” on page 67

Use the IMS Configuration Manager Eclipse plug-in to explore your systems.

**Connecting to a Common Services Library server**

The IMS Configuration Manager Eclipse plug-in requires a connection to a running instance of the Common Services Library server.

**Procedure**

1. In the **Navigation** view, click [common services library server], and then click **Common Services Library server**.

2. Enter the details of your Common Services Library server as follows:

   **Server Name**
   The name of the Common Services Library server. This field is descriptive only, but must be unique.

   **Host Name**
   The host name or IP address of the Common Services Library server.

   **Host Port**
   The TCP/IP port of the Common Services Library server.

   **Connection Profile**
   The **Connection Profile** is a predefined user name and password combination. If you leave this field blank, the default connection profile is used. To create a new connection profile or to change the default connection profile, click the **View Menu** icon, click **Preferences**, and then click **Connection Profiles**.

   **Test connection**
   Tests that the client is able to connect to the server.

The new server is displayed in the Common Services Library server section of the **Navigation** panel. If you cannot see the Common Services Library server, you might need to expand the Common Services Library server section of the **Navigation** view.

**Tip:** The IMS Configuration Manager Eclipse plug-in can be configured to connect to several servers at once. Use this feature to create a unified view of all your z/OS images across your global sites.

**Related tasks:**

“[Exploring the topology of your systems](#)” on page 67

The IMS Configuration Manager Eclipse plug-in allows you to explore the topology of your systems using the **Navigation** view.
Enabling autodiscovery in Common Services Library server

Enabling the optional autodiscovery feature in the Common Services Library server instructs IMS Configuration Manager to automatically detect IMS systems and update the IMS Configuration Manager definitions repository with the definitions each time the server starts. This is an optional feature that can be used to quickly refresh your definitions repository on a periodic basis or when changes have been made to your topology.

Before you begin

Ensure that the Common Services Library server has been installed and configured successfully. See "Installing the plug-in" on page 30.

Procedure

1. Customize the Common Services Library server startup job to include the AUTODISCOVER keyword.

   //GPLCNTL DD *
   REPOSITORY NAME=REPO_NAME,
       DESC=(MYREPOSITORY),
       DSN=TEST.REPOS,
       AUTODISCOVER
   */

2. Submit the server startup job. The results of autodiscovery are stored in the log. See Chapter 16, “Understanding the result of the discovery process,” on page 163.

What to do next

- To rediscover systems and components, restart the server or the IMS Configuration Manager product component (GPL) running under the server.
- To limit the scope of discovery to certain systems and member types, you can specify additional parameters. See "REPOSITORY keyword" on page 160 for additional details.
- To manage systems and parameters across your enterprise, see Part 3, “Enterprise system management with the Eclipse plug-in,” on page 63.

Related tasks:

"Installing the plug-in” on page 30

The IMS Configuration Manager plug-in for IBM Explorer for z/OS (z/OS Explorer) provides a graphical user interface (GUI) to some of the functions provided by the IMS Configuration Manager ISPF dialog. The plug-in communicates with IMS Configuration Manager via Common Services Library server, which is supplied with IBM Common Services Library for z/OS (Common Services Library).

Related reference:

Chapter 16, “Understanding the result of the discovery process,” on page 163

Results of the IMS Configuration Manager autodiscovery process are summarized in the log.

"Example JCL for autodiscovery” on page 159

This JCL uses the AUTODISCOVER keyword and the Common Services Library server to automatically discover IMS components for use in IMS Configuration Manager.
Chapter 3. Exploring IMS Configuration Manager

Now that your IMS Configuration Manager definitions repository contains system definitions, several options become available.

Continue reading from one of the following sections for further information.

If you are interested in learning more about the parameter management features of IMS Configuration Manager, see Part 2, “Parameter management,” on page 37. In this section, you will learn how to perform the following tasks:

- List and search parameter members using the ISPF dialog.
- Create and edit parameter members.
- Insert parameters based on a model.
- Use the syntax checker.
- View context-sensitive help for parameters.
- View parameter change history.

If you are interested in learning more about the features of the Eclipse plug-in, see Part 3, “Enterprise system management with the Eclipse plug-in,” on page 63. In this section, you will learn how to perform the following tasks:

- Explore your IMSplexes and IMS systems, view resources, and drill down into active parameter members.
- Submit IMS type-2 commands.
- Filter, search, save, and export results to CSV.
- Compare systems and their parameter values.
Part 2. Parameter management

The following topics provide information about how to use the IMS Configuration Manager ISPF dialog to manage IMS parameters defined in IMS PROCLIB data set members.

Related concepts:

“Advanced parameter management” on page 5

The IMS Configuration Manager parameter manager provides the following features.
Chapter 4. Listing and searching parameter members using the ISPF dialog

Use the IMS Configuration Manager ISPF dialog to list and search parameter members based on the systems on which they are active or within a specific PROCLIB.

Regardless of which way you choose to list parameters, IMS Configuration Manager automatically detects and shows placeholders for missing parameter members, allows you to perform semantic searches for parameters and their values, and provides context-sensitive help for each parameter member.

Listing parameter members for all systems in the IMSplex

The IMS Configuration Manager ISPF dialog allows you to view only those parameter members that are currently in use by each IMS system in the IMSplex using the ISPF dialog.

Before you begin

To view active members, you must specify your PROCLIB settings in the system definition. For details, see “Adding PROCLIB data set names to system definitions” on page 168.

Procedure

1. From the IMS Configuration Manager Primary Menu, select option 1 IM斯plexes to display the IMSplex list. The IMSplex panel is displayed.
2. Enter line action P next to the IMSplex you want to examine.

Results

The active member list shows all active parameter members for that system that are in all PROCLIBs defined for that system.
Listing parameter members that are used by a system

The IMS Configuration Manager ISPF dialog enables the IMS administrator to work with only those parameter members that are currently in use for a particular IMS system.

Before you begin

To view active members, you must specify your PROCLIB settings in the system definition. See “Adding PROCLIB data set names to system definitions” on page 168.

Procedure

1. From the IMS Configuration Manager Primary Menu, select option 2 Systems to display the IMS System List panel. The IMS Systems List panel is displayed.
2. Enter line action P next to the system you wish to examine.

Results

As shown in the following figure, the active member list displays all active parameter members for that system that are in all PROCLIBs defined for that system.

![Figure 1. The IMS Active Members panel](image)

Placeholder member names in the list can appear with one or more underscores (_) as a suffix or display the text *missing in the Prompt field. These members do not exist, but are put into the list so that you can easily create them. Members that display the *missing text represent a problem in the system definition.

Listing parameter members in a PROCLIB

The IMS Configuration Manager ISPF dialog PROCLIB view allows you to browse all members in a PROCLIB data set.

Procedure

1. From the IMS Configuration Manager Primary Menu, select option 3 **PROCLIBs**. The IMS PROCLIBs panel is displayed.
2. Enter line action S next to an existing PROCLIB, or use line action I to insert a new row and type the name of a new PROCLIB.

**Results**

As shown in the following figure, the PROCLIB member list displays all members in the PROCLIB.

*Figure 12. The IMS PROCLIBs panel*

1. Position the cursor on the Command line and then press F1.
2. Position the cursor on PROCLIB member help and then press F1.

**What to do next**

Comprehensive help on the correct usage and meaning of each member of the IMS PROCLIB data set can be viewed by accessing the online help:

1. Position the cursor on the Command line and then press F1.
2. Position the cursor on PROCLIB member help and then press F1.
Filtering parameter members

The IMS Configuration Manager ISPF dialog allows you to specify masking characters to filter the parameter member list.

**Before you begin**

Display a list of parameter members.

**Procedure**

Enter a filter in the member column heading.

These are some of the patterns you can use:

* (asterisk)

The * matches zero or more characters, no matter what they are. The * can be used alone (to display all members) or in combination with other characters. For example:

- **DFS*** Displays all members starting with DFS.
- **DFS+01** Displays all members starting with DFS and ending with 01. For example, DFSCG01, DFSINT01, and DFSPB001.

% (percent sign)

The % matches exactly one character, no matter what it is. For example:

- %%%%% Displays all members of exactly 6 characters.
- **DFS***** Displays all 8-character members starting with DFS.
- **DFS*****01** Displays all 8-character members starting with DFS and ending with 01. For example, DFSVSM01, DFSINT01, and DFSSPM01.
Results

Related tasks:
"Using the list filter" on page 73

The IMS Configuration Manager Eclipse plug-in has a filtering function that allows you to filter and highlight entries according to specified criteria.

Searching for members by their parameters and their function

Search is available from an active member list for an IMS system, a group, or a PROCLIB using the IMS Configuration Manager ISPF dialog.

About this task

Search scans all the members in the list, then displays only those members with parameters that match the specified search arguments.

An example of searching for parameters related to dynamic resource definition (DRD) is shown in the following figure by entering DRD into the Search prompt.
The preceding search finds all parameters related to DRD. If there is a value for the parameter, the value is shown (▌). Parameters where the member does not yet exist are also shown (▌). To display help for a parameter, enter line action H next to the parameter.

More examples of search arguments include:

**ODBM** or **OPEN DATABASE**
Finds all parameters related to IMS Open Database implementation.

**VTAM**
All parameters related to VTAM.

**IOBF 1024**
The 1 KB OSAM subpool definition.

**FP DATABASE**
All fast-path database related parameters.

**WHATSNEW V15**
All new and changed parameters in IMS V15, useful when migrating to a new release.

**WHATSNEW RACF**
All new and changed parameters related to RACF® for all releases of IMS.

**APPC**
All parameters related to APPC.

**APPC=**
The APPC parameter in the PB member. The equal sign searches for an exact parameter match.

**CLONING**
All parameters that need to be changed in a cloned system.
Most common IMS terms are supported as search arguments, and abbreviations are supported. For example, FP, FASTPATH, and FAST PATH are all allowed arguments for fast path.

Clear the search arguments to reset back to the original member list.

To rebuild the displayed results after you have selected and changed a parameter, use the REFRESH command.

**Related concepts:**

"Searching for values" on page 74

The IMS Configuration Manager Eclipse plug-in has a search functions that make finding values easier.
Chapter 5. Modifying PROCLIB parameters using the ISPF dialog

IMS Configuration Manager allows you to modify parameters using the ISPF dialog.

Related reference:
Chapter 13, “PROCLIB members supported by IMS Configuration Manager,” on page 123

The IMS Configuration Manager ISPF dialog supports a large number of PROCLIB members.

Creating and editing parameter members

IMS Configuration Manager allows you to create new parameter members, or to edit existing members.

Procedure
1. Browse and locate the parameter set you are interested in. See Chapter 4, “Listing and searching parameter members using the ISPF dialog,” on page 39 for details.
2. Select from one of the following options:
   - Edit an existing member by entering line action S next to the parameter member.
   - Create a new member by enter $memname on the command line.

What to do next

The IMS Configuration Manager parameter editor provides many of the features of ISPF edit but with the following additional features:

- The CHECK command, to check the syntax of a member and highlight syntax errors in context.
- The MODEL command, to insert parameters based on a model.
- The HELP command, and context-sensitive help for parameters by placing the cursor on the item of interest and pressing the Help function key (F1).
- The Backup facility, and retaining a history of your edits.

Inserting parameters based on a model

IMS Configuration Manager allows you to quickly insert new parameters by using template models. A template model contains a fragment of correctly formed parameter syntax that contains default and placeholder values that you can replace as you see fit.

Procedure
1. Edit the parameter member you are interested in. See “Creating and editing parameter members.”
2. Enter A on a line to insert a model template after that line (▌ 1 ▐), or B to insert before that line.
3. On the command line, enter MODEL (2), or select the point-and-shoot MODEL (3) field.

4. Enter an S next to each parameter model you want to insert. When you have finished, press the Exit function key (F3) to insert the parameter models you have selected. The model that has been inserted produces messages that provide additional assistance.
5. Replace the default and placeholder values in the model as required.

**Tip:** To clear all line actions, error messages, and explanatory notes, enter `RESET` on the command line.

---

### Checking the syntax of a member

To highlight syntax errors in the parameter member that you are editing, enter the primary command `CHECK` or use the point-and-shoot `CHECK` field.

**Procedure**

1. Edit the parameter member you are interested in. See “Creating and editing parameter members” on page 47.

2. On the command line, enter `CHECK`, or select the `CHECK` point-and-shoot field. Find errors by scanning the text for the `==MSG>` prefix which contains additional information about the error. The position of the error is marked with a + in the previous line.
The IMS Configuration Manager ISPF dialog supports a large number of PROCLIB members. Viewing context-sensitive help for parameters

IMS Configuration Manager contains context-sensitive parameter help that allows you to quickly look up information about parameters.

Procedure

1. Edit the parameter member you are interested in. See “Creating and editing parameter members” on page 47.
2. Select an item and press the Help function key (F1).

Example

The following example shows what happens when you press the Help function key (F1) with the cursor positioned on the R0SERR parameter of the DFSDFxxx member:
IMS Configuration Manager allows you to make a backup of the parameter members that you edit.

About this task

The first time that you save a supported member during an edit session, you are prompted to perform a backup of the member. A backup contains a snapshot of the member before the first save in the session.

Procedure

To save and backup a member:

1. Edit the parameter member you are interested in using the procedure described in "Creating and editing parameter members" on page 47.
2. Press the Exit function key (F3) to save your changes. The Confirm Member Save dialog is displayed.

3. Complete the form as required. The Confirm Member Save panel supplies the following information:

   Command ===>  
   Member to be saved:  IMS1.PROCLIB(DFSDFCOM)
   / Perform backup of member prior to save
   Backup member to:  
   Data Set Name . . . 'IMS1.PROCLIB'
   Member Suffix . . . B01 (DFSDFxxx)
   Last Changed . . . : 2017/10/07 12:58:47
   Replace like-named member

   Press ENTER to confirm save and backup.
   Press CANCEL or EXIT to cancel save and backup.
Member to be saved
This is indicated by the first field in the panel, which specifies the member you are saving and its PROCLIB. This information cannot be changed.

Perform backup of member prior to save
Enter / next to this field to backup the member. If this field is not selected, all other fields are ignored.

Data Set Name
To save the backup member in an alternative PROCLIB data set, overtype the name of the PROCLIB data set or press the Prompt function key (F4) to select from a list of available PROCLIBs.

Member Suffix
You must enter the suffix for the backup member. Depending on the age of the backup member, a default suffix might have been obtained from the PROCLIB Members list. You can overtype this suffix.

Last Changed
The time stamp of the last time the backup member was saved to the PROCLIB.

Replace like-named member
Enter / next to this field to replace an existing backup if it has the same name as the member about to be saved.

4. Press Enter to confirm the save and backup.

Viewing the history of a member
The history function allows you to examine the contents of back level members, and retrieve old history members to edit and save them back into a PROCLIB.

Before you begin
History is only available for members that have been previously edited with IMS Configuration Manager.

Procedure
1. Use the ISPF dialog to find the member you are interested in. See Chapter 4, “Listing and searching parameter members using the ISPF dialog,” on page 39.
2. Enter line action H next to a PROCLIB member.
   You can view any member in the history but you cannot edit a history member. To restore a history member use standard ISPF member edit functions to copy the contents of the member to a new member or to overwrite the existing member.
Deleting a member

IMS Configuration Manager also allows you to delete a member from a PROCLIB data set.

Procedure

1. Use the ISPF dialog to find the member you are interested in. See Chapter 4, “Listing and searching parameter members using the ISPF dialog,” on page 39 for further information.

2. Enter line action D next to the PROCLIB member you want to delete and press Enter. If Delete Confirmation is enabled in your profile options, press Enter again to confirm. See “Setting IMS Configuration Manager ISPF profile options” on page 21.

Related tasks:

“Setting IMS Configuration Manager ISPF profile options” on page 21

The IMS Configuration Manager profile allows you to set options such as whether to have a delete confirmation, and what job statement information to use when generating JCL from the dialog.
Chapter 6. Managing parameters to improve IMS performance

You can use IMS Configuration Manager with IMS Performance Analyzer to improve IMS performance.

IBM IMS Performance Analyzer for z/OS (program number 5655-R03) is an ISPF application to assist with IMS system performance monitoring and tuning, resource utilization, transaction transit analysis, capacity planning, and management reporting.

IMS Performance Analyzer provides a comprehensive set of reports that help you identify performance problems. Some of the reports can highlight problems that can be solved by modifying IMS setup and performance parameters that are managed by IMS Configuration Manager. For example:

- **“Database buffers” on page 56**
  - IRUR: OSAM Buffer Pool Statistics

- **“VSAM buffers” on page 58**
  - IRUR: VSAM Buffer Pool Statistics

- **“Logging and checkpoints” on page 59**
  - IRUR: Logger Statistics
  - System Checkpoint report

You can use IMS Configuration Manager to search across a system, group of systems, or a PROCLIB to quickly find and easily change parameters that can impact IMS system performance. For example, you can search for all VSAM BUFFER parameters.
You can then use IMS Performance Analyzer to provide an insight into the effect on system performance of particular parameter settings.

**Database buffers**

The PROCLIB member DFSVSMMxx defines VSAM, OSAM, and Fast Path DEDB buffer pools.

DFSVSMMxx includes the following parameters:
- VSAM buffer pools
  - VSRBF
  - POOLID/DBD
  - RESVPOOL
  - OPTIONS
- OSAM buffer pools
  - IOBF
  - DBD

*Figure 25. Searching for VSAM BUFFER parameters in IMS Configuration Manager*

You can then use IMS Performance Analyzer to provide an insight into the effect on system performance of particular parameter settings.
SBONLINE
• FP DEDB buffer pools
  • DEDB
  • DEDBMAS

**IMS Performance Analyzer IRUR: OSAM Buffer Pool Statistics**

This report provides information related to the activity in each OSAM subpool. Subpools with no activity in the reporting period are not reported on. The final report contains cumulative statistics for all of the OSAM buffer pools. This report is similar to the Database Buffer Pool report produced by the IMS DB Monitor.

A key performance indicator for an OSAM Buffer Pool is the percentage of locate calls where the data was already in the buffer. A high percentage indicates that the OSAM Buffer Pool is satisfying most requests without the need for database I/O.

You can use the report to calculate how many I/O operations were required to read to or write from the OSAM buffer pool. To decrease the number of I/O operations, try increasing the buffer pool size. If the number of I/O operations is increasing over time, you might need to reorganize the database.

When data sharing in IMSplex database environments, there needs to be a balance between maximizing the requests satisfied in the pool and minimizing the occurrence of buffer invalidation.

---

**Figure 26. IMS Performance Analyzer IRUR: OSAM Buffer Pool Statistics**

A key performance indicator for an OSAM Buffer Pool is the percentage of locate calls where the data was already in the buffer. A high percentage indicates that the OSAM Buffer Pool is satisfying most requests without the need for database I/O.

You can use the report to calculate how many I/O operations were required to read to or write from the OSAM buffer pool. To decrease the number of I/O operations, try increasing the buffer pool size. If the number of I/O operations is increasing over time, you might need to reorganize the database.

When data sharing in IMSplex database environments, there needs to be a balance between maximizing the requests satisfied in the pool and minimizing the occurrence of buffer invalidation.
VSAM buffers

The PROCLIB member DFSVSMxx defines single or multiple VSAM buffer pools.

DFSVSMxx includes the following parameters:
- Reserve pools
- VSAM local shared resource pools
- VSAM shared pools and subpools, linked by Pool ID
- Allocation of data sets to pools, linked by Pool ID
- VSAM performance options such as background write, maximum concurrent requests, fixed blocks

IMS Performance Analyzer IRUR: VSAM Buffer Pool Statistics

One of the Internal Resource Utilization reports (IRUR) is the VSAM Buffer Pool Statistics report. This report provides information related to the activity in each VSAM subprocess. Subpools with no activity in the reporting period are not reported on. The final report contains cumulative statistics for all of the VSAM buffer pools. This report is similar to the VSAM Buffer Pool report produced by the IMS DB Monitor. See the IMS Utilities Reference: Database Manager for a description of the meaning of the fields and the uses for this report.

<table>
<thead>
<tr>
<th>Enhanced VSAM Buffer Pool Statistics</th>
<th>Count /Transact /Second</th>
<th>Interval : 1.08.59 (HHHH.MM.SS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shared resource pool ID/type</td>
<td>VS8K/D</td>
<td></td>
</tr>
<tr>
<td>Fix option: index/block/data</td>
<td>N/Y/Y</td>
<td></td>
</tr>
<tr>
<td>Buffer size</td>
<td>8,192</td>
<td></td>
</tr>
<tr>
<td>Buffers in subpool</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>HS buffers in subpool</td>
<td>75</td>
<td></td>
</tr>
<tr>
<td>Write errors</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Largest number of write errors</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>Retrieve by RBA calls</td>
<td>43,821</td>
<td>4.92</td>
</tr>
<tr>
<td>Retrieve by key calls</td>
<td>25,653</td>
<td>2.88</td>
</tr>
<tr>
<td>Total retrieve calls</td>
<td>69,474</td>
<td>7.81</td>
</tr>
<tr>
<td>Logical records inserted into ESDS</td>
<td>1</td>
<td>0.00</td>
</tr>
<tr>
<td>Logical records inserted into KSDS</td>
<td>7</td>
<td>0.00</td>
</tr>
<tr>
<td>Logical records altered in this subpool</td>
<td>1,524</td>
<td>0.17</td>
</tr>
<tr>
<td>Total number of updates</td>
<td>1,532</td>
<td>0.17</td>
</tr>
<tr>
<td>Nbr of background write requests</td>
<td>9</td>
<td>0.00</td>
</tr>
<tr>
<td>Nbr of Synch calls</td>
<td>624</td>
<td>0.07</td>
</tr>
<tr>
<td>Nbr of VSAM get calls</td>
<td>65,581</td>
<td>7.37</td>
</tr>
<tr>
<td>Nbr of VSAM search buffer calls</td>
<td>7</td>
<td>0.00</td>
</tr>
<tr>
<td>Total Nbr of VSAM calls</td>
<td>66,221</td>
<td>7.44</td>
</tr>
<tr>
<td>Nbr of times VSAM found CI in pool</td>
<td>54,853</td>
<td>6.16</td>
</tr>
<tr>
<td>Nbr of times VSAM read CI from DASD</td>
<td>10,738</td>
<td>1.21</td>
</tr>
<tr>
<td>Nbr of writes initiated by IMS</td>
<td>606</td>
<td>0.07</td>
</tr>
<tr>
<td>Nbr of writes initiated by VSAM</td>
<td>56</td>
<td>0.01</td>
</tr>
<tr>
<td>Total VSAM I/O operations</td>
<td>11,400</td>
<td>1.28</td>
</tr>
<tr>
<td>Nbr of successful VSAM reads from HS</td>
<td>4,218</td>
<td>0.37</td>
</tr>
<tr>
<td>Nbr of successful VSAM writes to HS</td>
<td>14,957</td>
<td>1.68</td>
</tr>
<tr>
<td>Nbr of failed VSAM reads from HS</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>Nbr of failed VSAM writes to HS</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>Nbr of PUH waits</td>
<td>0</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Figure 27. IMS Performance Analyzer IRUR: VSAM Buffer Pool Statistics

A key performance indicator for a VSAM Buffer Pool is the number of times VSAM found the CI in the pool, rather than reading the CI from DASD.

When data sharing in IMS sysplex database environments, there needs to be a balance between maximizing the requests satisfied in the pool and minimizing the occurrence of buffer invalidation.
Logging and checkpoints

The parameters affecting the performance of logging are spread across two PROCLIB members, PB and VSAM.

**DFSPBxxx**
- CPLOG
- WADS

**DFSVSMxxx**
- WADSDEF
- OLDSDEF

**IRUR: Logger Statistics**

The Logger Statistics report is one of the Internal Resource Utilization reports (IRUR) and provides various statistics describing the performance of the IMS log and write-ahead data set (WADS).

I/O counts and Buffer Wait counts can be used to see if any performance problems are being caused by bad logger or WADS I/O times.

