

IBM IMS High Performance System
Generation Tools for z/OS
2.4

User's Guide



Note:

Before using this information and the product it supports, read the information in [“Notices” on page 435.](#)

Second Edition (May 2021)

This edition applies to Version 2.4 of IBM IMS High Performance System Generation Tools for z/OS (program number 5655-P43) and to all subsequent releases and modifications until otherwise indicated in new editions.

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Contents

About this information.....	ix
Part 1. IMS High Performance System Generation Tools overview.....	1
Chapter 1. IMS High Performance System Generation Tools overview.....	3
What's new in IMS High Performance System Generation Tools.....	3
IMS system definition.....	5
What does IMS High Performance System Generation Tools do?.....	6
IMS High Performance System Generation Tools components.....	6
IMS High Performance System Generation Tools components overview.....	7
Resource update lists for defining IMS sysgen changes.....	7
ISPF interface.....	9
IMS HP Sysgen Tools utilities.....	9
History log.....	11
Hardware and software requirements.....	11
Security and auditability.....	11
Service updates and support information.....	12
Product documentation and updates.....	12
Accessibility features.....	13
Part 2. Configuring IMS HP Sysgen Tools.....	15
Chapter 2. Configuring IMS HP Sysgen Tools.....	17
Target libraries available after installation.....	17
APPC services.....	17
Setting up the environment.....	18
Configuration procedures.....	19
Overview of configuration procedures.....	19
Step 1. Activate APPC/MVS.....	20
Step 2. Locate the APPC/MVS base LU names.....	21
Step 3. Find an APPC initiator class.....	22
Step 4. Define APPC/MVS symbolic destinations.....	22
Step 5. Allocate libraries.....	23
Step 6. Define APPC/MVS transaction program profile for IMS HP Sysgen Tools.....	23
Step 7. Copy IOHXISPF or IOHEXEC to CLIST/REXX library.....	24
Step 8. Define security profiles.....	25
Step 9. Create an IMS HP Sysgen Tools authorized user ID.....	26
Step 10. Verify IMS requirements.....	27
Step 11. Add APPLCTN for IMS HP Sysgen Tools.....	27
Step 12. Optional: Add IMS HP Sysgen Tools to a user menu or call IOHEXEC from a user EXEC.....	27
Step 13. Define resource class APPCLU profiles to your security system.....	28
Defining IMS HP Sysgen Tools options.....	30
Fast Sysgen performance suggestions.....	36
IMS Sysgen source organization.....	36
Sysgen source organization.....	37
Using software configuration and library manager to validate sysgen updates.....	39
Configuring installation store/forward.....	39
How installation store/forward works.....	40
Activating installation store/forward.....	41

Scheduling the REDO job.....	41
REDO job JCL requirements.....	42
Reports generated by installation store/forward.....	43
Restrictions for using the installation store/forward function.....	45
Chapter 3. Optional product customization.....	47
Configuring groups of IMS systems.....	47
Adding, deleting, and updating group definitions.....	47
Resource update list defaults and attribute authorization.....	49
Working with profiles.....	49
Working with user definitions.....	51
Working with user group definitions.....	52
Enabling the use of IMS ACB member level global online change.....	53
Enabling the IMS Managed ACBs Activate method.....	54
Part 3. Using the ISPF interface.....	55
Chapter 4. ISPF menu options.....	57
ISPF interface startup options.....	58
Chapter 5. Using the ISPF View option to view resources.....	63
Using the View Menu.....	63
Accessing the Loading panel.....	65
Using the ISPF line commands.....	65
Viewing resource and attribute values.....	66
Viewing a database list and attribute value.....	66
Viewing a program list and attribute values.....	67
Viewing a transaction list and attribute values	68
Viewing a route code list.....	71
Viewing a DEDB randomizer list.....	71
Chapter 6. Validating IMS stage 1 sysgen source.....	73
Chapter 7. Performing a Fastgen MODBLKS gen.....	75
Chapter 8. Reversing an IMS sysgen or security gen.....	77
Reverse sysgen.....	77
Reverse security gen.....	80
Chapter 9. Reviewing the HP Sysgen history log.....	83
Synchronizing IMS sysgen source with IMS resource definitions	83
Viewing the log.....	84
Reversing log entries.....	86
Maintaining the log.....	88
Reversing changes (undo).....	90
Chapter 10. Issuing IMS commands.....	93
Chapter 11. Dynamic Resource Definition (DRD) status.....	95
Chapter 12. Storage functions.....	97
Option 1. Virtual storage map for this MVS system.....	97
Option 2. CSA map for this MVS system.....	98
Option 3. Virtual storage display and alter.....	99
Storage display panel.....	100
Storage Zap panel.....	101
Zap Verify panel.....	102

Chapter 13. Generating JCL for batch utilities.....	103
Setting up to use the JCL generator.....	103
Using the JCL generator.....	104

Part 4. Installing IMS resources by using a resource update list..... 107

Chapter 14. Managing a resource update list	109
Chapter 15. Editing a resource update list.....	111
Starting an edit session.....	111
Selecting a resource update list.....	111
Sorting the list.....	114
Additional command line functions.....	114
Performing an edit.....	114
Inserting a new entry.....	115
Specifying attribute values.....	116
Updating database entries.....	117
Updating program entries.....	120
Updating transaction code entries.....	125
Updating route code entries.....	131
Updating an AGN definition.....	134
Updating transaction command SMU security.....	135
Updating IMS terminal SMU security.....	136
Issuing an IMS command in a resource update list.....	137
Reloading a DEDB randomizer.....	138
Reloading an ACBLIB member.....	138
Reloading an ACBLIB member by using HP Sysgen ACB reload.....	139
Reloading an ACBLIB member by using IMS member level global online change.....	140
Activating a pending ACB member in IMS directory staging data set by using IMS Managed ACBs Activate	141
Chapter 16. Verifying a resource update list.....	143
Verification methods.....	143
Completed verification.....	146
Chapter 17. Installing a resource update list.....	147
Installation methods.....	147
Completed installation.....	150
Chapter 18. Converting IMS sysgen macros to resource update list entries in batch.....	153
Processing the Resource Update List Create utility.....	153
Running IOHCLIST with SOURCE=PARTIAL.....	153
Running IOHCLIST with SOURCE=FULL.....	154
Running IOHCLIST with SOURCE=DELETE.....	154
Using the \$IOHGEN macro.....	154
IOHCLIST JCL requirements.....	155
IOHCLIST control cards.....	156
IOHCLIST return codes.....	157
Output of the IOHCLIST utility.....	157
Chapter 19. Using the Resource Update List Generator.....	159
Resource Update List Generator JCL.....	159
PARM field specifications.....	159
Resource Update List Generator DD statements.....	159
Resource Update List Generator control statements.....	160
Resource Update List Generator reports.....	166

Resource Update List Generator return codes.....	168
Chapter 20. Using the Batch Update List utility	171
JCL requirements.....	171
Control cards used for Batch Update List processing	171
Batch Update List return codes.....	172
Part 5. Batch utilities.....	173
Chapter 21. Using the Fast Sysgen utility.....	175
Fast Sysgen JCL.....	175
PARM field specifications.....	175
Fast Sysgen utility DD statements.....	176
Fast Sysgen batch output.....	178
IMSGEN report DD.....	179
IMSRPT report DD.....	180
SECGEN report DD.....	181
SECRPT report DD.....	182
First-time run suggestions.....	183
Fast Sysgen restrictions and requirements.....	183
Restrictions on assembler language facilities.....	183
Converting restricted facilities to Fast Sysgen compatible source.....	184
IMS stage 1 macro requirements.....	184
Fast Sysgen processing.....	185
IMS maintenance impacts.....	187
Chapter 22. Using the JCLIN Generator.....	189
When you should run JCLIN	189
Creating JCLIN.....	189
When to use the JCLIN Generator.....	190
Chapter 23. Using the Sysgen Compare utility.....	191
What Sysgen Compare does	191
Sysgen Compare JCL.....	191
PARM field specification.....	191
Sysgen Compare DD statements.....	191
Sample Sysgen Compare report.....	192
Chapter 24. Using the Batch Reverse Sysgen utility.....	195
Batch Reverse Sysgen utility JCL.....	195
Batch Reverse Sysgen utility PARM field.....	195
Batch Reverse Sysgen utility return codes.....	196
Batch Reverse Sysgen utility output report.....	196
Chapter 25. Using the Batch Search utility.....	197
Batch Search utility JCL.....	197
Batch Search utility return codes.....	198
Chapter 26. Using the Batch IMSID Options utility.....	199
IMSID options values.....	199
Batch IMSID Options utility JCL.....	202
Batch IMSID Options utility LIST function.....	203
Batch IMSID Options utility UPDATE function.....	203
Chapter 27. Using the Merge Clone utility.....	205
What Merge Clone does.....	205
Merge Clone utility restrictions.....	205

Conflict resolution.....	205
Resolving TRANSACT conflicts.....	206
Resolving APPLCTN conflicts.....	207
Resolving database conflicts.....	207
Merge Clone JCL.....	207
Merge Clone reports.....	210
IOHLIST reports.....	210
IOHEXCPT reports.....	211
Merge Clone return codes.....	211
Part 6. Troubleshooting.....	213
Chapter 28. Troubleshooting overview.....	215
Chapter 29. Abend codes.....	217
Chapter 30. Runtime messages (IOH).....	219
Chapter 31. ISPF messages (IOH[A-F]).....	363
Chapter 32. IMS sysgen messages (IOHG).....	417
Chapter 33. Gathering diagnostic information.....	433
Notices.....	435
Index.....	439

About this information

IBM® IMS High Performance System Generation Tools for z/OS® (also referred to as IMS HP Sysgen Tools) is an IMS Tools product that provides a comprehensive IMS sysgen management system, including the capability to dynamically alter IMS sysgen application resources.

These topics provide instructions for installing, configuring, and using IMS High Performance System Generation Tools.

To use these instructions, you must have already installed IMS High Performance System Generation Tools by completing the instructions in the *Program Directory for IBM IMS High Performance System Generation Tools for z/OS* (GI10-8677), which is included with the product media and is also available on the IMS Tools Product Documentation page.

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

- Understand the capabilities of the functions that are associated with IMS High Performance System Generation Tools
- Install and operate IMS High Performance System Generation Tools
- Customize your IMS High Performance System Generation Tools environment
- Diagnose and recover from IMS High Performance System Generation Tools problems
- Use IMS High Performance System Generation Tools with other IMS products

To use these topics, you should have a working knowledge of:

- The z/OS operating system
- ISPF
- SMP/E
- IMS

Always refer to the IMS Tools Product Documentation web page for complete product documentation resources:

<https://www.ibm.com/support/pages/node/712955>

The IMS Tools Product Documentation web page includes:

- Links to [IBM Documentation](#) for the user guides ("HTML")
- PDF versions of the user guides ("PDF")
- Program Directories for IMS Tools products
- Recent updates to the user guides, referred to as "Tech docs" ("See updates to this information!")
- Technical notes from IBM Software Support, referred to as "Tech notes"
- White papers that describe product business scenarios and solutions

Part 1. IMS High Performance System Generation Tools overview

IBM IMS High Performance System Generation Tools for z/OS (also referred to as IMS HP Sysgen Tools) is an IMS Tools product that provides a comprehensive IMS sysgen management system, including the capability to dynamically alter IMS sysgen application resources.

Topics:

- [Chapter 1, “IMS High Performance System Generation Tools overview,” on page 3](#)

Chapter 1. IMS High Performance System Generation Tools overview

IBM IMS High Performance System Generation Tools for z/OS (also referred to as IMS HP Sysgen Tools) is an IMS Tools product that provides a comprehensive IMS sysgen management system, including the capability to dynamically alter IMS sysgen application resources.

IMS HP Sysgen Tools provides:

- Easy-to-use interface that allows one person to define a list of changes to be implemented, have the list verified by another person, and be implemented by another person (or scheduled batch job)
- Ability to control which users have the authority to perform each function, providing the necessary control in a shared IMS environment
- An audit log for reviewing all changes made to an IMS system, along with the capability to easily back out individual resource updates

Topics:

- [“What's new in IMS High Performance System Generation Tools” on page 3](#)
- [“IMS system definition” on page 5](#)
- [“What does IMS High Performance System Generation Tools do?” on page 6](#)
- [“IMS High Performance System Generation Tools components” on page 6](#)
- [“Hardware and software requirements” on page 11](#)
- [“Security and auditability” on page 11](#)
- [“Service updates and support information” on page 12](#)
- [“Product documentation and updates” on page 12](#)
- [“Accessibility features” on page 13](#)

What's new in IMS High Performance System Generation Tools

This topic summarizes recent technical changes to IMS HP Sysgen Tools.

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.

SC27-9501-01 (May 2021)

This edition covers functional enhancements provided by the following APARs and other documentation changes.

- APAR PH33096. This APAR provides enhancements on issuing IMS commands through the ISPF Option C interface. See the following topics:
 - [“APPC services” on page 17](#)
 - [Chapter 10, “Issuing IMS commands,” on page 93](#)
 - New or updated messages: IOH4729E, IOH5008E
- APAR PH29654. IMS HP System Generation Tools has been enhanced to support user groups and IOH.LOGDLET.*imsid* profile. See the following topics:
 - [“Step 8. Define security profiles” on page 25](#)
 - [“Working with profiles” on page 49](#)
 - [“Working with user group definitions” on page 52](#)

- New or updated messages: IOHA211, IOHA214, IOHA260, IOHA261, IOHA262, IOHA263, IOHA264, IOHA265, IOHD400
- APAR PH26682. This APAR provides enhancements for editing entries in the resource update list. See the following topics:
 - [“Adding program definitions” on page 120](#)
 - [“Performing an edit” on page 114](#)
 - New or updated messages: IOHA232, IOHA233, IOHA234, IOHA235, IOHA236, IOHA237, IOHA090 through IOHA096, IOHB019, IOHB021
- APAR PH25710. This APAR enhances IMS HP System Generation Tools to support IMSID and IOHPDS startup parameters for the ISPF interface. See the following topics:
 - [“Step 12. Optional: Add IMS HP Sysgen Tools to a user menu or call IOHEXEC from a user EXEC” on page 27](#)
 - [“ISPF interface startup options” on page 58](#)
 - New messages: IOHA240, IOHA241, IOHB034, IOHB035, IOHF070E, IOHF071E, IOHF072E
- APAR PH23753. This APAR provides a new utility called the Resource Update List Generator. See the following topics:
 - [Chapter 19, “Using the Resource Update List Generator,” on page 159](#)
 - New messages: IOH7640I - IOH7650E
- APAR PH11959. See the following topics:
 - [“Reloading an ACBLIB member by using IMS member level global online change” on page 140](#)
 - [“Installation methods” on page 147](#)
 - [“Control cards used for Batch Update List processing ” on page 171](#)
 - New messages: IOH7121E, IOH7122E, IOHA250
- Documentation changes for the installation store/forward function. See the following topic:
 - [“Configuring installation store/forward” on page 39](#)

SC27-9501-00 (December 2018)

This edition applies to Version 2.4 of IMS HP Sysgen Tools. IMS HP Sysgen Tools 2.4 provides the following new major functions:

Installation store/forward

By using the installation store/forward function, you can have resource update lists installed later even if the installation failed because the target IMS was not active when IMS HP Sysgen Tools tried to install the resource update lists.

For more information about the installation store/forward function, see [“Configuring installation store/forward” on page 39](#).

IMSRSC repository support

IMS HP Sysgen Tools now supports DRD-enabled environments that use the IMS resource definition (IMSRSC) repository.

IMS Managed ACBs Activate

By using the IMS Managed ACBs Activate method, you can activate a pending ACB member in the IMS directory staging data set.

For more information about IMS Managed ACBs Activate, see the following topics:

- [“Enabling the IMS Managed ACBs Activate method” on page 54](#)
- [“Activating a pending ACB member in IMS directory staging data set by using IMS Managed ACBs Activate ” on page 141](#)

Batch Search utility (IOHBSRCH)

The Batch Search utility searches definitions of databases, programs, transactions, and route codes in IMS active system control blocks (CORE) or data sets (MODBLKS, RDDS, or IMSRSC repository) for user-specified search words and generates corresponding sysgen source macros (DATABASE, APPLCTN, TRANSACT, and RTCODE).

For more information about the Batch Search utility, see [Chapter 25, “Using the Batch Search utility,” on page 197](#).

In addition to updates for IMS HP Sysgen Tools 2.4, the following updates have also been made for this edition:

- Documentation changes for APAR PI41969 and PI44598
- Added new messages IOH3210E, IOH3211E, IOH3212E
- Updated messages IOHG306E, IOH4110E, IOH241S
- Added descriptions for running the Resource Update List Create utility (IOHCLIST) with SOURCE=DELETE
- Added descriptions for the storage functions (Option 2 (CSA))
- Removed descriptions about DFSPUE0 alias

IMS system definition

This topic describes an overview of the standard IMS system generation process. This information helps you understand how IMS HP Sysgen Tools facilitates IMS system management.

An IMS system definition is used by the IMS system generation (sysgen) process to create or modify IMS online and batch environments.

There are several types of system definitions you can use to make changes to an IMS system environment. The type of definition, and subsequent sysgen, depends on the changes you want to implement. Adding new features and functions typically requires a NUCLEUS, ALL, or online sysgen. Making changes to communication definitions typically requires a CTLBLKS type sysgen. Adding or changing application resources (transactions, programs, databases, and route codes) typically requires only a MODBLKS type system definition.

In many environments, periodic IMS sysgens are required to implement changes to the application definitions for each IMS system. These changes can be accomplished with an IMS MODBLKS system definition. Depending on the number of application resources defined to a particular IMS system, the MODBLKS sysgen process can take a significant amount of time, machine resources, and personnel resources. The typical IMS sysgen involves at least 4 jobs, including stage 1, stage 2, security, and installation (possibly with the IMS Online Change utility).

The stage 2 job stream is created by the stage 1 sysgen process, and might have to be edited to conform to installation requirements after the stage 1 job completes.

In addition to an IMS sysgen, if IMS internal Security Maintenance Utility (SMU) security is used in IMS 9 or earlier, an IMS security gen is required each time an IMS sysgen is performed. SMU security is used to define the following:

- IMS password security
- Terminal security
- Signon security
- AGN security
- Transaction command authorization

What does IMS High Performance System Generation Tools do?

IMS HP Sysgen Tools delivers a comprehensive IMS sysgen management system.

IMS HP Sysgen Tools allow the following types of IMS sysgen changes:

- Update existing IMS sysgen attributes for database, program, transaction, and fast path route code definitions.
- Add or delete IMS sysgen definitions for databases, programs, transactions, and fast path route codes.
- Rename an existing application resource to a new name, while maintaining attributes and relationships (such as the transactions associated with a renamed program).
- Change IMS SMU security, including AGN, transaction command authorization, and terminal security.
- Reload a specific ACBLIB member, without using ACBLIB online change.
- Reload DEDB randomizer routines.

Once a list of resource updates is created, it can be verified to ensure that there are no resource conflicts and that the updates will install properly in the target IMS system. Installation of the list of resource updates can then be performed, either from a TSO session or via a batch job.

A list of resource updates can be installed in a single IMS system or for a group of IMS systems simultaneously. This feature can be useful in IMSplex environments, ensuring that updates are installed successfully in all IMS systems at the same time, and that resource definitions are kept in sync with other members of the IMSplex.

IMS HP Sysgen Tools include the capability to:

- Display IMS resource definitions – either those currently being used by IMS or as defined in the MODBLKS data set – and all the attributes associated with the definitions.
- Validate IMS sysgen source without running an IMS sysgen.
- Perform an IMS MODBLKS type sysgen without going through the IMS sysgen process. The IMS HP Sysgen Tools Fast Sysgen (also referred as *Fastgen*) process duplicates the MODBLKS sysgen process using 90% less CPU and elapsed time. The Fastgen process can be run either as a batch job or from the IMS HP Sysgen Tools ISPF panels.
- Re-create IMS sysgen source and/or security gen source from the MODBLKS / MATRIX data sets.
- View IMS control region storage and control blocks, and even zap storage in the IMS control region.
- Use the IMS HP Sysgen Tools history log to review which resources were updated by which userid, and when the update was installed.
- Convert IMS HP Sysgen Tools history log entries to IMS sysgen macros, which can be used to update IMS sysgen source to keep source in sync with the running IMS system.
- Back out one or more resource updates, restoring the definitions to the state they were in before an update was installed.
- Create SMP/E JCLIN source statements from a MODBLKS data set.
- Create an installable list of resource updates to synchronize the running IMS system with the updated IMS sysgen source.
- Compare different MODBLKS data sets to identify any differences in the IMS resource definitions.

The functions provided by IMS HP Sysgen Tools are protected by your security subsystem, and can be customized to work within your local change control procedures.

IMS High Performance System Generation Tools components

IMS HP Sysgen Tools consists of several components.

Topics:

- [“IMS High Performance System Generation Tools components overview” on page 7](#)

- [“Resource update lists for defining IMS sysgen changes”](#) on page 7
- [“ISPF interface”](#) on page 9
- [“IMS HP Sysgen Tools utilities”](#) on page 9
- [“History log”](#) on page 11

IMS High Performance System Generation Tools components overview

IMS High Performance System Generation Tools provides the ISPF interface and IMS HP Sysgen Tools utilities as program components for various functions related to installation of IMS resources and several auxiliary functions. In addition, it uses resource update lists and a history log as the main data components that manage those processing.

The following figure illustrates main components of IMS High Performance System Generation Tools:

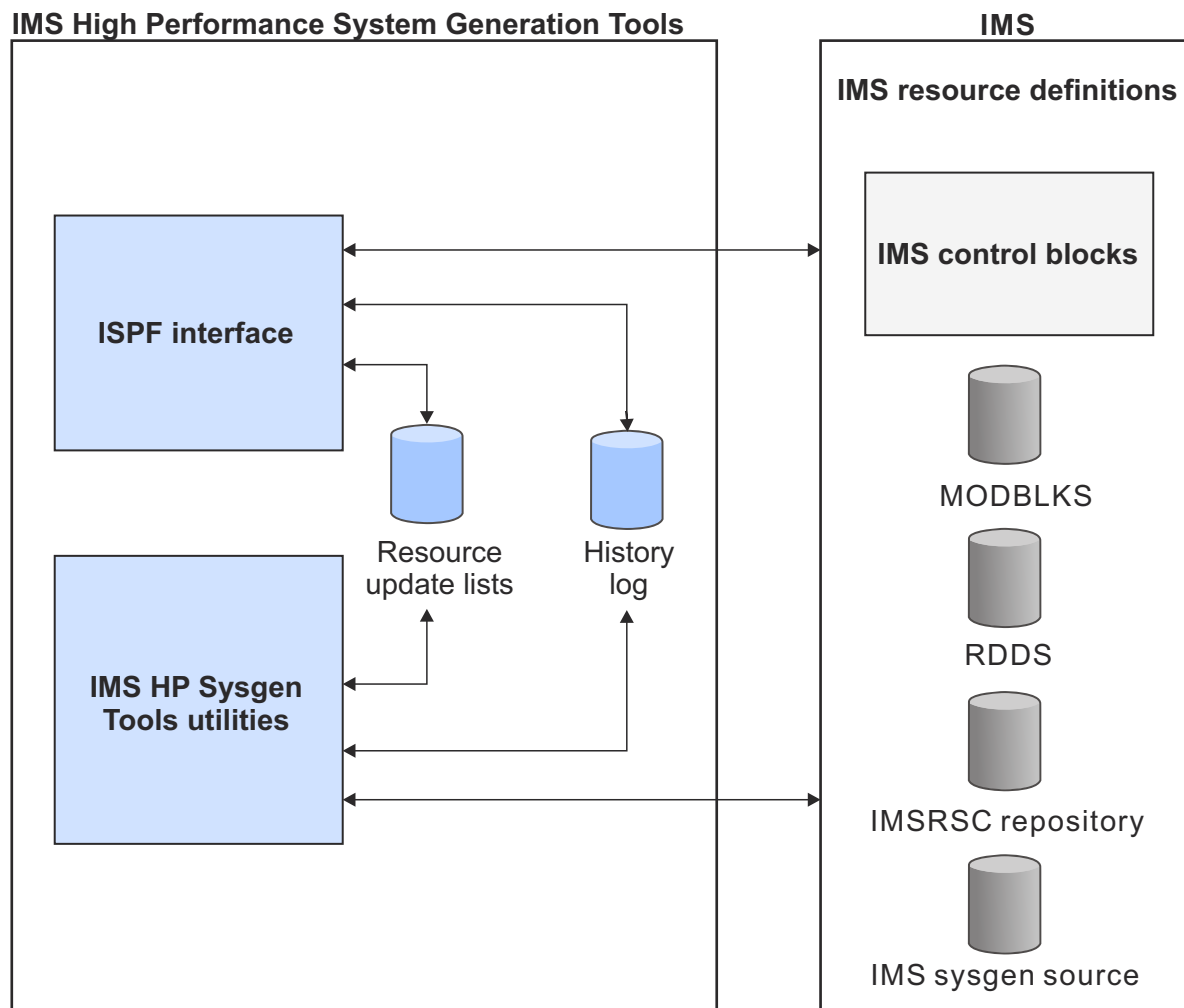


Figure 1. IMS High Performance System Generation Tools components

Resource update lists for defining IMS sysgen changes

IMS High Performance System Generation Tools updates IMS resources by using resource update lists.