**Note:** MSC incurs additional forced writes to the log.

<table>
<thead>
<tr>
<th>Logical Logger:</th>
<th>Count /Transact /Second</th>
<th>Interval: 20.00 (HHHH.MM.SS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Records written</td>
<td>212,075</td>
<td></td>
</tr>
<tr>
<td>Check write requests</td>
<td>15,400</td>
<td>1.76 12.83</td>
</tr>
<tr>
<td>Waits for writes</td>
<td>20</td>
<td>.00 .02</td>
</tr>
<tr>
<td>Buffer waits: chkpt invokers</td>
<td>8</td>
<td>.00 .01</td>
</tr>
<tr>
<td>Buffer waits: non-chkpt invokers</td>
<td>1</td>
<td>.00 .00</td>
</tr>
<tr>
<td>Awe submitted on wrt</td>
<td>0</td>
<td>.00 .00</td>
</tr>
<tr>
<td>Physical Logger:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WADS EXCPVRs</td>
<td>8,607</td>
<td>.98 7.17</td>
</tr>
<tr>
<td>2K segment writes initiated</td>
<td>24,482</td>
<td>2.79 20.40</td>
</tr>
<tr>
<td>OLDS writes initiated</td>
<td>1,786</td>
<td>.20 1.47</td>
</tr>
<tr>
<td>OLDS reads initiated</td>
<td>2</td>
<td>.00 .00</td>
</tr>
<tr>
<td>Internal checkpoint requests</td>
<td>6</td>
<td>.00 .00</td>
</tr>
<tr>
<td>Accumulative wtwt wait time</td>
<td>2,125</td>
<td>.24 1.77</td>
</tr>
</tbody>
</table>

*Figure 28. IMS Performance Analyzer IRUR: Logger Statistics*

A key performance indicator is the number of Logical Logger Buffer waits for non-checkpoint invokers. A high value might indicate that the Log Buffer allocation might be too low.

**System Checkpoint report**

The second part of the System Checkpoint report summarizes checkpoint activity, including:
- Average checkpoint duration and frequency
- Record counts by subtype

The following figure shows an example of a Checkpoint Summary report.
A Checkpoint Summary report is produced for each IMS Subsystem ID and contains the following information:

**Completed Checkpoints**
Number of completed checkpoints found in the log file. A complete checkpoint is one that starts with a 4001 record and ends with a 4098 record.

**Average Checkpoint Duration**
The average elapsed time per checkpoint in the format $hhhh.mm.ss.ths$. If there are insufficient completed checkpoints to allow a meaningful calculation, the following message is printed: **Insufficient Checkpoints to calculate.**

**Average Checkpoint Frequency**
The average time between checkpoints, or how frequently checkpoints are taken, in the format $hhhh.mm.ss.ths$. If there are insufficient completed checkpoints to allow a meaningful calculation, the following message is printed: **Insufficient Checkpoints to calculate.**

**CPLOG**
Checkpoint frequency. The average number of log records written between checkpoints.

**Checkpoint**
Start: Checkpoint start date and time.

---

### Subtype Description

<table>
<thead>
<tr>
<th>Subtype</th>
<th>Count</th>
<th>Bytes</th>
<th>%Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Begin Checkpoint</td>
<td>1</td>
<td>1,504</td>
</tr>
<tr>
<td>03</td>
<td>CNT - Communication Name (Node) Table</td>
<td>2</td>
<td>6,064</td>
</tr>
<tr>
<td>04</td>
<td>SMB - Scheduler Message Block</td>
<td>173</td>
<td>605,128</td>
</tr>
<tr>
<td>05</td>
<td>CTB - Communication Terminal Block</td>
<td>1</td>
<td>3,488</td>
</tr>
<tr>
<td>06</td>
<td>DDIR - OMB Directory Entry</td>
<td>50</td>
<td>50,080</td>
</tr>
<tr>
<td>07</td>
<td>PDIR - PSB Directory Entry</td>
<td>82</td>
<td>83,720</td>
</tr>
<tr>
<td>08</td>
<td>CLB - Communication Line Block</td>
<td>1</td>
<td>192</td>
</tr>
<tr>
<td>09</td>
<td>CCB - Conversational Control Block</td>
<td>1</td>
<td>1,376</td>
</tr>
<tr>
<td>10</td>
<td>LCB - Link Control Block</td>
<td>1</td>
<td>176</td>
</tr>
<tr>
<td>11</td>
<td>CRB - Communication Restart Block</td>
<td>1</td>
<td>352</td>
</tr>
<tr>
<td>14</td>
<td>SPQD - Subpool Queue Block</td>
<td>16</td>
<td>60,636</td>
</tr>
<tr>
<td>21</td>
<td>VTCB - VTAM Terminal Control Block</td>
<td>8</td>
<td>30,796</td>
</tr>
<tr>
<td>22</td>
<td>Queue Anchor block (LU 6.2)</td>
<td>1</td>
<td>32</td>
</tr>
<tr>
<td>30</td>
<td>RRE - Residual Recovery Element</td>
<td>6</td>
<td>5,330</td>
</tr>
<tr>
<td>31</td>
<td>SIDX - Subsystem Index Entry</td>
<td>1</td>
<td>132</td>
</tr>
<tr>
<td>32</td>
<td>OTMA TPIES/QABS</td>
<td>1</td>
<td>240</td>
</tr>
<tr>
<td>33</td>
<td>OTMA MRES/MCB5</td>
<td>1</td>
<td>248</td>
</tr>
<tr>
<td>80</td>
<td>Fast Path Begin Checkpoint</td>
<td>1</td>
<td>307</td>
</tr>
<tr>
<td>83</td>
<td>RCTE - Routing Code Table Entry</td>
<td>1</td>
<td>56</td>
</tr>
<tr>
<td>84</td>
<td>DMCB - DEDB Master Control Block</td>
<td>49</td>
<td>32,396</td>
</tr>
<tr>
<td>86</td>
<td>DMHR - Fast Path Buffer Header</td>
<td>3</td>
<td>13,176</td>
</tr>
<tr>
<td>87</td>
<td>ADSC - Area Data Set Control Block</td>
<td>8</td>
<td>7,696</td>
</tr>
<tr>
<td>89</td>
<td>Fast Path End Checkpoint</td>
<td>1</td>
<td>52</td>
</tr>
<tr>
<td>98</td>
<td>End Checkpoint</td>
<td>1</td>
<td>40</td>
</tr>
</tbody>
</table>

**TOTAL** | 411 | 983,217 | 100.00 |

---

**Figure 29. IMS Performance Analyzer: System Checkpoint Summary report**

A Checkpoint Summary report is produced for each IMS Subsystem ID and contains the following information:

**Completed Checkpoints**
Number of completed checkpoints found in the log file. A complete checkpoint is one that starts with a 4001 record and ends with a 4098 record.

**Average Checkpoint Duration**
The average elapsed time per checkpoint in the format $hhhh.mm.ss.ths$. If there are insufficient completed checkpoints to allow a meaningful calculation, the following message is printed: **Insufficient Checkpoints to calculate.**

**Average Checkpoint Frequency**
The average time between checkpoints, or how frequently checkpoints are taken, in the format $hhhh.mm.ss.ths$. If there are insufficient completed checkpoints to allow a meaningful calculation, the following message is printed: **Insufficient Checkpoints to calculate.**

**CPLOG**
Checkpoint frequency. The average number of log records written between checkpoints.

**Checkpoint**
Start: Checkpoint start date and time.
End: Checkpoint end date and time.
Number: Checkpoint number.

Subtype
Checkpoint record subtype.

Description
Subtype description.

Count Total number of checkpoint records of this subtype.
Bytes Total bytes of checkpoint records of this subtype.
%Total Percentage of records of this subtype over all checkpoint records.

Total
Count Total number of records in the checkpoint.
Bytes Total number of bytes of all records in the checkpoint.
%Total Should always be 100.00.

Adjusting parameters to tune system performance

IMS Performance Analyzer helps you monitor key performance indicators. As a result, you might determine that you need to tune your IMS systems by adjusting startup parameters. You can use the search and locate facilities of IMS Configuration Manager to quickly find the relevant parameters.

Before you begin

Ensure that you are familiar with the procedures described in Chapter 4, “Listing and searching parameter members using the ISPF dialog,” on page 39 and Chapter 5, ”Modifying PROCLIB parameters using the ISPF dialog,” on page 47.

Procedure

1. On the IMS Configuration Manager Primary Menu, select option 2 Systems. The IMS Systems List panel is displayed.
2. Enter line action P next to the system you want to adjust. The IMS Active Members panel is displayed.
3. Enter the search argument for the key performance parameter from the IMS Performance Analyzer report, such as CPL0G, the checkpoint frequency. You can enter the search argument CHECKPOINT to achieve the same result.
4. Enter line action S next to the CPL0G parameter and press Enter.
5. Adjust the CPLOG parameter value.
6. Exit and save changes.
7. After running your IMS systems with the changes, rerun the IMS Performance Analyzer reports to monitor whether the changes achieved the required results.
Part 3. Enterprise system management with the Eclipse plug-in

IMS Configuration Manager allows you to manage systems and parameters across your enterprise with the IMS Configuration Manager Eclipse plug-in.

Related concepts:

"Enterprise-wide system and parameter management" on page 6

The IMS Configuration Manager Eclipse plug-in provides an enterprise-level view of your resources and parameters and allows you to control and manage systems.
Chapter 7. Key features of the Eclipse plug-in

The IMS Configuration Manager Eclipse plug-in has several powerful features that can help you improve your understanding of your environment.

Perform the following tasks with the IMS Configuration Manager Eclipse plug-in:
- Centralize and consolidate your system and IMSplex configuration
- View IMS systems, resources, and parameters
- Compare parameters across multiple systems
- Submit IMS commands and view the output
- Use filters to highlight transactions matching certain attributes
- Identify transactions that can perform commands
- Identify transactions with a zero queue count
- List all active parameter members across your enterprise and drill down to parameter values
- Export data to external spreadsheet applications for further analysis

Online help is available throughout the plug-in by clicking the Help button ( ).

Related tasks:

“Installing the plug-in” on page 30

The IMS Configuration Manager plug-in for IBM Explorer for z/OS ( z/OS Explorer) provides a graphical user interface (GUI) to some of the functions provided by the IMS Configuration Manager ISPF dialog. The plug-in communicates with IMS Configuration Manager via Common Services Library server, which is supplied with IBM Common Services Library for z/OS (Common Services Library).
Chapter 8. Exploring your environment

Use the IMS Configuration Manager Eclipse plug-in to explore your systems.

Related tasks:
“Getting started with z/OS Explorer” on page 32
This topic explains how to get started with z/OS Explorer and the IMS Configuration Manager Eclipse plug-in.

Exploring the topology of your systems

The IMS Configuration Manager Eclipse plug-in allows you to explore the topology of your systems using the Navigation view.

Before you begin

Complete the steps described in the following topics:
1. “Establishing an IMS Configuration Manager definitions repository” on page 22
2. “Installing Common Services Library server” on page 24
3. “Installing the plug-in” on page 30

Procedure

Find the system you are interested in by expanding the items in the Navigation view.
1. Click the icon next to the All Sources entry to see its contents. IMS, IMS Connect, and IMSplex categories are displayed.
2. Continue to expand the entries in the Navigation view until you find the system you are interested in.
3. Double-click an entry to view additional details.

Results

Status icons may appear next to IMSplex, IMS Connect, and IMS entries displayed in the Navigation view.

Green circle (■)
The IMSplex, IMS, or IMS Connect is available.

Red square (■)
The IMSplex, IMS, or IMS Connect is unavailable. For an IMSplex, this can occur if the IMSplex is down, or there is no Operations Manager (OM) available for communication between the IMSplex and the Common Services Library server.

No status (blank)
The status of the IMSplex, IMS, or IMS Connect cannot be determined. This can occur in one of the following situations:
• the system is not in an IMSplex
• the system is in an IMSplex that is not available
• the system is not found within the IMSplex
Status information is only displayed for IMS Connect systems that are part of an IMSplex. IBM IMS Connect Extensions for z/OS can extend the status display for systems that are not part of the IMSplex.

What to do next
- Search for a particular IMS system, IMS Connect system, or IMSplex by typing search terms into the search list. A history of search terms can be accessed by clicking the arrow.
- Navigation items can be filtered by selecting an item from the source types list. By default, the Navigation view shows <All Source Types>.

Related tasks:
- “Connecting to a Common Services Library server” on page 33

The IMS Configuration Manager Eclipse plug-in requires a connection to a running instance of the Common Services Library server.

Listing active parameter members across your enterprise

The IMS Configuration Manager Eclipse plug-in allows you to list all active parameter members from across your enterprise.
**Procedure**

1. From the **Navigation** view, double-click **All Sources**. The **All Sources** tab is displayed.

2. In the **All Sources** tab, click the Refresh button ( ).

**What to do next**

- To view parameter history, select **MBRLIST** in the **Type** list and then select **HISTORY** in the **Show** list.
- To sort a column, click the column heading. For example, clicking **ChangeTimestamp** will sort the entries by the date and time that a parameter was modified.
- Right-click an item to reveal additional options.

**Viewing system resources**

The IMS Configuration Manager Eclipse plug-in allows you to list resources for individual systems or IMSplexes.

**Procedure**

1. From the **Navigation** view, double-click a system or IMSplex. The system or IMSplex is displayed in a new tab.
2. Select the **Resources** tab.
3. In the **Type** list, select **All** to show all resource types.
4. Click the Refresh button ( ) to load resources into the **Resources** tab.

**What to do next**

- To filter the list by resource type, select the resource type in the **Type** list and then click the Refresh button ( ).
- To sort a column, click the column heading.
- Right-click an item to reveal additional options.

**Related concepts:**

Chapter 9, “Filtering, searching, and saving,” on page 73

Use the IMS Configuration Manager Eclipse plug-in to filter and search table entries, and to save commonly used displays.
**Viewing members of an IMSplex**

The IMS Configuration Manager Eclipse plug-in allows you to view the members of your IMSplex.

**Procedure**

1. From the **Navigation** view, double-click an IMSplex. The IMSplex is displayed in a new tab.
2. Select the **Resources** tab.
3. In the **Type** list, select **Members** to show all members of the selected IMSplex.
4. In the **Show** list, select **Live** to show the current state of the IMS Configuration Manager definitions repository.

   **Note:** To compare live member systems with the definitions stored in your IMS Configuration Manager definitions repository, select **Live vs. Config. Repository**. To see only the definitions in your IMS Configuration Manager definitions repository, select **Config. Repository**.

5. Click the **Refresh** button. The members of the IMSplex are displayed. The **Type** column states if the member is an IMS system, IMS Connect system, or one of several possible Common Service Layer (CSL) components.
6. Optional: To view further detail on a CSL member, complete the following steps:
   a. Right-click on the member and select **Open**.
   b. Select values from the **Type** and **Show** lists (if available).
   c. Click the **Refresh** button.

**Related concepts:**

[Chapter 9, “Filtering, searching, and saving,” on page 73](#)

Use the IMS Configuration Manager Eclipse plug-in to filter and search table entries, and to save commonly used displays.

---

**Viewing parameters for individual systems**

The IMS Configuration Manager Eclipse plug-in allows you to view parameters for individual systems.

**Procedure**

1. From the **Navigation** view, double-click a system. The system is displayed in a new tab.
2. On the **Parameters** tab, click the **Refresh** button.
3. To view more detail on a particular item, right-click the item and select **Show Configuration**.
4. Optional: For members that support overrides, such as **DFSPB**, filter the results by selecting an option from the **Show** list:

   **INEFFECT**
   Displays the final parameter value that is “in effect” at IMS start after IMSGEN-specific parameter values, member-level parameter values, and any JCL overrides have been applied (in order).

   **JCLOVERRIDES**
   Display only the values in JCL overrides.
MEMBER
Display the value directly in the member.

XIMSGEN
Extract IMSGEN-specific parameters (stage 1).

ALL
Show all of the options at once. This results in multiple entries for each member.

The ParmSource column identifies where the value was obtained from.

What to do next
- To sort a column, click the column heading. For example, clicking MemberName will sort the entries by the name of the member.
- To access a history of your selections, click the list in the upper-left corner.

Related concepts:
Chapter 9, “Filtering, searching, and saving,” on page 73
Use the IMS Configuration Manager Eclipse plug-in to filter and search table entries, and to save commonly used displays.

Submitting IMS commands
The IMS Configuration Manager Eclipse plug-in allows you to submit IMS command to individual systems or IMSplexes.

About this task
The Eclipse plug-in issues commands through the Operations Manager (OM) API, which supports all type-2 commands, and many type-1 commands. For a complete list of commands, see the IMS documentation on commands and keywords supported by the OM API.

Procedure
1. From the Navigation view, double-click a system. A new tab is displayed showing the system or IMSplex you have selected.
2. Select the Commands tab.
3. Type your command in the Command box. Examples:
   - QUERY IMSPLEX SHOW(ALL)
   - DISPLAY STATUS
   - DISPLAY TRAN ALL or QUERY TRAN SHOW(ALL)
   - QUERY TRAN NAME(*) SHOW(QCNT)

   Note: Commands are submitted with the TSO credentials used to connect to the Common Services Library server. This TSO userid must be authorized to run the commands using the appropriate IMS command access authority.

4. Press Enter, or click the Refresh button (mış). The results of the query are displayed in the table.
What to do next

- To sort a column, click the column heading. For example, clicking Status will sort the entries by their reported status.
- A history of commands can be found by clicking the Command list.
- Right-click an item to reveal additional options.

Related concepts:

Chapter 9, “Filtering, searching, and saving,” on page 73

Use the IMS Configuration Manager Eclipse plug-in to filter and search table entries, and to save commonly used displays.
Chapter 9. Filtering, searching, and saving

Use the IMS Configuration Manager Eclipse plug-in to filter and search table entries, and to save commonly used displays.

Using the list filter

The IMS Configuration Manager Eclipse plug-in has a filtering function that allows you to filter and highlight entries according to specified criteria.

Procedure

1. Select a system, IMSplex or IMS Connect system, and then load resources, parameters, or command results into the corresponding tab. See Chapter 8, “Exploring your environment,” on page 67 for details.

2. Click the Manage/Define List Filters button ( ). The Manage List Filters dialog is displayed.

3. Click New to create a new filter. Enter a description for the new list filter and click OK. The new list filter is displayed in the list.

4. Select the check box to activate the filter. The conditions for the list filter can be entered in the space below.

5. Click New to create a new condition for the filter. The conditions you enter take the form of an equation and determine how the list will be filtered or highlighted.

6. Click each column to enter the terms of your condition:
   a. Select a Field (a column heading from your input data set), an Operator, and a Value to use.
   b. Select Highlight if you want to apply a colored highlight to list entries that match this condition.
   c. Select Case Sensitive if you want to apply case-sensitivity to the Value field.
7. Click **Save Filter**.
8. Click **OK** to apply the list filter. The results of the filter are displayed in the table.

```
Figure 34. Managing list filters in the plug-in
```

```
Figure 35. Highlighting items in type-2 command output using the plug-in list filter
```

**Related tasks:**

“Filtering parameter members” on page 43

The IMS Configuration Manager ISPF dialog allows you to specify masking characters to filter the parameter member list.

**Searching for values**

The IMS Configuration Manager Eclipse plug-in has a search functions that make finding values easier.
Find value buttons (🔍 and 🔍)

Allows you to search for rows with any column matching the value you specify.

Related tasks:

“Searching for members by their parameters and their function” on page 44
Search is available from an active member list for an IMS system, a group, or a PROCLIB using the IMS Configuration Manager ISPF dialog.

Saving the display

The IMS Configuration Manager Eclipse plug-in allows you to save commonly used resource, parameter, and command displays of your systems. Saving your display allows you to quickly access the data you use most without the need to re-input all of your settings.

Procedure

1. Select a system, IMSplex or IMS Connect system, and then load resources, parameters, or command results into the corresponding tab. See Chapter 8, “Exploring your environment,” on page 67 for details.

2. Click the Save the Current Display button (_staff:). The Save Display dialog is displayed.

3. Enter a name for your saved display.

4. Click OK to create the saved display. The name is displayed in the history list.
What to do next

- Click the Export button (🚀) to export displayed results to a comma-separated values (CSV) file for further analysis.

- If you no longer want the saved display, click the Delete button (🗑️) to delete it.
Chapter 10. Comparing systems and parameters

The IMS Configuration Manager Eclipse plug-in comparator allows you to perform comparisons across your enterprise. You can use the comparator to compare systems, parameters, resources, saved views, and the results of IMS type-2 commands with pre-configured comparison criteria, or you can perform your own customized comparisons. The comparator can be configured to ignore inconsequential differences between two result sets so you can focus on functionally significant differences within your IMS environment.

Using the comparator with a single data source

Compare data displayed in a results tab of the IMS Configuration Manager Eclipse plug-in with the comparator.

About this task

When using the comparator, a data source refers to the data presented in a tab or saved display of the IMS Configuration Manager Eclipse plug-in. The comparator can compare data within a single data source, or across multiple data sources.

This procedure demonstrates a simple comparison using a single data source. For additional examples using single and multiple data sources, see “Common uses of the Eclipse plug-in comparator” on page 79. For additional information on comparing data sources, see “Comparison criteria” on page 81.

Procedure

1. Load a list of parameter values, live resources, or the result of submitting an IMS command in a tab of the IMS Configuration Manager Eclipse plug-in. For more information on how to do this, see Chapter 8, “Exploring your environment,” on page 67 for details.

   In the following examples, the comparison is based on list of parameters associated with a particular IMSplex.

   Figure 38. Viewing a list of parameter values using the plug-in

2. Click the Compare button ( ). The Configure Comparison Criteria dialog is displayed, providing suggested comparison criteria based on the result set you selected in step 1. This result set is referred to in the dialog as Data Source 1. The columns contained within that result set are listed as follows.
3. Customize the output of your comparison. For additional detail on the Configure Comparison Criteria dialog, see “Comparison criteria” on page 81.

4. Click OK to perform the comparison.

The results of the comparison are displayed in the Compare tab. Highlights draw your attention to columns where adjacent cells contain different values. Differences in ignored columns are not highlighted.

In the preceding example, the following information is displayed:

- A highlight is shown in the DESC column to indicate the change in values from row 1 (7) to row 2 (empty).
- No highlight is shown in the CSLG or DC columns as they have been ignored using the Configure Comparison Criteria dialog.
What to do next

- Click the Compare button ( ) in this tab to change the comparison criteria.
- Use the Previous Difference ( ) and Next Difference ( ) buttons to jump between differences and to quickly examine the result set.

Related tasks:
“Saving the display” on page 75

The IMS Configuration Manager Eclipse plug-in allows you to save commonly used resource, parameter, and command displays of your systems. Saving your display allows you to quickly access the data you use most without the need to re-input all of your settings.

Common uses of the Eclipse plug-in comparator

The following section describes common uses of the comparator.

Identifying parameter differences across your enterprise

The IMS Configuration Manager Eclipse plug-in comparator allows you to identify parameter differences across your entire enterprise.

Procedure

1. From the Navigation view, double-click All Sources. The Navigation view is usually located on the left side of the screen but can be relocated if required. The All Sources tab is displayed.
2. On the All Sources tab, click the Refresh button ( ).
3. Right-click an item in the MemberName column and then click Show Configuration.
4. Click the Compare button ( ). The Configure Comparison Criteria dialog is displayed.
5. Click OK to perform the comparison using the suggested settings. The results of the comparison are displayed in the Compare tab. A highlight is displayed over two cells within a column where the value changes between rows.

Identifying resource differences between live IMS systems

Use the IMS Configuration Manager Eclipse plug-in comparator to display resource differences between two or more live IMS systems.
Procedure

1. Load a list of live resources for two or more IMS systems in separate tabs in the IMS Configuration Manager Eclipse plug-in. For more information on how to do this, see “Viewing system resources” on page 69 for details.

![Figure 42. Loading resources for three IMS systems in separate tabs with the IMS Configuration Manager Eclipse plug-in](image)

2. Click the **Compare** button ( ![Compare button](image) ). The **Configure Comparison Criteria** dialog is displayed.

3. Add your IMS systems as data sources and then select your comparison criteria. For additional information, see “Comparison criteria” on page 81. An example is provided in Figure 43.

![Figure 43. Selecting three comparison data sources using the Eclipse plug-in](image)
4. Click OK to perform the comparison. The results of the comparison are displayed in the Compare tab.

Figure 44. Resource comparison between three live IMS systems using the Show All option. Resources matching the Key Sequence conditions are grouped using beige rows. In this example, CEXTNWFI and CEXTPGM are present in all three IMS systems. CEXTRAN1, CEXTRAN2, and CEXTRAN3 are only present in two systems.

What to do next

- To change your comparison criteria, click the Compare button ( ). To learn more about the Configure Comparison Criteria dialog, see "Comparison criteria."
- To add additional IMS systems to the comparison, open new resources tabs and then add them as new data sources at step 3 on page 80. Alternatively, use a saved display in your comparison. To create a saved display, see "Saving the display" on page 75.

Comparison criteria

Use the Configure Comparison Criteria dialog to customize the result of your comparison.

Click the Compare button ( ) to display the dialog.
Data sources:

In the Eclipse plug-in, a data source is the name given to a set of results displayed in a tab. A data source can be one of the following:

- A tab you have opened containing a set of resources, parameters, or the results return from an IMS command. See Chapter 8, “Exploring your environment,” on page 67.
- A tab you have saved. See “Saving the display” on page 75.

The comparator can compare data within a single data source, or between two or more data sources. When you click the Compare button, Data Source 1 is automatically assigned to the open tab.

Comparing with a single data source allows you to compare between the rows of a result set. Highlighting is applied over table cells where the value between rows has changed. For an example of a single data source comparison, see “Using the comparator with a single data source” on page 77.

Comparing with multiple data sources allows you to compare across different open tabs and saved displays. To add additional data sources to your comparison, use the following procedure:

1. Click Add/Remove Data Sources.
2. Select your data sources. The list is derived from the results tabs you currently have open in the Eclipse plug-in and any saved displays you have.
3. Click OK.

For examples using multiple data sources, see “Common uses of the Eclipse plug-in comparator” on page 79.

Table options:

Label Items in the Label column will appear as column headings in your comparison output. By default they are derived from the column names of Data Source 1, but can be renamed if desired.
**Key Sequence**

The **Key Sequence** column controls your comparison output in two important ways:

- It allows you to bind related items together to form a comparison *key*.
- It allows you to sort the output by defining a *sequence*.

To sort the output by a particular column, place a 1 in the **Key Sequence** column next to the label. For example, enter 1 next to the *RepTTimeUpdate* label in Figure 45 on page 82 to sort the output chronologically by update time of the definitions repository.

To sort and group related items together, number the items sequentially. For example, resources are uniquely identified by their **Name** and **ResourceType**. To bind these items together, enter 1 and 2 next to their respective labels, as shown in Figure 45 on page 82.

When a new comparison is first created, the Eclipse plug-in suggests default values based on the content of **Data Source 1**. You can override these values as desired.

**Ignore**

By default, the comparator places a highlight over two cells in a column that have different values. Select the check box in the **Ignore** column to disable highlighting in that column.

**Hide**

Select the check box in the **Hide** column to remove that column from the output.

**Data Source**

A list of column headings in the selected data source. Add additional data sources by clicking the **Add/Remove Data Sources** button.

**Advanced:** Use the drop-down lists to perform the following tasks:

- Change the column ordering.
- Change the mapping between columns in your data sources. Use this technique if two data sources contain the same data, but use different naming conventions for column headings.

**Key matching options:**

These options allow you to define the behaviour of the comparator when it searches your data sources for the specified **Key Sequence**.

**Show Matched Keys**

Displays items where the key sequence is found in all data sources. For example, if **Show Matched Keys** was selected in Figure 45 on page 82, the comparison result would show a list of resources that are present in both IMS systems.

**Show Unmatched Keys**

Displays items where the key sequence is *not* found in all data sources. For example, the selections in Figure 45 on page 82 will list all resources, identified as the pairing of **Name** and **ResourceType**, that are present in one IMS system but not the other.

**Show All**

Displays the combination of selecting both **Show Matched Keys** and **Show Unmatched Keys**.
Part 4. Troubleshooting

Use these topics to diagnose and correct problems that you experience with IMS Configuration Manager.
Chapter 11. IMS Configuration Manager messages

This topic describes the messages issued by IMS Configuration Manager batch utilities.

Return codes

IMS Configuration Manager sets the following return codes:

- **0**: Operation was successful.
- **4**: Operation completed, but a warning (W) message was issued during processing.
- **8**: Operation may be incomplete. A failure (F) message was issued and IMS Configuration Manager continues processing.
- **12**: Operation may be incomplete. An error (E) condition caused premature termination.
- **16**: Operation is incomplete. A severe error (S) condition occurred.

Message format

IMS Configuration Manager messages begin with a unique message identifier, followed by message text which might contain variable information to identify the particular circumstance that caused the message.

The message identifier has the format **GPLnnnx** or **FUNnnnx** where:

- **GPL** or **FUN**: Three-character prefix to identify the origin of the message. GPL refers to errors associated with parameter processing or errors associated with IMS Configuration Manager components. FUN refers to functional support messages issued by IMS Configuration Manager.
- **nnnn**: Represents a four-digit message number. The preceding three-character prefix combined with this number uniquely identifies the message.
- **x**: Represents a single-letter severity level that indicates the return code, the purpose of the message, and the type of response required from you. The severity levels, from least to most severe, are:
  - **I**: Information. No action is required.
  - **W**: Warning. IMS Configuration Manager detected a possible error condition that you should evaluate.
  - **F**: Failure. IMS Configuration Manager detected a failure condition that you should evaluate.
  - **E**: Error. Your action is required before IMS Configuration Manager can continue processing.
  - **S**: Severe. IMS Configuration Manager processing is suspended until you have taken action.
Each message also includes the following information:

**Explanation:**
The Explanation section explains what the message text means, why it occurred, and what its variables represent.

**System action:**
The System action section explains what the system will do in response to the event that triggered this message.

**User response:**
The User response section describes whether a response is necessary, what the appropriate response is, and how the response will affect the system or program.

### GPL-prefixed messages

This topic describes messages with the GPLnnnx message identifier format.

**GPL5001F**  
Selected repository (dsn) is not suitable for this product

**Explanation:** The named IMS Configuration Manager definitions repository is from an older version of IMS Configuration Manager and is not supported.

**System action:** No IMS Configuration Manager functions can be used.

**User response:** Create a new IMS Configuration Manager definitions repository data set, or specify an existing data set supported by this version of IMS Configuration Manager and retry the request.

**GPL5002F**  
Member (mem), identified by RGSUF, had parameters that were not able to be parsed. Use List of all members (L) to edit member and correct problem

**Explanation:** The named member contains syntax errors and cannot be parsed to determine the further list of Proclib members.

**System action:** The list of applicable members is not built.

**User response:** Obtain a list of PROCLIB members via the l line command. Select the named member and correct the syntax errors then retry.

**GPL5003F**  
Access denied to parameter data set dsn

**Explanation:** The user does not have access to the named definitions repository data set.

**System action:** The requested product function fails.

**User response:** Refer the error to your security administrator and request access to the named data set. Alternatively, specify a data set to which you have access.

**GPL5004F**  
Invalid parameter data set dsn

**Explanation:** The data set failed to open due to one of the following reasons:
1. Security error
2. Invalid data set organization (not PO)
3. Data set cataloged but does not exist

**System action:** The requested product function fails.

**User response:** Examine the job log to determine the cause of the error. Correct the problem and retry the function.

**GPL5100F**  
Proclib dsn Member: mem IMS Release: imsr Function: func

**Explanation:** A failure has occurred.

**System action:** The utility stops.

**User response:** Contact IBM Software Support.

**GPL6000I**  
line cllcd

**Explanation:** A line of the SYSLIN utility parameter file is displayed along with its relative line number within the file.

**System action:** None. Informational message only.

**User response:** None. Informational message only.

**GPL6003I**  
cmd completed RC=rc

**Explanation:** The utility has ended with the displayed return code.

**System action:** If the return code is greater than 4 then the utility stops. Otherwise the utility will process the next defined utility command.

**User response:** If the return code is greater than 4, review prior messages in SYSPRINT to determine the recovery action.
### GPL6004E Utility command cmd failed, RC=rc

**Explanation:** The utility has ended with the displayed return code.

**System action:** If the return code is greater than 4 then the utility job stops. Otherwise the utility will process the next defined utility command.

**User response:** If the return code is greater than 4, review prior messages in SYSPRINT to determine the recovery action.

### GPL6005E Error in the SYSIN control cards, RC=rc

**Explanation:** The utility has detected a parameter error.

**System action:** The utility stops.

**User response:** Review prior messages in SYSPRINT, correct the indicated error, and rerun the utility.

### GPL6006E No parameters in the SYSIN control cards, RC=rc

**Explanation:** The utility has detected that there are no SYSIN parameters.

**System action:** The utility stops.

**User response:** Enter utility parameters and rerun the IMS Configuration Manager utility.

### GPL6007E Processing error rsn INFO=infoinfo2

**Explanation:** The utility has detected an error in a sub component.

**System action:** The utility stops.

**User response:** Save all files and job logs. Contact IBM Software Support.

### GPL6008W SET MAXCC=mrc, command processing continues

**Explanation:** The utility has modified the return code from the prior utility command to the MAXCC value.

**System action:** Processing continues.

**User response:** None required. This is a warning message only.

### GPL6010I COPY started from DD=ddname1 to DD=ddname2

**Explanation:** The utility job is starting to copy from ddname1 to ddname2.

**System action:** None. Informational message only.

**User response:** None. Informational message only.

### GPL6013I DISCOVER started output to DD=ddname

**Explanation:** The DISCOVER utility is starting. Output will be to the IMS Configuration Manager definitions repository ddname.

**System action:** None. Informational message only.

**User response:** None. Informational message only.

### GPL6020E DDname ddname not found

**Explanation:** A required ddname for the utility is missing.

**System action:** The utility stops.

**User response:** Supply the required ddname and resubmit the IMS Configuration Manager utility.

### GPL6021E Leading spaces not allowed in prm

**Explanation:** The parameter does not allow leading spaces.

**System action:** The utility stops.

**User response:** Correct the parameter and rerun the utility.

### GPL6022E Error act DDname ddn system code cde

**Explanation:** An error has been encountered reading or writing a QSAM utility file.

**System action:** The utility stops.

**User response:** Correct the problem described in the MVS system code and resubmit the utility.

### GPL6023E Duplicate typ in list: obj

**Explanation:** A duplicate resource group or NEWNAME was found in a list.

**System action:** The utility stops.

**User response:** Remove the duplicate resource group or NEWNAME and resubmit the utility.

### GPL6026E prm must be one alphabetic character followed by alphanumeric characters

**Explanation:** The parameter contains invalid characters. PLEX and IMSID names, and their new names, must conform to IBM naming conventions.

**System action:** The utility stops.

**User response:** Correct the parameter and resubmit the utility.
**GPL6041E** • **GPL6042E**

**GPL6041E**  
Plex is required for MBRTYPE(PLEX)  

**Explanation:** MBRNAME must contain the PLEX name when copying an IMSplex.  
**System action:** The run stops.  
**User response:** Add the PLEX parameter and resubmit COPY.

**GPL6042E**  
SYSTEM is required for MBRTYPE(SYSTEM)  

**Explanation:** The SYSTEM parameter must contain at least one IMSID or an asterisk when copying an IMS system.  
**System action:** The run stops.  
**User response:** Add the SYSTEM parameter and resubmit COPY.

**GPL6052E**  
prm 'plx' must conform to IMSplex naming conventions. One optional trailing asterisk is allowed for generic selection  

**Explanation:** The parameter contains invalid characters. The parameter value must be one alphabetic character followed by alphanumeric characters. One trailing asterisk is allowed for generic IMSplex selection.  
**System action:** The utility stops.  
**User response:** Correct the parameter and resubmit the utility.

**GPL6055I**  
cmd processing started for DD=dd, target repository DD=ddname  

**Explanation:** The MAINT utility is starting. Output will be to the repository ddname.  
**System action:** None. Informational message only.  
**User response:** None. Informational message only.

**GPL6300I**  
Copying obt 'obn' ob2  

**Explanation:** The object is being copied.  
**System action:** None. Informational message only.  
**User response:** None. Informational message only.

**GPL6301I**  
To target obt 'obn' ob2  

**Explanation:** The resource group is being copied to a new resource group name.  
**System action:** None. Informational message only.  
**User response:** None. Informational message only.

**GPL6303W**  
obt 'obn' ob2 exists and REPLACE not specified. Not copied  

**Explanation:** The IMS Configuration Manager definitions repository already contains the object. The object is not replaced because the COPY parameters do not include the REPLACE parameter.  
**System action:** The copy of the object is skipped.  
**User response:** Add the REPLACE parameter to your parameters and rerun COPY.

**GPL6304I**  
COPY has act obt 'obn' ob2  

**Explanation:** The object has been either created or replaced in the IMS Configuration Manager repository depending on if it already existed.  
**System action:** None. Informational message only.  
**User response:** None. Informational message only.

**GPL6307E**  
Repository call call failed, RC=rc RSN=rsn DD=dd  

**Explanation:** An error has been encountered accessing the IMS Configuration Manager definitions repository. The type of access is displayed along with the return and reason code and the ddname of the IMS Configuration Manager definitions repository in error.  
**System action:** The utility stops.  
**User response:** Save all job logs and report problem to IBM support.

**GPL6308E**  
Resource 'obn','ob2','res' of type obt  

**Explanation:** An error has been encountered accessing the IMS Configuration Manager definitions repository. The name and type of resource that was being processed is displayed.  
**System action:** The utility stops.  
**User response:** Save all job logs. Contact IBM Software Support.

**GPL6309E**  
The NEWSYSTEM parameter is required when copying an IMS system to the same repository  

**Explanation:** IMS systems cannot be copied to the same IMS Configuration Manager definitions repository unless they are going to be renamed.  
**System action:** The utility stops.  
**User response:** Add a new system name in the NEWSYSTEM parameter and rerun the utility.
GPL6314E  An XMIT file cannot be both the source and target of a COPY operation
Explanation: The COPY utility cannot COPY from an XMIT file to another XMIT file.
System action: The utility stops.
User response: Correct the FROM or TO parameter and rerun COPY.

GPL6315E  The NEWPLEX parameter must be different from the IMSPLEX name when copying to the same repository
Explanation: The COPY PLEX parameter must not be the same as the IMSplex name when copying to the same IMS Configuration Manager definitions repository.
System action: The utility stops.
User response: Correct the PLEX and NEWPLEX parameters and rerun COPY.

GPL6317I  Copying typ nam
Explanation: The named object is being copied.
System action: None. Informational message only.
User response: None. Informational message only.

GPL6319E  The NEWPLEX parameter is required when copying an IMSplex to the same repository
Explanation: The NEWPLEX parameter is required when copying a new IMSplex to the same IMS Configuration Manager definitions repository.
System action: The COPY utility stops.
User response: Add the NEWPLEX parameter and rerun COPY.

GPL6320E  Resource obn of type obt
Explanation: An error has been encountered accessing the definitions repository for MAINT processing. The name and type of the object that was being processed is displayed.
System action: The utility stops.
User response: Save all job logs. Contact IBM Software Support.

GPL6321E  IMSplex plx not found in DDname=dd
Explanation: The COPY utility did not find the IMSplex name in the file that was requested for copy.
System action: The utility stops.
User response: Correct the PLEX name parameter and rerun COPY.

GPL6324I  COPY has act IMSplex plx
Explanation: The IMSplex has been either created or replaced in the IMS Configuration Manager definitions repository depending on whether it already existed.
System action: None. Informational message only.
User response: None. Informational message only.

GPL6326E  The NEWSYSTEM parameter is required when copying a new system to the same repository
Explanation: The NEWSYSTEM parameter is required when copying a system to the same IMS Configuration Manager definitions repository.
System action: The COPY utility stops.
User response: Add the NEWSYSTEM parameter and rerun COPY.

GPL6328E  The NEWSYSTEM parameter(s) must be different from the SYSTEM name when copying to the same repository
Explanation: The COPY NEWSYSTEM parameter must not be the same as the SYSTEM name when copying to the same IMS Configuration Manager definitions repository.
System action: The utility stops.
User response: Correct the SYSTEM and NEWSYSTEM parameters and rerun COPY.

GPL6331E  The NEWSYSTEM parameter must have the same number of IMSID names as the SYSTEM parameter
Explanation: The NEWSYSTEM parameter, if used, must have the same number of IMSIDs specified as the SYSTEM parameter.
System action: The COPY utility stops.
User response: Change the NEWSYSTEM parameter so that there is one new IMSID name for each IMSID in the SYSTEM parameter. Use a comma for any IMSID name you do not want to rename.

GPL6332E  The NEWSYSTEM parameter cannot be specified when SYSTEM(*)
Explanation: The NEWSYSTEM parameter cannot be used with a generic SYSTEM parameter.
System action: The COPY utility stops.
User response: Remove the NEWSYSTEM parameter and resubmit the job.
GPL6333W No matching mbr found in DDname=d
Explanation: No members matching the MBRTYPE were found in the input file.
System action: The job ends.
User response: Correct the COPY selection parameters and resubmit the job.

GPL6334I mbr copied=cnt
Explanation: The number of PLEX and SYSTEMs copied are displayed.
System action: None. Informational message only.
User response: None. Informational message only.

GPL6335E Copy 'FROM' and "TO' data set names are the same and a new name not specified
Explanation: COPY to the same data set cannot be performed unless a new name for the objects is provided.
System action: COPY stops.
User response: Add the appropriate NEWPLEX, NEWSYSTEM or NEWNAME parameter and resubmit COPY.

GPL6337E The NEWSYSTEM parameter cannot be specified without a SYSTEM parameter
Explanation: The NEWSYSTEM parameter of the COPY utility can not out specified without the SYSTEM parameter. The NEWSYSTEM parameter is used to change the name of a system during the COPY operation.
System action: COPY stops.
User response: Remove the NEWSYSTEM parameter and resubmit COPY.

GPL6338E Your userid is not authorized to modify a ICM repository object
Explanation: An attempt to change an object in a IMS Configuration Manager definitions repository has been denied by IMS Configuration Manager access control.
System action: Utility stops.
User response: Contact your SAF administrator for more information.

GPL6339E A SAF error has been detected trying to authorize access to an ICM repository object, SAF RC=rc
Explanation: An attempt to change an object in a IMS Configuration Manager definitions repository has resulted in a SAF error.
System action: The utility stops.
User response: Contact your SAF administrator for more information.

GPL6340E SAF Entity: ent
Explanation: This message follows "GPL6338E" and "GPL6339E" to display the RACROUTE entity that failed.
System action: The utility stops.
User response: Contact your SAF administrator for more information.

GPL6341E The NEWPLEX parameter cannot be used with a generic PLEX copy
Explanation: The COPY NEWPLEX parameter cannot be used with PLEX(*).
System action: The utility stops.
User response: Remove the NEWPLEX parameter and rerun COPY.

GPL6342E The PLEX(*) parameter cannot be used to copy to the same repository
Explanation: The COPY PLEX(*) parameter cannot be used to copy to the same IMS Configuration Manager definitions repository.
System action: The utility stops.
User response: Correct the PLEX parameter and rerun COPY.

GPL6406E Plex (plx) not found in the repository
Explanation: The IMSplex name was not found in the IMS Configuration Manager definitions repository.
System action: The utility stops.
User response: Correct the PLEX parameter and resubmit the utility.

GPL6413E The XMITFILE is empty or invalid format. reason
Explanation: The XMITFILE was empty or not in XMITFILE format.
System action: The utility stops.
User response: Resubmit the utility with a valid XMITFILE.

GPL6600I Beginning command file processing
Explanation: MAINT processing has begun.
System action: None. Informational message only.
User response: None. Informational message only.
**GPL6601I** Objtype Created Updated Deleted
Notfound DupRec Skipped

**Explanation:** This message summarizes MAINT processing results.

When summarizing MAINT.MEMBERS command results, the possible values of Objtype are PLEX, IMS, IMSCON, ODBM, REPO, OM, RM, and SCI.

Counted are the number of each type of object created, updated, deleted, not found (on a create or delete operation), and a duplicate found (on a CREATE). Also displayed is the number of commands that were not executed because of errors in their syntax or values.

**System action:** None. Informational message only.

**User response:** None. Informational message only.

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**GPL6602I** ------- ------- ------- ------- -------- ------ -------

**Explanation:** This line is part of the total resources processed by the MAINT utility.

**System action:** None. Informational message only.

**User response:** None. Informational message only.

---

**GPL6603I** res cre upd del not dup skp

**Explanation:** This message summarizes the actions taken on an object during MAINT processing. A description of each column is provided by "GPL6601I."

**System action:** None. Informational message only.

**User response:** None. Informational message only.

---

**GPL6604E** Object name of type typ already exists - CREATE rejected

**Explanation:** MAINT processing has rejected a CREATE command since the object already exists.

**System action:** MAINT processing continues with the next command.

**User response:** Use the DELETE command and then the CREATE command, or use the UPDATE command to change an existing object.

---

**GPL6605E** Object name of type typ was not found - cmd rejected

**Explanation:** MAINT processing has rejected an UPDATE or DELETE command since the object does not exist.

**System action:** MAINT processing continues with the next command.

**User response:** If an UPDATE command failed, use CREATE command to insert the object. A failed DELETE command requires no response.

---

**GPL6606E** Object name of type typ is in use - cmd rejected

**Explanation:** The object specified is in use by the IMS Configuration Manager ISPF dialog or by another batch job.

**System action:** Processing continues.

**User response:** If another batch job is running then wait until it completes and resubmit the request. If the IMS Configuration Manager ISPF dialog is locking the object make sure that you exit the system edit session and then resubmit the request.

---

**GPL6607I** line cmd

**Explanation:** A line of the MAINT.RESOURCES utility command file is displayed along with its relative line number within the file.

**System action:** None. Informational message only.

**User response:** None. Informational message only.

---

**GPL6608E** No commands found in the MAINT command file, RC=rc

**Explanation:** The MAINT utility has detected that there are no commands in the command input file.

**System action:** The utility stops.

**User response:** Enter type-2 commands in the input command file and rerun the utility.

---

**GPL6609E** Error in the MAINT command file, RC=rc

**Explanation:** The MAINT utility has detected a command error in the input command file.

**System action:** The utility stops.

**User response:** Review messages in SYSPRINT, correct the error, and rerun the utility.

---

**GPL6611E** Invalid command NAME field value.
Name='name'

**Explanation:** The NAME field in the MAINT command must match IMS resource naming conventions. This includes a asterisk and percent signs for generic UPDATE and DELETE commands. Only alphanumeric and national characters are allowed in the name field of a CREATE command.

**System action:** The utility stops.

**User response:** Correct the NAME field and rerun.
GPL6612I Skipping `cmd object nam of type typ on line line`

Explanation: A command is being skipped because of an error. See prior error messages for the reason.

System action: The MAINT utility continues with the next command.

User response: Correct the error and rerun the command.

GPL6613E Generic names are not allowed on CREATE commands

Explanation: CREATE commands do not support generic substitution characters in the NAME field.

System action: The utility continues with the next command.

User response: Correct the error and rerun the command.

GPL6614E No objects of type typ are defined - cmd rejected

Explanation: UPDATE and DELETE commands with a GENERIC NAME will fail because there are no object records matching the NAME mask.

System action: The MAINT utility continues with the next command.

User response: Correct the error and rerun the command.

GPL6615I Generic name 'msk' matches 'typ nam' - Processing cmd request

Explanation: A command name mask matches an existing resource or descriptor in the resource group. The UPDATE or DELETE command will be processed.

System action: None. Informational message only.

User response: None. Informational message only.

GPL6616E LIKE statement model name of type typ not found - Skipping CREATE request

Explanation: MAINT.RESOURCES processing has rejected a CREATE using a LIKE parameter because the named resource or descriptor is not found in the resource group.

System action: MAINT.RESOURCES processing continues with the next type-2 command.

User response: Correct the command and rerun MAINT.RESOURCES.

GPL6617E No objects matched the NAME specification - cmd rejected

Explanation: MAINT processing has rejected an UPDATE or DELETE command since no objects could be found that matched the NAME specification.

System action: MAINT continues with the next command.

User response: Correct the NAME and rerun MAINT.

GPL6618E NAME="name" is invalid. typ system names must end in 'suf'

Explanation: The NAME field in the MAINT.MEMBERS command with a CREATE subcommand must match IMS resource naming conventions, where:
- ODBM system names must end in “OD”
- REPO system names must end in “RP”
- OM system names must end in “OM”
- RM system names must end in “RM”
- SCI system names must end in “SC”

System action: MAINT processing terminates.

User response: Correct the NAME field and rerun.

GPL6619E err

Explanation: MAINT.RESOURCES processing has found an error validating a resource or descriptor.

System action: The utility continues with the next command.

User response: Correct the command and rerun MAINT.RESOURCES.