This section describes an overview of the resource update list, which defines IMS sysgen changes, and the function to process them.

Resource update lists

A *resource update list* is a group of IMS sysgen changes that are implemented simultaneously. You can add new resources to a resource update list, or you can edit or delete existing resources. A resource update list can be created in advance by one user and then installed later by a different user.

Resource update list technology provides an incremental sysgen change function. You can create multiple resource update lists in any order and implement them in any order days or weeks later. Each resource update list is installed independently. When a resource update list is installed, only the resources that are specified in the resource update list entries are updated. All other resource definitions remain as they were defined before the installation of the resource update list.

A resource update list can be installed in either a single IMS system or a group of IMS systems. Even if global online change is enabled, a resource update list can be installed for only a single IMS in the global online change configuration. A group can include any combination of local online change, global online change, or IMSplex systems. When verifying or installing a resource update list, you can specify either a specific IMSID to install on a single IMS subsystem, or an IMS HP Sysgen Tools group name to install the update list on multiple IMS systems simultaneously.

Restriction: To use the installation store/forward function, the target IMS system must be configured as a local online change. For details, see [“Restrictions for using the installation store/forward function” on page 45.](#)

IMS resource definition

IMS HP Sysgen Tools enhances the resource definition and maintenance features that are provided by IMS.

By using the IMS online change process, you can define and maintain shared resource definitions among multiple IMS systems. IMS HP Sysgen Tools supports the Global Online Change feature of IMS. You can use IMS HP Sysgen Tools to install a resource update list to a group of IMS systems. Therefore, you can easily maintain duplicate resource definitions among such groups.

By using the IMS dynamic resource definition (DRD), you can dynamically define and maintain IMS resource definitions. IMS HP Sysgen Tools supports DRD-enabled environments that use resource definition data sets (RDDSs) or the IMS resource definition (IMSRSC) repository. You can use resource update lists to stage changes and implement them later as a group.

Installation store/forward

If the IMS online system is not active while the resource update list is being installed, installation fails. However, if you use the installation store/forward function, the resource update list is automatically installed later when the IMS become active.

The installation store/forward function consists of two components:

Store/forward VSAM data set

If the target IMS is not online at the time of resource update list installation, the IMSID value and the **INSTALL** command information are stored in this data set.

When you use the installation store/forward function, the data set stores the installation information for the failed IMS regardless of whether you tried to install the resource update list through the ISPF user interface or as a batch job.

REDO job

The REDO job starts automatically during IMS startup, reads the installation information from the store/forward VSAM data set, and reruns the installation procedure.

Important: To use the store/forward function, you must first create resource update lists by using IMS HP Sysgen Tools.

ISPF interface

IMS HP Sysgen Tools provides, through the ISPF interface, various functions related to installation of IMS resources.

For details, see [Part 3, “Using the ISPF interface,” on page 55](#).

In addition, it provides several additional functions through the ISPF interface, such as:

- JCL generator
- IMS commands

JCL generator

The ISPF interface contains a JCL generator for a number of IMS HP Sysgen Tools batch utilities.

The **Utilities** option on the IMS HP Sysgen Tools main menu provides the capability to generate JCL for batch utilities such as:

- Fast Sysgen utility (Fast MODBLKS sysgen)
- JCLIN Generator (Create SMP/E JCLIN)
- Batch Update List utility (Verify, install)
- Resource Update List Create utility (Synchronize, convert)
- Sysgen Compare utility (MODBLKS compare)
- Batch Reverse Sysgen utility (Reverse)
- Batch Search utility (Search)

IMS commands

By using the ISPF interface, you can issue any authorized IMS commands. The command response is displayed at your workstation.

The **Command** option on the IMS HP Sysgen Tools main menu provides the capability to issue IMS commands.

IMS HP Sysgen Tools utilities

IMS HP Sysgen Tools provides the Fast Sysgen utility, Merge Clone utility, and several other utilities.

Fast Sysgen utility

IMS HP Sysgen Tools provides a Fast Sysgen utility that performs an IMS MODBLKS sysgen in a fraction of the time used by the standard IMS sysgen process or the IMS LGEN process, and is easier to administer.

The Fast Sysgen utility (also referred to as the *Fastgen batch utility*) runs in batch mode and provides the ability to perform a MODBLKS type IMS sysgen and security gen in a single step job.

IMS HP Sysgen Tools also provides the ISPF interface that allows incremental updates to IMS system definitions. Use the ISPF interface to define a list of IMS sysgen changes, verify that the changes do not cause IMS system conflicts, and implement the changes. Any authorized user can perform the changes at any time after the list of changes is saved.

Additionally, the ISPF interface provides the ability to perform the following IMS sysgen related tasks:

- Review existing resource definitions
- Reverse IMS MODBLKS and MATRIX modules into IMS sysgen and security gen source code
- Validate IMS sysgen source
- Perform a Fast Sysgen
- Review IMS sysgen changes implemented via the HP Sysgen product
- Issue IMS commands

IMS system data set integrity is preserved using the same mechanisms that IMS uses in its sysgen and online change processes. The IMS staging library's integrity is ensured by using a hardware reserve with the same QNAME as the linkage editor or binder. The active and inactive libraries' integrity is preserved by using the IMS online change global enqueue process. In addition, you can control which libraries are updated by the batch utility (the staging library, inactive library, or A or B libraries) with a simple parameter in the Fast Sysgen JCL.

Merge Clone utility

The Merge Clone utility can be used to assist in adding new IMS regions to an existing configuration, merging existing IMS regions together, or ensuring APPLCTN, TRANSACT and DATABASE macro definitions remain consistent across all IMS regions in a data sharing environment.

Merging

The merging process takes two or more IMS regions running separate applications and combines the application, transaction, and database definitions together.

A merge results in the same number of IMS regions, but all of them would contain the same number (and names) of APPLCTN, TRANSACT and DATABASE macro definitions. As part of the process, the Merge Clone utility will build the MSC routing definitions for each transaction. It does this by analyzing each PSB from the PSBLIB and determining which IMS system has database access that meets the PSB's PROCOPT requirements.

Cloning

If you are running an IMS database-level data sharing environment, you can use Merge Clone to add (*clone*) new IMS regions to your configuration.

By running the Merge Clone process, you can build the entire application, transaction and database definitions for a new region, complete with the MSC routing definitions. Again, the utility will determine the routing by analyzing the PSBs and determining which IMS system has the database access that meets a PSB's PROCOPT requirements.

If you are running a data sharing environment, you can use Merge Clone to keep your IMS systems synchronized. The process will ensure that all systems have the same applications, transactions, and databases defined. It will also ensure that resources are defined consistently across systems because a resource will be defined with the same parameters in all systems.

Related information

[Using the Merge Clone utility](#)

The Merge Clone utility creates a common set of application, transaction, and database definitions across multiple IMS systems.

Sysgen Compare utility

The Sysgen Compare utility provides the ability to compare two sets of MODBLKS and MATRIX data sets and determine whether any differences exist, identifying any resource definitions that differ.

Related information

[Using the Sysgen Compare utility](#)

IMS HP Sysgen Tools includes the Sysgen Compare utility, which lets you compare two sets of IMS control blocks. You can use this utility to verify that two sets of MODBLKS and MATRIX modules are exactly the same.

Batch Reverse Sysgen utility

IMS HP Sysgen Tools provides a reverse sysgen capability for both IMS sysgen and security gens. You can create source for both IMS features from the MODBLKS, MATRIX, and RESLIB libraries.

Related information

[Using the Batch Reverse Sysgen utility](#)

The IMS HP Sysgen Tools generates HP sysgen source macros from either the incore IMS control blocks or from the active IMS MODBLKS, RDDS, or IMSRSC repository data set.

Batch Search utility

The Batch Search utility searches definitions of databases, programs, transactions, and route codes in IMS active system control blocks (CORE) or data sets (MODBLKS, RDDS, or IMSRSC repository) for user-specified search words. It then generates corresponding sysgen source macros (DATABASE, APPLCTN, TRANSACT, and RTCODE).

Related information

[Using the Batch Search utility](#)

The Batch Search utility searches definitions of databases, programs, transactions, and route codes in IMS active system control blocks (CORE) or data sets (MODBLKS, RDDS, or IMSRSC repository) for user-specified search words. It then generates corresponding sysgen source macros (DATABASE, APPLCTN, TRANSACT, and RTCODE).

JCLIN Generator

The JCLIN Generator provides a way to create SMP/E JCLIN input from a MODBLKS data set. This allows you to run a JCLIN before SMP/E maintenance is applied.

History log

IMS HP Sysgen Tools includes a history log for resource changes installed using resource update lists.

You can use the history log to review when resource definitions were changed, and by which user ID. Another report option builds IMS stage 1 macro definitions that can be used to update IMS sysgen source to ensure that gen source matches current resource definitions.

Hardware and software requirements

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

Hardware prerequisites

IMS HP Sysgen Tools is designed to operate in any hardware environment that supports any supported release of IMS.

Software prerequisites

IMS HP Sysgen Tools is designed to operate with any version of z/OS that supports the version of IMS that you are running. All supported releases of IMS are supported by IMS HP Sysgen Tools.

Security and auditability

IMS HP Sysgen Tools uses the security and auditability features of the z/OS operating system and IMS system under which the tools execute.

You must evaluate, select, and implement security features, administrative procedures, and appropriate controls in application systems and communication facilities.

Use of the Fast Sysgen utility might require changes to the security definitions of some IMS system data sets. These changes are discussed in [Chapter 2, “Configuring IMS HP Sysgen Tools,” on page 17](#).

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:

[IBM Support: IMS High Performance System Generation Tools for z/OS](#)

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

Always refer to the IMS Tools Product Documentation web page for complete product documentation resources:

<https://www.ibm.com/support/pages/node/712955>

The IMS Tools Product Documentation web page includes:

- Links to [IBM Documentation](#) for the user guides ("HTML")
- PDF versions of the user guides ("PDF")
- Program Directories for IMS Tools products
- Recent updates to the user guides, referred to as "Tech docs" ("See updates to this information!")
- Technical notes from IBM Software Support, referred to as "Tech notes"
- White papers that describe product business scenarios and solutions

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

<http://www.redbooks.ibm.com>

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

<https://www.ibm.com/software/data/ims/>

Receiving documentation updates automatically

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

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1. Go to <http://www.ibm.com/support/mysupport>
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4. Click **Continue** to specify the types of updates that you want to receive.
5. Click **Submit** to save your profile.

How to send your comments

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

Accessibility features

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

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

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

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

Part 2. Configuring IMS HP Sysgen Tools

These topics describe the procedures for configuring IMS HP Sysgen Tools for your installation.

Topics:

- [Chapter 2, “Configuring IMS HP Sysgen Tools,” on page 17](#)
- [Chapter 3, “Optional product customization,” on page 47](#)

Chapter 2. Configuring IMS HP Sysgen Tools

Before you start using IMS HP Sysgen Tools, read these topics to configure it.

Topics:

- [“Target libraries available after installation” on page 17](#)
- [“APPC services” on page 17](#)
- [“Setting up the environment” on page 18](#)
- [“Configuration procedures” on page 19](#)
- [“Defining IMS HP Sysgen Tools options” on page 30](#)
- [“Fast Sysgen performance suggestions” on page 36](#)
- [“IMS Sysgen source organization” on page 36](#)
- [“Configuring installation store/forward” on page 39](#)

Target libraries available after installation

The target libraries are populated when IMS HP Sysgen Tools completes installation.

Software installation is documented in the IMS HP Sysgen Tools Program Directory. When installation is completed, the following target libraries are populated:

- *ioh_smp.SIOHEXEC*
- *ioh_smp.SIOHLINK*
- *ioh_smp.SIOHMACS*
- *ioh_smp.SIOHMENU*
- *ioh_smp.SIOHPENU*
- *ioh_smp.SIOHSAMP*
- *ioh_smp.SIOHSENU*
- *ioh_smp.SIOHTENU*

where *ioh_smp* is the high-level qualifier of IMS HP Sysgen Tools SMP/E target libraries.

APPC services

Some ISPF functions call APPC services to retrieve information from or make updates to the IMS control region control blocks.

The options on the Primary Options menu that call APPC services include the following:

0 (Setup)

Uses an APPC application to extract IMS control region data set names.

1 (View)

Uses APPC when viewing INCORE definitions.

2 (Edit)

Creates an IMS resource update list.

3 (Verify)

Verifies an IMS resource update list.

4 (Install)

Implements an IMS resource update list.

7 (Reverse)

Uses APPC when retrieving information for an INCORE request.

C (Command)

Uses APPC/MVS to route the request to the proper MVS system. If you enter an IMS type-1 command and APPC/IMS is enabled, you can also use APPC/IMS to issue the command. If you enter an IMS type-2 command, IMS Operations Manager (OM) is used to issue the command, so APPC/IMS is not used even if APPC/IMS is enabled.

S (Storage)

Uses APPC when retrieving or updating IMS storage

Resource update list functionality calls APPC services to retrieve existing resource definition information. The verify and install resource update list functions run primarily in APPC. This means that ISPF functions invoke APPC to schedule IMS HP Sysgen Tools code in the same MVS LPAR in which IMS is running. This allows IMS HP Sysgen Tools to access IMS control blocks even when the TSO user is logged on to another MVS LPAR.

An understanding of how APPC tasks run is helpful when searching for diagnostic information for problems in an APPC environment. APPC schedules IMS HP Sysgen Tools functions in much the same way that JES2 or JES3 schedule jobs. An APPC initiator runs the IMS HP Sysgen Tools code. In order to understand what is running in an APPC initiator, it is important to understand the IOHTPADD job that runs during customization. The following JCL exists in the IOHTPADD job:

```
//SYSIN DD DATA,DLM='QT'
```

This JCL indicates that all card images that follow, up to the statement with 'QT' in the first two columns, are input to the APPC utility that is run in the IOHTPADD job. This includes what appears to be a second job that is included in the IOHTPADD member. Instead of being a second job, however, this input defines to APPC the environment that must be established to run the IMS HP Sysgen Tools application code in the APPC initiator.

The job name, IOHAPPC, is used when the IMS HP Sysgen Tools code processes. This name can be seen just as any other MVS started task or job, in an MVS D A, L command or in the SDSF DA panel. If the APPC code loops, it is canceled by issuing an MVS cancel command for job name IOHAPPC.

Note: //STEPLIB DD defines the current SIOHLINK data set. Any maintenance applied to IMS HP Sysgen Tools must be installed in this library in order to have the maintenance used in the APPC environment.

For security error messages, it might also be important to review the MVS syslog. For example, RACF resources defined in the IOHRACF job are used for validating a user's authority to perform certain functions. If a user does not have access to a resource, the RACF violation occurs in the APPC address space on the MVS system where IMS runs, not where the TSO user is logged in.

Setting up the environment

You need to set up the IMS HP Sysgen Tools before using all of the features.

Procedure

To use all features of IMS HP Sysgen Tools, you must complete the following steps:

1. The SIOHLINK library must be APF authorized.
2. IMS online change must be enabled in all IMS subsystems. This change can either be a local or a global change.
3. Each IMS control region must have unique MODBLKSA, MODBLKSB, MATRIXA, and MATRIXB data sets; that is, the MODBLKS data set cannot be used in both the MODBLKSA and MODBLKSB DD statements.
4. The SIOHLINK library (or the DSN specified for SIOHLINK in the IOHTPADD job) must be APF authorized.

Configuration procedures

In the following topics, the overview of the configuration procedures is followed by detailed descriptions of each configuration procedure.

Overview of configuration procedures

The IMS HP Sysgen Tools does not require changes to the IMS control region JCL or software. It can be configured without impact to the IMS online system. You do not have to stop or restart IMS to install IMS HP Sysgen Tools.

IMS HP Sysgen Tools uses APPC/MVS to run functions on the same MVS system(s) where targeted IMS subsystems are running. APPC/MVS allows a request from a TSO user on one MVS system to start IMS HP Sysgen Tools software on the MVS system where the target IMS subsystem is running. IMS HP Sysgen Tools software that is running on the proper MVS system can then access IMS control blocks by using access registers and common storage. APPC/MVS is required to use IMS HP Sysgen Tools.

IMS HP Sysgen Tools also uses APPC/IMS to issue IMS type-1 commands if APPC/IMS is active in the target IMS subsystem. APPC/IMS is not required to use IMS HP Sysgen Tools.

Perform the following steps before starting to use IMS HP Sysgen Tools:

1. If not already active, activate APPC/MVS.

For more information, see [“Step 1. Activate APPC/MVS” on page 20.](#)

2. Find the APPC/MVS base LU name on each MVS system where IMS runs.

For more information, see [“Step 2. Locate the APPC/MVS base LU names” on page 21.](#)

3. Find an appropriate APPC initiator class.

For more information, see [“Step 3. Find an APPC initiator class” on page 22.](#)

4. If not already present, define to APPC/MVS a symbolic destination (SYMDEST) for each MVS image where an IMS control region with IMS HP Sysgen Tools will reside. There is no need to create a separate SYMDEST for IMS HP Sysgen Tools; any existing definition can be used. SIOHSAMP member IOHSIADD provides a sample batch job to define an APPC/MVS symbolic destination.

For more information, see [“Step 4. Define APPC/MVS symbolic destinations” on page 22.](#)

5. Allocate the IOHPDS library, which stores user-created resource update lists, and the IOHOPT library, which stores the options for each IMS control region. Allocate an IOHLOG data sets for each IMS subsystem that does not already have a log data set.

For more information, see [“Step 5. Allocate libraries” on page 23.](#)

6. Define the required APPC/MVS TP profile used by IMS HP Sysgen Tools. See SIOHSAMP member IOHTPADD for an example.

For more information, see [“Step 6. Define APPC/MVS transaction program profile for IMS HP Sysgen Tools” on page 23.](#)

7. Copy SIOHEXEC member IOHXISPF, IOHXEXEC, or both, from the SIOHEXEC library to a CLIST/REXX library accessible to the IMS HP Sysgen Tools users. Update the data set names in the IOHXISPF or IOHXEXEC EXEC to reflect the data set names chosen for the target libraries.

For more information, see [“Step 7. Copy IOHXISPF or IOHXEXEC to CLIST/REXX library” on page 24.](#)

8. Define the required security profiles to limit user capabilities to edit and install resource update lists, issue IMS commands, and review IMS control region storage.

For more information, see [“Step 8. Define security profiles” on page 25.](#)

9. Define the IMS HP Sysgen Tools authorized user ID, and ensure that this new user ID has security authorization to the appropriate data sets and IMS commands.

For more information, see [“Step 9. Create an IMS HP Sysgen Tools authorized user ID” on page 26.](#)

10. Review IMS parameter values for AOIS and CMDMCS values in DFSPBxxx.

For more information, see [“Step 10. Verify IMS requirements” on page 27.](#)

11. Add an APPLCTN definition for IMS HP Sysgen Tools to IMS.

For more information, see [“Step 11. Add APPLCTN for IMS HP Sysgen Tools” on page 27.](#)

12. Optionally, add IMS HP Sysgen Tools to a user ISPF menu.

For more information, see [“Step 12. Optional: Add IMS HP Sysgen Tools to a user menu or call IOHEXEC from a user EXEC” on page 27.](#)

13. Ensure that the APPC/MVS security requirements for this environment are in place.

For more information, see [“Step 13. Define resource class APPCLU profiles to your security system” on page 28.](#)

After you completed these configuration steps, use the ISPF interface to define the options for each IMS subsystem that is accessed through this interface. For details, see [“Defining IMS HP Sysgen Tools options” on page 30.](#)

Step 1. Activate APPC/MVS

Advanced Program-to-Program Communication/MVS (APPC/MVS) must be active on all MVS systems where either IMS runs, or where an IMS HP Sysgen Tools TSO user might log on.

Before you begin

Determine whether APPC is active or not by issuing the MVS command `D APPC, LU, ALL`. If APPC/MVS is already active, you can skip this step and go on to [“Step 2. Locate the APPC/MVS base LU names” on page 21.](#)

About this task

If your installation has not yet implemented APPC/MVS, you can find helpful information in *z/OS MVS Planning: APPC/MVS Management*. This publication describes how to define and manage APPC/MVS and defines parameters specified in the TPADD and Side Information Add (SIADD) processes.

APPC uses a VTAM® SNA network and LU6.2 protocol to communicate between two application programs on the same or two different hosts, such as:

- z/OS
- VM/ESA
- AS/400
- Workstations running OS/2
- Other hosts

Procedure

To set up APPC/MVS:

1. Set up the APPC and ASCH started tasks (started by an operator command).

The APPC address space controls APPC/MVS communication functions. The ASCH address space is where APPC transaction programs are scheduled.

Here is a sample APPC procedure:

```
//APPC PROC APPC=00  
//APPC EXEC PGM=ATBINITM, PARM='APPC=&APPC', REGION=OK
```

Here is a sample ASCH procedure:

```
//ASCHC PROC ASCH=00
//ASCHC EXEC PGM=ASBSCHIN,PARM='ASCH=&ASCH',REGION=0K
```

2. Set up member ASCHPMxx in SYS1.PARMLIB.

This member defines classes and scheduling characteristics for transaction programs scheduled in the ASCH address spaces.

Here is a sample ASCHPMxx member:

```
CLASSADD CLASSNAME(A) MSGLIMIT(1000) MAX(10) MIN(1) RESPGOAL(1)
CLASSADD CLASSNAME(OPERNMVS) MAX(300) MIN(15) RESPGOAL(1)
CLASSADD CLASSNAME(FAST) MAX(10) MIN(2) RESPGOAL(.01)
```

3. Set up member APPCPMxx in SYS1.PARMLIB.

This member defines the APPC/MVS local logical unit names (LU names) and the data set names of the APPCTP and SIDEINFO data sets.

Here is a sample APPCPMxx member:

```
LUADD ACBNAME(MVSLU01) BASE TPDATA(SYS1.APPCTP)
SIDEINFO DATASET(SYS1.APPCSI)
```

4. Define the APPC/MVS base LU name to VTAM.

The ACBNAME defined to VTAM must match the ACBNAME specified in the APPCPMxx member of PARMLIB. The VTAM LU name (the label field of the APPL statement) should be unique within your installation. IMS HP Sysgen Tools require one LU name for each z/OS MVS system on which an IMS subsystem is running. The LU name can be any name, and it must be specified not only in the VTAM definition, but also in the LUADD statement, as shown in step “3” on page 21 and in the statements that define the side info entry shown here:

MVSLU01	APPL	ACBNAME=MVSLU01,	C
		APPC=YES,	C
		AUTOSES=0,	C
		DDRAINL=NALLOW,	C
		MODETAB=LOGMODES,	C
		DLOGMOD=APPCHOST,	C
		DMINWNL=5,	C
		DMINWNR=5,	C
		DRESPL=NALLOW,	C
		DSESLIM=10,	C
		LMDEXT=19,	C
		PARSESS=YES,	C
		SECACPT=ALREADYV,	C
		SRBEXIT=YES,	C
		VPACING=1	

Note:

- The values specified for MODETAB and DLOGMOD are dependent on your installation's logmode table entries. An LU 6.2 logmode entry must be available for these parameters.
- DLOGMOD SNASVCMG is not permitted by APPC/MVS.
- You can specify SECACPT as a valid VTAM value. If it is specified as other than ALREADYV or AVPV, then additional security definitions are required to ensure that the requesting user ID is propagated to the APPC initiator on the MVS system where IMS executes. For more information, refer to “[Step 13. Define resource class APPCLU profiles to your security system](#)” on page 28.

Step 2. Locate the APPC/MVS base LU names

The APPC/MVS base LU names are required for later steps in the ISPF configuration.

Procedure

To find the APPC/MVS base LU names:

1. Issue MVS command `D APPC, LU, ALL` and find the LLUN (LU name) that has both `SCHD=ASCH` and `BASE=YES` for each MVS system where an IMS subsystem runs.
2. Record the LLUN and the TP profile data set name for each MVS system.

For example:

```
LUADD ACBNAME(data set name) BASE TPDATA(data set name)
```

These data set names are used in [“Step 6. Define APPC/MVS transaction program profile for IMS HP Sysgen Tools”](#) on page 23.

3. Record the name of the APPC/MVS side info data set name.

For example:

```
SIDEINFO DATASET(data set name)
```

This data set name is used in [“Step 4. Define APPC/MVS symbolic destinations”](#) on page 22.

Step 3. Find an APPC initiator class

The APPC initiator class is required for later steps in the ISPF configuration.

Before you begin

The APPC initiator class that you use must be able to concurrently schedule at least 1 more than the number of IMS subsystems on that MVS system. For example, if an MVS system has 3 IMS subsystems executing, the APPC initiator class must be able to schedule at least 4 tasks concurrently (`MAX=4`).