GPL6620I Skipping `cmd obj command on line line`. No typ NAME is specified

Explanation: A subcommand being driven for a MAINT.MEMBERS command has been found to have no NAME parameter values. At least one NAME value is required to identify the target member or resource respectively.

System action: MAINT processing continues with the next subcommand.

User response: Correct the subcommand.

GPL6621E Object UPDATE request ignored as it does not alter the existing definition

Explanation: MAINT processing has ignored an update because the existing object will not be altered by applying the update.

System action: Processing continues.

User response: None. Informational message only.
The command on line ran successfully for object nam of type typ

Explanation: The given command has run successfully.

System action: Processing continues.
User response: None. Informational message only.

Processing IMSplex nam...

Explanation: This message displays the IMSplex names discovered and processed by autodiscovery.

System action: None. Informational message only.
User response: None. Informational message only.

Discovered obj job, XCF member mem in IMSplex plx on os - Version ver

Explanation: This message displays the IMS objects discovered by autodiscovery.

System action: None. Informational message only.
User response: None. Informational message only.

IMSplex plx has no active or eligible IMS components

Explanation: There are no active IMS components for this IMSplex or none match the MBRTYPE criteria.

System action: Autodiscovery continues with the next IMSplex.
User response: None. Informational message only.

JESJCL file in address space job not found

Explanation: The JESJCL file in a job cannot be found.

System action: Autodiscovery continues with the next member.
User response: None. Informational message only.

PARM = prm

Explanation: This message displays the PARM= string from the IMS component discovered by autodiscovery.

System action: None. Informational message only.
User response: None. Informational message only.

typ= dsn

Explanation: This message displays the data set names from the IMS component discovered by autodiscovery.

System action: None. Informational message only.
User response: None. Informational message only.

TYPE ‘ALL’ and ‘PLEX’ are mutually exclusive and are not allowed with other types

Explanation: DISCOVER parameter TYPE values ALL and PLEX are mutually exclusive and cannot be entered with any other TYPE values like IMS or IMSCON, etc.

System action: The DISCOVER utility stops.
User response: Correct the TYPE parameter and rerun the utility.

GPL7011I Searching for IMSCON jobs in the XCF group xcf which is associated with IMS system ims...

Explanation: Autodiscovery is looking for IMSCON regions in an XCF group from the IMS PB XCF group name.

System action: None. Informational message only.

User response: None. Informational message only.

GPL7012I Discovered obj, job, XCF member mem in XCF group xcf

Explanation: This message displays the IMS objects discovered by autodiscovery outside of an IMSplex.

System action: None. Informational message only.

User response: None. Informational message only.

GPL7013I Beginning DISCOVER update phase...

Explanation: This message indicates that DISCOVER is starting the phase when discovered IMS components are added to the IMS Configuration Manager definitions repository.

System action: None. Informational message only.

User response: None. Informational message only.

GPL7014I obj object nam, job job, XCF member mem - Object sta

Explanation: This message displays the IMS objects to be updated, added or ignored by autodiscovery.

System action: None. Informational message only.

User response: None. Informational message only.

GPL7015I MBRTYPE Discovered Added Updated No change Skipped Error

Explanation: This message is the heading row for a table that summarizes the results of autodiscovery.

MBRTYPE

- The type of component that has been discovered by IMS Configuration Manager. Possible values are PLEX (IMSplex), IMS, IMSCON (IMS Connect), ODBM (Open Database Manager), REP0 (Repository Server (RS)), OM (Operations Manager), RM (Resource Manager) and SCI (Structured Call Interface).

Discovered

- The number of components of each MBRTYPE found

Added

- The number of components that were new to the IMS Configuration Manager definitions repository.

Updated

- The number of components that were already in the IMS Configuration Manager definitions repository and were changed.

No change

- The number of components already in the IMS Configuration Manager definitions repository but are unchanged since the last time autodiscovery was executed.

Skipped

- The number of components that were not processed. There are several reasons a component may be skipped:
  1. An IMSplex does not have any active components.
  2. An IMS is in an IMSplex but NOPLEX processing is being done.
  3. The version of a component cannot be determined.
  4. An IMS Connect (IMSCON) is not associated with any IMS system that has been discovered.

Error

- The number of components that could not be processed further because of an error. Some reasons why a component can’t be processed further are:
  1. The component address space is not found.
  2. JESJCL cannot be parsed.
  3. A PROCLIB member cannot be read.
  4. A component parameter string cannot be parsed.
  5. Component STEPLIB tables cannot be loaded.

System action: None. Informational message only.

User response: None. Informational message only.

Related reference:

Chapter 16, “Understanding the result of the discovery process,” on page 163

Results of the IMS Configuration Manager autodiscovery process are summarized in the log.

GPL7016W No IMS components discovered

Explanation: This message indicates that DISCOVER did not discover any IMS components.

System action: None required. This is a warning message only.

User response: None required. This is a warning message only.
GPL7017I  Reading IMS Proclib member pmb for
   obj job job

Explanation: This message is issued when autodiscovery is reading an IMS proclib member.
System action: None. Informational message only.
User response: None. Informational message only.

GPL7018E  Proclib member 'pmb' not found for obj
   job job

Explanation: This message is issued if a PROCLIB member cannot be read from the data sets on an IMS component JOB's PROCLIB DD statement.
System action: Autodiscovery continues.
User response: Determine why the PROCLIB member is not in the data sets specified on the JOB's PROCLIB DD statement and rerun autodiscovery.

GPL7019I  ------- ---------- ----- ------- --------- ------- -----

Explanation: This message displays the number of objects discovered, added, and updated.
System action: None. Informational message only.
User response: None. Informational message only.

GPL7020I  obj dct act uct nucg skp err

Explanation: This message displays the number of objects discovered, added, update, not changed, skipped and in error.
System action: None. Informational message only.
User response: None. Informational message only.

GPL7021E  Dynamic typ error - DDname=ddn
   DSN=dsn

Explanation: Dynamic allocation failed for the named STEPLIB dataset. One or more dynamic allocation messages precede this message.
System action: Autodiscovery continues with the next component.
User response: Determine the cause of the dynamic allocate failure. Correct and restart the utility.

GPL7022E  Error opening DDname ddn system code cde

Explanation: An error has been encountered opening or closing an IMS component's STEPLIB.
System action: Autodiscovery stops.
User response: Correct the problem described in the MVS system code and resubmit the utility.

GPL7023I  obj object nam, job job, XCF member mem
   - Object is sta

Explanation: This message displays the status of IMS objects viewed in the IMS Configuration Manager definitions repository by autodiscovery.
System action: None. Informational message only.
User response: None. Informational message only.

GPL7024I  Checking for discovered IMS components in the ICM repository...

Explanation: This message indicates that DISCOVER is starting the phase when the IMS Configuration Manager definitions repository is checked for existence of previously discovered IMS components.
System action: None. Informational message only.
User response: None. Informational message only.

GPL7025W  No IMSplex discovered

Explanation: DISCOVER did not find any IMSplexes in the sysplex. This can occur if the PLEX parameter is used and none of the specified IMSplexes are defined in XCF.
System action: The autodiscovery stops.
User response: Correct the PLEX parameter and rerun.

GPL7026I  Load of IMS table 'tab' from 'ddn' failed.
   RC=rc RSN=rsn

Explanation: A load of an IMS table out of an IMS component's library failed.
System action: Autodiscovery continues with the next component.
User response: Return code 4 indicates that the IMS table is not in the library of the IMS component that is being discovered. Add the library with the module that is missing to the IMS component's STEPLIB and rerun autodiscovery.

GPL7027I  CQS job job, XCF member mem on os is
   associated with IMS system ims in
   IMSplex plx

Explanation: A CQS component is being associated with an IMS region in the same plex on the same OS image.
System action: None. Informational message only.
User response: None. Informational message only.

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Only MBR TYPES 'IMS' and 'IMSCON' allowed with the NOPLEX option

Explanation: The NOPLEX option only captures IMS and IMSCON components that are not part of an IMSplex.

System action: Autodiscovery stops.

User response: Correct the MBRTYPE parameter and rerun.

The PLEX parameter cannot be specified with the NO PLEX option

Explanation: The NOPLEX and PLEX parameters cannot be combined in a single command.

System action: Autodiscovery stops.

User response: Remove one of the parameters and rerun.

Discovered IMS job job, IMSID ims in subsystem name table

Explanation: This message displays the IMS regions found through the MVS Subsystem Name Table.

System action: None. Informational message only.

User response: None. Informational message only.

IMS system ims is in IMSplex plx and is therefore being skipped

Explanation: The NOPLEX option of autodiscovery ignores IMS systems that are in an IMSplex.

System action: The IMS is skipped. Autodiscovery continues.

User response: None. Informational message only.

The suffix of parameter member mbr* is not available in the PARM or PB member of IMS system ims

Explanation: Autodiscovery is skipping reading of this parameter member because the suffix is not in IMS parameters or PB member.

System action: None. Informational message only.

User response: None. Informational message only.

CQS PROCLIB DSN=dsn txt ims PROCLIB DD

Explanation: Autodiscovery is skipping or adding a CQS PROCLIB dataset to the IMS PROCLIB concatenation based on if the CQS PROCLIB is already in the IMS PROCLIB concatenation.

System action: None. Informational message only.

Name token services retrieve failed for CQSSN=cqs, RC=rsn

Explanation: Autodiscovery is unable to retrieve the name token for a CQS address space.

System action: Autodiscovery cannot retrieve CQS information for the IMS system.

User response: The return code is documented in the Assembler services guide for the IEANTRT callable service.

CQS PROCLIB DSN=dsn txt ims PROCLIB DD

Explanation: Autodiscovery is skipping or adding a CQS PROCLIB dataset to the IMS PROCLIB concatenation based on if the CQS PROCLIB is already in the IMS PROCLIB concatenation.

System action: None. Informational message only.

User response: None. Informational message only.
### GPL7039I

The name token for CQSSN=cqs could not be located

**Explanation:** Autodiscovery is unable to retrieve the name token for a CQS address space.

**System action:** Autodiscovery continues but cannot retrieve CQS information for the IMS system.

**User response:** Start the CQS region and rerun autodiscovery.

### GPL7040I

IMS system ims is not connected to a CQS system

**Explanation:** The IMS system discovered does not have a CQSID defined in the SQ or DF members of the IMS PROCLIB.

**System action:** None. Informational message only.

**User response:** None. Informational message only.

### GPL7041I

Discovered CQS job job, XCF member mem, CQSSN=cqs

**Explanation:** This message displays the CQS region found through Name/Token services.

**System action:** None. Informational message only.

**User response:** None. Informational message only.

### GPL7042I

CQS job job, XCF member mem, CQSSN=cqs is associated with IMS system ims

**Explanation:** A CQS component is associated with an IMS region not in an IMSplex.

**System action:** None. Informational message only.

**User response:** None. Informational message only.

### GPL7043I

IMS system ims is in IMSplex plx. Checking CQS connection

**Explanation:** The NOPLEX option of autodiscovery is checking an IMS that is an IMSplex for a CQS connection on the OSNAME that autodiscovery is running.

**System action:** None. Informational message only.

**User response:** None. Informational message only.

### GPL7044I

IMSCON job job is connected to IMS system ims

**Explanation:** Autodiscovery has found that an ICON region is connected to a IMS region though the TMEMBER name in the HWS DATASTORE parameter. The IMS system is not part of a IMSplex.

**System action:** None. Informational message only.

### GPL7045I

IMS job job, IMSID ims is being selected to find connected IMSCON jobs

**Explanation:** Autodiscovery is selecting an IMS job to try and find IMSCON regions connected to it.

**System action:** None. Informational message only.

**User response:** None. Informational message only.

### GPL7046I

obj job job selected for further processing

**Explanation:** Autodiscovery is selecting this object for further processing.

**System action:** None. Informational message only.

**User response:** None. Informational message only.

### GPL7047I

IXCQUERY error. RC=rc RSN=rtn, XCF group grp

**Explanation:** A XCF query command has failed. The IXCQUERY return and reason code are displayed and the XCF group name.

**System action:** Autodiscovery continues.

**User response:** Fix the problem indicated by the IXCQUERY return and reason codes displayed in message "GPL7047I" and rerun autodiscovery.

### GPL7048I

txt

**Explanation:** Autodiscovery has encountered an error issuing an XCF QUERY.

**System action:** Autodiscovery continues with the next IMSplex.

**User response:** Fix the problem indicated by the IXCQUERY return and reason codes displayed in message "GPL7047I" and rerun autodiscovery.

### GPL7049I

Found rcn DSN=dsn in DBRC ddn for IMSID ims

**Explanation:** Autodiscovery has found a RECON dataset for an IMSID by loading MDA blocks from STEPLIB or IMSDALIB in the DBRC region.

**System action:** None. Informational message only.

**User response:** None. Informational message only.

### GPL7050I

Discovered obj job job is associated with IMS system ims

**Explanation:** This message displays the DBRC region that is associated with an IMS system.

**System action:** None. Informational message only.
<table>
<thead>
<tr>
<th>Message ID</th>
<th>Message Text</th>
<th>User Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPL7051I</td>
<td>Found ddn DSN=dsn in DBRC job job</td>
<td>None. Informational message only.</td>
</tr>
<tr>
<td>GPL7052I</td>
<td>Error finding IMSplex associations for IMSCON hws. Feedback: RC=rc RSN=rsn</td>
<td>None. Informational message only.</td>
</tr>
<tr>
<td>GPL7053I</td>
<td>IMSCON hws has IMSplex associations with 'plx'</td>
<td>None. Informational message only.</td>
</tr>
<tr>
<td>GPL7054I</td>
<td>obj job job in IMSplex plx on os - Version is zero, skipping object</td>
<td>None. Informational message only.</td>
</tr>
<tr>
<td>GPL7055I</td>
<td>Loading SCD module scd from the IMS job STEPLIB</td>
<td>None. Informational message only.</td>
</tr>
<tr>
<td>GPL7056I</td>
<td>Reading CQS Proclib member pmb for obj job job</td>
<td>None. Informational message only.</td>
</tr>
<tr>
<td>GPL7057I</td>
<td>To discover the CQSSN cqs connected to IMS system ims, autodiscovery must be run on os</td>
<td>None. Informational message only.</td>
</tr>
<tr>
<td>GPL7058I</td>
<td>Searching for CQS connections to IMS systems...</td>
<td>None. Informational message only.</td>
</tr>
<tr>
<td>GPL7059I</td>
<td>Discovering resources for IMS system ims, IMSplex plx</td>
<td>None. Informational message only.</td>
</tr>
<tr>
<td>GPL7060I</td>
<td>Error processing an IMS SCD 'scd', RC=rc RSN=rsn</td>
<td>None. Informational message only.</td>
</tr>
<tr>
<td>GPL7061I</td>
<td>IMS system ims is searching for a CQS using CQSSN=ssn</td>
<td>None. Informational message only.</td>
</tr>
</tbody>
</table>
GPL7063E  Error parsing a spool buffer. INFO=ed
Explanation: An unexpected condition was encountered while parsing a spool buffer.
System action: Autodiscovery skips the affected spool buffer and continues.
User response: Save all files and job logs. Contact IBM Software Support.

GPL7064W  System name, type type not updated, conflicting update in progress
Explanation: Autodiscovery was unable to update a member system as there is another update in progress for that member, either by another batch utility or from an ISPF EDIT session.
System action: Autodiscovery continues with the next member.
User response: Rerun autodiscovery when the other update has completed.

GPL7300E  Unable to open file dsn - DD statement missing
Explanation: DD statement is missing from the JCL.
System action: IMS Configuration Manager fails to initialize.
User response: Add the missing DD card to the server JCL.

GPL7301E  No valid repositories defined
Explanation: GPLCNTL contains no IMS Configuration Manager definitions repositories.
System action: IMS Configuration Manager fails to initialize.
User response: Define at least one IMS Configuration Manager definitions repository via GPLCNTL.

GPL7302E  Required load module mod not found
Explanation: The required load module was not found.
System action: IMS Configuration Manager fails to initialize.
User response: Add the required library to the server STEPLIB.

GPL7303E  Syntax error(s) in GPLCNTL control cards
Explanation: GPLCNTL contains invalid control cards.
System action: IMS Configuration Manager fails to initialize.

User response: The cause of the syntax errors is described in earlier messages. Correct and restart the server.

GPL7304E  Dynamic allocation failed for repository rep, data set dsn
Explanation: Dynamic allocation failed for the named IMS Configuration Manager definitions repository. One or more dynamic allocation messages precede this message.
System action: IMS Configuration Manager initialization continues but the named IMS Configuration Manager definitions repository is not available.
User response: Determine the cause of the dynamic allocate failure. Correct and restart the product.

GPL7305I  rep repository act, data set dsn
Explanation: The named IMS Configuration Manager definitions repository data set was successfully allocated, freed, closed or initialized.
System action: Processing continues..
User response: None. Informational message only.

GPL7306E  Repository typ dup is a duplicate
Explanation: The name or data set name of the IMS Configuration Manager definitions repository has been duplicated.
System action: IMS Configuration Manager fails to initialize.
User response: Remove the duplicate specification.

GPL7307E  Initialization failed for repository rep, data set dsn
Explanation: Initialization failed for the named IMS Configuration Manager definitions repository. One or more messages precede this message.
System action: IMS Configuration Manager initialization continues but the named IMS Configuration Manager definitions repository is not available.
User response: Determine the cause of the IMS Configuration Manager definitions repository failure. Correct and restart the product.

GPL7308I  IMS Configuration Manager product act
Explanation: Information messages regarding the state of the product.
System action: Processing continues..
User response: None. Informational message only.
<table>
<thead>
<tr>
<th>Message ID</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPL7310I</td>
<td>Unable to load CSLSRG00 Explanation: An IMS Configuration Manager Eclipse plug-in IMSCOMMAND for the given IMSplex name cannot be performed as the load module CSLSRG00 is not available. System action: The command is rejected.</td>
</tr>
<tr>
<td>GPL7311I</td>
<td>Repository unavailable - name Explanation: An IMS Configuration Manager Eclipse plug-in command specified an IMS Configuration Manager definitions repository which is not known to the Common Services Library server, or is unavailable. System action: The command is rejected.</td>
</tr>
<tr>
<td>GPL7312E</td>
<td>Repositories rep1 and rep2 have duplicate systems: imsplex Explanation: The two named IMS Configuration Manager definitions repositories have duplicate entries. The IMS ID and IMSplex names are the same. This is not supported. System action: Both IMS Configuration Manager definitions repositories are flagged in error and are not available for processing.</td>
</tr>
<tr>
<td>GPL7313I</td>
<td>No records found Explanation: The server received a valid request but no data was found to match the specified parameters. System action: A null response (including the error message and headers) is returned.</td>
</tr>
<tr>
<td>GPL7314I</td>
<td>Response length exceeds the server's configured maximum length of maxlenM Explanation: The server is unable to respond to the command as the response length exceeds the server's configured maximum length. System action: A null response (including the error message and headers) is returned.</td>
</tr>
<tr>
<td>GPL7315I</td>
<td>Invalid command - type Explanation: An IMS Configuration Manager Eclipse plug-in command is invalid for a given reason. System action: The command is rejected with a response that includes this information message.</td>
</tr>
<tr>
<td>GPL7316I</td>
<td>Explanation: An IMS Configuration Manager Eclipse plug-in command failed in the command parser.</td>
</tr>
<tr>
<td>GPL7317I</td>
<td>SCI is not active for IMSplex plex Explanation: An IMS Configuration Manager command for the given IMSplex name failed as the IMSplex is not active. System action: The command is rejected.</td>
</tr>
<tr>
<td>GPL7318E</td>
<td>SCI registration error for IMSplex plex - macro RC=rc RSN=rs Explanation: The server was unable to register/deregister the named IMSplex with SCI. System action: No type-2 commands can be issued.</td>
</tr>
<tr>
<td>GPL7321I</td>
<td>Repository rep AUTODISCOVER(PLEX(xnm)) duplication ignored Explanation: The AUTODISCOVER parameter on the given definitions repository's GPLCNTL card has a duplicate PLEX name listed. The duplicate name value will be ignored. System action: Initialization for the IMS Configuration Manager definitions repository continues.</td>
</tr>
</tbody>
</table>
User response: Remove the duplicate specification to avoid this message in the future.

GPL7322I  Repository rep
  AUTODISCOVER(MBRTYPE(typ))
duplication ignored

Explanation: The AUTODISCOVER parameter on the given definitions repository’s GPLCNTL card has a duplicate MBRTYPE listed. The duplicate name value will be ignored.

System action: Initialization for the IMS Configuration Manager definitions repository continues.

User response: Remove the duplicate specification to avoid this message in the future.

GPL7323I  Repository rep
  AUTODISCOVER(MBRTYPE(ALL)) specified. Other MBRTYPE values ignored

Explanation: The AUTODISCOVER parameter on the given definitions repository’s GPLCNTL card has MBRTYPE(ALL) as well as other MBRTYPE values listed. MBRTYPE(ALL) incorporates all other values, so the other specified values are ignored.

System action: Initialization for the IMS Configuration Manager definitions repository continues.

User response: Remove the duplicate specification to avoid this message in the future.

GPL7324I  Autodiscovery for repository rep starting...

Explanation: Autodiscovery is commencing for the named IMS Configuration Manager definitions repository.

System action: Processing continues.

User response: None. Informational message only.

GPL7325I  Autodiscovery successful for repository rep

Explanation: Autodiscovery was performed successfully for the named IMS Configuration Manager definitions repository.

System action: Processing continues.

User response: None. Informational message only.

GPL7326E  Autodiscovery failed for repository rep

Explanation: Autodiscovery failed for the named IMS Configuration Manager definitions repository. One or more messages preceded this message.

System action: Initialization continues but the named IMS Configuration Manager definitions repository is not available.

User response: Determine the cause of the autodiscovery failure. Correct and restart the product.

GPL7327E  SCI query error for IMSplex plex -
  CSLSCQRY RC=rc RSN=rs

Explanation: The server was unable to query the named IMSplex.

System action: IMSplex member status can not be determined.

GPL7332W  Default repository request ignored for
  rep - DEFAULT previously assigned

Explanation: The request for the named definitions repository to be assigned as the DEFAULT definitions repository has been ignored. A default definitions repository has already been assigned.

System action: IMS Configuration Manager initialization continues.

User response: Remove the secondary DEFAULT specification and restart the server to avoid this message in the future.

GPL7333I  Repository rep has been implicitly assigned as DEFAULT

Explanation: No definitions repository was explicitly requested to be the DEFAULT, so the first definitions repository has been assigned implicitly.

System action: IMS Configuration Manager initialization continues.

User response: None - Information only. However, you may explicitly specify a DEFAULT definitions repository and restart the server to avoid this message in the future.

GPL7334E  DEFAULT is a reserved repository name

Explanation: The definitions repository name DEFAULT is reserved.

System action: IMS Configuration Manager fails to initialize.

User response: Correct the REPOSITORY NAME=DEFAULT specification.

**FUN-prefixed messages**

This topic describes messages with the FUNnnnnx message identifier format.
### FUN1003I Processing event at time

**Explanation:** These are startup and shutdown information messages. event identifies 'started' or 'ended'.

**System action:** The job continues.

**User response:** None. Informational message only.

### FUN1004I Message file DD ddname reason - records action

**Explanation:** The output message file is in error or cannot be found and the records have been suppressed or lost. ddname identifies the output file, reason identifies 'not found' or 'in error' and action the action taken with the records.

**System action:** The job continues.

**User response:** None. Informational message only.

### FUN1005W Message data with destination dest has been lost

**Explanation:** Output message data for the specified destination dest has been lost.

**System action:** The job continues.

**User response:** None required. This is a warning message only.

### FUN1006S Internal logic error rsn. INFO=info/info2

**Explanation:** The functional support environment has detected an internal error and is about to quiesce its functionality.

**System action:** The functional support environment quiesces.

**User response:** Gather the following documentary evidence at the time the problem occurs: copy of the job output, the PRINT data set and a portion of the JES syslog. Contact IBM Software Support.

### FUN1007E Processing error rsn. INFO=info/info2

**Explanation:** The functional support environment has detected an internal processing error and is about to quiesce its functionality.

**System action:** The functional support environment quiesces.

**User response:** Gather the following documentary evidence at the time the problem occurs: copy of the job output, the PRINT data set and a portion of the JES syslog. Contact IBM Software Support.