Procedure

To find an APPC initiator class:

Issue the MVS command `D ASCH, ALL` to list the APPC initiator classes defined on each MVS system.

The initiator class name is used in [“Step 6. Define APPC/MVS transaction program profile for IMS HP Sysgen Tools”](#) on page 23.

Step 4. Define APPC/MVS symbolic destinations

A symbolic destination (SYMDEST) is required to use the IMS HP Sysgen Tools.

Before you begin

- Each MVS system where an IMS subsystem runs requires a unique SYMDEST. This definition might be shared with other APPC applications, therefore, it does not need to be specific to IMS HP Sysgen Tools.
- `MODENAME SNASVCMG` is not permitted by APPC/MVS.
- The value of the `DESTNAME` parameter should be chosen to represent an MVS system, not a specific IMS system.
- All IMS subsystems present on an MVS image should use the same destination name.
- The `MODENAME` parameter should be the same as the `DLOGMOD` in the APPC/MVS APPL definition.
- The `PARTNER_LU` name is the name of the MVS base LU name found in [“Step 2. Locate the APPC/MVS base LU names”](#) on page 21 for the destination MVS system.
- A SYMDEST definition must be present on every MVS system where IMS HP Sysgen Tools can be used to access an IMS subsystem, including a symbolic destination for an MVS system on that system, itself.

Procedure

To define the symbolic destination name:

Modify the `DESTNAME(symbolic destination name)` parameter in your JCL.

For a sample definition, see the IOHSIADD member of the SIOHSAMP library.

Step 5. Allocate libraries

The IOHPDS, IOHOPT, and IOHLOG libraries must be allocated.

Before you begin

Because these data sets are not IMS HP Sysgen Tools release specific, the product release should not be included in the data set names.

The job IOHALCDS in the SIOHSAMP data set contains sample JCL for the allocation of these data sets.

Procedure

Allocate these libraries per shared DASD environment. They can be shared among multiple IMS systems and multiple MVS systems. You can either share one set of IOHPDS and IOHOPT among all IMS and MVS systems, or allocate one set of IOHPDS and IOHOPT for each IMS group that you want to manage.

IOHPDS

This data set is used to store resource update lists created by users.

Important: Communicate this data set name to end users because they will have to enter it on the IMS HP Sysgen Tools Primary Options menu.

IOHOPT

This data set contains the IMS options definitions. This data set is also specified in SIOHSAMP member IOHTPADD, and in REXX EXEC IOHXISPF and IOHXEXEC in the SIOHEXEC library.

IOHLOG

This data set contains information about implemented changes to resource definitions. This data set is required for each IMS control region. Each IMS subsystem should have a unique log data set. The sample job IOHALOG in the SIOHSAMP data set contains sample JCL to allocate an IOHLOG data set. Use this sample job to allocate logs for each IMS subsystem.

Step 6. Define APPC/MVS transaction program profile for IMS HP Sysgen Tools

Each APPC transaction program (TP) has a TP profile defined to APPC/MVS.

Before you begin

You must define the TP profile on every MVS system where an IMS subsystem runs that will be accessed by IMS HP Sysgen Tools. In an environment where multiple MVS systems share a single TP profile (APPCTP) data set, this definition needs to be defined only once.

About this task

The TP profile definitions are stored in the APPC TP profile data set. You can define a TP profile using a batch job (a sample batch job is provided) or using the APPC/MVS ISPF interface.

IMS HP Sysgen Tools uses one APPC transaction program, which is a batch job to define the required transaction profile included in SIOHSAMP member IOHTPADD. The job contains JCL that is used to run the batch utility and contains JCL in the SYSIN DD DATA input stream.

The data set names included in the SYSIN stream must be customized for your installation. The SYSIN stream includes entities such as the SIOHLINK and IOHOPT library data set names, as well as the APPC TP Profile DSN (obtained in [“Step 2. Locate the APPC/MVS base LU names” on page 21](#)) and the APPC initiator class (obtained in [“Step 3. Find an APPC initiator class” on page 22](#)).

The SYSIN stream must be modified to include:

- The SIOHLINK and IOHOPT library data set names

- The APPC TP Profile DSN shown in the TPDATA value (obtained in [“Step 2. Locate the APPC/MVS base LU names”](#) on page 21), which is associated with the APPC/MVS base LU name
- The APPC initiator class (obtained in [“Step 3. Find an APPC initiator class”](#) on page 22)

A default TP profile name, IOH240_IMS_HP_SYSGEN, is specified in the sample job. You can change the TP profile name to match an existing TP profile name or to conform to installation standards.

Important: If you change the TP profile name, you must specify the new name in the APPC/MVS HP Sysgen TPName field option of the IMSID of every IMS system. For information on setting up the IMSID options and the TP name field, see [“Defining IMS HP Sysgen Tools options”](#) on page 30.

Procedure

To define the TP profile name:

Modify the TPNAME(*TP profile name*) parameter in your JCL.

For a sample definition, see the IOHTPADD sample member in the SIOHSAMP data set.

If this job ends with condition code 8, there is not necessarily an error. If the TPNAME was not defined previously, the following messages may be generated by TPDELETE. These can be ignored.

```
ATB323I Processing of TPDELETE request has begun.
ATB371I Specified TP profile not found.
ATB311I TPDELETE request failed
```

Step 7. Copy IOHXISPF or IOHXEXEC to CLIST/REXX library

The IOHXISPF or IOHXEXEC REXX EXEC must be copied to a CLIST or REXX EXEC library that is accessible to the IMS HP Sysgen Tools user.

About this task

After copying the IOHXISPF or IOHXEXEC REXX EXEC, you can start an IMS HP Sysgen Tools ISPF session by typing IOHXISPF or IOHXEXEC.

Important: To use the functions that are available in IMS HP Sysgen Tools 2.4 and later, use IOHXEXEC.

Procedure

1. Copy SIOHEXEC member IOHXISPF, IOHXEXEC, or both, from the SIOHEXEC library to a CLIST/REXX library.
2. Customize the EXEC to reflect the appropriate installation data set names for the IMS HP Sysgen Tools target libraries. The following statements must be updated:

For SMP/E target libraries:

- IOHEXEC = "*ioh_smp*.SIOHEXEC"
- IOHLLIB = "*ioh_smp*.SIOHLINK"
- IOHMLIB = "*ioh_smp*.SIOHMENU"
- IOHPLIB = "*ioh_smp*.SIOHPENU"
- IOHSLIB = "*ioh_smp*.SIOHSENU"
- IOHTLIB = "*ioh_smp*.SIOHTENU"

where *ioh_smp* is the high-level qualifier of IMS HP Sysgen Tools SMP/E target libraries.

For IOHOPT in the SIOHSAMP IOHALCDS job:

- IOHOPT = "*ioh_hlq*.IOH.IOHOPT"

where *ioh_hlq* is the high-level qualifier of IMS HP Sysgen Tools system libraries.

3. Depending on whether you want to use the installation store/forward function, specify either of the following:

- If you want to use the installation store/forward function, specify:

```
DSN_IOHSTFWD = "DSN('hlq.IOH.IOHSTFWD')"
```

- Otherwise, specify:

```
DSN_IOHSTFWD = "DUMMY"
```

For details about installation store/forward, see [“Configuring installation store/forward” on page 39](#).

4. Optionally, determine the values of IOHXEXEC parameters and specify them.

For a description of IOHXEXEC parameters, see [“ISPF interface startup options” on page 58](#). An example of running IOHXEXEC with parameters is shown as follows:

```
EX 'IMS.IOH.EXEC(IOHXEXEC)' 'IMSID=IMSA IOHPDS=IMS.IOH.IOHPDS'
```

Step 8. Define security profiles

IMS HP Sysgen Tools uses different types of security profiles to determine which users can perform which functions.

Before you begin

Each IMS subsystem can have a different set of permissions, or all IMS subsystems can share the same definition by using a generic resource profile, for example, IOH.EDIT.*

Some profiles include an IMSID field as the last qualifier of the resource name. If all IMS subsystems have the same access list, a generic profile can be defined instead of multiple profiles for each IMS subsystem on the MVS image.

Access to these resources is checked on the MVS system where the IMS subsystem runs or the TSO user is logged on.

Procedure

Define the following profiles in the FACILITY class:

IOH.SETUP

This profile defines which users have the authority to use the Profiles, Users, and User Groups options in the IMS HP Sysgen Tools setup menu. This profile should be restricted to those who administer IMS HP Sysgen Tools.

Access to this resource is checked on the MVS system where the TSO user is logged on.

- Access of READ or higher allows the user to use the Profiles, Users, and User Groups options.
- Access of NONE causes any requests to use the Profiles, Users, and User Groups options to be denied.

IOH.EDIT.imsid

This profile defines users who can edit resource update lists. Edit capability is checked only when retrieving existing resource definition information from an IMS subsystem.

Access to this resource is checked on the MVS system where the IMS subsystem runs.

- Access of READ or higher allows the user to edit a resource update list.
- Access of NONE causes any requests for IMS resource information to be denied.

IOH.CHECK.imsid

This profile defines users who can check resource update lists.

Access to this resource is checked on the MVS system where the IMS subsystem runs.

- Access of READ or higher allows the user to check a resource update list.
- Access of NONE causes any requests to check a resource update list to be denied.

IOH.INSTALL.imsid

This profile defines users who can install resource update lists.

Access to this resource is checked on the MVS system where the IMS subsystem runs.

- Access of READ or higher allows the user to install resource update lists.
- Access of NONE causes any requests to install a resource update list to be denied.

IOH.IMSCMD.imsid

This profile defines users who can use the IMS command option of the IMS HP Sysgen Tools ISPF menu.

Access to this resource is checked on the MVS system where the IMS subsystem runs.

- Access of READ or higher allows the user to issue IMS commands for the specified IMSID.
- Access of NONE causes any requests to issue an IMS command to be denied.

IOH.STORAGE.imsid

This profile defines users who are authorized to view or update IMS storage using the storage Display and Update ISPF option.

Access to this resource is checked on the MVS system where the IMS subsystem runs.

- Access of UPDATE or higher allows a user to change (zap) IMS storage. Because this could cause significant problems, access to change storage should be limited to authorized personnel.
- Access of READ or higher allows a user to display storage used by IMS, but not to update it.
- Access of NONE prohibits a user from viewing or updating storage used by the IMS system.

IOH.LOGDLET.imsid

Optional. This profile defines users who are authorized to remove IMS HP Sysgen Tools log entries using the IMS HP Sysgen Tools log maintenance option. If you want to use this profile, you must use IOHXEXEC REXX EXEC.

Access to this resource is checked on the MVS system where the TSO user is logged on.

- Access of READ or higher allows the user to remove IMS HP Sysgen Tools log entries.
- Access of NONE causes any requests to remove IMS HP Sysgen Tools log entries to be denied.



Attention: Do not use IOHXISPF REXXEXEC if you want to use this profile. If you use IOHXISPF REXXEXEC, any requests to remove IMS HP Sysgen Tools log entries are not denied even if access of NONE is defined.

For a sample job that shows how to define resources to RACF and permit users access to the resources, see member IOHRACF in the SIOHSAMP data set.

Step 9. Create an IMS HP Sysgen Tools authorized user ID

If you do not have authorization to the required resources, HP Sysgen provides a special “authorized user ID” that allows you to perform the functions required during the resource update list install process.

Before you begin

- If every HP Sysgen user who has authorization to install a resource update list also has authority to the resources, you can skip the following steps and instead specify an asterisk (*) for the authorized user ID in the IMSID setup options. When an asterisk is specified, HP Sysgen uses the requesting user ID instead of the authorized user ID to perform a resource update list install.
- The authorized user ID is only used in the APPC/MVS initiator address space.

About this task

IMS HP Sysgen Tools allows you to install a resource update list without the required security authorization to update APF-authorized libraries, including the MODBLKS and MATRIX data sets, or IMS commands such as /MODIFY, /START, and /ASSIGN that are used during the resource update list install process.

Procedure

To create an authorized user ID:

1. Define a new user ID and allow the user ID to:

- Issue all IMS commands
- Update the MODBLKS and MATRIX data sets
- Read SIOHLINK, IOHOPT, and IMS RESLIB data sets
- UPDATE access to MODBLKS, MODBLKSA, MODBLKSB, MATRIX, MATRIXA, and MATRIXB
- READ access to the RESLIB, MODSTAT/OLCSTAT, IOHOPT, and SIOHLINK data sets
- UPDATE access to the IOHLOG data set of each IMS system

Recommendation: Use IOHAPPC as the authorized user ID name, because this name matches the job name used in the APPC/MVS initiator.

2. Specify the authorized user ID in the IMSID setup options for each IMS control region.

Step 10. Verify IMS requirements

Verify that IMS HP Sysgen Tools conforms to the IMS requirements.

Procedure

- Ensure that the AOIS parameter value specified in IMS PROCLIB member DFSPBxxx is set to A, C, or R.
 - Ensure that the CMDMCS parameter in the IMS PROCLIB member DFSPBxxx does not specify value N.
- IMS HP Sysgen Tools uses the IMSID command recognition character to issue **/MODIFY** commands.

Step 11. Add APPLCTN for IMS HP Sysgen Tools

IMS HP Sysgen Tools might require an IMS APPLCTN definition in the IMS sysgen.

About this task

Although a PSB is used only when APPC/IMS is not active, defining this resource provides you with a backup in the event that APPC is not available.

Procedure

Add the following definition to the IMS stage 1 sysgen source:

Use batch Fastgen (or an IMS MODBLDS gen) and online change to install this definition.

```
APPLCTN  GPSB=IOHCMD,PGMTYPE=BATCH,SCHDTYP=PARALLEL
```

Step 12. Optional: Add IMS HP Sysgen Tools to a user menu or call IOHEXEC from a user EXEC

Optionally, you can modify a user menu to include the option to invoke IMS HP Sysgen Tools through the ISPF interface. If you do not update a user menu, you can access the ISPF interface by using TSO

command **%IOHXISPF** or **%IOHXEXEC**. In addition, you can call IOHXEXEC from a user EXEC, optionally with startup options specified.

Procedure

1. Update the menu to add an option for IBM IMS HP Sysgen Tools.
2. In the &ZSEL section, translate the selection option to CMD(%IOHXISPF) or CMD(%IOHXEXEC).
3. If you want to call IOHXEXEC with startup options, specify the parameters. An example is shown as follows:

```
&HPSGCMD = '%IOHXEXEC TARGET=IMSGRP1 GRPMBR=YES MENU=0123 +  
            IOHPDS=IMS.IOH.IOHPDS'  
&ZSEL = TRANS (TRUNC (&ZCMD, '.'))  
            H, 'CMD(&HPSGCMD)'  
...
```

The following example shows a user EXEC that calls IOHXEXEC with startup options specified:

```
/* REXX */  
.....  
  params="TARGET=GROUP@A GRPMBR=YES MENU=01234 ",  
        || "IOHPDS=IMS.IOH.IOHPDS"  
  myrc= IOHXEXEC(params)  
  If myrc ^= 0 then exit myrc  
.....
```

For details about the startup options, see [“ISPF interface startup options” on page 58](#).

Step 13. Define resource class APPCLU profiles to your security system

You must set up APPC/MVS LU definitions to provide automatic propagation so that APPC/MVS can propagate the requester's security user ID from the TSO session (or batch job) to the APPC/MVS initiator where HP Sysgen executes.

Before you begin

If all of the LU definitions in VTAMLST specify SECACPT=ALREADYV (or SECACPT=AVPV), there is no need to define any additional security profiles.

If the SECACPT= values specified in VTAMLST do not already specify ALREADYV or AVPV, you must either change the keyword definitions in the VTAM definition list or define resource class APPCLU profiles to your security system that permit you to override the SECACPT= value for a conversation between two specific LU names.

Important:

- Changing the keyword definitions can potentially affect other APPC applications that are running in your environment.
- Defining APPCLU profiles requires multiple RACF definitions and can be complicated to update when a new MVS LPAR must be added to your environment.

About this task

You can define class APPCLU profiles that allow you to specify SECACPT=ALREADYV (or SECACPT=AVPV).

You can define class APPCLU profiles that permit you to override the SECACPT= value for a conversation between two specific LU names. Defining APPCLU profiles allows you to override the SECACPT= value specified on the VTAM APPL definition. The profile name includes both LU names involved in the session. The format of the profile name is either:

- *net-id.local-lu-name.remote-lu-name*
- *net-id.local-lu-name.net-id.remote-lu-name*

Where:

net-id

The network ID.

local-lu-name

The base LU name for APPC/MVS.

remote-lu-name

The base LU name for IMS APPC LU.

Procedure

To define a security profile:

1. Determine the LU name by issuing a D APPC, LU, ALL command. The display output shows all of the LU names defined to APPC on that MVS LPAR.

In this example, the *local-lu-name* is shown in the line that contains SCHED=ASCH and BASE=YES (in this example, LLUN=MVSLU01). The *remote-lu-name* is shown in the line that contains SCHED=*imsid* and BASE=YES (in this example, LLUN=IMS9PPC).

```
D APPC,LU,ALL
ATB121I 12.05.30 APPC DISPLAY 796
  ACTIVE LU'S      OUTBOUND LU'S      PENDING LU'S      TERMINATING LU'S
    00006          00000          00006          00000
  SIDEINFO=SYS1.APPCSI
LLUN=IMS9PPC      SCHED=IMS9      BASE=YES      NQN=NO
  STATUS=ACTIVE    PARTNERS=00001    TPLEVEL=SYSTEM  SYNCPT=NO
  GRNAME=*NONE*    RMNAME=*NONE*
  TPDATA=SYS1.APPCTP
  PLUN=ADCD.MVSLU01
LLUN=MVSLU01      SCHED=ASCH      BASE=YES      NQN=NO
  STATUS=ACTIVE    PARTNERS=00004    TPLEVEL=SYSTEM  SYNCPT=NO
  GRNAME=*NONE*    RMNAME=*NONE*
  TPDATA=SYS1.APPCTP
  PLUN=ADCD.IMSHPPC
  PLUN=ADCD.IMS0PPC
  PLUN=ADCD.IMS9PPC
  PLUN=ADCD.MVSLU01
```

2. Determine the *net-id* by issuing the command D NET, ID=*lu-name*.

For example:

```
D NET,ID=MVSLU01
IST097I DISPLAY ACCEPTED
IST075I NAME = ADCD.MVSLU01, TYPE = APPL 803
```

The IST075I message in the display output shows the *net-id* just before the LU name. In this example, the LU name displayed is MVSLU01, so the *net-id* is ADCD.

3. Determine the format of the profile name by the NQN= value.
 - If the LU names specify NQN=NO, then the profile name used is *net-id.local-lu-name.remote-lu-name*.
 - If NQN=YES is shown, then the profile name used must include the net-id (network ID) twice, as in *net-id.local-lu-name.net-id.remote-lu-name*.

a) Optional: Define both forms of the APPCLU profiles.

If this is done when the profiles are initially defined, a change in the NQN specification does not require changes in the defined security profiles. For the example:

- If you specify NQN=NO

```
ADCD.MVSLU01.MVSLU01
ADCD.MVSLU01.IMS9PPC
ADCD.IMS9PPC.MVSLU01
```

- If you specify NQN=YES

```
ADCD.MVSLU01.ADCD.MVSLU01
ADCD.MVSLU01.ADCD.IMS9PPC
ADCD.IMS9PPC.ADCD.MVSLU01
```

4. Define the security profiles by specifying a value for SESSION CONVSEC of ALREADYV (or AVPV). If you use the RACF program product, the format of the command to define these profiles is (for an NQN=NO environment):

```
RDEFINE APPCLU (ADCD.MVSLU01.MVSLU01) UACC(NONE) SESSION(CONVSEC(ALREADYV))
RDEFINE APPCLU (ADCD.MVSLU01.IMS9PPC) UACC(NONE) SESSION(CONVSEC(ALREADYV))
RDEFINE APPCLU (ADCD.IMS9PPC.MVSLU01) UACC(NONE) SESSION(CONVSEC(ALREADYV))
```

Important: If VERIFY=REQUIRED is specified on the VTAM APPL definitions in VTAMLST, session key definitions might also be required in the RACF commands. For additional information on session keys, see *z/OS MVS Planning: APPC/MVS Management* and *z/OS Security Server RACF Command Language Reference*.

5. If the APPCLU resource class is RACLISTed on your system, refresh it after defining APPCLU profiles by using the following command:

```
SETROPTS RACLIST(APPCLU) REFRESH
```

This SETROPTS command can be issued even if the APPCLU resource class is not RACLISTed.

- a) Optional: Request that VTAM refresh the profiles it keeps for APPC LUs by issuing the MVS command:

```
F vtam-proc-name,PROFILES,ID=lu-name
```

Where *vtam-proc-name* is the name of the started task that executes VTAM, and *lu-name* is the APPC LU name that you want VTAM to reload security profiles for.

What to do next

If you have multiple IMS subsystems you must create multiple profiles. For each IMS subsystem, you need only create 1 set of profiles for the APPC/IMS LU name and the APPC/MVS base LU name on the MVS LPAR where IMS runs.

If you have multiple MVS LPARs, each LPAR should have a different APPC/MVS base LU name. For example, if you have 2 LPARs, and want to be able to use HP Sysgen from LPAR 1 to access an IMS subsystem that runs on LPAR 2, you would need to create multiple profiles. In the following example, LPAR SYS1 has APPC/MVS base LU name MVSLU01 and LPAR SYS2 has APPC/MVS base LU name MVSLU02, you should create the following profiles (for an NQN=NO environment):

```
ADCD.MVSLU01.MVSLU02
ADCD.MVSLU02.MVSLU01
ADCD.MVSLU01.MVSLU01
ADCD.MVSLU02.MVSLU02
```

These profiles would allow you to access IMS systems on SYS1 from either SYS1 or SYS2, and IMS systems on SYS2 from either SYS2 or SYS1.

Defining IMS HP Sysgen Tools options

After you complete configuration tasks, IMS HP Sysgen Tools is ready for use. Before performing any other actions, you must enter at least one IMSID in the IMSID Setup, using option **0** of the IMS HP Sysgen Tools main menu.

You can also use batch utility IOHBIMS to create IMSID options, but this method requires that you specify all the required data set names because the batch utility does not use APPC/MVS to obtain the data set names used by the IMS control region. The batch utility was designed for users who do not intend to use the ISPF interface. For additional information on the IOHBIMS batch utility, see [Chapter 26, “Using the Batch IMSID Options utility,” on page 199](#).

When you run the **%IOHXISPF** or **%IOHXEXEC** command for the first time, you must enter the name of a valid IOHPDS data set on the IMS HP Sysgen Tools main menu. The data set name must be fully qualified without any quotation marks. ISPF uses this name on each subsequent invocation of the **%IOHXISPF** or **%IOHXEXEC** command.

To add a new IMSID, use option **0** from the IMS HP Sysgen Tools Primary Options menu, [Figure 25 on page 57](#). The IMS HP Sysgen Tools SETUP menu shown in [Figure 2 on page 31](#), is displayed. The IOHOPT data set name is automatically populated with the DSN specified for the IOHOPT data set that you specified in the IOHXISPF or IOHXEXEC EXEC.

Select option **1** to display the IMSID Setup list.

```

SETUP          IMS HP Sysgen Tools - Setup
Option ===> -----
 1 IMSID       Define an IMS Subsystem
 2 Group       Define a group of IMS Subsystems

 3 Profiles    Define Authorization Profiles
 4 Users       Define User Authorization
 5 User Groups Define User Group Authorization

IOHOPT DSN ===> IMS.IOH.IOHOPT-----
                  (Fully qualified DSNAME without quotes)

```

Figure 2. Setup menu

After selecting option **1**, a list is displayed of all IMSIDs that have options modules. If you have no IMSID options defined, the list is empty, as shown in the following panel:

```

SETUP          IMS HP Sysgen Tools - Setup IMS Systems          Row 0 to 0 of 0
Command ===> ----- Scroll ===> CSR

Primary Commands:          Line Commands:
  S Edit/Create an IMSID    D Delete an IMSID
                           S View / Edit IMSID Specifications

IMSID
***** Bottom of data *****

```

Figure 3. IMSIDs options modules - Empty list

To add a new IMSID, enter **S xxxx**, where **xxxx** is the IMSID which you want to add. The first of five IMSID setup panels is displayed.

```

SETUP          IMS HP Sysgen Tools - ADD IMSID IMS9 (Page 1 of 5)
Command ===> -----

RACF Information:
  Authorized User ID . . . .

BMP Information:
  HP Sysgen PSB Name . . . .
  AGN Name for PSB . . . . (Optional)

APPC:
  APPC/MVS HP Sysgen TPName. ._____ (Enter on next line)
  __IOH240 IMS HP Sysgen_____

  APPC/MVS Symbolic Dest . . _____ (Not the IMS destination name - the
                                         APPC symbolic destination name of the
                                         MVS system where IMS is running)

Information will be retrieved from the IMS control region before the next
setup screen is displayed. IMS must be started and available to proceed.

Press Enter to continue to Page 2

```

Figure 4. Add IMSID panel 1 of 5

where:

IMSID

The IMSID of the subsystem for which you want to create an options member. To proceed to the next setup panel, this IMS subsystem must be running.

Authorized User ID

The name of the user ID you created previously. IOHAPPC is suggested, as mentioned in [“Step 9. Create an IMS HP Sysgen Tools authorized user ID” on page 26](#). The user ID must be present on the MVS system where the IMSID is currently running. Instead of a user ID, you can also specify this field as an asterisk (*) if all users who will request installation of a resource update list have the authorization required for HP Sysgen install process. See [“Step 9. Create an IMS HP Sysgen Tools authorized user ID” on page 26](#) to see a list of all the authorizations required.

HP Sysgen PSB Name

The PSB name you created previously. IOHCMD is suggested, as mentioned in [“Step 11. Add APPLCTN for IMS HP Sysgen Tools” on page 27](#).

AGN Name for PSB

This field is optional. If IMS security definitions were updated to require an AGN name for the PSB name, enter one to which all users have access.

APPC/MVS HP Sysgen TPName

This field is required and is automatically initialized to the default value of IOH240_IMS_HP_SYSGEN. The name you specify must be 64 characters or fewer and must match the TPName specified in [“Step 6. Define APPC/MVS transaction program profile for IMS HP Sysgen Tools” on page 23](#).

APPC/MVS Symbolic Dest

The name of the APPC symbolic destination for the MVS system where this IMS subsystem is running. This name was created in [“Step 4. Define APPC/MVS symbolic destinations” on page 22](#).

Note: This is not the APPC/IMS LU or symbolic destination name.

When you have completed this panel, press the Enter key to see the second setup panel.

IMS HP Sysgen Tools retrieves data set name information for the current IMS system and includes it in the following panel:

```
SETUP      IMS HP Sysgen Tools - EDIT IMSID IMS1 (Page 2 of 5)
Command ==>
IMS Information:
  Suffix. . . . . I          (IMS Nucleus Suffix)
  Online Change . . . LOCAL  (Global or Local)
  DRD . . . . . ENABLED    (Dynamic Resource Definition)
  Repository. . . . . ENABLED (IMS resource definition repository)
IMS Data Set Names (fully qualified without quotes):
  IOHLOG. . . . . IMS11.IOH.IOHLOG
  RESLIB. . . . . IMS11.IMS1.SDFSRESL
  MODSTAT . . . . . IMS11.IMS1.MODSTAT
IMS MODBLKS Libraries (fully qualified, without quotes):
  MODBLKS . . . . . IMS11.IMS1.MODBLKS
  MODBLKSA . . . . . IMS11.IMS1.MODBLKSA
  MODBLKSB . . . . . IMS11.IMS1.MODBLKSB
  User MODBLKS. . . . . _____ (Optional)
IMS MATRIX Libraries (fully qualified without quotes):
  MATRIX. . . . .
  MATRIXA . . . . .
  MATRIXB . . . . .
  User MATRIX . . . . . _____ (Optional)

Press Enter to continue to Page 3
```

Figure 5. Add IMSID panel 2 of 5

where:

Suffix

The IMS nucleus suffix as defined in the DFSPBxx member of the IMS PROCLIB on the SUF= keyword. This field is populated by IMS HP Sysgen Tools and cannot be changed.

Online Change

Shows whether this IMS system is defined for local online change or global online change. This field is populated by IMS HP Sysgen Tools and cannot be changed.

DRD

Shows whether IMS Dynamic Resource Definition (DRD) is enabled or disabled in this IMS system. This field is populated by IMS HP Sysgen Tools and cannot be changed.

Repository

Shows whether the IMS resource definition (IMSRSC) repository is enabled or disabled in this IMS system. This field is populated by IMS HP Sysgen Tools and cannot be changed.

IMS Data Set Names

Fully qualified data set names, without quotation marks. MODSTAT is populated by IMS HP Sysgen Tools and cannot be changed. The RESLIB data set is also populated by IMS HP Sysgen Tools and cannot be changed. It is the library that contains the current DFSVNUCx, DFSISDCx, and DFSVC000 modules that are being used by the IMS control region.

IOHLOG

Requires the data set name for the IOHLOG data set as allocated in the IOHALOG member of the SIOHSAMP library.

IMS MODBLKS Libraries

MODBLKSA and MODBLKSB are populated by IMS HP Sysgen Tools and cannot be changed.

MODBLKS

Requires the name of the staging MODBLKS data set.

User MODBLKS

Optional. Allows you to enter a MODBLKS data set name which is updated by the installation of resource update lists. If you want to maintain a backup of the current MODBLKS, you can use this field to enter the name of the backup MODBLKS.

IMS MATRIX Libraries

MATRIXA and MATRIXB are populated by IMS HP Sysgen Tools and cannot be changed.

MATRIX

Requires the name of the staging MATRIX data set.

User MATRIX

Optional. If you want to maintain a backup of the current MATRIX libraries, you can use this field to enter the backup name of the MATRIX libraries.

When you have completed this panel, press Enter. IMS HP Sysgen Tools displays the third of five setup panels as shown in [Figure 6 on page 34](#).

Use this panel to define IMS sysgen source information. Entering data on this panel is optional, and is used only in ISPF option **5**, Validation of gen source and option **6**, Fastgen. If you do not expect to use these options, this panel and panel 4 can be left blank. If you require these panels later, you can complete them at that time.

To enter your IMS sysgen source information, determine the data set names that identify where your IMS sysgen source is located. You enter information on this panel based on how the sysgen source is organized. Follow instructions on the panel.

All data set names must be fully qualified names with no quotation marks.

```

SETUP      IMS HP Sysgen Tools - ADD IMSID IMS9 (Page 3 of 5)      Row 1 to 1 of 1
Command ==> ----- Scroll ==> CSR

If IMS gen source will be specified as sequential data set names or as data
sets with member names, leave the MEMBER field blank. If the gen source is
specified as PDS data sets without member names, enter the member name of the
main gen source file (probably containing COPY statements) below.

Member ==> -----

Line CMDs:      Specify SYSIN data set names for the IMS Stage 1 Sysgen process.
  I Insert      When finished press enter with no updates to the screen.
  D Delete
  R Replicate

CMD  Data Set Name (Fully qualified DSN without quotes)
-----
***** Bottom of data *****

```

Figure 6. Add IMSID panel 3 of 5

You can specify up to 30 data set names on this panel. Figure 7 on page 34 shows a basic configuration of IMS sysgen source. It shows IMS sysgen input present in five members of a gen source PDS.

```

SETUP      IMS HP Sysgen Tools - ADD IMSID IMS9 (Page 3 of 5)      Row 1 to 5 of 5
Command ==> ----- Scroll ==> CSR

If IMS gen source will be specified as sequential data set names or as data
sets with member names, leave the MEMBER field blank. If the gen source is
specified as PDS data sets without member names, enter the member name of the
main gen source file (probably containing COPY statements) below.

Member ==> IMS9COPY

Line CMDs:      Specify SYSIN data set names for the IMS Stage 1 Sysgen process.
  I Insert      When finished press enter with no updates to the screen.
  D Delete
  R Replicate

CMD  Data Set Name (Fully qualified DSN without quotes)
    IMS910.IMGGEN.CNTL(SYSTEM)
    IMS910.IMGGEN.CNTL(DATABASE)
    IMS910.IMGGEN.CNTL(PROGRAM)
    IMS910.IMGGEN.CNTL(TERMINAL)
    IMS910.IMGGEN.CNTL(IMGGEN)
***** Bottom of data *****

```

Figure 7. IMS sysgen source example 1

This example could also have a member in IMS910.IMGGEN.CNTL called IMS9COPY, which would consist of the following statements:

```

COPY SYSTEM
COPY DATABASE
COPY PROGRAM
COPY TERMINAL
COPY IMGGEN

```

This member would use the information in [Figure 8 on page 35](#).

```

SETUP      IMS HP Sysgen Tools - ADD IMSID IMS9 (Page 3 of 5)
Command ==> ----- Scroll ==> CSR

If IMS gen source will be specified as sequential data set names or as data
sets with member names, leave the MEMBER field blank. If the gen source is
specified as PDS data sets without member names, enter the member name of the
main gen source file (probably containing COPY statements) below.

Member ==> IMS9COPY

Line CMDs:   Specify SYSIN data set names for the IMS Stage 1 Sysgen process.
  I Insert   When finished press enter with no updates to the screen.
  D Delete
  R Replicate

CMD  Data Set Name (Fully qualified DSN without quotes)
-   IMS910.IMSGEN.CNTL
***** Bottom of data *****

```

Figure 8. IMS sysgen source example 2

When you have completed this panel, press Enter twice to display the fourth setup panel as shown in the following figure:

```

SETUP      IMS HP Sysgen Tools - ADD IMSID IMS9 (Page 4 of 5)      Row 1 to 1 of 1
Command ==> ----- Scroll ==> CSR

Line CMDs:   Specify Security Gen Source data set names.
  I Insert   When finished, press enter with no updates to the screen.
  D Delete
  R Replicate

CMD  Data Set Name (Fully qualified DSN without quotes)
-   -----
***** Bottom of data *****

```

Figure 9. IMS security gen source

In this panel, you specify the IMS security gen source data sets. Enter security gen source data set names as they appear in the SYSIN DD in the security gen job. You might enter up to 10 data set names.

When you have completed this panel, press Enter twice to display the final setup panel, as shown in the following figure:

```

SETUP  IMS HP Sysgen Tools - EDIT IMSID IMS9 (Page 5 of 5) Row 1 to 3 of 3
Command ==>

The IMS IMS9 Resource Definition Data Set (RDDS) names are listed below.
You can use the Up and Down PF Keys to scroll through the RDDS data set
names. There will only be RDDS data set names listed if DRD is enabled. If
DRD is disabled, no RDDS data set names will be listed.

Press the End Key to SAVE these IMSID options
Enter the Cancel command to exit IMSID setup without saving

Resource Definition Data Set Name

IMS11.IMS9.RDDS1
IMS11.IMS9.RDDS2
IMS11.IMS9.RDDS3
***** Bottom of data *****

```

Figure 10. Add IMSID panel 5 of 5

You cannot change the information on this screen. It is shown for informational purposes only.

The fifth Add IMSID panel displays any IMS RDDS names that are defined. If DRD is disabled, the list of RDDS names is blank.

When you have verified that the RDDS names are valid for this IMS system, you can either press **PF3** to save the updated IMSID options module, or you can enter the **CANCEL** command on the command line to discard all changes to the IMSID options on the prior four panels.

IMS HP Sysgen Tools returns to the IMSID selection menu, which now displays the added options member as shown in the following figure:

```

SETUP      IMS HP Sysgen Tools - Setup IMS Systems      IMSID IMS9 Added
Command ==> ----- Scroll ==> CSR

      Primary Commands:      Line Commands:
      S Edit/Create an IMSID      D Delete an IMSID
                                   S View / Edit IMSID Specifications

      IMSID
      _ IMS9
***** Bottom of data *****

```

Figure 11. IMSID selection menu

These options are saved in the IOHOPT data set in member IOH@xxxx, where xxxx is the IMSID. For information about allocating and sharing IOHOPT, see [“Step 5. Allocate libraries”](#) on page 23.

Fast Sysgen performance suggestions

Sorting resource names uses the largest amount of computer resources in the traditional IMS sysgen process. Fast Sysgen takes advantage of better sorting techniques to improve IMS sysgen performance.

Presorting IMS resources does not improve Fast Sysgen performance. Although CPU resource consumption can be improved in the standard IMS process by sorting in descending order, this is usually not necessary using Fast Sysgen because the sort techniques it uses are faster than the traditional IMS sysgen.

The steps you can take to improve Fast Sysgen performance are related to I/O processing. You should:

- Consider blocking the MODBLKS and MATRIX data sets at either one-half track blocking or the maximum block size (32760).
- Ensure that all MODBLKS and MATRIX data sets use the same block size (including the staging library as well as the A and B libraries).
- Increase the block size of the sysgen source libraries to either one-half track blocking or the largest reasonable block size.
- Reduce the number of lines of source code in the IMS sysgen source. This can be accomplished by merging short lines of macros; for example, not using a line for each keyword.

The greatest sysgen performance improvement, for Fast Sysgen or traditional IMS sysgen, is achieved by eliminating unused resource definitions from the IMS sysgen source.

IMS Sysgen source organization

This section discusses suggestions for improving Fast Sysgen performance, managing sysgen source and using SCLM to validate sysgen updates.

Topics:

- [“Sysgen source organization”](#) on page 37
- [“Using software configuration and library manager to validate sysgen updates”](#) on page 39

Sysgen source organization

Managing IMS sysgen source requires careful attention. For efficient use of IMS HP Sysgen Tools, you should ensure that a source management process has been implemented for IMS sysgen and security gen source. You can organize sysgen source in a number of ways that are supported by Fast Sysgen.

You can maintain sysgen source in members of a PDS or in one or more sequential data sets. The Fast Sysgen process supports as many as 50 different partitioned or sequential data sets containing sysgen source.

It is important to maintain application independence in case, for example, changes to sysgen source are managed by application programmers or DBAs, while IMS sysgens are performed by IMS system support staff. To ensure independence is maintained, each application can maintain a separate sysgen source data set. This data set could include multiple members in a single PDS. Your installation's security software can be used to ensure that individuals responsible for different applications are allowed to update only one source data set and read the sysgen source of other applications.

Example: Managing sysgen source for application independence

In this example, assume that there are three applications in an IMS subsystem: payroll, accounts payable and accounts receivable.

In addition, IMS system support maintains the system macros, such as IMSCTRL and IMCTF, terminal definitions and perhaps application definitions, such as APPLCTN, TRANSACT, and DATABASE macros.

You could implement this configuration as shown in the following series of tables:

The following PDSs could be created:

Table 1. Application PDSs

Application PDS	Description
IMS.SYSGEN.SOURCE	Contains system support definitions
PAYROLL.SYSGEN.SOURCE	Contains payroll application definitions
ACCTPAY.SYSGEN.SOURCE	Contains accounts payable application definitions
ACCTRECV.SYSGEN.SOURCE	Contains accounts receivable application definitions

The IMS sysgen source data set could contain members such as *imidCOPY*, where *imid* is the IMSID of the IMS subsystem. This member would contain Assembler COPY statements for all members used in the sysgen for this IMS subsystem.

Table 2. Source data set members

IMS sysgen source data set members	Description
SUPPORT	Contains IMS support macros, APPLCTN, TRANSACT and DATABASE
MASTER	Contains IMS master terminal definitions
TERMINAL	Contains terminal definitions
<i>imidSYS</i>	Contains IMS system macros, such as IMSCTRL and IMCTF. It cannot contain the IMSGEN macro which must be last in the gen source
<i>imidGEN</i>	Contains IMSGEN macro

The PAYROLL sysgen source data set could contain members such as the following:

Table 3. PAYROLL sysgen source data set members

PAYROLL sysgen source data set members	Description
PAYAPPL	Contains the APPLCTN and TRANSACT macros required for the payroll application
PAYDBD	Contains the DATABASE macros required for the payroll application.

The ACCTPAY sysgen source data set could contain a member such as the following:

Table 4. ACCTPAY sysgen source data set member

ACCTPAY sysgen source data set member	Description
ACCTPAY	Contains all the accounts payable application definitions (APPLCTN, TRANSACT and DATABASE).

The ACCTRECV sysgen source data set could contain a member such as the following:

Table 5. ACCTRECV sysgen source data set member

ACCTRECV sysgen source data set member	Description
ACCTRECV	Contains all the accounts receivable definitions (APPLCTN, TRANSACT and DATABASE).

Given this environment, the sysgen source would be connected using the imidCOPY member in the IMS sysgen source data set. If the IMS subsystem name was DEV5, member DEV5COPY would contain the following:

Table 6. DEV5COPY sysgen source data set member

Copy statement	Purpose
COPY DEV5SYS	SYSTEM MACROS
COPY SUPPORT	SYSTEM TRANSACTIONS
COPY PAYAPPL	PAYROLL
COPY PAYDBD	PAYROLL
COPY ACCTPAY	ACCOUNTS PAYABLE
COPY ACCTRECV	ACCOUNTS RECEIVABLE
COPY MASTER	MASTER TERMINAL / BTAM
COPY TERMINAL	MSC/ISC/TERMINALS
COPY DEV5GEN	IMSGEN MACRO

Advantages of this sysgen source environment

This sysgen source environment functions for both the traditional IMS sysgen process and the Fast Sysgen process. For a traditional IMS sysgen, the following DD statements would be included in the stage 1 sysgen process.

```
//SYSLIB DD DSN=IMS.MACLIB,DISP=SHR
//      DD DSN=IMS.GENLIB,DISP=SHR
//      DD DSN=SYS1.MACLIB,DISP=SHR
//      DD DSN=IMS.SYSGEN.SOURCE,DISP=SHR
//      DD DSN=PAYROLL.SYSGEN.SOURCE,DISP=SHR
```



```
//      DD DSN=ACCTPAY.SYSGEN.SOURCE,DISP=SHR
//      DD DSN=ACCTRECV.SYSGEN.SOURCE,DISP=SHR
//SYSIN DD DSN=IMS.SYSGEN.SOURCE(DEV5COPY),DISP=SHR
```

To use the configuration with IMS HP Sysgen Tools Fastgen or ISPF panels, you would code the IMSID setup panel containing IMS sysgen source information (panel 3) as:

```
SETUP      IMS HP Sysgen Tools - EDIT IMSID (Page 3 of 5)      Row 1 to 21 of 30
Command ==>      Scroll ==> CSR

If IMS gen source will be specified as sequential data set names or as data
sets with member names, leave the MEMBER field blank.  If the gen source is
specified as PDS data sets without member names, enter the member name of the
main gen source file (probably containing COPY statements) below.

Member ==> DEV5COPY

Line CMDs:      Specify SYSIN data set names for the IMS Stage 1 Sysgen process.
  I Insert      When finished press enter with no updates to the screen.
  D Delete
  R Replicate

CMD  Data Set Name (Fully qualified DSN without quotes)
-   IMS.SYSGEN.SOURCE_____
-   PAYROLL.SYSGEN.SOURCE_____
-   ACCTPAY.SYSGEN.SOURCE_____
-   ACCTRECV.SYSGEN.SOURCE_____
```

Figure 12. IMSID setup panel for Fastgen or ISPF panels that contain sysgen source information

This sysgen source environment has the following advantages:

- Application independence can be maintained.
- You can use your existing security system to ensure that only appropriate personnel can update the sysgen source for each application.
- You can easily add or remove applications by making a few changes to JCL and/or control cards.

Using software configuration and library manager to validate sysgen updates

You can use Software Configuration and Library Manager (SCLM) to validate and promote IMS sysgen source changes. Doing so provides benefits of sysgen source validation before allowing sysgen changes to be used in an online or batch sysgen process. These benefits include testing source updates through the Fast Sysgen process before allowing changes.

SCLM provides a structure for updating, promoting and implementing application code changes. As part of the code promotion process, SCLM compiles and links application programs. Similarly, you can configure SCLM to invoke Fast Sysgen to verify that IMS sysgen source is valid before allowing any changes to be promoted to the production version of sysgen source.

Configuring installation store/forward

If an IMS system is not active at the time the resource update list is being installed, installation fails. However, if you use the installation store/forward function, the resource update list is automatically installed later when the IMS become active.

To install the resource update list through the ISPF user interface or as a batch job, the target IMS must be online; otherwise, installation fails. The installation store/forward function enables you to store the failed installation information in the store/forward VSAM data set, categorized by IMSIDs, and to retry the installation later when the IMS becomes active.

Installation store/forward is available only if the store/forward VSAM data set is specified in the batch job (IOHBLIST) or the IOHXEXEC EXEC statement. Installation store/forward supports only **INSTALL** commands for resource update lists.

Topics:

- [“How installation store/forward works” on page 40](#)
- [“Activating installation store/forward” on page 41](#)
- [“Scheduling the REDO job” on page 41](#)
- [“REDO job JCL requirements” on page 42](#)
- [“Reports generated by installation store/forward” on page 43](#)
- [“Restrictions for using the installation store/forward function” on page 45](#)

How installation store/forward works

The process of the installation store/forward function can be divided into two steps: storing the failed installation information and reinstalling it by running the REDO job.

Step 1: Storing the installation information in the store/forward VSAM data set

If any of the following situations occurred during installation of the resource update list, the installation information for the failed IMS is stored in the store/forward VSAM data set:

- The target IMS specified by the IMSID= parameter was configured as a local online change system or as a dynamic resource definition (DRD) system, and installation of the resource update list failed because that IMS system was not active during installation.
- None of the IMS systems in the group specified by the TARGET= parameter was configured as a global online change system, and installation of the resource update list failed for some of those IMS systems because they were not active.
- In the group specified by the TARGET= parameter, some IMS systems were configured as global online change systems and others were configured as local online change systems or DRD systems. Installation of the resource update list was successful for all the IMS systems that were configured as global online change, but failed for the IMS systems that were configured as local online change and were not active.

If you specified the IMSID= parameter to install the resource update list, one record is written in the store/forward VSAM data set. If you specified the TARGET= parameter to install the resource update list, records are categorized by the IMSIDs and written in the store/forward VSAM data set.

Step 2: Installing the resource update list by running the REDO job

For each of the IMSID whose installation information is stored in the store/forward VSAM data set, a REDO job is invoked when the target IMS starts. The REDO job reads the installation information from the store/forward VSAM data set and runs IOHBLIST to install the resource update list.

If the installation is successful, the respective installation information is removed from the store/forward VSAM data set.

If the installation fails, the installation information stored in the store/forward VSAM data set is not removed. Check the error and take an appropriate action. If the entry is no longer needed, delete it manually by using the TSO ISPF editing function.

Deleting an entry from the store/forward VSAM data set:

1. See the IOH7603I message in the REDO job report to identify the key information of the record whose installation information you want to delete.
2. Edit the store/forward VSAM data set on TSO ISPF.
3. Search the data set for the key that was identified in step [“1” on page 40](#) to locate the record.
4. Delete the record from the data set.

Record format of the store/forward VSAM data set:

The following table illustrates the record format of the IOHSTFWD data set:

Table 7. Record format of the IOHSTFWD data set

Keys (80 bytes)							Variable length data (up to 2480 bytes)	
IMSID	Date	Time	Command	IOHPDS data set name	Group	(reserved)	Number of entries	IOHPDS member list (up to 256 entries)
CL4	CL8	CL13	CL1	CL44	CL8	CL2	XL2	256CL8

Activating installation store/forward

To configure the installation store/forward feature, you must prepare the store/forward VSAM data set and activate the REDO job.

Before you begin

1. Allocate and initialize the IMS HP Sysgen Tools store/forward data set by using the sample JCL that is provided in the IOHSTF member of the AIOHSAMP data set. Ensure that you tailor the JCL as described in the sample. For information about allocating enough DASD space, see [“How installation store/forward works”](#) on page 40 and the explanation of IOHSTFWD in [“REDO job JCL requirements”](#) on page 42.

Important: Always use this JCL because you must initialize the store/forward VSAM data set by using the IMS HP Sysgen Tools utility IOHWINI.

2. Allocate the store/forward VSAM data set on a DASD that is being shared among:
 - MVS on which the installation takes place
 - MVS on which the REDO job runs
 - MVS on which the target IMS operates
3. Edit the IOHXEXEC REXX EXEC that you copied in [“Step 7. Copy IOHXISPF or IOHXEXEC to CLIST/REXX library”](#) on page 24. Specify the name of the store/forward VSAM data set (IOHSTFWD) that you created in step [“1”](#) on page 41, as follows:

```
DSN_IOHSTFWD = "DSN('h1q.IOH.IOHSTFWD')"
```

Procedure

1. Customize the JCL for the REDO job. Sample JCL is provided in the IOHREDO member of the AIOHSAMP data set. Ensure that you tailor the JCL as described in the sample.
2. Specify any required parameters in the IOHREDO JCL. For detailed descriptions of the required parameters, see [“REDO job JCL requirements”](#) on page 42.

Scheduling the REDO job

The REDO job must be scheduled immediately after IMS is started and before the system is opened up for processing.

Before you begin

The REDO job basically runs on the same IMS system that processes the installation of the resource update list. To customize which target IMS systems are processed by the REDO job, specify target IMS systems in the SYSIN control statement.

Procedure

You can use one of the following methods to schedule a REDO job:

- Incorporating the REDO job scheduling into your automated operation procedure

If you already have your own automated operation procedure, add REDO job scheduling after IMS is started and before the system is opened up for processing. Then, schedule an IMS command that activates IMS resources, such as **/STA DC** or **/STA REGION**, after the REDO job completion.