### FUN1008E JCL parameter parm is missing or invalid

**Explanation:** There is a missing parameter for this job.

**System action:** The job will not run.

**User response:** See the instructions for running the job and then resubmit the job.

### FUN1009E Unable to function module name.

**Explanation:** The functional support environment could not find the specified module. function identifies the function being performed and name the module name. info identifies the reason code.

**System action:** The functional support environment quiesces.

**User response:** Gather the following documentary evidence at the time the problem occurs: copy of the job output, the PRINT data set and a portion of the JES syslog. Contact IBM Software Support.

### FUN1010E Insufficient storage available.

**Explanation:** The functional support environment was unable to acquire sufficient storage. info identifies the amount of storage requested.

**System action:** The functional support environment quiesces.

**User response:** Increase the region size parameter for the job and restart.

### FUN2051E Error on VSAM file dsname, VSAM request is func, return code = rc, reason code = rsn

**Explanation:** The functional support environment has detected an error with the specified VSAM file dsname. func identifies the VSAM macro that failed, for example OPEN, GET, PUT, ERASE. rc and rsn identify the VSAM Macro return and reason codes.

**System action:** The functional support environment stops processing.

**User response:** Ensure the file is a valid VSAM file and resubmit the job. If it fails repeatedly, see the DFSMS/MVS Macro Instructions for Data Sets (SC26-4913) for an explanation of the VSAM Macro Return and Reason Codes. If you cannot correct the problem, contact the IBM Support Centre.
FUN2052E Unable to open VSAM file \textit{ddname} - DD statement missing

Explanation: The functional support environment cannot open a VSAM file because the DD statement is missing. \textit{ddname} identifies the VSAM file.

System action: The functional support environment stops processing.

User response: Ensure the file is defined with a key of (64 0) and resubmit the job.

---

FUN2053E \textit{dsname} is not a VSAM KSDS

Explanation: The functional support environment has identified that the specified file \textit{dsname} is not a VSAM file.

System action: The functional support environment stops processing.

User response: Ensure the file is defined correctly as a VSAM file and resubmit the job.

---

FUN2055E VSAM file \textit{dsname} data component has shareoptions \textit{dataopt1} \textit{dataopt2}, index has \textit{idxopt1} \textit{idxopt2}

Explanation: The functional support environment has identified that the shareoptions for the data component and the index component are not the same. \textit{dsname} identifies the VSAM file, \textit{dataopt1} and \textit{dataopt2} the shareoptions for the data component and \textit{idxopt1} and \textit{idxopt2} the shareoptions for the index component.

System action: The functional support environment stops processing.

User response: The shareoptions must be the same for the data and index components. Ensure the file is defined correctly and resubmit the job.

---

FUN2056E VSAM file \textit{dsname} defined with shareoptions \textit{opt1} \textit{opt2} instead of (4 3)

Explanation: The functional support environment has identified that the VSAM file has been specified with incorrect shareoptions. \textit{dsname} identifies the VSAM file and \textit{opt1} and \textit{opt2} the shareoptions. The shareoptions must be defined (4 3).

System action: The functional support environment stops processing.

User response: Ensure the file is defined with the correct shareoptions and resubmit the job.

---

FUN2060E VSAM file \textit{dsname} defined with incorrect key length offset instead of (64 0)

Explanation: The functional support environment has identified an incorrect key for the VSAM file. \textit{length} and \textit{offset} identify the invalid key values.

System action: The functional support environment stops processing.

User response: Ensure the file is defined with a key of (64 0) and resubmit the job.

---

FUN2100F Failed to format a message. The Message ID is \textit{messageid}, Reason: \textit{reason}

Explanation: The functional support environment failed to format a message.

System action: Processing continues.

User response: Gather the following documentary evidence at the time the problem occurs: copy of the job output, the PRINT data set and a portion of the JES syslog. Contact IBM Software Support.

---

FUN2210F Syntax error at end of input: string or comment terminator missing

Explanation: The Parameter Parser has reached the end of the input parameters while trying to locate the end of a string or a comment.

System action: The Parameter Parser stops processing.

User response: Add the missing delimiter and resubmit the job.

---

FUN2211I Syntax error at line \textit{record}: the input command is not a known command

Explanation: The Parameter Parser has detected an unexpected command. \textit{command} identifies the command and \textit{record} identifies the record number containing the unexpected command.

System action: The Parameter Parser continues.

User response: None. Informational message only.

---

FUN2212F Syntax error at end of input: record continuation on last record

Explanation: The Parameter Parser encountered a continuation character on the last record of the input parameters.

System action: The Parameter Parser stops processing.

User response: Remove the incorrect continuation and resubmit the job.

---

FUN2213I Syntax error at line \textit{record}: input does not match known keywords or positional parameters. Input string: \textit{input*}

Explanation: The Parameter Parser has detected an unexpected parameter. \textit{input} identifies the unknown parameter or keyword, and \textit{record} identifies the record...
number where the error was found.

**System action:** The Parameter Parser stops processing.

**User response:** Edit the input and resubmit the job.

---

**FUN2214F**  Syntax error: the command command is required

**Explanation:** The Parameter Parser has detected a missing mandatory command. command identifies the input containing the missing command.

**System action:** The Parameter Parser stops processing.

**User response:** Add the mandatory command and resubmit the job.

---

**FUN2215F**  Syntax error: required keyword/parameter is not present.

**Explanation:** The Parameter Parser has detected a missing mandatory option. option identifies the input containing the missing option.

**System action:** The Parameter Parser stops processing.

**User response:** Add the mandatory option and resubmit the job.

---

**FUN2216F**  Syntax error at line record: the command command may not be repeated

**Explanation:** The Parameter Parser has detected multiple commands command where only a single command is allowed. record identifies the record number where the second or subsequent command was found.

**System action:** The Parameter Parser stops processing.

**User response:** Remove the multiple entries and resubmit the job.

---

**FUN2217F**  Syntax error at line record: the keyword/parameter option may not be repeated

**Explanation:** The Parameter Parser has detected multiple keywords or parameters option where only a single keyword or parameter is allowed. record identifies the record number where the second or subsequent keyword or parameter was found.

**System action:** The Parameter Parser stops processing.

**User response:** Remove the multiple entries and resubmit the job.

---

**FUN2218F**  Syntax error at line record: invalid length for option. Value=input.

**Explanation:** The Parameter Parser has detected input values that do not match expected length parameters. option identifies the option where the invalid length was found, input identifies the input string containing the invalid value, and record identifies the record number where the error was found. length identifies the length specified, and min and max respectively identify the minimum and maximum allowable lengths of the string.

**System action:** The Parameter Parser stops processing.

**User response:** Correct the value to conform to the expected length and resubmit the job.

---

**FUN2219F**  Syntax error at line record: Invalid datatype for option. Value=input.

**Explanation:** The Parameter Parser has detected an input parameter option with a specified value that has an invalid data type.

**System action:** The Parameter Parser stops processing.

**User response:** Correct the value to conform to the expected data type and resubmit the job.

---

**FUN2220F**  Syntax error at line record: input value does not match the allowed syntax for option. Input=value.

**Explanation:** The Parameter Parser has detected parameter option that has invalid syntax. input indicates the string in error and record identifies the record where the error was detected.

**System action:** The Parameter Parser stops processing.

**User response:** Edit the input and resubmit the job.

---

**FUN2221F**  Syntax error at line record: invalid value for option. Value=value.

**Explanation:** The Parameter Parser has detected parameter option that has been specified with an invalid value. input indicates the string containing the invalid value and record indicates the record where the error was detected.

**System action:** The Parameter Parser stops processing.

**User response:** Correct the parameter to specify a valid value and resubmit the job.

---

**FUN2222F**  Syntax error at line record: number of values for parameter option exceed the list limit

**Explanation:** The Parameter Parser has detected a larger number of items in a list than expected. option identifies the input string containing the items, and
record identifies the record where the error was detected.

**System action:** The Parameter Parser stops processing.

**User response:** Edit the list of items and resubmit the job.

---

**FUN2223F**  Syntax error at line record: invalid value for option.

**Explanation:** The Parameter Parser has detected an invalid parameter. option identifies the input string containing the error, and record identifies the record where the error was detected.

**System action:** The Parameter Parser stops processing.

**User response:** Put the command in sequence and resubmit the job.

---

**FUN2224F**  Syntax error at line record: unmatched parenthesis. Input: input.

**Explanation:** The Parameter Parser has detected a missing parenthesis. input identifies the input string containing the missing parenthesis, and record identifies the record where the error was detected.

**System action:** The Parameter Parser stops processing.

**User response:** Add the missing parenthesis and resubmit the job.

---

**FUN2225F**  Syntax error at line record: unexpected data command expected. Input: input.

**Explanation:** The Parameter Parser has detected a missing command. input identifies the input string containing the missing command, and record identifies the record where the error was detected.

**System action:** The Parameter Parser stops processing.

**User response:** Add the missing command and resubmit the job.

---

**FUN2226F**  Syntax error at line record: command command is out of sequence.

**Explanation:** The Parameter Parser has detected an out of sequence command. command identifies the input string containing the sequence error, and record identifies the record where the error was detected.

**System action:** The Parameter Parser stops processing.

**User response:** Put the command in sequence and resubmit the job.

---

**FUN2227F**  Syntax error at line record: invalid delimiter for option. Value=value.

**Explanation:** The Parameter Parser has detected an invalid delimiter. command identifies the input string containing the error, and record identifies the record where the error was detected.

**System action:** The Parameter Parser stops processing.

**User response:** Put the command in sequence and resubmit the job.

---

**FUN2300F**  Load of resource class cls failed, SAF return code=safcrtracfr1racfr2.

---

**FUN2301F**  RACROUTE saff=failed,SAF return code=safcrtracfr1racfr2.

---

**FUN3001E**  Server terminating due to an error condition.

**Feedback:** feedback1: module_id/rsn_code
feedback2 feedback3

**Explanation:** An unsupported error condition has occurred. The server must terminate as its integrity is unknown. The feedback words contain IBM diagnostic and debugging information: the module ID and internal reason code for the module in which the error is generated.

**System action:** Processing ends unconditionally and the server terminates.

**User response:** Contact IBM Software Support.

---

**FUN3002E**  The server experienced an error condition.

**Feedback:** feedback1: module_id/rsn_code
feedback2 feedback3

**Explanation:** An unsupported error condition has occurred in the server. The server can continue processing. The feedback words contain IBM diagnostic and debugging information: the module ID and internal reason code for the module in which the error is generated.

**System action:** Processing ends for the affected thread but the server attempts to continue processing.

**User response:** Contact IBM Software Support.

---

**FUN3003E**  Unable to load module module: description

**Explanation:**

module Name of the module that could not be loaded.

description One of the following:

• Module not found
• BLDL for module failed
• LOAD for module failed
• BPELOAD RC=BPE return code
As part of server or product initialization, a LOAD for a required load module failed.

**System action:** If the routine is a required server module the server will issue a FUN3001E error message and will terminate.

If the routine is a product-based required module, the product will fail initialization and will be stopped.

**User response:** If possible, resolve the condition and restart the server or product. Otherwise, contact IBM Software Support.

---

**FUN3004I** DUMPTRACE command ignored as optional DD ddname is not present

**Explanation:** A DUMPTRACE modify command was issued but the optional destination FUNDIAG DD is not present in the server job, so the command has been ignored.

**System action:** The command is ignored. The server continues.

**User response:** Information only; no response needed.

---

**FUN3005I** DUMPSTATS command ignored as optional DD ddname is not present

**Explanation:** A DUMPSTATS modify command was issued but the optional destination FUNSTATS DD is not present in the server job, so the command has been ignored.

**System action:** The command is ignored. The server continues.

**User response:** Information only; no response needed.

---

**FUN3006E** Product task abnormal termination.

**Product:** product code

**Symptom:** CODE=completion code from the trapped abend 
REASON=reason code from the trapped abend

**Component:** product component name

**Explanation:** The server has recovered from an abend in a product task.

**System action:** The product will be stopped. Server processing will continue.

**User response:** Contact IBM Software Support.

---

**FUN3007E** Conversation subtask abnormal termination

**Subtask:** product subtask identifier

**Symptom:** CODE=completion code from the trapped abend 
REASON=reason code from the trapped abend

**Component:** product component name

**Explanation:** The server has recovered from an abend in a product subtask.

---

**System action:** The failing product subtask will be restarted. Product processing will continue.

**User response:** Contact IBM Software Support.

---

**FUN3008I** Server in final termination phase, command ignored

**Explanation:** A command was issued after the server had reached the final termination phase. Command processing is suspended for the server when it is in this final phase, so the command has been ignored.

**System action:** The command is ignored. Server termination continues.

**User response:** Information only; no response needed.

---

**FUN3009E** Server address space MEMLIMIT exceeded. Requested size: n MB

**Explanation:** A MEMLIMIT error condition has occurred in the server. The server can continue processing.

**System action:** Processing ends for the affected thread but the server attempts to continue processing.

**User response:** Raise the MEMLIMIT value for the address space to accommodate its storage needs. The server MEMLIMIT must match, or exceed, the server configuration specification for SDA_MAXLEN.

---

**FUN3010I** Command verb, command parameters (if any)

**Explanation:** A modify command was issued and has been acknowledged by the server.

**System action:** Server command processing continues.

**User response:** Information only; no response needed.

---

**FUN3011W** Listener socket connection dropped out. New client connections are suspended

**Explanation:** Due to events external to the server, the Listener socket connection has dropped out.

**System action:** Without the Listener socket connection the server is unable to accept new client connections. Existing client connections may be able to continue depending on the event that has caused the Listener socket to be dropped. For example, if the cause was that TCP has ended, then all client connections will have been dropped too.

**User response:** Use the RESTARTIP command, or recycle the server in order to reestablish the Listener socket connection.
FUN3012I Insufficient access authority - UserID=x
SAF class: SAF class Access intent: access intent
Resource: resource profile

Explanation: This message is issued when the server detects an unauthorized request (a violation) made by a user.

System action: The user request will be rejected.

User response: Follow the security procedures established for your installation. If no such procedures have been established, report the complete text of this message to the security administrator.

---

FUN3013E Maximum initialization time exceeded for product 'product code'

Explanation: The server has attempted to start the given product. However, the product failed to initialize in the maximum time allowed.

System action: The product will be stopped. Server processing will continue.

User response: Attempt to identify the cause of the product initialization delay in order to correct the issue. If possible, resolve the condition and restart the server or product. Otherwise, contact IBM Software Support.

---

FUN3014I DISPLAY PRODUCT product code
Status . . . . . . . . : status indicator

Explanation: Result of a console DISPLAY command:
F server,DISPLAY PRODUCT product

System action: None.

User response: Information only; no response needed.

---

FUN3015I In-core user security profiles refreshed

Explanation: Result of a console SECURITY command:
F server,SECURITY REFRESH

System action: None.

User response: Information only; no response needed.

---

FUN3101E Configuration error: description

Explanation: An error in the JCL initialization script prevented the server from initializing. The error can be one of the following:
- FUNCFG keyword missing, check PARM in JCL
- FUNCFG parameter missing, check PARM in JCL
- FUNCFG parameter must specify a PDS member name

System action: The server will terminate.

User response: Review the startup JCL and ensure all parameters are valid and rerun the job.

---

FUN3102E Error processing PROCLIB member member
Description: description

Explanation:
member Server configuration member

The server configuration parameter member is in error. The error can be one of the following:
- PROCLIB OPEN failed
- PROCLIB not in fixed format
- Member not found
- Member read failed
- Unsupported record format
- PROCLIB not LRECL=80
- Member too large

System action: The server will terminate.

User response: Review the startup JCL and ensure all parameters are valid and rerun the job.

---

FUN3103E Error parsing PROCLIB member member,
BPEPARSE RC=rc

Explanation:
member Server configuration member
rc BPEPARSE return code

The server configuration parameter member is in error. BPE0003E console messages are issued with details of the error identified by the BPE parameter parser.

System action: The server will terminate.

User response: Review the server configuration member and ensure that all parameters are valid. Rerun the job.

---

FUN3104E TCP_PORT is a required parameter.
Specify a value in the range 1 through 65535

Explanation: The TCP_PORT server configuration parameter value was not specified, or was specified as zero. A value is required and must be in the range 1 - 65535.

System action: The server will terminate.

User response: Correct the parameter value and rerun the job.

---
FUN3105E  Invalid maximum number of TCP input-threads: n. Valid range is 1 through 64

Explanation:

n   The TCP_THREADS value specified in the server configuration member

The TCP_THREADS server configuration parameter value is invalid. If specified, the value must be in the range 1 - 64. The default is 16.

System action: The server will terminate.

User response: Correct the parameter value and rerun the job.

FUN3106E  Invalid server CCSID: CCSID - description

Explanation:

CCSID  The CCSID value specified in the server configuration member

The CCSID server configuration parameter value is invalid. This represents the CCSID used by the server and is utilized for SDA data translation, when applicable. If specified, the CCSID must represent a single byte character set (SBCS) supported by z/OS Unicode Services. By default, a value of of 37 is used. That is, COM EUROPE EBCDIC.

System action: The server will terminate.

User response: Correct the parameter value and rerun the job.

FUN3107E  Invalid SDA bar-limit: n. Valid range is 64 - 4096 KB

Explanation:

n   The SDA_BARLIM value specified in the server configuration member

The SDA_BARLIM server configuration parameter value is invalid. If specified, the value must be in the range 64 - 4096 KB. By default, a limit value of 2048 KB is used.

System action: The server will terminate.

User response: Correct the parameter value and rerun the job.

FUN3108E  Invalid maximum SDA size: n. Valid range is 4 - 100 MB

Explanation:

n   The SDA_MAXLEN value specified in the server configuration member

The SDA_MAXLEN server configuration parameter value is invalid. If specified, the value must be in the range 4 - 100 MB. By default, a maximum value of 32 MB is used.

System action: The server will terminate.

User response: Correct the parameter value and rerun the job.

FUN3109E  Invalid SAF class name: name

Explanation:

name   The SAF_CLASS value specified in the server configuration member

The specified SAF class is not a valid SAF class name.

System action: The server will terminate.

User response: Ensure that SAF_CLASS is a valid SAF class name and specifies a defined resource class.

FUN3110E  SAF class not defined: name

Explanation:

name   The SAF_CLASS value specified in the server configuration member

The SAF class could not be identified. Possible reasons:

• SAF-enabled security (RACF or similar) is not installed.
• The class was not defined.

System action: The server will terminate.

User response: Correct the server configuration member if the SAF class is not as expected, or ensure that the SAF class is defined.

FUN3111E  Invalid SERVER_NAME value: name

Explanation:

name   The SERVER_NAME value specified in the server configuration member

The specified server name is not a valid name. A name name must be 1-8 alphanumeric characters with no imbedded blanks. However, the name cannot start with a numeric character. The characters '@', '#' and '$ are also allowable and are treated as alphabetic.

System action: The server will terminate.

User response: Correct the parameter value and rerun the job.
FUN3112E Invalid maximum number of TCP sockets: \( n \). Valid range is 50 through 2000

Explanation:
\( n \) The TCP_MAXSOC value specified in the server configuration member

The TCP_MAXSOC server configuration parameter value is invalid. If specified, the value must be in the range 50 - 2000. The default is 50.

System action: The server will terminate.

User response: Correct the parameter value and rerun the job.

---

FUN3113I Duplicate PRODUCT code 'code' will be ignored

Explanation:
\( code \) The PRODUCT value specified in the server configuration member

The specified PRODUCT code is a duplicate of an earlier configuration parameter and will be ignored.

System action: The server will continue.

User response: Remove the duplicate parameter value to avoid this notification.

---

FUN3114E Invalid or unsupported PRODUCT code: 'code'

Explanation:
\( code \) The PRODUCT value specified in the server configuration member

The specified PRODUCT code is invalid, or at least does not represent a product supported by the server.

System action: The server will terminate.

User response: Correct the parameter value and rerun the job.

---

FUN3115E Invalid TCP_RCVTIMEO value: \( x \). Valid are 0 (no limit), or 100000 through 1000000 microseconds

Explanation:
\( x \) The TCP_RCVTIMEO value specified in the server configuration member

The TCP_RCVTIMEO server configuration parameter value is invalid. If specified, the value must be 0 (no limit), or in the range 100,000 - 1,000,000. By default a value of 250,000 is used. I.e. 1/4 of a second.

System action: The server will terminate.

User response: Correct the parameter value and rerun the job.

---

FUN3116E Invalid PRD_MAXCNVQ# value: \( n \). Use a value in the range 1 through 255

Explanation:
\( n \) The PRD_MAXCNVQ# value specified in the server configuration member

The PRD_MAXCNVQ# server configuration parameter value is invalid. If specified, the value must be in the range 1 - 255. By default a value of 64 is used.

System action: The server will terminate.

User response: Correct the parameter value and rerun the job.

---

FUN3117E Server instance is already active for SERVER_NAME=name

Explanation:
\( name \) The SERVER_NAME value specified in the server configuration member

A server instance with the same SERVER_NAME is already active. The server name must be unique across the sysplex.

System action: The server will terminate.

User response: Correct the parameter value and rerun the job.

---

FUN3118E Invalid TCP_SNDTIMEO value: \( x \). Valid are 0 (no limit), or 100000 through 1000000 microseconds

Explanation:
\( x \) The TCP_SNDTIMEO value specified in the server configuration member

The TCP_SNDTIMEO server configuration parameter value is invalid. If specified, the value must be 0 (no limit), or in the range 100,000 - 1,000,000. By default a value of 250,000 is used (0.25 seconds).

System action: The server will terminate.

User response: Correct the parameter value and rerun the job.
System action: The server will terminate.
User response: Correct the parameter value and rerun the job.

---

**FUN3125E** Invalid TCP_NAME value: *name*

**Explanation:**

*name* The TCP_NAME value specified in the server configuration member.

The specified TCP/IP stack name is not a valid name. A name must be 1 - 8 alphanumeric characters with no embedded blanks. However, the name cannot start with a numeric character. The characters @, #, and $ are also allowed and are treated as alphabetic.

System action: The server will terminate.
User response: Correct the parameter value and rerun the job.

---

**FUN3126E** Invalid TCP_IPV6 value: 'value'. Use Y/N

**Explanation:**

*value* The TCP_IPV6 value specified in the server configuration member.

The specified TCP_IPV6 value is invalid. Specify Y or N.

System action: The server will terminate.
User response: Correct the parameter value and rerun the job.

---

**FUN3127E** NAME is required for the IRM_EXIT parameter. Specify a 1 to 8 character exit routine name

**Explanation:**

If the IRM_EXIT server configuration parameter is specified with a non-blank ID, then a 1 - 8 alphanumeric character exit routine name NAME is required.

System action: The server will terminate.
User response: Correct the parameter value and rerun the job.

---

**FUN3128E** Invalid IRM_EXIT parameter NAME value: *name*

**Explanation:**

*name* The IRM_EXIT parameter's NAME sub-parameter value specified in the server configuration member.

The IRM exit routine name must be a valid member name.

System action: The server will terminate.
User response: Correct the parameter value and rerun the job.
FUN3205I  Shutdown command received, server terminating

Explanation: The server has received a SHUTDOWN command or console stop request and has commenced termination.

System action: Server termination continues.

User response: Information only; no response needed.

---

FUN3206I  SHUTDOWN FORCE command received, server terminating

Explanation: The server has received a SHUTDOWN FORCE command and has either commenced server termination with FORCE, or upgraded an earlier shutdown request to use FORCE.

The FORCE option immediately terminates any outstanding client conversations that might be responsible for delaying server termination.

System action: Server termination continues.

User response: Information only; no response needed.

---

FUN3208E  TCP address space name is not available, server terminating

Explanation: The TCP address space name specified in the server configuration member

The given TCP address space name is invalid.

System action: The server will terminate.

User response: Make the TCP address space available, or change the TCP_NAME parameter of the configuration member to the name of a TCP address space that is available. Alternatively the TCP_NAME configuration parameter can be removed, which will result in the system's default TCP address space being selected.

---

FUN3209E  TCP/IP port $n in use

Explanation: The TCP/IP port number value specified in the server configuration member

The specified TCP/IP port is currently in use.

System action: Server continues without TCP/IP support.

User response: Retry as TCP/IP can take up to 2 minutes to free a port. Change the TCP_PORT parameter of the configuration member.

---

FUN3210I  TCP/IP using port $n

Explanation:

$n  The TCP/IP port number value specified in the server configuration member

The given TCP/IP port is being used by the server.