You can recognize REDO job completion by an IMS HP Sysgen Tools WTO message. One of the following messages is displayed, depending on the REDO job completion status.

```
IOH7602I STORE/FORWARD PROCESSING COMPLETED DATE-TIME=yyyy.ddd-hh:mm:ss
IOH7610W STORE/FORWARD PROCESSING COMPLETED DATE-TIME=yyy.ddd-hh:mm:ss
IOHBLIST HIGHEST RC=rc
```

- Using IMS TCO (time-controlled operations) to start the REDO job immediately at IMS startup

In order to use IMS TCO for a REDO job, register the REDO job with the IMS . JOBS data set that is used for the IMS **/START REG** command.

When writing a TCO script, note the following:

- Code the **/START REG** command for starting the REDO job at the top of the TCO script.
- Set an interval time between the REDO job startup and the subsequent TCO script startup. Specify an appropriate interval time for your system.
- In the subsequent script, include a command that activates IMS resources such as **/STA DC** or **/STA REGION**.

In the following example, the REDO job is registered with the IMS . JOBS data set as "IOHREDO". The example assumes that the **/STA REG** command for starting the REDO job was added to an existing TCO script. The next command will be invoked three minutes after the REDO job is started.

```
/STA REG IOHREDO.
*TIME DFSTXIT0 S ****
/STA DC
/OPN NODE XXXXXXXX
/OPN NODE YYYYYYYY
/STA REGION IMSMSG1
/STA REGION IMSMSG2
/BRO MASTER S
THREE MINUTES HAVE ELAPSED SINCE IOHREDO STARTED.
*TIME DFSTXIT0 0003 S ****
```

For more information, see the topic "IMS time-controlled operations" in *IMS Operations and Automation*.

Important: In an IMS DBCTL environment, you must implement this function without using TCO because of an IMS restriction. For more information, see [“Restrictions for using the installation store/forward function”](#) on page 45.

What to do next

If the REDO job ends abnormally for some reason, fix the error and rerun the REDO job manually.

REDO job JCL requirements

Sample JCL for the REDO job can be found in the IOHREDO member of the AIOHSAMP data set.

The following DD statements are required for the REDO job JCL:

STEPLIB

This DD statement must refer to the IMS HP Sysgen Tools load library, SIOHLINK.

REDOCTL

Specifies the IMSIDs of the target IMS systems on which to reinstall resource update lists. Specify the IMSID= control statement in the following format:

```
IMSID=imsid1,imsid2,imsid3,...
```

The IMSID= statement can be placed anywhere between column 1 and 71. If column 1 is an asterisk (*), that line is treated as a comment line.

Use commas to separate two or more IMSIDs on the same IMSID= statement. An IMSID= statement must be on the same line.

You can specify as many IMSID= control statements as you want, provided that the total number of IMSIDs defined does not exceed 256.

REDORPT

Specifies the location for output reports from the installation store/forward function. The location can be a SYSOUT file or a data set.

IOHSTFWD

Specifies the store/forward VSAM data set in which the information about reinstalling the resource update list is stored.

The records must be fixed length. The CI (control intervals) size is 2560 bytes. The record format is illustrated in [Table 7 on page 41](#).

SYSUDUMP

This DD statement is used to record diagnostic information when a failure occurs in the REDO job and the Batch Update List utility.

The following DD statements are also required for the REDO job JCL because the REDO job uses the Batch Update List utility internally. For an explanation of each DD statement, see [“JCL requirements” on page 171](#).

- IOHOPT
- IOHPDS
- IOHPRINT
- SYSIN

Reports generated by installation store/forward

When a REDO job for the installation store/forward completes successfully, the status panel displays the information about installation status.

Installation status report

If the installation of a resource update list fails because the target IMS system is not active, message IOH7150E is issued. However, if the installation store/forward function is enabled and the installation information is stored in the store/forward VSAM data set, message IOHF062I is issued instead of IOH7150E.

If you used a batch job (IOHBLIST) to install resource update lists on two IMS systems and one IMS was not active at the time of installation, the following output is generated:

```

PAGE      1                      IMS HIGH PERFORMANCE SYSTEM GENERATION TOOLS 2.4.0 (5655-P43)      DATE: 10/15/2020
                                      BATCH RESOURCE UPDATE LIST UTILITY                                TIME: 02:26:29

INSTALL TARGET=GROUP@A,NAME=ADDDDB1

IOH7153I RESOURCE UPDATE LIST ENTRIES:
  MEMBER  FUNCTION  RESOURCE  NAME
  -----  -
ADDDDB1   COMMENT   ADD DATABASE NO.1
ADDDDB1   ADD        DATABASE  TESTDB12
ADDDDB1   ADD        DATABASE  TESTDB11

SUMMARY OF INSTALL PROCESSING:
IOHF061I STORE/FORWARD ACTIVE DSN=IMS.IOH.IOHSTFWD
IMS8: INSTALLATION SUCCESSFUL
IMS9: ERROR DURING VERIFY, INSTALL COMMNAD SAVED IN IOHSTFWD
IMSA: ERROR DURING VERIFY, INSTALL COMMNAD SAVED IN IOHSTFWD
----- STORE/FORWARD KEY INFORMATION -----
IOHF062I STORE/FORWARD KEY DSN=IMS.IOH.IOHPDS
IMSID  DATE      TIME      CMD  GROUP
-----  -
IMS9  2020.288  022630.197550  I  GROUP@A
IMSA  2020.288  022630.197564  I  GROUP@A
----- MESSAGES FOR IMS IMS8 -----
UPDATING INACTIVE MODBLKS DATASET IMS.IMS8.MODBLKSB
  MODULE  CSECT  ENTRY  SIZE  AMODE  RMODE  ATTRIBUTES
  -----  -
DFSDDIRI  DFSIDMD0  41B90  31    ANY  REUS
DFSPDIRI  DFSIDI00  19A60  31    ANY  REUS
DFSRCITEI DBFIRCT0  90     31    ANY  REUS
DFSSMB0I  DFSISMB0  DFSISMB 1E30  31    ANY  REUS

ONLINE CHANGE STATUS BEFORE INSTALLATION: MODBLKSA IMSACBA FORMATA
ONLINE CHANGE STATUS AFTER  INSTALLATION: MODBLKSB IMSACBA FORMATA

----- MESSAGES FOR IMS IMS9 -----
IOHF003 IMS IS NOT RUNNING. UNABLE TO PROCESS THE COMMAND
----- MESSAGES FOR IMS IMSA -----
IOHF003 IMS IS NOT RUNNING. UNABLE TO PROCESS THE COMMAND
IOH7151I INSTALL COMMAND COMPLETED SUCCESSFULLY

```

Figure 13. Installation status report for installation store/forward (batch)

If you used IMS HP Sysgen Tools to install resource update lists on two IMS systems and one IMS was not active at the time of installation, the following output is generated:

```

SUMMARY OF INSTALL PROCESSING:
IOHF061I STORE/FORWARD ACTIVE DSN=IMS.IOH.IOHSTFWD
IMS8: INSTALLATION SUCCESSFUL
IMS9: ERROR DURING VERIFY, INSTALL COMMNAD SAVED IN IOHSTFWD
IMSA: ERROR DURING VERIFY, INSTALL COMMNAD SAVED IN IOHSTFWD
----- STORE/FORWARD KEY INFORMATION -----
IOHF062I STORE/FORWARD KEY DSN=IMS.IOH.IOHPDS
IMSID  DATE      TIME      CMD  GROUP
-----  -
IMS9  2020.288  030815.257739  I  GROUP@A
IMSA  2020.288  030815.257788  I  GROUP@A
----- MESSAGES FOR IMS IMS8 -----
UPDATING INACTIVE MODBLKS DATASET IMS.IMS8.MODBLKSB
  MODULE  CSECT  ENTRY  SIZE  AMODE  RMODE  ATTRIBUTES
  -----  -
DFSDDIRI  DFSIDMD0  41B90  31    ANY  REUS
DFSPDIRI  DFSIDI00  19A60  31    ANY  REUS
DFSRCITEI DBFIRCT0  90     31    ANY  REUS
DFSSMB0I  DFSISMB0  DFSISMB 1E30  31    ANY  REUS

ONLINE CHANGE STATUS BEFORE INSTALLATION: MODBLKSA IMSACBA FORMATA
ONLINE CHANGE STATUS AFTER  INSTALLATION: MODBLKSB IMSACBA FORMATA

IOH7204W ACBLIB MEMBER FOR NEW/UPDATED DBD TESTDB12 WAS NOT FOUND
IOH7204W ACBLIB MEMBER FOR NEW/UPDATED DBD TESTDB11 WAS NOT FOUND
----- MESSAGES FOR IMS IMS9 -----
IOHF003 IMS IS NOT RUNNING. UNABLE TO PROCESS THE COMMAND
----- MESSAGES FOR IMS IMSA -----
IOHF003 IMS IS NOT RUNNING. UNABLE TO PROCESS THE COMMAND

```

Figure 14. Installation status report for installation store/forward (ISPF)

REDO job report

The REDO job report summarizes the IMSIDs and the resource update lists that were processed.

The following figure is an example of the REDO job report:

```

PAGE      1                      IMS HIGH PERFORMANCE SYSTEM GENERATION TOOLS 2.4.0 (5655-P43)          DATE: 10/15/2020
                                INSTALLATION STORE/FORWARD REDO UTILITY                                TIME: 03:58:38

IOH7601I STORE/FORWARD PROCESSING STARTED DATE-TIME=2020.288-035838.466762 DSN=IMS.IOH.IOHSTFWD
*** IOHREDO CONTROL STATEMENTS ***
|...+...1...+...2...+...3...+...4...+...5...+...6...+...7...+...>
IMSID=IMS9,IMSA
*** END OF CONTROL STATEMENTS ***
IOH7603I RECORD: IMSID=IMS9 TIME=2020.287-022630.197550 CMD=I IOHPDS=IMS.IOH.IOHPDS          GROUP=GROUP@A
IOH7604I IOHBLIST COMPLETED TIME=2020.288-035839.601018 RC=00
IOH7603I RECORD: IMSID=IMS9 TIME=2020.287-030815.257739 CMD=I IOHPDS=IMS.IOH.IOHPDS          GROUP=GROUP@A
IOH7604I IOHBLIST COMPLETED TIME=2020.288-035840.472604 RC=00
IOH7603I RECORD: IMSID=IMSA TIME=2020.287-032056.818430 CMD=I IOHPDS=IMS.IOH.IOHPDS          GROUP=
IOH7604I IOHBLIST COMPLETED TIME=2020.288-035841.345305 RC=00
IOH7603I RECORD: IMSID=IMSA TIME=2020.287-032135.085124 CMD=I IOHPDS=IMS.IOH.IOHPDS          GROUP=
IOH7604I IOHBLIST COMPLETED TIME=2020.288-035842.237533 RC=00
IOH7602I STORE/FORWARD PROCESSING COMPLETED DATE-TIME=2020.288-03:58:42

```

Figure 15. REDO job report

Restrictions for using the installation store/forward function

There are several restrictions in using the installation store/forward function.

- Installation store/forward does not apply to an IMS system that is configured as a global online change system.
- If you try to install resource update lists on a group of IMS systems that consists of global online change and local online change systems, whether installation store/forward applies to local online change systems depends on the results of installation on global online change systems.
 - If installation of resource update lists was successful for all global online change systems, installation store/forward applies to all local online change systems that were not active during the installation.
 - If installation of resource update lists was not successful for one or more global online change systems, installation store/forward does not apply to any IMS systems in that group.
- IMSIDs and groups must have been registered in advance with the IOHOPT data set.
- If an IMS system is not active at the time of installation, IMS HP Sysgen Tools refers to IOHOPT to determine whether the target IMS is configured as a global online change or a local online change system. Therefore, if the IMS configuration has been changed, update the IOHOPT data set with the latest information.

For information about how to update IOHOPT, see [“Defining IMS HP Sysgen Tools options” on page 30](#).

- In an IMS DBCTL environment, you must implement a function that schedules a REDO job immediately at IMS startup because IMS does not support TCO in the DBCTL environment. Because a REDO job is an OS batch program, most of the automation tools can be used for REDO job scheduling.

Chapter 3. Optional product customization

This section describes how to perform optional configuration tasks.

Topics:

- [“Configuring groups of IMS systems” on page 47](#)
- [“Resource update list defaults and attribute authorization” on page 49](#)
- [“Enabling the use of IMS ACB member level global online change” on page 53](#)
- [“Enabling the IMS Managed ACBs Activate method” on page 54](#)

Configuring groups of IMS systems

IMS HP Sysgen Tools allows you to verify and install resource update lists for either a single IMS system, or for multiple IMS systems concurrently.

In order to use group functionality, you must define an IMS HP Sysgen Tools group. The group simply defines a group name, which can be any eight character name that does not start with IOH and a list of IMS systems that are part of the group.

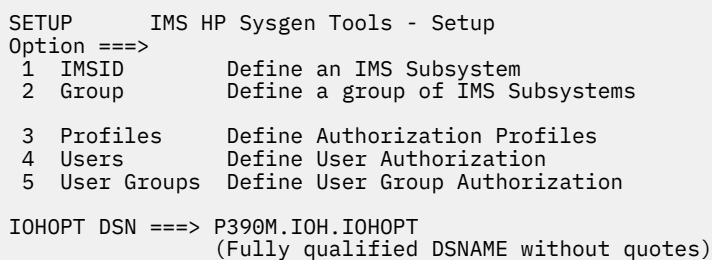
Anyone can use the IMS HP Sysgen Tools Setup option to create or update a group definition. Your security system can be used to prevent users from making changes to group definitions by only allowing authorized users to update the IOHOPT data set.

Adding, deleting, and updating group definitions

A *group* is defined by using the IMS HP Sysgen Tools ISPF Setup option.

About this task

Selecting option **0** from the IMS HP Sysgen Tools main menu displays the setup menu, as shown in the following figure:



```
SETUP          IMS HP Sysgen Tools - Setup
Option ===>
 1 IMSID       Define an IMS Subsystem
 2 Group       Define a group of IMS Subsystems

 3 Profiles    Define Authorization Profiles
 4 Users       Define User Authorization
 5 User Groups Define User Group Authorization

IOHOPT DSN ===> P390M.IOH.IOHOPT
                  (Fully qualified DSNNAME without quotes)
```

Figure 16. Setup menu

On the main Setup menu, you must supply the fully qualified data set name of the IOHOPT data set where IMSID definitions are stored. Then, select option **2** to list the groups defined in the specified IOHOPT data set. After selecting option **2**, a list of groups currently defined will be displayed as shown in the following figure:

```

SETUP      IMS HP Sysgen Tools - Setup Groups      Row 1 to 10 of 10
Command ==>

Primary Commands:      Line Commands:
  S  Edit/Create a Group      D Delete a Group
                                S View / Edit Group

Group
IMSAB
IMS56
IMS70
IMS789
IMS79
IMS790
IMS8H
IMS89
IMS90
IMS9100
***** Bottom of data *****

```

Figure 17. Group list

On the setup groups panel, you can update or delete an existing group by selecting its line with a D for Delete or an S to select the group for editing. To add a new group, you must use the S command on the command line along with the name of the group you want to define. For example, to define a new group called MARKIMS, you would enter

```
S MARKIMS
```

on the command line.

When deleting a group, a confirmation panel will ask you to verify the group to be deleted. Press Enter to delete the group, or press the End key (usually **PF3**) to cancel the delete request.

When selecting a group to add or update, you will see a panel showing a list of all the IMS systems defined in the IOHOPT data set. IMS systems to be included as part of the group are marked with a slash (/).

The following figure shows the definition of group IMS789, which includes three IMS systems: IMS7, IMS8, and IMS9.

```

SETUP      IMS HP Sysgen Tools - EDIT a Group      Row 1 to 12 of 12
Command ==>      Scroll ==> CSR

Group Name . . . IMS789

Select all the IMSIDs to be included in the group by placing a nonblank
character to the left of the IMSID. Only those IMSIDs selected on this panel
will be members of the group. Press PF3 to save, or enter CANCEL on the
command line to ignore any changes you have made.

S  IMSID
   DBC0
   DB07
   DCC0
   IMSH
   IMSI
   IMSJ
   IMS0
   IMS5
   IMS6
/  IMS7
/  IMS8
/  IMS9
***** Bottom of data *****

```

Figure 18. Group definition panel

To change a group definition, simply remove the slash (/) before any IMS you want to remove from the group, or add a slash in front of any IMS system to be added to the group. If you want to add an IMS system that is not listed on the panel, you must define that IMSID in the IOHOPT data set using option **1**

of the Setup menu. When you press the End key (typically **PF3**), the changes you entered are saved in the group definition in the IOHOPT data set.

Resource update list defaults and attribute authorization

IMS HP Sysgen Tools provides the ability for you to customize resource attribute defaults that appear when adding a new resource, and also provides the ability to limit a specific user's ability to override the default value of a resource attribute.

Following are examples of how you might specify defaults:

- If your installation does not allow conversational transactions, you can prohibit users from entering a value in the SPA size field, and specify that the default SPA size is blank.
- If all transactions should be defined as MODE=SNGL, instead of using the IMS default of MODE=MULT, you can specify a default value of SNGL and prohibit specific users from updating the new SNGL default value.
- You can update the IMS default value for given users, but allow them to override the default value.

IMS HP Sysgen Tools uses profile, user, and user group definitions to define these abilities. A profile defines updated default values for each attribute value, and whether updates to each attribute value are permitted. A user definition associates a specific user ID with a profile name. A user group definition associates a specific RACF group with a profile name. A profile must be defined before any user or user group definitions can be entered. If both user and user group are defined, IMS HP Sysgen Tools preferentially uses a user definition.

In order to view or update profile, user, and user group definitions, you must have read access to security profile IOH.SETUP. See sample job IOHRACF for the definition of this resource and how to provide appropriate users with access to this security profile.

Working with profiles

To work with IMS HP Sysgen Tools profile definitions, select option **3** from the Setup menu. A list of profiles defined in the IOHOPT data set is displayed.

About this task

A sample list of profiles is shown in the following figure:

```
PROFILE      IMS HP Sysgen Tools - List of Authorization Profile Row 1 to 5 of 5
Command ==>                                     Scroll ==> CSR

  Primary Commands:                                Line Commands:
    S Edit/Create a Profile                          D Delete a Profile
                                                    S Edit a Profile

Profile      Description
DALE         DALE'S PROFILE
SYSPROG1     SYSTEM PROGRAMMER PROFILE
PROG1        APPLICAITON PROGRAMMER PROFILE
DBA2         DBA PROFILE 2
DBA1         DBA PROFILE 1
***** Bottom of data *****
```

Figure 19. List of profiles

From the **List of profiles** panel, you can delete or edit an existing profile by selecting it with a D or S line command. To add a new profile, use the command line to enter S *name* where *name* is the name of the profile you want to define.

If you attempt to delete a profile, you will be presented with a panel requesting that you confirm the attempt to delete the profile. Note that if any user definitions are associated with the profile being deleted, the delete request will fail.

When editing a profile, you are presented with a panel showing all attributes for database, program, transaction, and route code definitions. With each attribute, you can specify an updated default value used in the profile and whether the profile allows users to change the value of the attribute. A sample profile screen is shown as follows:

SYSPROG1 Profile Description: SYSTEM PROGRAMMER PROFILE			
Default Value Enforce option: N (Y/N)			
Parameter	Default Value	Allow Updates	Description
More: +			
DATABASE Options			
RESIDENT	NO	Y	DMB is retained in storage (NO or YES)
Access	EX	Y	Subsystem access intent (RO, RD, UP, or EX)
PROGRAM Options			
RESIDENT	NO	Y	PSB to remain resident in storage (YES or NO)
DOPT	NO	Y	Reload PSB for each execution (YES or NO)
GPSB	NO	Y	Generic PSB (YES or NO)
FPATH	NO	Y	Fast Path Exclusive Program (YES or NO)
LANG		Y	GPSB Language (ASSEM, COBOL, PASCAL, PL/I, JAVA)
PGMTYPE	TP	Y	Program Type (BATCH or TP)
SCHEDTYP	SERIAL	Y	Schedule Type (SERICAL or PARALLEL)
TRANSACTION Options			
DCLWA	YES	Y	DC Log Write Ahead (YES or NO)
Edit Case	UC	Y	Upper Case (UC) or Upper/Lower Case (ULC)
EDIT Name		Y	Transaction Edit Routine Module Name
FPATH	NO	Y	Fast Path Specification (NO, YES or 12-30720)
INQUIRY	NO	Y	Inquiry Mode (NO or YES)
RECOVER	RECOVER	Y	Recoverable Transaction (RECOVER or NORECOV)
MAXRGN	0	Y	Maximum regions (0-2555)
MODE	MULT	Y	Mode (SNGL or MULT)
MSGTYPE	MULTSEG	Y	Segments (SNGLSEG or MULTSEG)
RESPONSE	NO	Y	Response mode (NO or YES)
CLASS	1	Y	Transaction Class (1-999)
PARLIM	NONE	Y	Parallel Limit Count (NONE or 0-32767)
COUNT	65535	Y	PROCLIM Count (0-65535)
SECONDS	65535.00	Y	PROCLIM Time (.01-65535)
PRIORITY1	1	Y	Normal Priority (0-14)
PRIORITY2	1	Y	Limit Priority (0-14)
PRIORITY3	65535	Y	Limit Count (1-65535)
ROUTING	NO	Y	Routing (NO or YES)
SCHD	1	Y	Scheduling Option (1-4)
SEGNO	0	Y	Number of Output Segments (0-65535)
SEGSIZE	0	Y	Size of Output Segments (0-65535)
SERIAL	NO	Y	Serial Processing of Input Messages (NO or YES)
SPA SIZE		Y	SPA Size (blank or 16-32767)
SPA TYPE		Y	SPA Truncation Option (blank, RTRUNC, STRUNC)
RMT SYSID		Y	Remote SYSID (blank or 1-2036)
LCL SYSID		Y	Local SYSID (blank or 1-2036)
WFI	NO	Y	Wait for Input (NO or YES)
AOI	NO	Y	Automated Operator (NO, YES, TRAN, CMD)
ROUTE CODE Options			
Inquiry	NO	Y	Inquiry Mode (NO or YES)

Figure 20. Profile authorizations

When you add a new profile, IMS HP Sysgen Tools populates the profile with the IMS default values for each of the attribute fields. You can accept the IMS default values or update selected values with new defaults. Following is an explanation of other actions you can perform on this panel:

Description

This field appears near the top of the panel. You can provide comments to be displayed next to each profile parameter.

Default Value Enforce option

This option is applicable only to UPDATE entries in a resource update list. It specifies whether IMS HP Sysgen Tools will use the default values or the current values for the attributes whose **Allow Updates** columns are N. If you specify Y, the default values will be set. If you specify N, the current values will be set. The default value is N.

Default Value

The default value for each resource attribute is shown in this column. The value can be updated to any valid value, which will then be used when a new resource is added. If the **Allow Updates** flag is set to

N for an attribute, the value in the **Default Value** column will be enforced for any added or updated resource.

Allow Updates

The **Allow Updates** column defines whether a user is permitted to change the default value or the current value of each attribute. When specified as Y, the user is permitted to change the value associated with the attribute. When specified as N, the user cannot update the value of the attribute.

If a user is prohibited from updating an attribute value, any resource update lists created by this user will force the new specified default value to be used. This applies even to updating an existing resource, in which case you can use the **Default Value Enforce option** and select whether to force the default value or the current value to be used. For example, suppose that a profile is defined which has a default SPA SIZE of blank and users associated with the profile are not permitted to update the value. If the user creates a resource update list to update an existing transaction that has SPA SIZE 16, IMS HP Sysgen Tools will force the value of blank to be included in the resource update list. Thus, while the user might have intended to change only the MODE from MULT to SNGL, the user will also be forced to change the SPA SIZE because the profile forces the SPA SIZE to blank.

Working with user definitions

In order to make a profile effective for a given user ID, a user entry must be created. User entries define which profile name will be used for that user name.

About this task

You can define users by selecting option **4** of the Setup menu. You must be authorized by your security subsystem to have READ access to profile IOH.SETUP in order to view or update user definitions.

The following figure shows a sample list of users presented when selecting option **4** of the Setup menu.

```
SETUP          IMS HP Sysgen Tools - Setup User Profiles Row 1 to 7 of 7
Command ==>                                         Scroll ==> CSR

Primary Commands:                                Line Commands:
  S Edit/Create a User Profile                    D Delete User          M Move a user
  D Delete a Profile                             S Edit a User          A move After
                                                    I Insert new User      B move Before

  User      Profile
DALE        DALE
DBADALE     DALE
TIM         DBA2
DBA#####   DBA1
IMS#####   SYSPROG1
SYS1##### SYSPROG1
#####      PROG1
***** Bottom of data *****
```

Figure 21. List of user definitions

User names correspond with TSO user IDs. Generic user entries are permitted so that the number of user entries can be reduced. You can use the pound sign character (#) as a wild card character for exactly one character of a TSO user ID. In this example, user entry DALE will match only a TSO user ID named DALE. The user entry named DBA##### will match any TSO user ID that begins with DBA. The last entry in the example, an entry with all wild card characters, will match any TSO user ID.