System action: None. Server continues.

User response: None. Information only.

---

FUN3211E  Shutdown command rejected, shutdown in progress

Explanation: The server has received a SHUTDOWN command after it had already commenced server termination.

System action: Server termination continues.

User response: Information only; no response needed.

---

FUN3212I  RESTARTIP initiated

Explanation: The server has initiated the process to perform a RESTARTIP action.

System action: The asynchronous process to perform the RESTARTIP action continues.

User response: Information only; no response needed.

---

FUN3213I  SECURITY REFRESH initiated

Explanation: The server has initiated the process to perform a SECURITY REFRESH action.

System action: The asynchronous process to perform the SECURITY REFRESH action continues.

User response: Information only; no response needed.

---

FUN3214I  Product code stop initiated

Explanation: The server has initiated the process to perform a product STOP action for the named product.

System action: The asynchronous process to perform the STOP action continues.

User response: Information only; no response needed.

---

FUN3215I  Product code stopped

Explanation: The named product has been stopped.

System action: None.

User response: Information only; no response needed.
Fun3216I • Fun3227I

Fun3216I Unable to stop product code, status: state
Explanation: The server cannot STOP the named product at this time due to the product's given status.
System action: The asynchronous process to perform the STOP action terminates.
User response: Information only; no response needed.

Fun3218I Unable to perform action, shutdown in progress
Explanation: The server cannot perform the named action as the server is in shutdown.
System action: The asynchronous process to perform the name action terminates.
User response: Information only; no response needed.

Fun3219I Unable to start product code, shutdown in progress
Explanation: The server cannot START the named product at this time as the server is shutting down.
System action: The asynchronous process to perform the START action terminates.
User response: Information only; no response needed.

Fun3220I Product code start initiated
Explanation: The server has initiated the process to perform a product START action for the named product.
System action: The asynchronous process to perform the START action continues.
User response: Information only; no response needed.

Fun3221I Product code started
Description ...: description
Version .......: version,release,number (modification)
Interface Level: interface module APAR level/ modification sublevel
Explanation: The named product has been started.
System action: None.
User response: Information only; no response needed.

Fun3222I Unable to start product code, status: state
Explanation: The server cannot START the named product at this time due to the product's given status.
System action: The asynchronous process to perform the START action terminates.
User response: Information only; no response needed.

Fun3223E DISPLAY|START|STOP command failed due to an invalid product specification
Valid products: products
Explanation: The command could not be performed because the product specification is invalid, or at least does not identify one of the products configured for the server.
"Valid products: NONE" is possible for START or STOP commands where no products have been configured for the server.
System action: None.
User response: Correct the product specification and reissue the command.

Fun3224I Command ignored, product code status: state
Explanation: The command has been ignored as it is not applicable to the current state of the given product.
System action: None.
User response: Information only; no response needed.

Fun3225I command command ignored, shutdown in progress
Explanation: The command has been ignored as it is not available during server shutdown.
System action: None.
User response: Information only; no response needed.

Fun3226I Server start completed
Explanation: The server is now ready to accept client connections.
System action: None.
User response: Information only; no response needed.

Fun3227I Product code initialization failed
Explanation: Initialization has failed for the named product. This could be due to a number of reasons:
• Load failure for required product programs.
• Product CPROG rejected product INIT or failed.
• FUN definition or environment error.

Earlier messages should have been written identifying the cause of the initialization failure.
System action: The product will be stopped.
User response: Information only; no response needed.
FUN3228I   Product code stopping
Explanation: The server has commenced the process of stopping the named product.
System action: Product STOP processing continues. Note that a product cannot stop while active request threads are outstanding, so the STOP process can be prolonged. No new external client requests will be accepted for the product at this stage.
User response: Information only; no response needed.

FUN3231E   UNIX System Services callable service func not found
Explanation: The named USS callable service could not be found. This is a z/OS environmental error.
System action: Server processing continues.
User response: Consult your z/OS System Administrator to ensure that UNIX System Services (USS) has been properly installed and configured.

FUN3232E   UNIX System Services callable service func (sreq) RETURN_CODE rc REASON_CODE rsn
Explanation: A TCP/IP function has failed unexpectedly and this message is issued to capture diagnostic feedback. Function: The TCP/IP function that was attempted Service: The function’s USS callable service Return code: The return code as a decimal number Reason code: Further qualifies the RETURN_CODE value, given as a hexadecimal value cccccc. cccc is a halfword reason code qualifier generally used to identify the issuing module and rrrr is the halfword reason code as described in the UNIX System Services Messages and Codes manual.
System action: Server processing continues.
User response: Look up the USS return code in z/OS UNIX System Services Messages and Codes.

FUN3233E   Unexpected TCP/IP response. IP operation function received ERRNO error number
Explanation: Function The TCP/IP function that was attempted
error The TCP/IP error number
Common Services Library server received an unexpected error attempting to perform the named TCP/IP function.
System action: Server processing continues.
User response: Look up the sockets return codes (ERRNOs) in z/OS Communications Server IP Sockets Application Programming Interface Guide and Reference.

FUN3234E   PassTicket generation failed RC=RC - Class=PTKTDATA, UserID=UserID, ApplName=AppName
Explanation: A PassTicket generation request has failed.
RC Return code from the RACF routine:
04 Incorrect PassTicket.
08 No PTKTDATA profile found for the application.
12 No task or address space ACEE found.
16 Caller is not authorized.
20 The RACF PTKTDATA class is not active.
24 Error in the session key generator process.
AppName The user ID associated with the failed request.
ApplName The application name associated with the failed request.
System action: The processing thread that requested the PassTicket is terminated.
User response: Contact IBM Software Support.

FUN3231E   UNIX System Services callable service func not found
Explanation: The named USS callable service could not be found. This is a z/OS environmental error.
System action: Server processing continues.
User response: Consult your z/OS System Administrator to ensure that UNIX System Services (USS) has been properly installed and configured.

FUN3232E   UNIX System Services callable service func (sreq) RETURN_CODE rc REASON_CODE rsn
Explanation: A TCP/IP function has failed unexpectedly and this message is issued to capture diagnostic feedback. Function: The TCP/IP function that was attempted Service: The function’s USS callable service Return code: The return code as a decimal number Reason code: Further qualifies the RETURN_CODE value, given as a hexadecimal value cccccc. cccc is a halfword reason code qualifier generally used to identify the issuing module and rrrr is the halfword reason code as described in the UNIX System Services Messages and Codes manual.
System action: Server processing continues.
User response: Look up the USS return code in z/OS UNIX System Services Messages and Codes.

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FUN3300I • FUN3310E

**FUN3300I**  
Server default product (FUD) action  
**Explanation:** Information messages regarding the state of the server's default product (FUD).  
**System action:** Processing continues.  
**User response:** None.

**FUN3301E**  
Required load module mod not found  
**Explanation:** The required load module was not found.  
**System action:** The server's default product (FUD) will be stopped and the server will terminate.  
**User response:** Add the required library to the server STEPLIB.

**FUN3302I**  
Invalid command - type  
**Explanation:** GUI client command is invalid for a given reason.  
**System action:** The command is rejected with a response that includes this error message.  
**User response:** Probable syntax error. Correct and redrive the request.

**FUN3303I**  
The command entered has invalid syntax or contains an invalid keyword  
**Explanation:** GUI client command specified failed in the command parser.  
**System action:** The command is rejected with a response that includes this error message.  
**User response:** Probable syntax error. Correct and redrive the request.

**FUN3304E**  
Product initialization error  
**Explanation:** Server’s default product (FUD) initialization has encountered an error.  
**System action:** The server’s default product (FUD) will be stopped and the server will terminate.  
**User response:** Probable server logic error. Capture information to assist in problem diagnosis.

**FUN3305E**  
Conversation subtask initialization error. Subtask: tskid  
**Explanation:** Product subtask initialization has encountered an error.  
**System action:** Product subtask will be stopped and the associated request will be rejected.  
**User response:** Probable server logic error. Capture information to assist in problem diagnosis.

**FUN3306W**  
No records found  
**Explanation:** No data was found to match the specified parameters.  
**System action:** A null response (including this informational message and headers) is returned.  
**User response:** None.

**FUN3307E**  
Dynamic allocation type failed for DSN=dsn, UID=uid  
**Explanation:** Dynamic allocation failed for the named object, where the allocation request was driven as part of user request processing. One or more dynamic allocation messages precede this message.  
**System action:** Processing continues but the user request associated with the dynamic allocation fails.  
**User response:** Determine the cause of the dynamic allocation failure. Correct and retry the user request.

**FUN3308E**  
JCLIN data set is not a card-image PDS, DSN=dsn  
**Explanation:** For a server submit command the specified JCLIN data set was found not to be a card-image (LRECL=80) PDS.  
**System action:** The server submit command fails.  
**User response:** Specify a card-image PDS and retry the request.

**FUN3309E**  
Access denied to JCLIN data set, DSN=dsn  
**Explanation:** For a server submit command the requesting user is not authorized to read from the JCLIN data set.  
**System action:** The server submit command fails.  
**User response:** Correct the user authorization or modify the data set specification and retry the request.

**FUN3310E**  
JCLIN member mbr not found, or found to be empty  
**Explanation:** For a server submit command the specified JCLIN data set member was not found, or was found but had no records.  
**System action:** The server submit command fails.  
**User response:** Modify or respecify the JCLIN member and retry the request.

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### FUN3311E  JCL submitted to INTRDR but no job resulted

**Explanation:** For a server submit command the specified JCLIN data set member was tailored and submitted. However, no job resulted, which is indicative of invalid JCL with no JOB card.

**System action:** The server submit command fails.

**User response:** Modify or respecify the JCLIN member and retry the request.

---

### FUN3312I  Job jobid submitted

**Explanation:** Job submission has been successful. The job identifier for the submitted job is given. However, if multiple jobs were submitted via a single JCLIN member, then only the last job identifier is returned.

**System action:** None.

**User response:** None.

---

### FUN3399E  Processing error rsn. INFO=info/info2

**Explanation:** Generic error message capturing the error module, reason and associated feedback information.

**System action:** Processing continues.

**User response:** Probable server logic error. Capture information to assist in problem diagnosis.
Chapter 12. Gathering diagnostic information

Before you report a problem with IMS Configuration Manager to IBM Software Support, you need to gather the appropriate diagnostic information.

Procedure

Provide the following information for all IMS Configuration Manager problems:

- A clear description of the problem and the steps that are required to re-create the problem
- All messages that were issued as a result of the problem
- Product release number and the number of the last program temporary fix (PTF) that was installed
- The version of DB2/IMS that you are using and the type and version of the operating system that you are using

Provide additional information based on the type of problem that you experienced:

For online abends, provide the following information:

- A screen capture of the panel that you were using when the abend occurred
- The job log from the TSO session that encountered the abend
- The job log from the server
- A description of the task that you were doing before the abend occurred

For errors in batch processing, provide the following information:

- The complete job log
- Print output
- Contents of the data sets that were used during the processing
Part 5. Reference

These topics provide reference information for IMS Configuration Manager.
Chapter 13. PROCLIB members supported by IMS Configuration Manager

The IMS Configuration Manager ISPF dialog supports a large number of PROCLIB members.

In the following list of member names, x represents any of the following suffix characters: A-Z, 0-9, @, #, or $.

**BPE configuration parameter member**
Defines BPE execution environment settings such as tracing, language, and statistics time interval settings for an address space that is being started.

**BPE Exit List members**
Defines user exit routines to BPE.

**CQSIPxxx**
Parameters related to initialization of the Common Queue Server (CQS) address space.

**CQSSLxxx**
Defines local CQS parameters that are related to one or more coupling facility structures.

**CQSSGxxx**
Defines global CQS parameters that are related to one or more coupling facility structures.

**CSLDCxxx**
Defines the data store connections between one or more Open Database Manager (ODBM) instances and one or more IMS systems.

**CSLDIxxx**
ODBM initialization member. Parameters related to the initialization of the ODBM address space.

**CSLOIxxx**
Parameters related to initialization of the Operations Manager (OM) address space.

**CSLRIxxx**
Parameters related to initialization of the Resource Manager (RM) address space.

**CSLSIxxx**
Parameters related to initialization of the Structured Call Interface (SCI) address space.

**DBFMSDBx**
Defines Main Storage Databases (MSDBs) to be loaded at startup.

**DFS62DTx**
Stores the LU 6.2 device descriptors that are built during IMS initialization.

**DFSCGxxx**
Parameters related to the Common Services Layer (CSL), including the Operations Manager (OM), the Resource Manager (RM), and the Structured Call Interface (SCI).

**DFSDCxxx**
Defines data communication options.

**DFSDFxxx**
Processing options for the following IMS components and functions:
- Databases
- Dynamic database buffer pools
- Dynamic resource definition (DRD)
- Exit routines
- The Fast Path 64-bit buffer manager
- The IMS abend search and notification procedure
- The IMS catalog
- The IMS Common Service Layer (CSL)
- The IMSRSC repository
- Multiple Systems Coupling (MSC)
- Shared queues

**DFSDRxx**
Used to specify that portions of the control region be placed in disabled reference (DREF) storage during initialization.

**DFSDSCMx**
Stores Extended Terminal Option (ETO) descriptors generated by IMS during stage 1 system definition.

**DFSDSCTy**
Specifies override descriptors for the Extended Terminal Option (ETO), including logon descriptors, Message Format Service (MFS) device descriptors, Multiple Systems Coupling (MSC) descriptors, and user descriptors. By default, the suffix y on DFSDSCTy is 0.

**DFSFDRxx**
Specifies the Fast Database Recovery (FDBR) options used by the FDR.

**DFSFIXnn**
Used to specify that portions of the control region (for example, certain control blocks, buffer pools, loaded modules, and part of the IMS nucleus) be fixed in address space during initialization.

**DFSHSBxx**
Specifies the Extended Recovery Facility (XRF) options used by the active and alternate subsystems in an XRF complex.

**DFSINTxx**
Identifies the preinitialization modules to receive control before MPR, IFP, BMP, JMP, and JBP dependent regions are initialized.

**DFSVSMxx**
Settings for buffer pools, trace options, DASD logging, coupling facility structures, IRLM lock timeout, and transactions in a HALDB partition.
DFSYDTx
Specifies the OTMA client descriptors and the OTMA destination descriptors that are built during IMS initialization.

DSPBIxxx
Database Recovery Control (DBRC) initialization member. Parameters that initialize the DBRC address space.

FRPCFG
Used to define the Repository Server (RS) configuration parameters relating to performance, communications, and security. FRPCFG also identifies the names of the RS catalog repository data sets.

HWSCFG
Specifies environmental settings for IMS Connect. IMS Connect uses the information it retrieves from this member to establish communication with IMS and TCP/IP.

SSM
Subsystem member (SSM). The SSM contains an entry for each external subsystem with which IMS communicates.

Related concepts:
- Chapter 5, “Modifying PROCLIB parameters using the ISPF dialog,” on page 47
- IMS Configuration Manager allows you to modify parameters using the ISPF dialog.

Related tasks:
- “Listing parameter members in a PROCLIB” on page 41
  The IMS Configuration Manager ISPF dialog PROCLIB view allows you to browse all members in a PROCLIB data set.
- “Checking the syntax of a member” on page 49
  To highlight syntax errors in the parameter member that you are editing, enter the primary command CHECK or use the point-and-shoot CHECK field.
Chapter 14. IMS Configuration Manager batch utility (GPLUTIL)

The IMS Configuration Manager batch utility allows you to perform IMS Configuration Manager functions in batch.

The GPLUTIL batch utility includes the following commands:

DISCOVER
Automatically discovers your IMS environment and creates corresponding IMSplex, IMS, IMS Connect, and CSL definitions in your IMS Configuration Manager definitions repository.

MAINT:MEMBERS
Create, update, and delete IMSplexes, IMS systems, and CSL component definitions stored in an IMS Configuration Manager definitions repository.

Related concepts:
"Batch commands" on page 9

The batch utility (GPLUTIL) allows you to maintain your IMS Configuration Manager definitions repository.

How to read syntax diagrams

The following rules apply to the syntax diagrams that are used in this information:

• Read the syntax diagrams from left to right, from top to bottom, following the path of the line. The following conventions are used:
  – The >>--- symbol indicates the beginning of a syntax diagram.
  – The ---> symbol indicates that the syntax diagram is continued on the next line.
  – The >--- symbol indicates that a syntax diagram is continued from the previous line.
  – The --->< symbol indicates the end of a syntax diagram.

• Required items appear on the horizontal line (the main path).

• Optional items appear below the main path.

If an optional item appears above the main path, that item has no effect on the execution of the syntax element and is used only for readability.

• If you can choose from two or more items, they appear vertically, in a stack.
  If you must choose one of the items, one item of the stack appears on the main path.
If choosing one of the items is optional, the entire stack appears below the main path.

If one of the items is the default, it appears above the main path, and the remaining choices are shown below.

- An arrow returning to the left, above the main line, indicates an item that can be repeated.

A repeat arrow above a stack indicates that you can repeat the items in the stack.

- Keywords, and their minimum abbreviations if applicable, appear in uppercase. They must be spelled exactly as shown. Variables appear in all lowercase italic letters (for example, column-name). They represent user-supplied names or values.
- Separate keywords and parameters by at least one space if no intervening punctuation is shown in the diagram.
- Enter punctuation marks, parentheses, arithmetic operators, and other symbols exactly as shown in the diagram.
- Footnotes are shown by a number in parentheses; for example, (1).
COPY command

Copies objects between two IMS Configuration Manager definitions repositories or within a single IMS Configuration Manager definitions repository. Use this command to migrate definitions or to create backups and snapshots of your definitions.

Syntax

```
COPY MBRTYPE(SYSTEM) FROM(REPOSITORY, ddname) FROM options

COPY MBRTYPE(PLEX) FROM(REPOSITORY, ddname) FROM options

COPY TO(REPOSITORY, ddname) TO options
```

Copying IMS systems

Copy systems using the COPY command and the MBRTYPE(SYSTEM) option.

Syntax

```
COPY MBRTYPE(SYSTEM) FROM(REPOSITORY, ddname) SYSTEM(name)

COPY TO(REPOSITORY, ddname) NEWSYSTEM(name)
```

Parameters

MBRTYPE(SYSTEM)
Copy one or more IMS systems.

FROM(REPOSITORY, ddname)
Specifies the type of input and a reference to the name of the DD statement for the IMS Configuration Manager definitions repository containing the definitions. For example:
FROM(REPOSITORY,GPLDD)

SYSTEM(name,...)
A list of one or more systems to be copied. The systems can be renamed using the NEWSYSTEM name.

TO(REPOSITORY, ddname)
Specifies the name of the destination IMS Configuration Manager definitions repository. This can be the same name as the source (FROM) repository.

NEWSYSTEM(name,...)
A list of one or more new names for the system. For example, SYSTEM(A,B) NEWSYSTEM(X,Y) will copy system A as system X, and copy system B as system Y. The systems X and Y must not exist for the operation to succeed, or, alternatively, specify the REPLACE option to replace existing systems.
Copying IMSplexes

Copy IMSplexes using the COPY command and the MBRTYPE(PLEX) option.

Syntax

```
COPY MBRTYPE(PLEX) FROM(REPOSITORY,ddname) PLEX(plexname)
```

```
TO(REPOSITORY,ddname) NEWSYSTEM(name)
```

```
NEWPLEX(target-plex-name)
```

Parameters

MBRTYPE(PLEX)
Copy one or more IMSplexes.

FROM(REPOSITORY,ddname)
Specifies the type of input and a reference to the name of the DD statement for the IMS Configuration Manager definitions repository containing the definitions. For example:
FROM(REPOSITORY,GPLDD)

PLEX(plexname)
The name of the originating IMSplex.

SYSTEM(name,...)
A list of one or more systems that are part of the same IMSplex that are to be copied. Specify SYSTEM(*) to copy all systems that are associated with the IMSplex. The systems can be renamed using the NEWSYSTEM name.

TO(REPOSITORY,ddname)
Specifies the name of the destination IMS Configuration Manager definitions repository. This can be the same name as the source (FROM) repository.

NEWPLEX(target-plex-name)
The name of the IMSplex in the destination repository.

NEWSYSTEM(name,...)
A list of one or more new names for the system. For example, SYSTEM(A,B)
NEWSYSTEM(X,Y) will copy system A as system X, and copy system B as system Y. The systems X and Y must not exist for the operation to succeed, or, alternatively, specify the REPLACE option to replace existing systems.

REPLACE
This option specifies whether to replace objects that already exists in the destination IMS Configuration Manager definitions repository.

Any systems that are copied are replaced.

DISCOVER command

Automatically discover IMS components for use in IMS Configuration Manager.
Prerequisites

Users running the DISCOVER command must have access to the JES joblog before proceeding.

Syntax

```
►► DISCOVER MBRTYPE(ALL) MBRTYPE(PLEX)
   MBRTYPE(component)
   TO(REPOSITORY,ddname)
►►
PLEX(*) PLEX(mask)
   NOPLEX
  ```

Parameters

`MBRTYPE(ALL|PLEX) or MBRTYPE (component,...)`

Limit the discovery of members to one or more types. MBRTYPE accepts one of the following options:

- **ALL**
  Inserts all discoverable member types. See `component` for a list of supported member types.

- **PLEX**
  Inserts only the IMSplex records.

- **component,...**
  Specify a list of one or more systems and components. Options include:

  - **IMS**
    Inserts IMS systems and their associated IMSplexes. If applicable, Common Queue Server (CQS) components for systems discovered by this option are also inserted.

  - **IMSCON**
    Inserts IMS Connect systems and their associated IMSplexes.

  - **ODBM**
    Inserts Open Database Manager (ODBM) Common Service Layer (CSL) components and their associated IMSplexes.

  - **REPO**
    Inserts Repository Server (RS) CSL components and their associated IMSplexes.

  - **OM**
    Inserts Operations Manager (OM) CSL components and their associated IMSplexes.

  - **RM**
    Inserts Resource Manager (RM) CSL components and their associated IMSplexes.
**SCI**

Inserts Structured Call Interface (SCI) CSL components and their associated IMSplexes.

Default: MBRTYPE(ALL) (if parameter not specified).

**TO(REPOSITORY, ddname)**

Specify the ddname of the IMS Configuration Manager definitions repository in which to store discovered components. For example:

TO(REPOSITORY, GPLREPOS)

**PLEX(plexid or mask , . . .)**

Specify a list of IMSplexes that contain the components you want to discover. For example:

PLEX(PLXA, PLXB, PLXC)

Alternatively, use a mask to discover all IMSplexes beginning with a particular prefix. The preceding example can also be expressed as:

PLEX(PLX*)

The mask can be used to create complex search statements. The following examples demonstrate valid examples of how the mask can be used:

PLEX(*) PLEX(ABC*) PLEX(DEF*, XYZ*) PLEX(PLXDP, PLX*)

To discover components in all IMSplexes, use:

PLEX(*)

or omit the parameter.

Default: all IMSplexes (if parameter not specified).

**NOPLEX**

Default: all IMSplexes (if parameter not specified).

Discover IMS regions not in an IMSplex.

**Related reference:**

“Example JCL for discovering systems and IMSplexes”

This JCL uses the DISCOVER batch command to automatically discover IMS components for use in IMS Configuration Manager.

---

**Example JCL for discovering systems and IMSplexes**

This JCL uses the DISCOVER batch command to automatically discover IMS components for use in IMS Configuration Manager.

```
//GPLUTIL EXEC PGM=GPLUTIL
//STEPLIB DD DISP=SHR, DSN=HLQ.V2R3M0.SGPLLINK
// // SYSIN DD DISP=SHR, DSN=HLQ.VnRnMn.SDFSRESL
/*
DISCOVER MBRTYPE(imscomponenttype) +
   TO(REPOSITORY, GPLREPOS) +
   PLEX(plex) */
/*
GPLREPOS DD DISP=SHR, +
// DSN=HLQ.V2R3M0.REPOSTRY 3
//SYSPRINT DD SYSOUT** //
*/
```

where:
1 The IMS Configuration Manager link library.

Note: The IMS Configuration Manager link library, and all other libraries in the STEPLIB, must be APF-authorized.

2 The IMS RESLIB.

3 The IMS Configuration Manager definitions repository to use to store your definitions.

Related tasks:
“Establishing an IMS Configuration Manager definitions repository” on page 22

The IMS Configuration Manager definitions repository is a VSAM key-sequenced data set (KSDS) that contains an inventory of IMS Configuration Manager definitions and parameter change history. To begin using IMS Configuration Manager, you must create a definitions repository and then populate it with definitions using the autodiscovery feature.