The order of user entries in the list is critical because the list is searched from top to bottom for a match for a TSO user ID. For a user ID named DBADALE, entry DBADALE will be found before DBA#####. Therefore, TSO user ID DBADALE will use profile DALE instead of profile DBA1 because user entry DBADALE comes before user entry DBA##### in the list.

You can change the order of user entries in the list by using the line commands **M** (move) and **B** (before) or **A** (after). Use these commands to move a user entry from one place in the list to a new location.

If you choose to delete a user entry, you will be prompted with a confirmation panel to verify that you want to delete the user entry.

To add a new user entry, you can use the **I** line command to insert a new user entry, or the **S** *username* primary command to create a new user entry named *username*. To update an existing user entry, select the entry with a **S** line command. When editing or creating a user entry, IMS HP Sysgen Tools displays the User Profile panel, as shown in the following figure:

```
USERS          IMS HP Sysgen Tools - User Profile          Scroll ===> CSR
Command ===>

Userid         DBA##### The selected userid
Profile        DBA1       The HP Sysgen Tools Profile name associated with this user
```

Figure 22. Edit user entry panel

When editing a user entry, you can update the profile field to specify the name of an existing profile, as defined in IMS HP Sysgen Tools Setup option **3**. IMS HP Sysgen Tools will validate the profile name you enter and will only allow valid names.

Working with user group definitions

In order to make a profile effective for a given RACF group, a user group entry must be created and IOHEXEC REXX EXEC must be used to start the IMS HP Sysgen Tools ISPF session. IOHEXEC REXX EXEC refers to the RACF definition to obtain the relationship between the user ID and the RACF group. User group entries define which profile name will be used for which user group name.

About this task

You can define user groups by selecting option **5** of the Setup menu. In order to view or update user group definitions, you must be authorized by your security subsystem to have READ access to profile IOH.SETUP.

The following figure shows a sample list of user groups presented when selecting option **5** of the Setup menu.

```
SETUP          IMS HP Sysgen Tools - Setup User Groups          Row 1 to 3 of 3

Primary Commands:          Line Commands:
  S Edit/Create a User Group  D Delete user group      M Move user group
  D Delete a User Group      S Edit user group        A move After
                              I Insert new user group B move Before

  User Group      Profile
- USERGRP1      GRPPROF2
- ADMUSER        GRPPROF2
- USERGRP#       GRPPROF1
- #####         GRPPROF1
```

Figure 23. List of user group definitions

User group names correspond with RACF groups. Generic user group entries are permitted so that the number of user group entries can be reduced. You can use the pound sign character (#) as a wildcard character for exactly one character of a RACF group name. In this example, user group entry ADMUSER will match only a RACF group named ADMUSER. The user group entry named USERGRP# will match any RACF group that begins with USERGRP. The last entry in the example, an entry with all wildcard characters, will match any RACF groups.

The order of user group entries in the list is critical because the list is searched from top to bottom for a match. For a RACF group named USERGRP1, entry USERGRP1 will be found before USERGRP#. Therefore, RACF group USERGRP1 will use profile GRPPROF2 instead of profile GRPPROF1 because user group entry USERGRP1 comes before user group entry USERGRP# in the list.

You can change the order of user group entries in the list by using the line commands **M** (move) and **B** (before) or **A** (after). Use these commands to move a user group entry from one place in the list to a new location. If you choose to delete a user group entry, you will be prompted with a confirmation panel to verify if you really want to delete it.

If the user belongs to multiple RACF groups, IMS HP Sysgen Tools searches the list for all those RACF groups. If the user belongs to RACF groups USERGRP1 and ADMUSER, IMS HP Sysgen Tools uses the profile GRPPROF2 because the entries USERGRP1 and ADMUSER have the same profile. If the user belongs to RACF groups USERGRP2 and ADMUSER, IMS HP Sysgen Tools cannot determine which profile to use because entries USERGRP# and ADMUSER have different profiles, so it uses the internally owned default profile.

To add a new user group entry, you can use the **I** line command to insert a new user group entry, or the **S** *usergroupname* primary command to create a new user group entry named *usergroupname*.

To update an existing user group entry, select the entry with an **S** line command. When editing or creating a user group entry, IMS HP Sysgen Tools displays the User Group panel, as shown in the following figure:

```
USER GROUPS IMS HP Sysgen Tools - User Group

User Group  GROUPA    The selected user group.
Profile     IOHCOMY   The HP Sysgen Profile name to be associated
                    with this user group.
```

Figure 24. Edit user group entry panel

When editing a user group entry, you can update the profile field to specify the name of an existing profile, as defined in IMS HP Sysgen Tools Setup option **3**. IMS HP Sysgen Tools will validate the profile name you enter and will only allow valid names.

Enabling the use of IMS ACB member level global online change

You can use the IMS ACB member level global online change method to reload an updated IMS ACBLIB member, including a database definition (DBD) for a data entry database (DEDB), and automatically reload any PSB that is affected by a change to a DBD. Enabling the use of IMS ACB member level global online change requires changing the IMS environment.

To use IMS ACB member level global online change, HP Sysgen must be authorized to use the IMS ACB member level global online change commands, such as the IMS type-2 **INITIATE OLC PHASE (PREPARE) TYPE (ACBMBR)** command.

To enable IMS HP Sysgen Tools to use global online change for member level ACB reloads, the following IMS features must be available.

- The IMS SCI address space must be available on the system where IMS runs.
- An IMS OM address space must be available in the sysplex to process IMS commands for any target IMS systems.
- IMS Security must allow the HP Sysgen authorized user ID to issue the IMS type-2 **INITIATE** command.
- IMS global online change must be enabled. Enablement includes replacing the MODSTAT data set with the OLCSTAT data set. You can create a global online change environment with only one defined IMS system, even though the environment is normally designed to define all the IMS systems in an IMSplex.
- An IMS staging ACBLIB must be created (or designated).
- The staging ACBLIB data set must either be added to the IMS control region JCL, or an IMS dynamic allocation member must be defined to allow IMS to dynamically allocate the staging ACBLIB when it is needed.
- Changes to IMS PROCLIB members are required to enable global online change.

For more information about enabling IMS global online change, see the *IMS System Administration*.

Enabling the IMS Managed ACBs Activate method

Use the IMS Managed ACBs Activate method to activate a pending ACB member in the IMS directory staging data set. To enable the IMS Managed ACBs Activate method, you must change the IMS environment.

To use the IMS Managed ACBs Activate method, IMS HP Sysgen Tools must be authorized to use the IMS type-2 **IMPORT DEFN SOURCE(CATALOG)** command.

To enable IMS HP Sysgen Tools to use the IMS Managed ACBs Activate method, the following IMS features must be available:

- The IMS SCI address space must be available on the system where IMS runs.
- An IMS OM address space must be available in the sysplex to process IMS commands for any target IMS systems.
- IMS Security must allow the HP Sysgen authorized user ID to issue the IMS type-2 **IMPORT** command.
- The IMS management of ACBs must be enabled.
- Changes to IMS PROCLIB members are required to enable the IMS management of ACBs. For more information about enabling the IMS management of ACBs, see *IMS System Administration*.

Part 3. Using the ISPF interface

The ISPF user interface allows you to use certain IMS HP Sysgen Tools features.

Topics:

- [Chapter 4, “ISPF menu options,” on page 57](#)
- [Chapter 5, “Using the ISPF View option to view resources,” on page 63](#)
- [Chapter 6, “Validating IMS stage 1 sysgen source,” on page 73](#)
- [Chapter 7, “Performing a Fastgen MODBLKS gen,” on page 75](#)
- [Chapter 8, “Reversing an IMS sysgen or security gen,” on page 77](#)
- [Chapter 9, “Reviewing the HP Sysgen history log,” on page 83](#)
- [Chapter 10, “Issuing IMS commands,” on page 93](#)
- [Chapter 11, “Dynamic Resource Definition \(DRD\) status,” on page 95](#)
- [Chapter 12, “Storage functions,” on page 97](#)
- [Chapter 13, “Generating JCL for batch utilities,” on page 103](#)

Chapter 4. ISPF menu options

The ISPF interface provides IMS HP Sysgen Tools functionality.

The following figure shows the IMS HP Sysgen Tools Primary Options menu, which is presented through the ISPF interface.

```
Option ==>
-----
0 Setup      IMS Configuration      User      P390M
1 View      Display IMS Resource Definitions Date      20/11/03
2 Edit      Create an IMS Resource Update List Time      21:46
3 Verify     Verify an IMS Resource Update List z/OS      01.07.00
4 Install    Implement an IMS Resource Update List Sysname   ADCD
5 Validate   Syntax Check Stage 1 Sysgen Source JESNode   N1
6 Fastgen    Perform a Fast IMS Sysgen Sysplex     ADCDPL
7 Reverse    Create Stage 1 Source from MODBLKS
8 History    Review Historical Log Information
C Command    Issue an IMS Command
D DRD        Dynamic Resource Definition Status
S Storage    z/OS Virtual Storage Utilities
U Utilities  Generate JCL for HP Sysgen Batch Jobs

IOHPDS Data Set Name ==> IMS.IOH.IOHPDS
                        (Fully qualified DSNAME without quotes)
```

Figure 25. HP Sysgen Primary Options menu

The IOHPDS data set name must be entered on the IMS HP Sysgen Tools Primary Options menu before you can use option **2**, **3**, or **4**.

Setup

By using the **Setup** option, you can define various IMS HP Sysgen Tools options.

For more information, see [“Defining IMS HP Sysgen Tools options” on page 30](#).

View

By using the **View** option, you can view IMS resource definition attributes. You can display either the attributes from the last IMS sysgen (or resource update list installation) by viewing the MODBLKS data set, or you can view the resources and associated attributes from a running IMS control region.

Edit

By using the **Edit** option, you can edit resource update lists. In addition, you can verify and install the resource update lists from this menu. Verification and installation can also be done independently from the **Verify** and **Install** menu options.

For more information, see [Chapter 15, “Editing a resource update list,” on page 111](#).

Verify

By using the **Verify** option, you can check whether the resource update lists that you created can be installed successfully before actually installing them by using the **Install** option.

For more information, see [Chapter 16, “Verifying a resource update list,” on page 143](#).

Install

By using the **Install** option, you can install the resource update lists that you created.

For more information, see [Chapter 17, “Installing a resource update list,” on page 147](#).

Validate

By using the **Validate** option, you can validate sysgen source. This option reads the IMS sysgen and security gen source code and provide a list of any errors or warnings.

For more information, see [Chapter 6, “Validating IMS stage 1 sysgen source,” on page 73](#).

Fastgen

By using the **Fastgen** option, you can perform an IMS HP Sysgen Tools fastgen and updates MODBLKS and MATRIX data sets with these definitions. This option reads the IMS sysgen and security gen source code and provides a list of any errors or warnings.

For more information, see [Chapter 7, “Performing a Fastgen MODBLKS gen,” on page 75.](#)

Reverse

By using the **Reverse** option, you can reverse IMS sysgen and security gens. This option reads the MODBLKS or MATRIX data sets and creates source code that reflects the definitions present in these data sets.

For more information, see [Chapter 8, “Reversing an IMS sysgen or security gen,” on page 77.](#)

History

By using the **History** option, you can review changes that have been implemented using IMS HP Sysgen Tools. You can view information about changes, reverse updated definitions into IMS sysgen source, or undo installed updates.

For more information, see [Chapter 9, “Reviewing the HP Sysgen history log,” on page 83.](#)

Command

By using the **Command** option, you can issue IMS commands and view the response.

For more information, see [Chapter 10, “Issuing IMS commands,” on page 93.](#)

DRD

By using the **DRD** option, you can display the DRD status and the IMSRSC repository status for an IMS control region. If DRD is enabled and the IMSRSC repository is disabled, the data set names of all system RDDSs are shown. If DRD is enabled and the IMSRSC repository is also enabled, the data set name of the IMSRSC repository is shown.

Storage

By using the **Storage** option, you can display IMS control region storage and control blocks.

For more information, see [Chapter 12, “Storage functions,” on page 97.](#)

Utilities

By using the **Utilities** option, you can generate JCL to run IMS HP Sysgen Tools batch utilities.

For more information, see [Chapter 13, “Generating JCL for batch utilities,” on page 103.](#)

ISPF interface startup options

You can optionally specify startup parameters for the ISPF interface so that IMS HP Sysgen Tools processes only the predetermined installation target, IOHPDS, or both. These parameters can be specified only for the **IOHXEXEC** command.

Specify the installation target and the IOHPDS name by using the IMSID, TARGET, GRPMBR, and IOHPDS parameters. If these parameters are specified, IMS HP Sysgen Tools restricts the installation target and the IOHPDS that you can process. This function is applicable for the following menu items:

Primary options menu	Description
1. View	Display IMS Resource Definitions
2. Edit	Create an IMS Resource Update List
3. Verify	Verify an IMS Resource Update List
4. Install	Implement an IMS Resource Update List

You can also select primary option menu items to be displayed by specifying the MENU parameter.

Startup parameters

The following startup parameters are available:

IMSID=imsid

Specify the installation target by providing an IMSID.

IMSID= and TARGET= are mutually exclusive.

The specified value will be the predetermined installation target, and you will not be able to change the IMSID in any IMS HP Sysgen Tools ISPF panels.

TARGET=group_name

Specify the installation target by providing a group name.

IMSID= and TARGET= parameters are mutually exclusive.

The specified value will be the predetermined installation target. After this value is set, the values you can specify for the **Target** field in any IMS HP Sysgen Tools ISPF panels will be limited to the group name and members of the group.

If you specify GRPMBR=YES, you can specify the group name or members of the target group in the **Target** field. If you specify GRPMBR=NO, you can specify only members of the target group in the **Target** field. Regardless of the value of the GRPMBR= parameter, you can specify only the target group member (IMSID) in the **IMSID** field.

You can also enter a question mark (?) in the **Target** field or **IMSID** field to display the target selection pop-up window, in which you can select a target.

```
EDIT          IMS HP Sysgen Tools - Update List ADDDB1          Row 1 to 3 of 3
Command ==>>          Scroll ==>> CUR

Target ==>> ?          (IMSID or group name)
Comment ==            IMS HP Sysgen Tools - Target selection

Primary          Command ==>>          Scrol Row 1 to 9 of 9
Ins              Select or enter target ==>>
COPY             S Select a target
CAN

CMD  Func       Target
ADD  GROUP@A    - Group name
ADD  IMSA
ADD  IMSB
***** IMSC
***** IMSD
***** IMSE
***** IMSF
***** IMSG
***** IMSH
***** Bottom of data *****

F1=HELP          F2=SPLIT          F3=END          F4=RETURN
F7=UP            F5=RFIND          F6=RCHANGE     F7=UP          F8=DOWN
/
```

Figure 26. Target selection pop-up window

GRPMBR=YES | NO

Specify how to handle the IMSIDs that are members of the target group (specified by the TARGET parameter) for the functions of EDIT, VERIFY, and INSTALL.

This parameter can be specified only if TARGET= is specified. YES is the default value.

YES

If you specify YES, the main panels of EDIT, VERIFY, and INSTALL will display a list of the IOHPDS members whose targets are either the specified group or a member of that group.

On each Update List Entries panel of EDIT, VERIFY and INSTALL functions, you can change the **Target** field only to the specified group or a member of that group.

NO

If you specify NO, the main panels of EDIT, VERIFY, and INSTALL will display a list of the IOHPDS members whose targets are the specified group name.

In this case, you cannot change the **Target** field in each Update List Entries panel for the EDIT, VERIFY and INSTALL functions.

IOHPDS=

Specify the IOHPDS name. If this parameter is specified, you cannot change the IOHPDS name in any IMS HP Sysgen Tools ISPF panels.

MENU=

Specify the IDs of the menu items that you want to display on the IMS HP Sysgen Tool Primary Options menu.

If you do not specify this parameter, all option menu items will be displayed.

Parameter examples

Example 1

In this example, IMSID and IOHPDS values are passed to the **IOHXEXEC** command:

```
"EX 'IMS.IOH.EXEC(IOHXEXEC) '  
  'IMSID=IMSA IOHPDS=IMS.IOH.IOHPDS' "
```

Example 2

In this example, group and IOHPDS values are passed to the **IOHXEXEC** command:

```
"EX 'IMS.IOH.EXEC(IOHXEXEC) '  
  'TARGET=GROUP@A IOHPDS=IMS.IOH.IOHPDS GRPMBR=YES' "
```

Example 3

In this example, IMSID, IOHPDS, and MENU values are passed to the **IOHXEXEC** command:

```
"EX 'IMS.IOH..EXEC(IOHXEXEC) '  
  'IMSID=IMSA IOHPDS=IMS.IOH.IOHPDS MENU=1234' "
```

The Primary Options menu will be displayed as follows:

```

                                IMS High Performance Sysgen Tools
Option ==>
1 View      Display IMS Resource Definitions      User      TSOA01
2 Edit      Create an IMS Resource Update List    Date      20/05/20
3 Verify    Verify an IMS Resource Update List    Time      04:22
4 Install    Implement an IMS Resource Update List z/OS      02.02.00
                                           Sysname   MVSA
                                           JESNode   JESNODEA
                                           Sysplex   SYSPLEXA
                                           IMSID     IMSA
```

```
IOHPDS Data Set Name ==> IMS.IOH.IOHPDS
                        (Fully qualified DSNAME without quotes)
```

Example 4

In this example, group with GRPMBR=YES, IOHPDS, and MENU values are passed to the **IOHXEXEC** command:

```
"EX 'IMS.IOH..EXEC(IOHXEXEC) '  
  'TARGET=GROUP@A GRPMBR=YES IOHPDS=IMS.IOH.IOHPDS MENU=01234'
```

The Primary Options menu will be displayed as follows:

```
                                IMS High Performance Sysgen Tools  
Option ==>  
  
0 Setup      IMS Configuration           User      TS0A01  
1 View       Display IMS Resource Definitions Date     20/08/13  
2 Edit       Create an IMS Resource Update List Time      22:55  
3 Verify     Verify an IMS Resource Update List z/OS      02.03.00  
4 Install    Implement an IMS Resource Update List Sysname   MVSA  
                                           JESNode   JESNODEA  
                                           Sysplex   SYSPLEXA  
  
                                           Target    GROUP@A  
                                           GRPMBR   Yes  
  
IOHPDS Data Set Name ==> IOHPDS=IMS.IOH.IOHPDS  
                          (Fully qualified DSNAME without quotes)
```


Chapter 5. Using the ISPF View option to view resources

You can view existing IMS resource definitions by using IMS HP Sysgen Tools ISPF option **1**, the View option.

Such definitions include database, program, transaction, and route codes. You can review the resources as they were defined in the last IMS sysgen (and any changes installed via resource update lists), or you can review the definitions that are currently being used by the online IMS system. If you have Fast Path DEDBs defined in your IMS system, you can also view the DEDB randomizer names that are in use by an IMS system which is currently running.

Note: The online system might include changes in resource definitions that were requested by using IMS commands (such as **/ASSIGN** or **/CHANGE**).

Topics:

- [“Using the View Menu” on page 63](#)
- [“Accessing the Loading panel” on page 65](#)
- [“Using the ISPF line commands” on page 65](#)
- [“Viewing resource and attribute values” on page 66](#)
- [“Viewing a DEDB randomizer list” on page 71](#)

Using the View Menu

Use the View panel of the ISPF interface to display resources.

Using the initial View panel

When you select the View option, the View Menu is displayed.

```
VIEW          IMS HP Sysgen Tools - View Menu
Command ===> -----

Option ===>
1 INCORE      View resources currently being used in the IMS control region
2 DASD       View resources defined in the current MODBLKS/RDDS/Repository
3 MODBLKS    View resources defined in a user specified MODBLKS Data Set
4 RDDS       View resources defined in a user specified RDDS Data Set

Resource ===>
1 DATABASE   View IMS database definitions
2 PROGRAM    View IMS application program definitions
3 TRAN       View IMS transaction definitions
4 RTCODE     View IMS fast path route code definitions
5 Randomizer View DEDB database randomizer names and associated DBDs

IMSID      ===> _____
```

Figure 27. Initial View panel

The IMSID field is required. It specifies which IMS system's resources will be displayed. The Option field allows you to select which definitions are to be shown. You can select the following options:

INCORE

This option shows the resource definitions in IMS control blocks that are being used when you press Enter. IMS must be running to use this option. The resource status will include changes that were made by using IMS commands such as **/ASSIGN** that might not be in the MODBLKS, RDDS, or IMSRSC repository data sets.

DASD

This option shows the resource definitions that are stored in the current MODBLKS, RDDS, or IMSRSC repository data sets, depending on whether DRD is disabled or enabled and whether the IMSRSC repository is disabled or enabled. The values that are shown are used by IMS if IMS is cold started. Changes that are installed through resource update lists are included in the resources that are displayed when you use this option.

MODBLKS

This option allows you to specify IMS system data sets (MODBLKS and RESLIB). You can also specify the nucleus suffix that is in those data sets that will be used to retrieve resource definitions. The data sets do not have to be related to any IMS system, and they can be in use or not. For more information, see [“Using the MODBLKS option” on page 64](#).

RDDS

This option shows the names of the system RDDSs that are used by the selected IMS system. The time stamp and the statuses that are associated with each RDDS are shown. If you select any of the RDDSs, the resource definitions that are present in the selected RDDS are shown. You can also enter the data set name of any valid RDDS if you want to supply your own data set name.

You can select the type of resource that you want to see (database, program, transaction, route code, or DEDB randomizer) by entering the appropriate option in the Resource field.

Note: To view DEDB randomizer names, you must specify the INCORE option, and IMS must be active. For more information, see [“Using the RDDS option” on page 64](#).

Using the MODBLKS option

If you select the MODBLKS option, IMS HP Sysgen Tools prompts you to enter data set names and the IMS nucleus suffix that are used to retrieve resource definitions. The following figure shows the fields for entering the specifications for the MODBLKS option.

```
VIEW      IMS HP Sysgen Tools - View User Specified MODBLKS Data Set
Command ==> -----

To view the resources defined in a MODBLKS data set, you need to supply a
consistent set of libraries (MODBLKS and RESLIB), along with the IMS
nucleus suffix.

IMS Suffix ==> _
MODBLKS DSN ==> -----
RESLIB DSN  ==> -----
              (Fully qualified DSNAMEs without quotes)
```

Figure 28. View MODBLKS specification panel.

All three fields on the panel are required. The IMS suffix is the SUFFIX= value that is specified on the MSGEN macro during the IMS sysgen process. The IMS release that is present in the RESLIB must match the IMS release that is used to create the IMS resource definitions in the MODBLKS data set.

Specify values in these fields and press Enter to display the requested resource definitions.

Using the RDDS option

If you select the RDDS option, IMS HP Sysgen Tools shows the system RDDSs that are used for the selected IMS system. An example is shown in the following figure.

```

VIEW      IMS HP Sysgen Tools - View User Specified RDDS Data Row 1 to 3 of 3
Command ==> -----

The IMS IMS1 RDDS data set names are listed below. You can select one of
listed data sets or enter a data set name of your choosing here.

RDDS DSN ==> -----

S Resource Definition Data Set Name      Status or Timestamp
- IMS11.IMS1.RDDS1                      2020.107 22:31:35.479699-UTC
- IMS11.IMS1.RDDS2                      2020.102 16:57:32.556037-UTC
- IMS11.IMS1.RDDS3                      2020.102 17:26:30.258770-UTC
***** Bottom of data *****

```

Figure 29. View RDDS specification panel

On the View RDDS specification panel, you can specify an RDDS name of your choosing, or you can select one of the system RDDSs that are shown in the table. Select the RDDS by using the **S** line command next to the one that you want to use.

Specify or select an RDDS and press Enter to display the requested resource definitions.

Accessing the Loading panel

If you select the DASD or MODBLKS options, a status panel, as shown in the following figure, is displayed while the resource definitions are loaded from the MODBLKS data set. After the definitions are loaded, press Enter to continue to the display panel. If you selected the INCORE option, the status panel is bypassed, and the resource definitions are displayed as soon as they are prepared.

About this task

```

LOADING      IMS HP Sysgen Tools - Loading IMS Definitions
Command==> -----

IMS Definitions loaded in 0.30 seconds

      Defined      Loaded
IMS Databases. . . .: 2023      2023
IMS Programs . . . .: 62        62
IMS Transactions . . .: 39        39
IMS Route Codes. . . .: 0         0

Press Enter to continue...

```

Figure 30. Resource definitions loaded from MODBLKS data set

Using the ISPF line commands

The View panels of this product use the following ISPF line commands: **P**, **S**, and **T**.

Depending on the resource type being displayed, the line commands cause specific panels to display. A summary is provided as follows:

P

- If you are viewing a transaction list, a panel is displayed showing the IMS sysgen macro that created definition of the program associated with the selected transaction, as well as any other transactions and route codes associated with that program. [Figure 40 on page 70](#) is an example of such a panel.
- If you are viewing a route code list, a panel is displayed showing the IMS sysgen definition of the program associated with the selected route code, as well as any other transactions and route codes associated with that program. [Figure 43 on page 71](#) is an example of such a panel.