Related reference:
“DISCOVER command” on page 130
Automatically discover IMS components for use in IMS Configuration Manager.

MAINT.MEMBERS command

Edits IMSplexes, IMS systems, and CSL component definitions stored in an IMS Configuration Manager definitions repository.

Syntax

```
MAINT.MEMBERS—FROM(DDNAME,ddname)—TO(REPOSITORY,ddname)
```

Parameters

FROM(DDNAME,ddname)
The ddname of a statement containing a series of subcommands that are to be applied to the IMS Configuration Manager definitions repository. See “Repository subcommands” for details.

TO(REPOSITORY,ddname)
The ddname of the IMS Configuration Manager definitions repository containing the definitions. Repository subcommands listed in the ddname variable specified by the FROM parameter will be submitted to this IMS Configuration Manager definitions repository.

Repository subcommands

Repository subcommands that are supported by the MAINT.MEMBERS command conform to the following syntax:

```
CREATE
UPDATE
DELETE
PLEX
NAME(component-name)
NAME(component-name-mask)
IMS
IMSCON
ODBM
REPO
OM
RM
SCI
```
Related reference:
"Example JCL for editing systems and IMSplexes" on page 157

This JCL examples uses the MAINT.MEMBERS batch command to create and edit IMSplexes, IMS systems, and Common Service Layer (CSL) component definitions stored in the IMS Configuration Manager definitions repository.

**CREATE subcommands**

Use a CREATE subcommand with the MAINT.MEMBERS command to create an IMS, IMS Connect system, or Common Service Layer (CSL) component definition in the IMS Configuration Manager definitions repository.

**CREATE PLEX subcommand**

Creates an IMSplex definition in the IMS Configuration Manager definitions repository.

**Syntax**

```
CREATE PLEX NAME(component-name)
```

**SET attributes: PLEX:**

```
DSCR(description)
```

**Parameters**

**NAME()**

Specifies the name, names, or component name mask of the component. Names may be up to five characters in length.

**SET()**

Specifies the attributes to be assigned.

**DSCR()**

A textual description of the IMSplex. Descriptions may be up to forty characters in length.

**CREATE IMS subcommand**

Create an IMS definition in the IMS Configuration Manager definitions repository.
Syntax

```
CREATE IMS NAME(component-name) component-name-mask

SET(set-attribute)
```

SET attributes: IMS:

```
VER(15.1)
14.1
13.1
DSCR(description)
PLEX(imsplex-name)
RECON1(data-set-name)
RECON2(data-set-name)
RECON3(data-set-name)
RGSUF(DFSPB-member-suffix)
JCLOVERRIDES(DFSPB-JCL-overrides-string)
COSINIT(CQSIP-member-suffix)
COSOVERRIDES(CQSIP-JCL-overrides-string)
SPECFG(BPE-configuration-member-name)
DSPBI(DBRC-configuration-member-suffix)
CTRLREGIONTYPE(DBDC)
ADDRNAME(address-name)
OSNAME(os-name)
PROCLIBS(data-set-name)
STEPLIBS(data-set-name)
```

Notes:
1. VER is a mandatory parameter.
2. RGSUF is a mandatory parameter.
3. If not specified, CTRLREGIONTYPE defaults to DBDC.

Parameters

**NAME()**

Specifies the name, names, or component name mask of the component. Names may be up to four characters in length.

**SET()**

Specifies the attributes to be assigned.
VER()
The software version of the IMS.

DSCR()
A textual description of the IMS. Descriptions may be up to forty characters in length.

PLEX()
The five-character name of the participating IMSplex. If the IMSplex is not already defined in the IMS Configuration Manager definitions repository, the action fails and an error message is issued.

RECON1(data-set-name)
IMS DBRC Recon data set name 1

RECON2(data-set-name)
IMS DBRC Recon data set name 2

RECON3(data-set-name)
IMS DBRC Recon data set name 3

RGSUF()
The three-character suffix for DFSPBxxx to be used during startup of the IMS control region. The PROCLIB member DFSPBxxx contains control region execution parameters.

Note: Specify a particular suffix for different control region environments. For example, specify IMS for DB/DC, DBC for DBCTL, and DCC for DCCTL.

JCLOVERRIDES()
One or more execution parameters to document JCL overrides to PROCLIB member parameters for this IMS. Parameters are specified in the form parameter=value. Parameter/value pairs are separated using a comma or spaces.

CQSINIT()
The three-character suffix for the CQSIIPxxx member which contains CQS initialization parameters (if applicable).

CQSOVERRIDES()
One or more execution parameters to override the corresponding CQSIIPxxx suffix parameters at CQS system startup. The particular CQSIIPxxx startup member is identified by CQSINIT. Parameters are specified in the form parameter=suf where suf is the three-character suffix that identifies the corresponding PROCLIB member. For example, specify STRDEFG=001,STRDEFL=002 to select PROCLIB members CQSSG001 and CQSSL002. Parameter/value pairs are separated using a comma or spaces.

BPECFG()
BPE configuration member in PROCLIB for the CQS system (if applicable).

DSPBI()
The suffix of the DBRC configuration member name.

CTRLREGIONTYPE()
The type of control region environment. This information is used in parameter validation.

DBDC
Database/data communication (DB/DC).

DBCTL
Database Control.
**CREATE IMSCON subcommand**

Create an IMS Connect system definition in the IMS Configuration Manager definitions repository.

### Syntax

```
CREATE IMSCON NAME( component-name )

SET( set-attribute )
```

### SET attributes: IMSCON:

1. **VER**
   - **VER(15.1)**
   - **VER(14.1)**
   - **VER(13.1)**

2. **DSCR**
   - **DSCR(description)**

3. **HWSCFG**
   - **HWSCFG(member-name)**

4. **BPECFG**
   - **BPECFG(member-name)**

5. **CEXCONSOLE**
   - **CEXCONSOLE(hostname,port-number)**

6. **PROCLIBS**
   - **PROCLIBS(data-set-name)**

7. **IMSPLEX**
   - **IMSPLEX(TMEMBER(imsplex-name),MEMBER(imsplex-member-name))**

### Notes:

1. **VER** is a mandatory parameter.
2. **HWSCFG** is a mandatory parameter.
3. **BPECFG** is a mandatory parameter.

### Parameters

**NAME()**

Specifies the name, names, or component name mask of the component. Names may be up to eight characters in length.
SET()
Specifies the attributes to be assigned.

VER()
The software version of the IMS Connect system.

DSCR()
A textual description of the IMS Connect system. Descriptions may be up to forty characters in length.

HWSCFG()
The name of the IMSCON configuration member in PROCLIB.

BPECFG()
The name of the BPE configuration member in PROCLIB for the IMS Connect system.

CEXCONSOLE()
The hostname and port number of the IMS Connect Extensions console, if available.

PROCLIBS()
One or more fully qualified procedure library names.

IMSPLEX(TMEMBER(imsplex-name1, imsplex-name2,...) MEMBER(imsplex-member-name1, imsplex-member-name2,...))
Associate this IMS Connect system with one or more IMSplexes.

The IMSPLEX parameter must contain the following parameters:

TMEMBER()
The name of the IMSplex. This name corresponds to the TMEMBER operand of the IMSPLEX statements in the HWSCFG configuration member. If the IMSplex is not already defined in the IMS Configuration Manager definitions repository, the action fails and an error message is issued.

MEMBER()
The IMSplex member name that IMS Connect uses to connect to the IMSplex. This name corresponds to the MEMBER operand of the IMSPLEX statement in the HWSCFG configuration member.

Each IMSplex association must have an entry in both the TMEMBER and MEMBER parameters. For example, to specify a single IMSplex association, use the following command syntax:

IMSPLEX(TMEMBER(PLEX1) MEMBER(ICMI0DP1))

To associate this IMS Connect with two IMSplexes (an IMSplex named PLEX1 with a member name of MEMBERP1, and an IMSplex named PLEX2 with a member name of MEMBERP2), use the following syntax:

IMSPLEX(TMEMBER(PLEX1, PLEX2) MEMBER(MEMBERP1, MEMBERP2))

Up to 32 IMSplexes may be specified.

CREATE ODBM subcommand
Create an Open Database Manager (ODBM) Common Services Layer (CSL) component definition in the IMS Configuration Manager definitions repository.
Syntax

```
CREATE ODBM NAME(
   component-name,
   component-name-mask,
)
```

```
SET(
   set-attribute,
)
```

SET attributes: ODBM:

```
VER(
   1.5,
   1.4,
   1.3,
)
DSCR(description)
PLEX(imsplex-name)
ODBMINIT(CSLDI-member-suffix)
JCOVERRIDES(CSLDI-JCL-overrides-string)
BPECFG(BPE-configuration-member-name)
PROCLIBS(data-set-name)
```

Notes:
1. VER is a mandatory parameter.
2. PLEX is a mandatory parameter.
3. ODBMINIT is a mandatory parameter.
4. BPECFG is a mandatory parameter.

Parameters

NAME()
Specifies the name, names, or component name mask of the component.
Names may be up to eight characters in length and must end in the suffix 00.

SET()
Specifies the attributes of the component to be assigned.

VER()
The software version of the ODBM component.

DSCR()
A textual description of the ODBM component. Descriptions may be up to forty characters in length.

PLEX()
The five-character name of the participating IMSplex. If the IMSplex is not already defined in the IMS Configuration Manager definitions repository, the action fails and an error message is issued.
ODBMINIT()
The three-character suffix of the ODBM initialization member CSLDIxxx in the PROCLIB.

JCLOVERRIDES()
One or more JCL execution parameters which override the corresponding CSLDIxxx parameters at system startup. This is for documentation purposes only and does not affect the live system. Parameters are specified in the form parameter=value and are separated by commas or spaces.

BPECFG()
The name of the BPE configuration member in PROCLIB for this CSL component.

PROCLIBS()
One or more fully qualified procedure library names.

CREATE REPO subcommand
Create a Repository Server (RS) Common Services Layer (CSL) component definition in the IMS Configuration Manager definitions repository.

Syntax

```
CREATE REPO NAME(component-name)

SET(set-attribute)

SET attributes: REPO:

VER(1.4)
1.3
1.2
DSCR(description)
PLEX(imsplex-name)
FRPCFG(repository-server-configuration)
BPECFG(BPE-configuration-member-name)
PROCLIBS(data-set-name)
```

Notes:
1   VER is a mandatory parameter.
2   PLEX is a mandatory parameter.
3   FRPCFG is a mandatory parameter.
4   BPECFG is a mandatory parameter.
Parameters

NAME()
Specifies the name, names, or component name mask of the component. Names may be up to eight characters in length and must end in the suffix RP.

SET()
Specifies the attributes to be updated.

VER()
The software version of the Repository Server.

DSCR()
A textual description of the Repository Server. Descriptions may be up to forty characters in length.

PLEX()
The five-character name of the participating IMSplex. If the IMSplex is not already defined in the IMS Configuration Manager definitions repository, the action fails and an error message is issued.

FRPCFG()
The name of the FRP configuration member in PROCLIB for the Repository Server.

BPECFG()
The name of the BPE configuration member in PROCLIB for this CSL component.

PROCLIBS()
One or more fully qualified procedure library names.

CREATE OM subcommand
Create an Operations Manager (OM) Common Services Layer (CSL) component definition in the IMS Configuration Manager definitions repository.

Syntax

```
CREATE OM NAME(component-name)

SET(set-attribute)

SET attributes: OM:
```
**Parameters**

**NAME**()
Specifies the name, names, or component name mask of the component. Names may be up to eight characters in length and must end in the suffix OM.

**SET**()
Specifies the attributes to be assigned.

**VER**()
The software version of the Operations Manager.

**DSCR**()
A textual description of the Operations Manager. Descriptions may be up to forty characters in length.

**PLEX**()
The five-character name of the participating IMSplex. If the IMSplex is not already defined in the IMS Configuration Manager definitions repository, the action fails and an error message is issued.

**OMINIT**()
The suffix of the CSLOI.xxx member in PROCLIB.

**JCLOVERRIDES**()
One or more JCL execution parameters which override the corresponding CSLOI.xxx parameters at system startup. This is for documentation purposes only and does not affect the live system. Parameters are specified in the form parameter=value and are separated by commas or spaces.

**BPECFG**()
The name of the BPE configuration member in PROCLIB for this CSL component.

**PROCLIBS**()
One or more fully qualified procedure library names.

**Notes:**

1. VER is a mandatory parameter.
2. PLEX is a mandatory parameter.
3. OMINIT is a mandatory parameter.
4. BPECFG is a mandatory parameter.
CREATE RM subcommand
Create a Resource Manager (RM) Common Services Layer (CSL) component
definition in the IMS Configuration Manager definitions repository.

Syntax

```
CREATE RM NAME(component-name, component-name-mask)
```  

```
SET(set-attribute)
```  

SET attributes: RM:

```
VER(1.8, 1.7, 1.6)
DSCR(description)
PLEX(imsplex-name)
RMINIT(CSLRI-member-suffix)
JCLOVERRIDES(CSLRI-JCL-overrides-string)
BPECFG(BPE-configuration-member-name)
PROCLIBS(data-set-name)
```

Notes:
1. VER is a mandatory parameter.
2. PLEX is a mandatory parameter.
3. RMINIT is a mandatory parameter.
4. BPECFG is a mandatory parameter.

Parameters

NAME()  
Specifies the name, names, or component name mask of the component.  
Names may be up to eight characters in length and must end in the suffix RM.

SET()  
Specifies the attributes to be assigned.

VER()  
The software version of the RM.

DSCR()  
A textual description of the RM. Descriptions may be up to forty characters in length.
PLEX()
The five-character name of the participating IMSplex. If the IMSplex is not already defined in the IMS Configuration Manager definitions repository, the action fails and an error message is issued.

RMINIT()
The suffix of the CSLRIxxx member in PROCLIB.

JCLOVERRIDES()
One or more JCL execution parameters which override the corresponding CSLRIxxx parameters at system startup. This is for documentation purposes only and does not affect the live system. Parameters are specified in the form parameter=value and are separated by commas or spaces.

BPECFG()
The name of the BPE configuration member in PROCLIB for this CSL component.

PROCLIBS()
One or more fully qualified procedure library names.

CREATE SCI subcommand
Create a Structured Call Interface (SCI) Common Services Layer (CSL) component definition in the IMS Configuration Manager definitions repository.

Syntax

```
CREATE SCI NAME(component-name)
```

```
SET(set-attribute)
```

SET attributes: SCI:

```
VER(1.8, 1.7, 1.6)
DSCR(description)
PLEX(imsplex-name)
SCIINIT(CSLSI-member-suffix)
JCLOVERRIDES(CSLSI-JCL-overrides-string)
BPECFG(BPE-configuration-member-name)
PROCLIBS(data-set-name)
```

Notes:
1. VER is a mandatory parameter.
PLEX is a mandatory parameter.

SCIINIT is a mandatory parameter.

BPECFG is a mandatory parameter.

Parameters

NAME()
Specifies the name, names, or component name mask of the component.
Names may be up to eight characters in length and must end in the suffix $C$.

SET()
Specifies the attributes to be assigned.

VER()
The software version of the SCI.

DSCR()
A textual description of the SCI. Descriptions may be up to forty characters in length.

PLEX()
The five-character name of the participating IMSplex. If the IMSplex is not already defined in the IMS Configuration Manager definitions repository, the action fails and an error message is issued.

SCIINIT()
The suffix of the CSLSIxxx member in PROCLIB.

JCLOVERRIDES()
One or more JCL execution parameters which override the corresponding CSLSIxxx parameters at system startup. This is for documentation purposes only and does not affect the live system. Parameters are specified in the form parameter=value and are separated by commas or spaces.

BPECFG()
The name of the BPE configuration member in PROCLIB for this CSL component.

PROCLIBS()
One or more fully qualified procedure library names.

UPDATE subcommands

Use an UPDATE subcommand with the MAINT.MEMBERS command to update an IMS, IMS Connect system, or CSL component definition in the IMS Configuration Manager definitions repository.

UPDATE PLEX subcommand

Updates an IMSplex stored in the IMS Configuration Manager definitions repository.

Syntax

```
UPDATE PLEX NAME(component-name) component-name-mask
```
SET attributes: PLEX:

\[ \text{DSCR} (\text{description}) \]

Parameters

NAME()

Specifies the name, names, or component name mask of the component. Names may be up to five characters in length. The action fails and an error is issued if the named component does not exist.

SET()

Specifies the attributes to be updated.

DSCR()

A textual description of the IMSplex. Descriptions may be up to forty characters in length.

UPDATE IMS subcommand

Updates an IMS stored in the IMS Configuration Manager definitions repository.

Syntax

\[ \text{UPDATE IMS NAME} (\text{component-name} \text{-mask}) \]

SET attributes: IMS:
Parameters

**NAME()**

Specifies the name, names, or component name mask of the component. Names may be up to four characters in length. The action fails and an error is issued if the named component does not exist.

**SET()**

Specifies the attributes to be updated.

**VER()**

The software version of the IMS.

**DSCR()**

A textual description of the IMS. Descriptions may be up to forty characters in length.

**PLEX()**

The five-character name of the participating IMSplex. If the IMSplex is not already defined in the IMS Configuration Manager definitions repository, the action fails and an error message is issued.

**RECON1(data-set-name)**

IMS DBRC Recon data set name 1

**RECON2(data-set-name)**

IMS DBRC Recon data set name 2

**RECON3(data-set-name)**

IMS DBRC Recon data set name 3

**RGSUF()**

The three-character suffix for DFSPB:xxx to be used during startup of the IMS control region. The PROCLIB member DFSPB:xxx contains control region execution parameters.
**Note:** Specify a particular suffix for different control region environments. For example, specify IMS for DB/DC. DBC for DBCTL, and DCC for DCCTL.

**JCLOVERRIDES()**
One or more execution parameters to document JCL overrides to PROCLIB member parameters for this IMS. Parameters are specified in the form `parameter=value`. Parameter/value pairs are separated using a comma or spaces.

**CQSINIT()**
The three-character suffix for the CQSPxxx member which contains CQS initialization parameters (if applicable).

**CQSOVERRIDES()**
One or more execution parameters to override the corresponding CQSPxxx suffix parameters at CQS system startup. The particular CQSPxxx startup member is identified by CQSINIT. Parameters are specified in the form `parameter=suf` where `suf` is the three-character suffix that identifies the corresponding PROCLIB member. For example, specify `STRDEFG=001,STRDEFL=002` to select PROCLIB members CQSSG001 and CQSSL002. Parameter/value pairs are separated using a comma or spaces.

**BPECFG()**
BPE configuration member in PROCLIB for the CQS system (if applicable).

**DSPBI()**
The suffix of the DBRC configuration member name.

**CTRLREGIONTYPE()**
The type of control region environment. This information is used in parameter validation.

- **DBDC**
  Database/data communication (DB/DC).

- **DBCTL**
  Database Control.

- **DCCTL**
  Data Communication Control.

**ADDRNAME()**
Eight character address space name.

**OSNAME()**
Eight character operating systems MVS ID.

**PROCLIBS()**
One or more fully qualified procedure library names.

**STEPPLIBS()**
One or more fully qualified step library names.

**UPDATE IMSCON subcommand**
Updates an IMS Connect system stored in the IMS Configuration Manager definitions repository.

**Syntax**

```
UPDATE IMSCON NAME(component-name, component-name-mask)
```
SET attributes: IMSCON:

- **VER()**: The software version of the IMS Connect system.
- **DSCR()**: A textual description of the IMS Connect system. Descriptions may be up to forty characters in length.
- **HWSCFG()**: The name of the IMSCON configuration member in PROCLIB.
- **BPECFG()**: The name of the BPE configuration member in PROCLIB for the IMS Connect system.
- **CEXCONSOLE()**: The hostname and port number of the IMS Connect Extensions console, if available.
- **PROCLIBS()**: One or more fully qualified procedure library names.
- **IMSPLEX(TMEMBER(imsplex-name1, imsplex-name2,...) MEMBER(imsplex-member-name1, imsplex-member-name2,...))**: Associate this IMS Connect system with one or more IMSPlexes.

**Parameters**

**NAME()**: Specifies the name, names, or component name mask of the component. Names may be up to four characters in length. The action fails and an error is issued if the named component does not exist.

**SET()**: Specifies the attributes to be updated.

**VER()**: The software version of the IMS Connect system.

**DSCR()**: A textual description of the IMS Connect system. Descriptions may be up to forty characters in length.

**HWSCFG()**: The name of the IMSCON configuration member in PROCLIB.

**BPECFG()**: The name of the BPE configuration member in PROCLIB for the IMS Connect system.

**CEXCONSOLE()**: The hostname and port number of the IMS Connect Extensions console, if available.

**PROCLIBS()**: One or more fully qualified procedure library names.

**IMSPLEX(TMEMBER(imsplex-name1, imsplex-name2,...) MEMBER(imsplex-member-name1, imsplex-member-name2,...))**: Associate this IMS Connect system with one or more IMSPlexes.

The IMSPLEX parameter must contain the following parameters:

**TMEMBER()**: The name of the IMSplex. This name corresponds to the TMEMBER operand of the IMSPLEX statements in the HWSCFG configuration.
member. If the IMSplex is not already defined in the IMS Configuration Manager definitions repository, the action fails and an error message is issued.

**MEMBER()**

The IMSplex member name that IMS Connect uses to connect to the IMSplex. This name corresponds to the MEMBER operand of the IMSPLEX statement in the HWSCFG configuration member.

Each IMSplex association must have an entry in both the TMEMBER and MEMBER parameters. For example, to specify a single IMSplex association, use the following command syntax:

```
IMSPLEX(TMEMBER(PLEX1) MEMBER(ICMI0DP1))
```

To associate this IMS Connect with two IMSplexes (an IMSplex named PLEX1 with a member name of MEMBERP1, and an IMSplex named PLEX2 with a member name of MEMBERP2), use the following syntax:

```
IMSPLEX(TMEMBER(PLEX1,PLEX2) MEMBER(MEMBERP1,MEMBERP1))
```

Up to 32 IMSplexes may be specified. This parameter replaces any previously specified IMSplex associations.

**UPDATE ODBM subcommand**

Updates an Open Database Manager (ODBM) Common Services Layer (CSL) component stored in the IMS Configuration Manager definitions repository.

**Syntax**

```
UPDATE ODBM NAME(component-name)

SET(set-attribute)

SET attributes: ODBM:

VER(1.5)

DSCR(description)

PLEX(imsplex-name)

ODBMINIT(CSLDI-member-suffix)

JCOVERRIDES(CSLDI-JCL-overrides-string)

BPECFG(BPE-configuration-member-name)

PROCLIBS(data-set-name)
```
Parameters

NAME()
Specifies the name, names, or component name mask of the component. Names may be up to eight characters in length and must end in the suffix 00. The action fails and an error is issued if the named component does not exist.

SET()
Specifies the attributes of the component to be created.

VER()
The software version of the ODBM component.

DSCR()
A textual description of the ODBM component. Descriptions may be up to forty characters in length.

PLEX()
The five-character name of the participating IMSplex. If the IMSplex is not already defined in the IMS Configuration Manager definitions repository, the action fails and an error message is issued.

ODBMINIT()
The three-character suffix of the ODBM initialization member CSLDIxxx in the PROCLIB.

JCOVERRIDES()
One or more JCL execution parameters which override the corresponding CSLDIxxx parameters at system startup. This is for documentation purposes only and does not affect the live system. Parameters are specified in the form parameter=value and are separated by commas or spaces.

BPECFG()
The name of the BPE configuration member in PROCLIB for this CSL component.

PROCLIBS()
One or more fully qualified procedure library names.

UPDATE REPO subcommand
Updates a Repository Server (RS) Common Services Layer (CSL) component stored in the IMS Configuration Manager definitions repository.

Syntax

```
UPDATE REPO NAME(component-name, component-name-mask)

SET(set-attribute)

SET attributes: REPO:
```
Parameters

**NAME()**
Specifies the name, names, or component name mask of the component.
Names may be up to eight characters in length and must end in the suffix RP. The action fails and an error is issued if the named component does not exist.