S

- If you are viewing a database list, a panel is displayed showing the IMS sysgen macro that created the definition, as well as descriptions of the columns displayed in the database list panel. [Figure 32 on page 67](#) is an example of such a panel.
- If you are viewing a program list, a panel is displayed showing the IMS sysgen macro that created the definition, as well as descriptions of the columns displayed in the program list panel. See [Figure 33 on page 67](#) and [Figure 34 on page 68](#) for examples of a program list and subsequent definition panel.
- If you are viewing a transaction list, a panel is displayed showing the IMS sysgen macro that created the transaction definition. See [Figure 36 on page 69](#), [Figure 37 on page 69](#), [Figure 38 on page 70](#), and [Figure 39 on page 70](#) for examples of a multipart transaction list and subsequent definition panel.
- If you are viewing a route code, a panel is displayed showing the IMS sysgen macro that created the resource definition, as well as descriptions of the columns displayed in the route code list panel. [Figure 42 on page 71](#) is an example of such a panel.

T

If you are viewing a program list, and you select a program using the T line command, a panel is displayed showing the IMS sysgen macro that created the definition for the program and all associated transaction codes and route codes. [Figure 35 on page 68](#) shows an example of such a panel.

Viewing resource and attribute values

After the resource definitions are prepared for display, an ISPF table displays resources and attribute values. You can scroll lists using the **UP** and **DOWN** ISPF commands. The **LOCATE** command allows you to skip to a specific value in the table. The table can also be sorted on any displayed column.

For example, consider the following scenario:

When displaying database definitions, the SORT ACCESS command could be used to sort the table by the value of the ACCESS= keyword specified on the DATABASE sysgen macro. The LOCATE command could then be used to skip to a particular ACCESS value; for example, the **L R0** command would skip to the first database defined with the ACCESS attributed defined as R0. Command **L R** would locate any database ACCESS value that begins with R, which would probably be an ACCESS of RD.

Viewing a database list and attribute value

A database list shows all defined databases and their attributes.

The following figure shows an example of a database list.

```

VIEW                               IMS HP Sysgen Tools - Database List      Row 1 to 35 of 2,2023
Command====> ----- Scroll ==> CUR

Primary Commands:                  Line Commands:
  SORT Sort the List                S View Gen Source
  L   Locate an Entry

  DBDNAME    ACCESS    RESIDENT
- DBFSAMD1    EX
- DBFSAMD2    EX
- DBFSAMD3    UP
- DBFSAMD4    UP
- DBIZT1      UP
- DBFSHR0     UP
- DBFSHR1     UP
- DBFSHR2     UP
- DBFSHR3     UP
- DBFSHR4     UP
- DBFSHR5     UP
- DBFSHR6     UP
- DBFSHR7     UP
- DBFSHR8     UP
- DBFSHR9     UP
- DBV08       UP

```

Figure 31. Database list created from IMS sysgen macros

The following figure shows the macro that was used to create the database definition.

```

VIEW                               IMS HP Sysgen Tools - View Database Definition
Command====> -----

IMS Sysgen source definition for database DBFSAMD3

DATABASE DBD=DBFSAMD3,ACCESS=UP

Parameter      Value      Description
NAME           DBFSAMD3    DBD name
RESIDENT
Access         UP          DMD is retained in storage
                  Subsystem access intent

```

Figure 32. Macro used to create a database definition

Viewing a program list and attribute values

A program list shows all defined programs and their attributes.

```

VIEW                               IMS HP Sysgen Tools - Program List      Row 1 to 35 of 62
Command====> ----- Scroll ==> CSR

Primary Commands:                  Line Commands:
  SORT Sort the List                S View a Program Definition
  L   Locate an Entry                T View Associated Transactions

  PSBNAME    RESIDENT    DOPT    PGMTYPE    SCHDTYP    GPSB    LANGUAGE    FPATH
- DCMIVCMD    BATCH      SERIAL
- DCMIVPS1    BATCH      SERIAL
- CALLSUB     TP         PARALLEL  GPSB    COBOL
- CCFCMD00    TP         SERIAL     GPSB    COBOL
- CCFRED00    TP         SERIAL     GPSB    COBOL
- DBFSAMP1    BATCH      SERIAL
- DBFSAMP2    BATCH      SERIAL
- DBFSAM04    BATCH      SERIAL
- DBFSAM05    BATCH      SERIAL
- DBFSAM14    BATCH      SERIAL
- DBFSAM15    BATCH      SERIAL
- DBFSAM24    BATCH      SERIAL
- DBFSAM25    BATCH      SERIAL
- DFSIVPA     BATCH      SERIAL

```

Figure 33. Programs created from IMS sysgen macros

```

VIEW                IMS HP Sysgen Tools - View Program Definition
Command===> -----
IMS Sysgen source for program CCFCMD00

      APPLCTN GPSB=CCFCMD00,PGMTYPE=TP,LANG=COBOL

Parameter      Value      Description
PSB Name        CCFCMD00    PSB (or GPSB) Name
RESIDENT        PSB to remain resident in storage
DOPT            Dynamic Option - reload PSB for each execution
GPSB            GPSB        Generic PSB
FPATH            Fast Path
LANG            COBOL        GPSB Language
PGMTYPE          TP          Program Type
SCHDTYP          SERIAL      Schedule Type

```

Figure 34. Macro used to create a program definition

```

BROWSE      IMS Sysgen Source                      Line 00000000 Col 001 080
Command===> -----                               Scroll ==> CSR
***** Top of Data *****
      APPLCTN PSB=DFSSAM04,PGMTYPE=TP
*
      TRANSACT CODE=ADDINV,PRTY=(7,10,2),MODE=SINGL,DCLWA=YES,      *
              MSGTYPE=(MULTSEG,NONRESPONSE,1)
*
      TRANSACT CODE=ADDPART,PRTY=(7,10,2),MODE=SINGL,DCLWA=YES,      *
              MSGTYPE=(MULTSEG,NONRESPONSE,1)
*
      TRANSACT CODE=DLETINV,PRTY=(7,10,2),MODE=SINGL,DCLWA=YES,      *
              MSGTYPE=(MULTSEG,NONRESPONSE,1)
*
      TRANSACT CODE=DLETPART,PRTY=(7,10,2),MODE=SINGL,DCLWA=YES,      *
              MSGTYPE=(MULTSEG,NONRESPONSE,1)
***** Bottom of Data *****

```

Figure 35. Macro used to create a definition for program and associated codes and route codes

Viewing a transaction list and attribute values

A transaction list shows all defined transactions and their attributes.

Because transaction definitions have a large number of attributes, the attributes for each transaction are split across three panels. Use the **RIGHT** and **LEFT** commands (typically **PF10** and **PF11**) to scroll to the second transaction list panel ([Figure 37 on page 69](#)) and the third transaction list panel ([Figure 38 on page 70](#)).

Use the **S** line command to display the IMS sysgen source macro that was used to create the transaction, as well as the list of attributes and values. [Figure 39 on page 70](#) shows the results of using the **S** line command.

Use the **P** line command to display the IMS sysgen source for the program that is associated with the selected transaction, as well as the sysgen source for all of the transactions and route codes that are associated with that program. [Figure 40 on page 70](#) shows the results of using the **P** line command.

```

VIEW                               IMS HP Sysgen Tools - Transaction List          Row 1 to 35 of 39
Command====> -----                Scroll ==> CUR
                                       Columns 1 to 8

Primary Commands:                    Line Commands:
  SORT Sort the List                  S View a Transaction Definition
  L   Locate an Entry                 P View Associated Program

TRANSCODE PSBNAME  SEGMENTS RESPONSE INQUIRY RECOVER SPASIZE TRUNC
- A        DFSIVP0  SNGLSEG  NO        NO        RECOVER SPASIZE
- ADDINV   DFSSAM04 MULTSEG  NO        NO        RECOVER
- ADDPART  DFSSAM04 MULTSEG  NO        NO        RECOVER
- CALLSUB  CALLSUB  SNGLSEG  NO        NO        RECOVER
- CLOSE    DFSSAM05 MULTSEG  NO        NO        RECOVER
- DISBURSE DFSSAM06 MULTSEG  NO        NO        RECOVER
- DLETINV  DFSSAM04 MULTSEG  NO        NO        RECOVER
- DLETPART DFSSAM04 MULTSEG  NO        NO        RECOVER
- DSPALLI  DFSSAM07 MULTSEG  NO        NO        RECOVER
- DSPINV   DFSSAM03 MULTSEG  NO        YES       RECOVER
- GHTRAN1  GHTRAN1  SNGLSEG  YES       NO        RECOVER
- GHTRAN2  GHTRAN2  SNGLSEG  YES       NO        RECOVER
- IMS6RMT1 IMS6RMT1 SNGLSEG  NO        NO        RECOVER
- IMS7RMT1 IMS7RMT1 SNGLSEG  NO        NO        RECOVER
- IMS9TRX1 IMS7TRX1 SNGLSEG  NO        NO        RECOVER
- IMS9TRX2 IMS7TRX2 SNGLSEG  NO        NO        RECOVER      80
- INSERT   INSERT   SNGLSEG  NO        NO        RECOVER
- IVPREXX  IVPREXX  SNGLSEG  NO        NO        RECOVER
- IVTCB    DFSIVP34 SNGLSEG  NO        NO        RECOVER      80
- IVTCC    DFSIVP32 SNGLSEG  NO        NO        RECOVER      80
- IVTCJ    DFSIVP33 SNGLSEG  NO        NO        RECOVER      80

```

Figure 36. Transaction list created from IMS sysgen macros (part 1)

```

VIEW                               IMS HP Sysgen Tools - Transaction List          Row 1 to 35 of 39
Command====> -----                Scroll ==> CUR
                                       Columns 9 to 18

Primary Commands:                    Line Commands:
  SORT Sort the List                  S View a Transaction Definition
  L   Locate an Entry                 T View Associated Program

TRANSCODE WF1  SERIAL  MODE  ROUTING DCLWA  ULC  EDITNAME FPATH  AOI  SCHD
- A        NO    SNGL   NO    YES    UC    NO    NO    NO    1
- ADDINV   NO    SNGL   NO    YES    UC    NO    NO    NO    1
- ADDPART  NO    SNGL   NO    YES    UC    NO    NO    NO    1
- CALLSUB  NO    SNGL   NO    YES    UC    NO    NO    NO    1
- CLOSE    NO    SNGL   NO    YES    UC    NO    NO    NO    1
- DISBURSE NO    SNGL   NO    YES    UC    NO    NO    NO    1
- DLETINV  NO    SNGL   NO    YES    UC    NO    NO    NO    1
- DLETPART NO    SNGL   NO    YES    UC    NO    NO    NO    1
- DSPALLI  NO    SNGL   NO    YES    UC    NO    NO    NO    1
- DSPINV   NO    SNGL   NO    YES    UC    NO    NO    NO    1
- GHTRAN1  NO    SNGL   NO    YES    UC    NO    NO    NO    1
- GHTRAN2  NO    SNGL   NO    YES    UC    NO    NO    NO    1
- IMS6RMT1 NO    SNGL   NO    YES    UC    NO    NO    NO    1
- IMS7RMT1 NO    SNGL   NO    YES    UC    NO    NO    NO    1
- IMS9TRX1 NO    SNGL   NO    YES    UC    NO    NO    NO    1
- IMS9TRX2 NO    SNGL   NO    YES    UC    NO    NO    NO    1
- INSERT   NO    SNGL   NO    YES    UC    NO    NO    NO    1
- IVPREXX  NO    SNGL   NO    YES    UC    NO    NO    NO    1
- IVTCB    NO    SNGL   NO    YES    UC    NO    NO    NO    1

```

Figure 37. Transaction list created from IMS sysgen macros (part 2)

```

VIEW          IMS HP Sysgen Tools - Transaction List          Row 1 to 35 of 39
Command====> ----- Scroll ==> CUR
                                   Columns 19 to 30

Primary Commands:          Line Commands:
  SORT Sort the List        S View a Transaction Definition
  L   Locate an Entry       P View Associated Program

      ---PRTY---    --PROCLIM--
TRANSCODE CLS  NP  LP  PLMCT  COUNT  TIME  PARLM  SEGNO  SEGSZ  MAXRGN  RMT  LCL
- A          1   1   1   65535  65535  65535  NONE    0     0     0     0
- ADDINV     1   7  10     2   65535  65535  NONE    0     0     0     0
- ADDPART    1   7  10     2   65535  65535  NONE    0     0     0     0
- CALLSUB    1   1   1   65535  65535  65535    0     0     0     0
- CLOSE      1   7  10     2   65535  65535  NONE    0     0     0     0
- DISBURSE   1   7  10     2   65535  65535  NONE    0     0     0     0
- DLETINV    1   7  10     2   65535  65535  NONE    0     0     0     0
- DLETPART   1   7  10     2   65535  65535  NONE    0     0     0     0
- DSPALLI    1   7  10     2   65535  65535  NONE    0     0     0     0
- DSPINV     1   7  10     2   65535  65535  NONE    0     0     0     0
- GHTRAN1    1   1   1   65535  65535  65535  NONE    0     0     0     0
- GHTRAN2    1   1   1   65535  65535  65535  NONE    0     0     0     0
- IMS6RMT1    1   1   1   65535  65535  65535    0     0     0     0
- IMS7RMT1    1   1   1   65535  65535  65535    0     0     0     0
- IMS9TRX1    1   1   1   65535  65535  65535    0     0     0     0
- IMS9TRX2    1   1   1   65535  65535  65535    0     0     0     0
- INSERT     1   1   1   65535  65535  65535    0     0     0     0
- IVPREXX    1   1   1   65535  65535  65535  NONE    0     0     0     0

```

Figure 38. Transaction list created from IMS sysgen macros (part 3)

```

VIEW          IMS HP Sysgen Tools - View Transaction Definition
Command ==> -----

IMS Sysgen source definition for transaction PART ...

      TRANSCODE=PART,PRTY=(7,10,2),MODE=SNGL,DCLWA=YES,          *
      INQUIRY=(YES,RECOVER),MSGTYPE=(MULTSEG,NONRESPONSE,1)

Parameter   Value      Description
Tran Code   PART        Transaction Code
PSB Name    DFSSAM02    Associated PSB Name
DCLWA       YES         DC Log Write Ahead
Edit Case   UC          Upper Case or Upper/Lower Case
EDIT Name   UC          Transaction Edit Routine Module Name
FPATH       NO          Fast Path Specification
INQUIRY     YES         Inquiry Mode
RECOVER     RECOVER     Recoverable Transaction
MAXRGN      0           Maximum regions
MODE        SNGL        Mode
MSGTYPE     MULTSEG     Segments
RESPONSE    NO          Response mode

```

Figure 39. Macro used to create a transaction definition

```

BROWSE      IMS Sysgen Source          Line 00000000 Col 001 080
Command====> ----- Scroll ==> CSR
***** Top of Data *****
      APPLCTN PSB=DFSSAM04,PGMTYPE=TP
*
      TRANSCODE=ADDINV,PRTY=(7,10,2),MODE=SINGL,DCLWA=YES,      *
      MSGTYPE=(MULTSEG,NONRESPONSE,1)
*
      TRANSCODE=ADDPART,PRTY=(7,10,2),MODE=SINGL,DCLWA=YES,    *
      MSGTYPE=(MULTSEG,NONRESPONSE,1)
*
      TRANSCODE=DLETINV,PRTY=(7,10,2),MODE=SINGL,DCLWA=YES,    *
      MSGTYPE=(MULTSEG,NONRESPONSE,1)
*
      TRANSCODE=DLETPART,PRTY=(7,10,2),MODE=SINGL,DCLWA=YES,   *
      MSGTYPE=(MULTSEG,NONRESPONSE,1)
***** Bottom of Data *****

```

Figure 40. Macro used to create a definition for transaction list and associated codes and route codes

Viewing a route code list

A route code list shows all defined route codes and their attributes.

The following figure shows an example.

```
VIEW          IMS HP Sysgen Tools - Route Code List          Row 1 to 3 of 3
Command====> ----- Scroll ==> CUR

Primary Commands:
  SORT Sort the List
  L    Locate an Entry

Line Commands:
  S View a Route Code Definition
  P View Associated PSB Definition

RTCODE  PSBNAME  INQUIRY
- FPSAMP1 DBFSAMP3 NO
- IVTFD   DFSIVP4 NO
- IVTFM   DFSIVP5 NO
```

Figure 41. Route code list

```
VIEW          IMS HP Sysgen Tools - View Route Code Definition
Command====> -----

IMS Sysgen source definition for route code FPSAMP1 ...

Parameter  Value      Description
- ROUTCDE  FPSAMP1    Route Code Name
- PSB Name DBFSAMP3    Name of PSB associated with this Route Code
- Inquiry  NO         Inquiry Mode
```

Figure 42. Route code definition

```
BROWSE      IMS Sysgen Source          Line 00000000 Col 001 080
Command====> ----- Scroll ==> CSR
***** Top of Data *****
APPLCTN PSB=DBFSAMP3,PGMTYPE=BATCH,FPATH=YES
*
TRANSACT CODE=FPSAMP1,FPATH=256,PRTY=(1,1,0),MODE=SNGL,DCLWA=YES,      *
MSGTYPE=(SNGLSEG,RESPONSE,1)
*
RTCODE CODE=FPSAMP1
***** Bottom of Data *****
```

Figure 43. Macro used to create a program definition associated with a route code

Viewing a DEDB randomizer list

A DEDB randomizer list shows the names of all active DEDB randomizers and the names of all DEDB databases using the randomizer.

The following figure shows an example of a DEDB randomizer list. Note that there are no line commands available in a randomizer list.

```
VIEW  IMS HP Sysgen Tools - IMS IMS9 DEDB Randomizer List Row 1 to 2 of 2
Command====> ----- Scroll ==> CSR

Primary Commands:
  SORT Sort the List
  L    Locate an Entry

RandName DBDName
DBFHDC40 DBFSAMD3
DBFHDC40 IVPDB3
***** Bottom of Data *****
```

Figure 44. DEDB randomizer list example

Chapter 6. Validating IMS stage 1 sysgen source

Use option **5** of the Primary Options menu (see [Figure 25 on page 57](#)) to perform syntax validation of IMS sysgen macros. You can validate either IMS stage 1 sysgen source, or both IMS sysgen source and the security source.

To perform a gen source validation, an existing data set name must be specified which will contain IMS HP Sysgen Tools messages and the gen source listing. The data set must meet the following requirements:

- Must be a sequential data set (or a PDS with a member name specified)
- Allocation with DCB attributes of RECFM=FBA and LRECL=133
- Data set name must be entered on the panel shown in the following figure:

```
VALIDATE      IMS HP Sysgen Tools - Validate IMS Gen Source
Command ===> -----

Option ===> -
1  SYSGEN      IMS Sysgen
2  SECURITY    Both IMS Sysgen and IMS Security Gen

IMSID ===> -----

Output DSN ===> SYSGEN.OUTLIST
```

Figure 45. Initial panel for validating IMS gen source

In addition to entering the output DSN, you must select option **1** or **2** (for stage 1 or stage 1 and security gen validation), and enter the IMSID for which the gen source is to be validated.

The IMS sysgen source data set name information is obtained from the IMS Configuration information for the IMSID, which is set by selecting option **0** from the Primary Options menu.

The Fastgen process reads the gen source, builds interim control block in storage, and, if requested, reads security gen source and creates interim security control blocks. While the definitions are not written to any MODBLKS or MATRIX data sets, the process ensures that IMS sysgen source is valid, and that any security gen source has correct syntax and is consistent with the IMS sysgen source.

When the validation process completes, an ISPF browser panel provides the opportunity to review the Fastgen reports. The output of the validation process is the same as the output of the Fastgen batch process. It will contain source statement listings for all source that was read and any warning or error messages associated with the input. The reports of resource definitions are also included in the validation report.

Chapter 7. Performing a Fastgen MODBLKS gen

Select option **6** of the IMS HP Sysgen Tools Primary Options menu, [Figure 25 on page 57](#), to perform a MODBLKS IMS sysgen under ISPF. Depending on the size of the gen source, it might be easier to run the Fastgen process in batch (for more information, see [Chapter 21, “Using the Fast Sysgen utility,” on page 175](#)).

To perform a Fastgen, an existing data set name must be specified which will contain IMS HP Sysgen Tools messages and the gen source listing. The data set must meet the following requirements:

- Must be a sequential data set (or a PDS with a member name specified)
- Allocation with DCB attributes of RECFM=FBA and LRECL=133
- Data set name must be entered on the panel shown in the following figure

```
FASTGEN      IMS HP Sysgen Tools - Fast MODBLKS Sysgen
Command ==>  -----

Option ==>
1 SYSGEN      IMS Sysgen
2 SECURITY    Both IMS Sysgen and IMS Security Gen

IMSID ==> IMS8

Target Libraries (select all libraries to be updated):
_ Staging Libraries
_ Inactive Libraries

Output DSN ==> SYSGEN.OUTLIST-----
                (Include quotes when entering a fully qualified DSNNAME)
```

Figure 46. Initial panel for performing fastgen MODBLKS sysgen

In addition to entering the output DSN, you must select option **1** or **2** (for stage 1 or stage 1 and security gen), and enter the IMSID for which the gen is to be performed. In addition, you must select one or more target libraries which will be updated by the Fastgen process. The libraries selected refer to the MODBLKS and, if option **2** is selected, the MATRIX data set. You can choose to update either the staging libraries (MATRIX and MODBLKS data sets), the inactive libraries (the A or B versions of the MATRIX/MODBLKS libraries, whichever is inactive as determined by the MODSTAT or OLCSTAT data set), or both sets of libraries.

The IMS sysgen source data set name information is obtained from the IMS Configuration information for the IMSID, which is set by selecting option **0** from the Primary Options menu.

When the Fastgen process completes, an ISPF browse panel provides the opportunity to review the Fastgen reports. It will contain source statement listings for all source that was read and any warning or error messages associated with the input. The reports of resource definitions are also included in the validation report. At the end of stage 1 and at the end of the security gen reports, Fastgen link edit reports are generated showing which libraries and members were affected by the sysgen process.

Chapter 8. Reversing an IMS sysgen or security gen

Use the reverse IMS sysgen and security gen processes to re-create IMS stage 1 sysgen or security gen source.

The reverse security gen source uses the MATRIX, MODBLKS, or RESLIB data sets to re-create IMS security gen source. The reverse sysgen process can use the MODBLKS or RESLIB data sets, the RDDS, the IMSRSC repository, or the IMS control region control blocks that are in memory to re-create the IMS sysgen source.

The reverse sysgen process re-creates only the application definitions DATABASE, APPLCTN, TRANSACT, and RTCODE macros. IMS control macros and terminal/MSR related macros are not generated.

The reverse security gen process re-creates all security gen source although it might not be in the same sequence as the security gen source that created the MATRIX data set.

Select option **7** of the IMS HP Sysgen Tools Primary Options menu, [Figure 25 on page 57](#), to access the reverse functions. The following panel is displayed.

```
REVERSE      IMS HP Sysgen Tools - Reverse Sysgen
Command ===> -----

Option ===> -
1 SYSGEN      Create IMS Stage 1 Macros from the current MODBLKS/RDDS/Repository
2 Security    Create IMS Security Gen Source from the current MATRIX data set

Note: To create IMS security gen source, your TS0 userid must have read access
to the IMS MATRIX data set specified in the following options panel.
```

Figure 47. Initial panel for performing reverse sysgen

Topics:

- [“Reverse sysgen” on page 77](#)
- [“Reverse security gen” on page 80](#)

Reverse sysgen

Use the reverse IMS sysgen process to re-create IMS stage 1 sysgen source. The reverse sysgen process uses the MODBLKS or RESLIB data set, the RDDS, the IMSRSC repository, or the IMS control region control blocks that are in memory to re-create the IMS sysgen source.

Selecting a reverse sysgen displays the panel in [Figure 48 on page 78](#) for specifying reverse sysgen options.

The **Output DSN** field is required and must specify the data set name of an existing sequential data set (or member of a PDS) where the generated IMS sysgen source will be written. DCB attributes are required to be RECFM=FB and LRECL=80.



Attention: Do not specify your existing sysgen source DSN. If you do, the specified data set will be replaced with IMS sysgen source code that was generated from the MODBLKS data set.

Choose the source that you want to use for the reverse sysgen with the following options:

INCORE

This option uses the IMS control region storage to obtain information from the control blocks of the running IMS system. The running control blocks might be affected by commands such as **/ASSIGN** or **/STA DB** with the ACCESS= keyword. These commands will change your generated IMS sysgen source.

DASD

This option uses the active MODBLKS, RDDS, or IMSRSC repository data set as the source of the IMS resource definitions. This option creates source that matches IMS definitions as if IMS was cold

started. If you use IMS sysgen, this option re-creates the source from your last IMS sysgen. This source is updated to include any IMS resource update lists that are installed.

MODBLKS

This option allows you to specify the data set names of MODBLKS and RESLIB data sets and to specify an IMS nucleus suffix. IMS HP Sysgen Tools uses the specified libraries as the source for the resource definitions.