**SET()**
Specifies the attributes to be updated.

**VER()**
The software version of the Repository Server.

**DSCR()**
A textual description of the Repository Server. Descriptions may be up to forty characters in length.

**PLEX()**
The five-character name of the participating IMSplex. If the IMSplex is not already defined in the IMS Configuration Manager definitions repository, the action fails and an error message is issued.

**FRPCFG()**
The name of the FRP configuration member in PROCLIB for the Repository Server.

**BPECFG()**
The name of the BPE configuration member in PROCLIB for this CSL component.

**PROCLIBS()**
One or more fully qualified procedure library names.

**UPDATE OM subcommand**
Updates an Operations Manager (OM) Common Services Layer (CSL) component stored in the IMS Configuration Manager definitions repository.

**Syntax**

```
UPDATE OM NAME(component-name) component-name-mask
```
SET attributes: OM:

- **VER()**: The software version of the Operations Manager.
- **DSCR()**: A textual description of the Operations Manager. Descriptions may be up to forty characters in length.
- **PLEX()**: The five-character name of the participating IMSplex. If the IMSplex is not already defined in the IMS Configuration Manager definitions repository, the action fails and an error message is issued.
- **OMINIT()**: The suffix of the CSLOIxxx member in PROCLIB.
- **JCLOVERRIDES()**: One or more JCL execution parameters which override the corresponding CSLOIxxx parameters at system startup. This is for documentation purposes only and does not affect the live system. Parameters are specified in the form `parameter=value` and are separated by commas or spaces.
- **BPECFG()**: The name of the BPE configuration member in PROCLIB for this CSL component.
- **PROCLIBS()**: One or more fully qualified procedure library names.

**Parameters**

**NAME()**

Specifies the name, names, or component name mask of the component. Names may be up to eight characters in length and must end in the suffix OM. The action fails and an error is issued if the named component does not exist.

**SET()**

Specifies the attributes to be updated.

**VER()**

The software version of the Operations Manager.

**DSCR()**

A textual description of the Operations Manager. Descriptions may be up to forty characters in length.

**PLEX()**

The five-character name of the participating IMSplex. If the IMSplex is not already defined in the IMS Configuration Manager definitions repository, the action fails and an error message is issued.

**OMINIT()**

The suffix of the CSLOIxxx member in PROCLIB.

**JCLOVERRIDES()**

One or more JCL execution parameters which override the corresponding CSLOIxxx parameters at system startup. This is for documentation purposes only and does not affect the live system. Parameters are specified in the form `parameter=value` and are separated by commas or spaces.

**BPECFG()**

The name of the BPE configuration member in PROCLIB for this CSL component.

**PROCLIBS()**

One or more fully qualified procedure library names.
UPDATE RM subcommand
Updates a Resource Manager (RM) Common Services Layer (CSL) component stored in the IMS Configuration Manager definitions repository.

Syntax

```
UPDATE RM NAME(component-name, component-name-mask)
```

```
SET(set-attribute)
```

**SET attributes: RM:**

```
VER(1.8, 1.7, 1.6)
```

```
DSCR(description)
PLEX(imsplex-name)
RMINIT(CSLRI-member-suffix)
JCLOVERRIDES(CSLRI-JCL-overrides-string)
BPECFG(BPE-configuration-member-name)
```

```
PROCLIBS(data-set-name)
```

Parameters

**NAME()**
Specifies the name, names, or component name mask of the component. Names may be up to eight characters in length and must end in the suffix RM. The action fails and an error is issued if the named component already exists.

**SET()**
Specifies the attributes to be updated.

**VER()**
The software version of the RM.

**DSCR()**
A textual description of the RM. Descriptions may be up to forty characters in length.

**PLEX()**
The five-character name of the participating IMSplex. If the IMSplex is not already defined in the IMS Configuration Manager definitions repository, the action fails and an error message is issued.

**RMINIT()**
The suffix of the CSLRIxxx member in PROCLIB.

**JCLOVERRIDES()**
One or more JCL execution parameters which override the corresponding
CSLRIxxx parameters at system startup. This is for documentation purposes only and does not affect the live system. Parameters are specified in the form parameter=value and are separated by commas or spaces.

**BPECFG()**
The name of the BPE configuration member in PROCLIB for this CSL component.

**PROCLIBS()**
One or more fully qualified procedure library names.

**UPDATE SCI subcommand**
Updates a Structured Call Interface (SCI) Common Services Layer (CSL) component stored in the IMS Configuration Manager definitions repository.

**Syntax**

```
UPDATE SCI NAME(component-name) component-name-mask
SET(set-attribute)
```

**SET attributes: SCI:**

```
VER(1.8)
1.7
1.6
DSCR(description)
PLEX(imsplex-name)
SCIINIT(CSLSI-member-suffix)
JCOVERRIDES(CSLSI-JCL-overrides-string)
BPECFG(BPE-configuration-member-name)
PROCLIBS(data-set-name)
```

**Parameters**

**NAME()**
Specifies the name, names, or component name mask of the component. Names may be up to eight characters in length and must end in the suffix SC. The action fails and an error is issued if the named component already exist.

**SET()**
Specifies the attributes to be updated.

**VER()**
The software version of the SCI.

**DSCR()**
A textual description of the SCI. Descriptions may be up to forty characters in length.
PLEX()
The five-character name of the participating IMSplex. If the IMSplex is not already defined in the IMS Configuration Manager definitions repository, the action fails and an error message is issued.

SCIINIT()
The suffix of the CSLSIxxx member in PROCLIB.

JCOLOVERRIDES()
One or more JCL execution parameters which override the corresponding CSLSIxxx parameters at system startup. This is for documentation purposes only and does not affect the live system. Parameters are specified in the form parameter=value and are separated by commas or spaces.

BPECFG()
The name of the BPE configuration member in PROCLIB for this CSL component.

PROCLIBS()
One or more fully qualified procedure library names.

DELETE subcommand
Use the DELETE subcommand with the MAINT.MEMBERS command to delete an IMSplex, IMS, IMS Connect system, or CSL component stored in the IMS Configuration Manager definitions repository.

Syntax

```
DELETE PLEX IMS IMSCON ODBM REPO OM RM SCI
```

Parameters

PLEX
Delete an IMSplex. Only an IMSplex that is not referenced by any member systems may be deleted. If the IMSplex is referenced by systems in the IMS Configuration Manager definitions repository, the action fails and an error message is issued.

IMS
Delete an IMS.

IMSCON
Delete an IMS Connect system.

ODBM
Delete an Open Database Manager (ODBM) Common Services Layer (CSL) component.

REPO
Delete a Repository Server (RS) CSL component.
OM  Delete an Operations Manager (OM) CSL component.
RM  Delete a Resource Manager (RM) CSL component.
SCI Delete a Structured Call Interface (SCI) CSL component.

NAME()
Delete components that match the specified name, names, or component name mask. A warning is issued if the named component does not exist.

Example JCL for editing systems and IMSplexes
This JCL examples uses the MAINT.MEMBERS batch command to create and edit IMSplexes, IMS systems, and Common Service Layer (CSL) component definitions stored in the IMS Configuration Manager definitions repository.

```
//GPLUTIL EXEC PGM=GPLUTIL
//STEPLIB DD DISP=SHR,DSN=HLQ.V2R3M0.SGPLINK
//GPLREPOS DD DISP=SHR,DSN=HLQ.V2R3M0.REPOSITORY
//SYSPRINT DD SYSOUT=*  
//SYSIN DD *
  MAINT.MEMBERS TO(REPOSITORY,GPLREPOS) +
        FROM(DDNAME,CMDLIST)
/*
//CMDLIST DD *
  CREATE PLEX NAME(PLXTT) SET(DSCR(IMSPLEX PLXTT))
  CREATE IMS NAME(TEST) SET(VER(13.1),
                             PLEX(PLXTT),
                             RGSUF(IMS))
  CREATE IMSCON NAME(TESTIC) SET(VER(12.1),
                                DSCR(TEST IMS CONNECT),
                                HWSCFG(HWSCFG01),
                                BPECFG(BPECFG01))
  CREATE ODBM NAME(TESTOD) SET(VER(1.4),
                               DSCR(TEST OPEN DATABASE MANAGER),
                               PLEX(PLXTT),
                               ODBMINIT(000),
                               BPECFG(BPECFG22))
  CREATE REPO NAME(TESTRP) SET(VER(1.3),
                               DSCR(TEST REPOSITORY SERVER),
                               PLEX(PLXTT),
                               FRPCFG(FRPCFG00),
                               BPECFG(BPECFG11))
  CREATE OM NAME(TESTOM) SET(VER(1.5),
                            DSCR(TEST OPERATIONS MANAGER),
                            PLEX(PLXTT),
                            OMINIT(000),
                            BPECFG(BPECFG11))
  CREATE RM NAME(TESTRM) SET(VER(1.7),
                           DSCR(TEST RESOURCE MANAGER),
                           PLEX(PLXTT),
                           RMINIT(000),
                           BPECFG(BPECFG11))
  CREATE SCI NAME(TESTSC) SET(VER(1.6),
                            DSCR(TEST SCI),
                            PLEX(PLXTT),
                            SCIINIT(000),
                            BPECFG(BPECFG11))
  UPDATE IMS NAME(TEST) SET(VER(14.1),
                            DSCR(TEST IMS))
  UPDATE IMSCON NAME(TESTIC) SET(HWSCFG(HWSCFG00),
                                BPECFG(BPECFG11),
                                IMSPLEX(TMEMBER(PLXTT)
                                MEMBER(ICM100DP)))
  CREATE PLEX NAME(PLXT2) SET(DSCR(IMSPLEX PLXT2))
  UPDATE IMSCON NAME(TESTIC) SET(HWSCFG(HWSCFG00),
                                BPECFG(BPECFG11))
```
where:

1. The IMS Configuration Manager link library.

   **Note**: The IMS Configuration Manager link library, and all other libraries in the STEPLIB, must be APF-authorized.

2. The IMS Configuration Manager definitions repository to use to store your definitions.

3. Uses the "MAINT.MEMBERS command" on page 133 to edit the IMS Configuration Manager definitions repository.

4. The ddname of a DD statement that contains your subcommands.

5. Subcommands that edit the IMS Configuration Manager definitions repository. The subcommands in this example perform the following tasks:
   1. Create an IMSplex named PLXTT.
   2. Create an IMS named TEST and associate it with PLXTT.
   3. Create an IMS Connect system named TESTIC.
   4. Create an Open Database Manager (ODBM) Common Service Layer (CSL) component named TESTOD and associate it with PLXTT.
   5. Create a Repository Server (RS) CSL component named TESTRP and associate it with PLXTT.
   6. Create an Operations Manager (OM) CSL component named TESTOM and associate it with PLXTT.
   7. Create a Resource Manager (RS) CSL component named TESTRM and associate it with PLXTT.
   8. Create a Structured Call Interface (SCI) CSL component named TESTSC and associate it with PLXTT.
   9. Update several properties of the IMS named TEST.
   10. Update several properties of the IMS Connect system named TESTIC. Associate it with the IMSplex named PLXTT (member name ICMIOODP).
   11. Create an IMSplex named PLXT2. Update the IMS Connect system named TESTIC to replace the current IMSplex association(s) with two new associations, PLXTT (member name MBRPLXTT) and PLXT2 (member name MBRPLXT2).

**Related reference**:

"MAINT.MEMBERS command” on page 133
Edits IMSplexes, IMS systems, and CSL component definitions stored in an IMS Configuration Manager definitions repository.
Chapter 15. Common Services Library server configuration options

The Common Services Library server startup job contains several options to control how IMS Configuration Manager manages system definitions.

Example JCL for autodiscovery

This JCL uses the AUTODISCOVER keyword and the Common Services Library server to automatically discover IMS components for use in IMS Configuration Manager.

```
//FUNSRV  JOB (ACCOUNT), 'NAME'
//SERVER  EXEC PGM=FUNSRV, 
//         PARM=('BPECFG=BPECONFG,FUNCTION=FUNCONFG')
/*
//STEPLIB DD DISP=SHR, DSN=FUNHLQ.SFUNLINK
// DD DISP=SHR, DSN=PRDHLQ.SGPLLINK
// DD DISP=SHR, DSN=IMSHLQ.SDFSRESL
//PROCIB DD DISP=SHR, DSN=FUNHLQ.SFUNSAMP
//GPLCNTL DD *
  REPOSITORY NAME=testrepo, + 1
     DESC=(shortdescription), +
     DSN=TEST.REPO, +
     AUTODISCOVER=(PLEX(plexname,...), + 2
                     MBRTYPE(values))
/*
//GPLPRINT DD SYSOUT=* 
```

where:

1. The IMS Configuration Manager definitions repository to use to store your definitions.
2. The AUTODISCOVER keyword and optional parameters. Replace the placeholders `plexname`,... and `values` as required, or remove the PLEX and MBRTYPE parameters completely to discover as many systems in your environment as possible.

Related tasks:
"Enabling autodiscovery in Common Services Library server" on page 34

Enabling the optional autodiscovery feature in the Common Services Library server instructs IMS Configuration Manager to automatically detect IMS systems and update the IMS Configuration Manager definitions repository with the definitions each time the server starts. This is an optional feature that can be used to quickly refresh your definitions repository on a periodic basis or when changes have been made to your topology.

Related reference:
"REPOSITORY keyword" on page 160

The REPOSITORY keyword allows users to specify information about IMS Configuration Manager definitions repositories that are accessible to the Common Services Library server.
REPOSITORY keyword

The REPOSITORY keyword allows users to specify information about IMS Configuration Manager definitions repositories that are accessible to the Common Services Library server.

Syntax

```
REPOSITORY
   NAME=repository_name,
   DESC=(repository_description)
   DSN=repository_dsn,
   AUTODISCOVER
      Options
```

Options:

```
PLEX(*)
PLEX(mask,plexid)
MBRTYPE(ALL)
MBRTYPE(PLEX)
MBRTYPE(component)
```

Parameters

NAME
Specify a 1-8 character name to identify the IMS Configuration Manager definitions repository. The name may not start with a numeric character and must be unique within a single running instance of the Common Services Library server.

DESC
Specify a short description for the IMS Configuration Manager definitions repository. The description may be up to 40 characters long.

DSN
Specify the data set name for the IMS Configuration Manager definitions repository.

AUTODISCOVER
Instruct IMS Configuration Manager to perform system autodiscovery on server start. The AUTODISCOVER keyword has a number of additional options. If no options are specified, IMS Configuration Manager attempts to discover as many systems as possible.

The options are:

PLEX(plexid or mask,...)
Specify a list of IMSplexes that contain the components you want to discover. For example:
PLEX(PLXA,PLXB,PLXC)

Alternatively, use a mask to discover all IMSplexes beginning with a particular prefix. The preceding example can also be expressed as:
PLEX(PLX*)
The mask can be used to create complex search statements. The following examples demonstrate valid examples of how the mask can be used:
PLEX(*)  PLEX(ABC*)  PLEX(DEF*,XYZ*)  PLEX(PLXD*,PLX*)

To discover components in all IMSplexes, use:
PLEX(*)

or omit the parameter.

Default: all IMSplexes (if parameter not specified).

**MBRTYPE(ALL|PLEX) or MBRTYPE (component,...)**

Limit the discovery of members to one or more types. MBRTYPE accepts one of the following options:

**ALL**
Inserts all discoverable member types. See *component* for a list of supported member types.

**PLEX**
Inserts only the IMSplex records.

**component,...**
Specify a list of one or more systems and components. Options include:

**IMS**
Inserts IMS systems and their associated IMSplexes. If applicable, Common Queue Server (CQS) components for systems discovered by this option are also inserted.

**IMSCON**
Inserts IMS Connect systems and their associated IMSplexes.

**ODBM**
Inserts Open Database Manager (ODBM) Common Service Layer (CSL) components and their associated IMSplexes.

**REPO**
Inserts Repository Server (RS) CSL components and their associated IMSplexes.

**OM**
Inserts Operations Manager (OM) CSL components and their associated IMSplexes.

**RM**
Inserts Resource Manager (RM) CSL components and their associated IMSplexes.

**SCI**
Inserts Structured Call Interface (SCI) CSL components and their associated IMSplexes.

Default: MBRTYPE(ALL) (if parameter not specified).

**Related reference:**

“Example JCL for autodiscovery” on page 159

This JCL uses the AUTODISCOVER keyword and the Common Services Library server to automatically discover IMS components for use in IMS Configuration Manager.
Chapter 16. Understanding the result of the discovery process

Results of the IMS Configuration Manager autodiscovery process are summarized in the log.

Discovery process logs have the following basic structure:
Figure 46. Example output from the discovery process

where:

1. The autodiscovery process has begun. Objects discovered are stored in the specified IMS Configuration Manager definitions repository.
2. Objects discovered by IMS Configuration Manager are listed together with their details.
An object that could not be added, updated or skipped by IMS Configuration Manager.

An indication to the user that autodiscovery is incomplete. To discover more of your environment, follow the instructions in the message displayed.

An object that can not be processed by IMS Configuration Manager.

IMS Configuration Manager has finished exploring the environment and is about to compare what it discovered with what is currently stored in the specified IMS Configuration Manager definitions repository.

IMS Configuration Manager begins the process of updating the specified IMS Configuration Manager definitions repository.

The result of autodiscovery summarized as a table with the following column headings:

<table>
<thead>
<tr>
<th>MBRTYPE</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discovered</td>
<td>The number of objects found through autodiscovery</td>
</tr>
<tr>
<td>Added</td>
<td>The number of discovered objects that were newly added to the IMS Configuration Manager definitions repository. These are new objects that have not previously been discovered by IMS Configuration Manager.</td>
</tr>
<tr>
<td>Updated</td>
<td>The number of discovered objects updated in the IMS Configuration Manager definitions repository. These are objects that have changed since they were last discovered by IMS Configuration Manager.</td>
</tr>
<tr>
<td>No change</td>
<td>The number of discovered objects that did not require an IMS Configuration Manager definitions repository update. These are objects that have not changed since they were last discovered by IMS Configuration Manager.</td>
</tr>
<tr>
<td>Skipped</td>
<td>The number of discovered objects that were not processed by IMS Configuration Manager. Search for log message &quot;GPL7035I&quot; on page 98 (in the preceding example) for further details.</td>
</tr>
<tr>
<td>Error</td>
<td>The number of discovered objects that could not be added, updated or skipped by IMS Configuration Manager. Search for log messages &quot;GPL7001I&quot; on page 95, &quot;GPL7036I&quot; on page 98, and &quot;GPL7037I&quot; on page 98 (in the preceding example) for further details.</td>
</tr>
</tbody>
</table>

Autodiscovery is complete.

Related tasks:

"Enabling autodiscovery in Common Services Library server" on page 34

Enabling the optional autodiscovery feature in the Common Services Library server instructs IMS Configuration Manager to automatically detect IMS systems and update the IMS Configuration Manager definitions repository with the definitions each time the server starts. This is an optional feature that can be used to quickly refresh your definitions repository on a periodic basis or when changes have been made to your topology.
Related information:

“GPL7015I” on page 96

MBRTYPE Discovered Added Updated No change Skipped Error
Chapter 17. Defining systems and IMSplexes using the ISPF dialog

You can use the IMS Configuration Manager ISPF dialog to manually define IMSplexes and systems in the IMS Configuration Manager definitions repository. This can be useful if you do not wish to rediscover your entire topology again using autodiscovery.

Defining an IMSplex

You can use the IMS Configuration Manager ISPF dialog to manually define an IMSplex in the IMS Configuration Manager definitions repository.

Procedure

1. From the IMS Configuration Manager Primary Menu, select option 1 IMSplexes. The IMSplex panel is displayed.
2. On the command line, enter NEW. The New IMSplex dialog is displayed.
3. Enter a name and description for the new IMSplex definition.
4. To finalize the creation of the new IMSplex definition, press the Exit function key (F3).

What to do next

Add member systems to the new IMSplex. See “Defining an IMS system.”

Defining an IMS system

You can use the IMS Configuration Manager ISPF dialog to manually define an IMS system in the IMS Configuration Manager definitions repository.

Before you begin

If the IMS system belongs to an IMSplex, you must first define that IMSplex. See “Defining an IMSplex.”

Procedure

1. From the IMS Configuration Manager Primary Menu, select option 2 Systems. The System Member List panel is displayed.
2. On the command line, enter NEW. The New System Member dialog is displayed.
3. Type a name for the system.
4. Select IMS System and press Enter.
5. Complete the form as required.

6. To finalize the creation of the new IMS system definition, press the Exit function key (F3).

**Adding PROCLIB data set names to system definitions**

If you want to list parameter members by system or IMSplex, you must first add the PROCLIB data set names to your system definitions.

**About this task**

The procedure presented here describes how to use the ISPF dialog to add PROCLIB data set names to system definitions. Alternatively, you can use autodiscovery to add the data set names. See "Establishing an IMS Configuration Manager definitions repository" on page 22.

**Procedure**

1. From the IMS Configuration Manager Primary Menu, select option 2 Systems. The IMS Systems List panel is displayed.

2. In the system list, enter an S next to the required system. The IMS System PROCLIB Parameters panel is displayed.

3. Enter your required configuration options. Press the Help function key (F1) to obtain additional information about each field.

4. Specify the PROCLIB data sets used by this system. IMS Configuration Manager uses the information you supply to parse these PROCLIBs and identify the members used by this IMS system within them.

**Note:** The PROCLIB data sets must be entered in the order in which they appear in the Control Region STEPLIB DD.

---

**Figure 48. Specifying PROCLIB settings for systems**

5. Press the Exit function key (F3) to save the new settings.
Defining an IMS Connect system

You can use the IMS Configuration Manager ISPF dialog to manually define an IMS Connect system in the IMS Configuration Manager definitions repository.

About this task

Defining an IMS Connect system allows you to track the initialization parameters and configuration members used, and the IMSplex connections for each IMS Connect system.

Procedure

1. From the IMS Configuration Manager Primary Menu, select option 2 Systems. The System Member List panel is displayed.
2. On the command line, enter NEW. The New System Member dialog is displayed.
3. Type a name for the system. Enter 2 to specify an IMS Connect system and press Enter. The IMS Connect Settings form is displayed.
4. Complete the form as required. Specify the names of the IMS Connect and BPE configuration members in the PROCLIB as well as the PROCLIB data set name. If you have IBM IMS Connect Extensions for z/OS installed, you can also specify the host name and port number of the IMS Connect Extensions console. If you want to add this system to an IMSplex, press the Right function key (F11) and complete the relevant fields.
5. To finalize the creation of the new IMS Connect system definition, press the Exit function key (F3).

Results

If the IMS Connect system belongs to an IMSplex, the name of the IMSplex is displayed in the IMSplex column. If it belongs to more than one plex, a plus sign (+) is displayed followed by the number of IMSplex associations. An empty field in the IMSplex column signifies that the IMS Connect system does not belong to an IMSplex.
Defining a CSL member

You can use the IMS Configuration Manager ISPF dialog to manually define a Common Service Layer (CSL) member in the IMS Configuration Manager definitions repository.

Procedure

1. From the IMS Configuration Manager Primary Menu, select option 2 **Systems**. The System Member List panel is displayed.
2. On the command line, enter **NEW**. The New System Member dialog is displayed.

![Figure 50. Creating a new CSL member definition](image)

3. Type a name for the member. Different member types have different name validation rules.
4. Select the type of CSL member you want to create from the list and press Enter. A form corresponding to the system you selected is displayed.
5. Complete the form. Press the Help function key (F1) on any field to see additional information.
6. Press the Exit function key (F3).

Deleting a system or IMSplex

You can use the IMS Configuration Manager ISPF dialog to delete an IMSplex, an IMS system, or an IMS Connect system from the IMS Configuration Manager definitions repository using the ISPF dialog.

Before you begin

If you are using the autodiscovery feature, any discoverable systems and IMSplexes you delete may be re-added if they are rediscovered by IMS Configuration Manager. For more information, see "Establishing an IMS Configuration Manager definitions repository" on page 22 and "Establishing an IMS Configuration Manager definitions repository" on page 22.

About this task

If you want to delete an IMSplex, it must not be referenced by any member systems. This reference can be eliminated by deleting the referenced systems or by moving them to another IMSplex.
Procedure

1. From the IMS Configuration Manager Primary Menu, select option 1 IMSplexes or option 2 Systems.
2. Enter line action D next to the item you want to delete.
3. If **Delete Confirmation** is enabled in your profile options, press Enter to confirm deletion of the system. See "Setting IMS Configuration Manager ISPF profile options" on page 21.
Part 6. Appendixes
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