RDDS

The RDDS option allows you to specify an RDDS name or to select one of the system RDDSs that are defined for the target IMS system. The data set is used as the definition source from which IMS sysgen source is generated.

For the INCORE and DASD options, you only need to specify the IMSID of the IMS system for which gen source should be re-created. The MODBLKS and RDDS options prompt you for the data set names that are used for IMS system definitions.

You can also choose to re-create only source for DATABASE macros, or only the source for APPLCTN, TRANSACT, and RTCODE macros. You can also choose both sets of macro definitions to re-create all of the gen source in a single file.

```
REVERSE      IMS HP Sysgen Tools - Reverse Sysgen
Command ===> _____

Option ===> _
1 INCORE      Generate IMS Sysgen source from active incore control blocks
2 DASD        Generate IMS Sysgen source from the current MODBLKS/RDDS/Repository
3 MODBLKS     Generate IMS Sysgen source from user specified MODBLKS
4 RDDS        Generate IMS Sysgen source from user specified RDDS

IMSID ===> ____

Select resource type(s) to include in Reverse:
_ Database
_ Program / Transaction / Route Code

Output Data Set for Reverse Sysgen Process:
Output DSN ===> _____
                  (Include quotes when entering a fully qualified DSNAME)
```

Figure 48. Initial panel for performing reverse sysgen

If you choose the MODBLKS option, the MODBLKS data set panel is displayed, as shown in the following figure:

```
REVERSE      IMS HP Sysgen Tools - Reverse User Specified MODBLKS Data Set
Command ===> _____

To view the resources defined in a MODBLKS data set, you need to supply a
consistent set of libraries (MODBLKS and RESLIB), along with the IMS
nucleus suffix.

IMS Suffix   ===> _
MODBLKS DSN  ===> _____
RESLIB DSN   ===> _____
                  (Include quotes for fully qualified data set names)
```

Figure 49. MODBLKS data set panel

To specify MODBLKS information, enter the IMS nucleus suffix, which is specified in the SUF= parameter of the DFSPBxxx member of PROCLIB or in the SUFFIX= keyword of the IMSGEN macro in the IMS sysgen source. In addition, specify the IMS MODBLKS data set name and the IMS RESLIB data set name. The MODBLKS and RESLIB must have consistent sysgen information.

Specify the required information and press Enter. If you chose the MODBLKS option on the Reverse Sysgen panel, the MODBLKS data set panel is displayed, as shown in [Figure 49 on page 78](#). If you chose the RDDS option on the Reverse Sysgen panel, the user RDDS panel is displayed, as shown in [Figure 51 on page 79](#).


```

LOADING                IMS HP Sysgen Tools - Loading IMS Definitions
Command===> -----

IMS Definitions loaded in 0.12 seconds

          Defined      Loaded
IMS Databases. . . . : 2023      2023
IMS Programs . . . . : 65        65
IMS Transactions . . : 42        42
IMS Route Codes. . . : 0         0

Press Enter to continue...

```

Figure 50. Loading MODBLKS definitions

When IMS HP Sysgen Tools reads a MODBLKS data set to retrieve IMS system definitions, this panel in [Figure 50 on page 79](#) is displayed while the MODBLKS modules are loaded and placed into tables. This panel shows the number of resources that are defined in the MODBLKS data set and the length of time that was spent loading the modules and tables.

```

REVERSE  IMS HP Sysgen Tools - Reverse User Specified RDDS D Row 1 to 3 of
Command ===> -----

The IMS IMS1 RDDS data set names are listed below. You can select one of
listed data sets or enter a data set name of your choosing here.

RDDS DSN ===> -----

S  Resource Definition Data Set Name          Status or Timestamp
-  IMS11.IMS1.RDDS1                          2020.107 22:31:35.479699-UTC
-  IMS11.IMS1.RDDS2                          2020.102 16:57:32.556037-UTC
-  IMS11.IMS1.RDDS3                          2020.102 17:26:30.258770-UTC
***** Bottom of data *****

```

Figure 51. User RDDS panel

In the User RDDS panel, you can enter an RDDS name in the **RDDS DSN** field, or you can select one of the system RDDS names that is used by the IMS system. Press Enter to display the reverse sysgen source panel, such as the one that is shown in [Figure 52 on page 80](#).

After the sysgen source is re-created, an ISPF browse session shows the generated sysgen macros. An example of reverse MODBLKS is shown in [Figure 52 on page 80](#). Note that a comment is inserted at the beginning of the generated source to identify the date and requesting user ID of the reverse sysgen.

The data that is displayed in the browse session has already been written to the Output DSN as specified on the request panel. The output data set can be edited or used as input to an IMS sysgen or an HP Sysgen Fastgen process.

```

BROWSE      P390M.STAGE1                      Line 00000000 Col 001 080
Command ==> ----- Scroll ==> CSR
***** Top of Data *****
*          REVERSE MODBLKS GENERATED ON 2020.296 BY USER P390M
*
  DATABASE DBD=DBFSAMD1,ACCESS=EX
  DATABASE DBD=DBFSAMD2,ACCESS=EX
  DATABASE DBD=DBFSAMD3,ACCESS=UP
  DATABASE DBD=DBFSAMD4,ACCESS=UP
  DATABASE DBD=DBIZT1,ACCESS=UP
  DATABASE DBD=DBSHR0,ACCESS=UP
  DATABASE DBD=DBSHR1,ACCESS=UP
  DATABASE DBD=DBSHR2,ACCESS=UP
  DATABASE DBD=DBSHR3,ACCESS=UP
  APPLCTN PSB=BCMIVPS1,PGMTYPE=BATCH
  APPLCTN GPSB=CALLSUB,PGMTYPE=TP,SCHDTYP=PARALLEL,LANG=COBOL
  TRANSACT CODE=CALLSUB,PARLIM=0,MODE=SNGL,DCLWA=YES,          *
            MSGTYPE=(SNGLSEG,NONRESPONSE,1)
  APPLCTN GPSB=CCFCMD00,PGMTYPE=TP,LANG=COBOL
  APPLCTN GPSB=CCFRED00,PGMTYPE=TP,LANG=COBOL
  APPLCTN PSB=DBFSAMP1,PGMTYPE=BATCH
  APPLCTN PSB=DBFSAMP2,PGMTYPE=BATCH
  APPLCTN PSB=DBFSAMP4,PGMTYPE=TP
  TRANSACT CODE=FPSAMP2,MODE=SNGL,DCLWA=YES,                  *
            MSGTYPE=(MULTSEG,NONRESPONSE,1)
  APPLCTN PSB=DBFSAMP5,PGMTYPE=BATCH

```

Figure 52. Generated IMS sysgen macro statements

This output has been written to the specified gen source data set and can be edited at any time. Press the End key (usually, **PF3**) to return to the reverse sysgen menu.

Reverse security gen

The reverse security gen process re-creates all security gen source although it might not be in the same sequence as the security gen source that created the MATRIX data set.

If you select the reverse security gen option, the panel in the following figure is displayed:

```

REVERSE      IMS HP Sysgen Tools - Reverse Security Gen
Command ==> -----

Option ==> _
1 MATRIX      Generate IMS Security source from active MATRIX data set
2 User        Generate IMS Security source from user specified libraries

For option 1:
  IMSID ==> IMS8

For option 2 (Include quotes for fully qualified data set names):
  MATRIX DSN   ==> 'IMS710.MATRIXB'-----
  MODBLKS DSN  ==> 'IMS810.MODBLKSA'-----
  RESLIB DSN   ==> 'IMS810.SDFSRESL'-----
  IMS Suffix   ==> I

Output Data Set for Reverse Security Gen Process:
  Output DSN ==> STAGE1-----
                (Include quotes when entering a fully qualified DSNAME)

```

Figure 53. Initial panel for performing reverse security sysgen

The **Output DSN** field is required and must specify the data set name of an existing sequential data set (or member of a PDS) that the generated IMS sysgen source will be written to. DCB attributes are required to be RECFM=FB and LRECL=80.



Attention: Do not specify your existing sysgen source DSN. If you do, the specified data set will be replaced with IMS security gen source code that was generated from the MATRIX data set.

Choose the source you want to use for the reverse security gen from the following two options:

MATRIX

This option uses the active MATRIX data set as the source of the IMS security definitions. Use this option to re-create your last IMS security gens source, updated to include any changes from resource update lists that were installed. You must specify only the IMSID of the IMS system for which security gen source should be re-created.

USER

This option allows you to specify the data set names of the MATRIX, MODBLKS, and RESLIB data sets, and specify an IMS nucleus suffix. IMS HP Sysgen Tools uses the specified libraries as the source for the security definitions. You must supply the names of the MATRIX, MODBLKS, and RESLIB data sets, and the IMS nucleus suffix from which security gen source will be re-created.

After the security gen source is re-created, an ISPF browse session shows the generated security gen macros. An example of reverse MATRIX is shown in the following figure. Note that a comment is inserted at the beginning of the generated source to identify the date and requesting user ID of the reverse security gen.

```
BROWSE      P390M.STAGE1                               Line 00000000 Col 001 080
Command ==> _____ Scroll ==> CSR
***** Top of Data *****
* REVERSE MODBLKS GENERATED ON 2020.296 BY USER P390M
*
*)( PASSWORD IVP
  COMMAND DELETE
*)( PASSWORD PASSWORD
  TRANSACT DLETINV
  TERMINAL IVPPRT1
*)( TRANSACT IVTNO
  TERMINAL USER1
  TERMINAL USER2
*)( TRANSACT IVTNV
  TERMINAL USER1
  TERMINAL USER2
*)( TRANSACT TSTTRAN2
  TERMINAL SC0TCP07
*)( TERMINAL PMASTER
  COMMAND ACTIVATE
  COMMAND ALLOCATE
  COMMAND ASSIGN
```

Figure 54. Generated IMS security gen source statements

The data displayed in the browse session has already been written to the Output DSN as specified on the request panel. You can edit the output data set or you can use it as input to an IMS security gen or an HP Sysgen Fastgen process.

Chapter 9. Reviewing the HP Sysgen history log

The IMS HP Sysgen Tools log contains an audit trail of all changes to the environment introduced by the ISPF interface. The log shows all commands entered using the ISPF interface (except **/DISPLAY** commands and **QUERY** commands), shows storage zaps performed, changes to IMS resource or security definitions, and ACBLIB reloads. The log contains the time of each activity, as well as the resource update list name (where appropriate), and the user ID that performed the change or installed the resource update list.

Option 8 from the IMS HP Sysgen Tools Primary Options menu, [Figure 25 on page 57](#), allows you to review and act upon entries in the log.

```
LOG          IMS HP Sysgen Tools - HP Sysgen Log
Option ==>> -----
1  View      View HP Sysgen Update Log
2  Reverse   Create IMS Macro Definitions from the HP Sysgen Log
3  Maintain  Remove Old LOG Entries
4  Undo      Undo One or More Resource Updates
```

Figure 55. HP Sysgen history log menu

View

Use this option to review log entries that document each individual resource change and IMS command in the log. Use the Gen Source feature to update the log to show which resource updates have been included in the IMS sysgen source.

Reverse

Use this option to reverse log entries into IMS sysgen source and to generate macros and comments that can be used to update IMS sysgen source to make it consistent with the current system definition.

Maintain

Use this option to remove entries from the log that are no longer needed.

Undo

Use this option to create a resource update list that will reverse user-selected individual resource updates.

Topics:

- [“Synchronizing IMS sysgen source with IMS resource definitions” on page 83](#)
- [“Viewing the log” on page 84](#)
- [“Reversing log entries” on page 86](#)
- [“Maintaining the log” on page 88](#)
- [“Reversing changes \(undo\)” on page 90](#)

Synchronizing IMS sysgen source with IMS resource definitions

By using IMS HP Sysgen Tools, you can make changes to your IMS sysgen resources without actually running an IMS sysgen. However, doing this can cause problems when an IMS sysgen needs to be performed for maintenance or terminal definitions. There are two ways to manage your IMS sysgen source when you are using IMS HP Sysgen Tools to dynamically change IMS resource definitions.

One way to ensure that your IMS sysgen source is in sync with your executing IMS control region is to use Generate to create new IMS sysgen source every time you want to perform an IMS sysgen. IMS HP Sysgen Tools provides the capability to reverse your MODBLKS data set and create a full set of IMS sysgen source that will ensure that your sysgen source is in sync with your executing IMS system. When you use this option, however, any comments that you have in your IMS sysgen source are lost when the source is re-created from the MODBLKS data set.

Another way to maintain your IMS sysgen source is to update your sysgen source with each individual update that was performed by IMS HP Sysgen Tools in response to user-installed resource update lists. IMS HP Sysgen Tools provides two tools that can help manage sysgen source maintenance when using this method.

History log

The History log tracks that each resource update in the log was reflected by changing your IMS sysgen source. After your IMS sysgen source is updated for an entry in the log, use the Y line command on that log entry to update the GEN SRC flag to show that the update is included in your IMS sysgen source. For more information, see [“Viewing the log” on page 84](#).

Reverse log entry function

Use the IMS HP Sysgen Tools log reverse function to create IMS sysgen macros that will update your IMS sysgen source and track which resource update entries in the log are already included in your gen source. This method determines if there are any log entries that are not included in your IMS sysgen source. For more information, see [“Reversing log entries” on page 86](#).

Viewing the log

Use the View option to review log entries that document each individual resource change and IMS command in the log. You can use the Gen Source feature to update the log to show which resource updates have been included in the IMS sysgen source.

About this task

Complete the following steps to view the log:

1. Select option **1** from the IMS HP Sysgen Tools history log menu to display an empty log view panel. A valid IMSID is required to retrieve and display log entries.

```
LOG          IMS HP Sysgen Tools - HP Sysgen Log Information
Command ==>  _____ Scroll ==> CSR

  Primary Commands:          Line Commands:
    SORT Sort the Log Entries  S View Entry Details
    L Locate a Log Entry      Y Change GEN SRC to YES
                              N Change GEN SRC to NO

IMSID ==> IMS8

CMD  Function  Resource   Name      List      Userid      Time      GEN
                                           SRC

EeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeN
e Enter or verify the IMSID   e
e shown and press enter to   e
e display the History Log     e
e entries for the IMS system. e
DeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeM
```

Figure 56. Empty log view panel

After the IMSID is entered, log entries from the associated log are displayed. The entries are presented in descending time order, as shown in the following figure:

```

LOG          IMS HP Sysgen Tools - HP Sysgen Log Information      Row 1 to 33 of 205
Command ==> ----- Scroll ==> CSR

Primary Commands:          Line Commands:
  SORT Sort the Log Entries  S View Entry Details
  L  Locate a Log Entry      Y Change GEN SRC to YES
                              N Change GEN SRC to NO

IMSID ==> IMS9

CMD  Function  Resource  Name      List  Userid      Time      GEN
-    -        -        -        -    -        -        -    SRC
-    RELOAD   PSB       DFSSAM05  #A2   P390M      2020.087 17:51:51
-    RELOAD   DBD       DI21PART  #A2   P390M      2020.087 17:51:51
-    UPDATE   DATABASE  DI21PART  #A2   P390M      2020.087 17:51:51  NO
-    UPDATE   TRANSACT  CLOSE     #A2   P390M      2020.087 17:51:51  NO
-    UPDATE   TRANSACT  DISBURSE  #A2   P390M      2020.087 17:51:51  NO
-    DELETE   TRANSACT  MARK001   #A2   P390M      2020.087 17:51:51  NO
-    DELETE   PROGRAM  MARK001   #A2   P390M      2020.087 17:51:51  NO
-    AGN      AGN      RALPH     #A2   P390M      2020.087 17:51:51
-    AGN      AGN      RALPH     #A2   P390M      2020.087 17:51:51
-    TERMSEC  LTERM    SC0TCP10  #A2   P390M      2020.087 17:51:51
-    TERMSEC  LTERM    SC0TCP10  #A2   P390M      2020.087 17:51:51
-    TERMSEC  LTERM    SC0TCP06  #A2   P390M      2020.087 17:51:51
-    TERMSEC  LTERM    SC0TCP06  #A2   P390M      2020.087 17:51:51
-    TCOMMAND TRANSACT  CLOSE     #A2   P390M      2020.087 17:51:51
-    TCOMMAND TRANSACT  PART      #A2   P390M      2020.087 17:51:51
-    COMMAND  /STA     DB        P390M      2020.087 17:51:51
-    COMMAND  /STA     TRAN      P390M      2020.087 17:51:51
-    COMMAND  /STA     PGM       P390M      2020.087 17:51:51

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

```

Figure 57. Panel with Log entries

- Sort the log entries by using the **SORT** primary command followed by the column name. You can sort the log by any column name on the panel. For example, to sort the log entries by the user ID which installed each entry, enter SORT USERID.
- For IMS HP Sysgen Tools resource entries, you can track whether IMS sysgen source has been updated to reflect the change represented by a log entry. Enter the **Y** line command to change the **GEN SRC** field to YES for a sysgen update entry. You can use this to indicate that the sysgen source has been updated for this log entry. You can also use the **N** line command to change the **GEN SRC** field back to NO.
- Select a log entry by using the **S** line command to display the details of the change. The panel in [Figure 58 on page 86](#) shows an example of a sysgen resource change, including the IMS sysgen macro that reflects the updated resource definition and the old and new values of the resource attributes. Similar information is displayed for other resource updates. Security changes, IMS commands, Resource Update List commands (LIST-CMD entries), ACB reloads, and storage zaps display similar information about the updated information, including before and after values of attributes wherever appropriate.

```

LOG          IMS HP Sysgen Tools - HP Sysgen Log Information
Command ===> -----

The Transaction definition was updated to:
    TRANSACT CODE=SCOTT3,MAXRGN=255,SEGN0=65535,SEGSIZE=65535,      *
              PARLIM=32767,PROCLIM=(1,1),PRTY=(14,14,1),DCLWA=NO,    *
              ROUTING=YES,MSGTYPE=(MULTSEG,NORESPONSE,2),SCHD=4,    *
              AOI=TRAN

Parameter    OldValue  NewValue  Description
Tran Code    SCOTT3    SCOTT3    Transaction Code
PSB Name     SCOTT3    SCOTT3    Associated PSB Name
DCLWA        NO        NO        DC Log Write Ahead (YES or NO)
Edit Case    UC        UC        Upper Case (UC) or Upper/Lower Case (ULC)
EDIT Name    Transaction Edit Routine Module Name
FPATH        NO        NO        Fast Path Specification (NO, YES or 12-30720)
INQUIRY      YES       NO        Inquiry Mode (NO or YES)
RECOVER      NORECOV   RECOVER   Recoverable Transaction (RECOVER or NORECOV)
MAXRGN       255      255      Maximum regions (0-255)
MODE         MULT      MULT      Mode (SNGL or MULT)
MSGTYPE      MULTSEG   MULTSEG   Segments (SNGLSEG or MULTSEG)
RESPONSE     NO        NO        Response mode (NO or YES)
CLASS        2        2        Transaction Class (1-999)
PARLIM       32767    32767    Parallel Limit Count (NONE or 0-32767)
COUNT       1        1        PROCLIM Count (0-65535)
SECONDS      1        1        PROCLIM Time (0-65535)
PRIORITY1    14        14        Normal Priority (0-14)
PRIORITY2    14        14        Limit Priority (0-14)
PRIORITY3    1        1        Limit Count (1-65535)
ROUTING      YES       YES       Routing (NO or YES)
SCHD         4        4        Scheduling Option (1-4)
SEGN0        65535    65535    Number of Output Segments (0-65535)
SEGSIZE      65535    65535    Size of Output Segments (0-65535)
SERIAL       NO        NO        Serial Processing of Input Messages (NO or YES)
SPA SIZE     SPA SIZE    SPA SIZE  SPA Size (blank or 16-32767)
SPA TYPE     SPA TYPE    SPA TYPE  SPA Truncation Option (blank,RTRUNC,STRUNC)
RMT SYSID    RMT SYSID  RMT SYSID Remote SYSID (blank or 1-2036)
LCL SYSID    LCL SYSID  LCL SYSID Local SYSID (blank or 1-2036)
WFI          NO        NO        Wait for Input (No or YES)
AOI          TRAN     TRAN     Automated Operator (NO,YES,TRAN, CMD)

```

Figure 58. Information about a log entry

Reversing log entries

When an IMS sysgen is required for maintenance, a new release, or TM configuration changes, IMS application source macros (DATABASE, APPLCTN, TRANSACT, and RTCODE statements) should be updated to reflect the current configuration.

About this task

Complete the following steps to update the IMS application source macros:

1. Select option **7** from the IMS HP Sysgen Tools Primary Options menu, [Figure 25 on page 57](#).

A complete replacement of application IMS sysgen source macros is generated. To maintain existing IMS sysgen source, with comments intact, the reverse log entry function provides a report showing changes required to update IMS sysgen source to reflect all changes installed through resource update lists.

2. Select option **2** from the IMS HP Sysgen Tools history log menu to define the requirements for the IMS sysgen source report. The **Create sysgen source from log** panel is displayed:


```

LOG      IMS HP Sysgen Tools - Create IMS Sysgen Source from Log
Command ==> -----

Option  ==> _
1 DATE   Generate IMS Sysgen source for History entries by Date
2 GEN SRC Generate IMS Sysgen source for History entries with GEN SRC = N

For option 1 or 2:
  IMSID ==> ----

Output Data Set for Reverse Sysgen Process:
  Output DSN ==> -----
                    (Include quotes when entering a fully qualified DSNNAME)

For option 1: Specify Date range (current julian date is 2020.296)
  Start Date ==> 0000.000
  Stop Date  ==> 2020.212

```

Figure 59. Create sysgen source from log

3. Select option **1** to select log entries to reverse by date or select option **2** to select log entries by the setting of the GEN Source flag.
4. Specify the IMSID of the log that is to be used to select entries.
5. Specify an Output DSN. The Output DSN must be an existing data set with LRECL=80 and RECFM=FB.
6. If you selected option **1**, specify a date range.

If you select entries by date, you must specify a start and stop date for the entries. These dates must be Julian dates with a 4-digit year (for example, 2020.001 for January 1, 2020). The current Julian date is always shown on the panel.

After processing input entered on the Create IMS Sysgen Source from Log panel, [Figure 59 on page 87](#), IMS HP Sysgen Tools populates the data set with a report showing all resource adds, deletes, and updates that would be required for IMS sysgen source to reflect the online configuration.

The report, which is generated in IMS sysgen source format, shows each resource definition and comments reflecting information about all changes to the resource. DATABASE macros are listed first, and are sorted by the database name. Next, APPLCTN (program) resources are listed (in PSB name order), along with any associated transactions or route codes that were also updated. After all APPLCTN macros are listed, any TRANSACT or RTCODE macros changed by resource update lists, but not associated with a program definition that was updated by a resource update list, are shown.

[Figure 60 on page 88](#) shows an example of the format of a sysgen report. An asterisk is used in column 1 to designate a comment to the high level assembler, the utility that processes an IMS stage 1 sysgen. This means that comment lines can be included in the IMS sysgen source as shown in the report to reflect historical information about who changed a resource definition and when.

```

Menu      Utilities  Compilers  Help
BROWSE    P390M.STAGE1
Command ==> Macro Format Error
Scroll ==> CSR
***** Top of Date *****
*
* DATABASE AAA      WAS DELETED      BY P390M      ON 2020.119 07:30:37
*** DATABASE DBD=AAA,ACCESS=RD
*
* DATABASE DBSHR0    WAS UPDATED      BY P390M      ON 2020.119.07:30:59
* DATABASE DBSHR0    WAS UPDATED      BY P390M      ON 2020.118.22:42:44
  DATABASE DBD=DBSHR0,ACCESS=EX
*
* DATABASE DI21PART  WAS UPDATED      BY P390M      ON 2020.119 07:30:59
  DATABASE RESIDENT,DBD=DI21PART,ACCESS=EX
*
* APPLCTN DFSSAM01   WAS UPDATED BY P390M      ON 2020.119 02:32:57
* APPLCTN DFSSAM01   WAS UPDATED BY P390M      ON 2020.119 02:48:33
  APPLCTN PSB=DFSSAM01,PGMTYPE=BATCH,SCHDTYP=PARALLEL
*
* TRANSACT A         WAS UPDATED BY P390M      ON 2020.119 08:556:05
* THIS TRANSACTION ASSOCIATED WITH APPLCTN NAME DFSSAM01
  TRANSACTION CODE=A,PRTY=(0,0,65535),MODE=SNGL,DCLWA=YES,
  MSGTYPE=(MULTSEG,NONRESPONSE,1)
*
* APPLCTN DFSSAM02   WAS UPDATED BY P390M      ON 2020.119 02:32:57
* APPLCTN DFSSAM02   WAS UPDATED BY P390M      ON 2020.119 02:48:33
  APPLCTN PSB=DFSSAM02,PGMTYPE=TP,SCHDTYP=PARALLEL

```

Figure 60. Sysgen history report

Resources that were deleted by installation of a resource update list have three asterisks beginning in column 1.

In Figure 60 on page 88, the first entry includes comments about the deletion of database AAA, and the user ID and time stamp of the installation of the resource update list that performed the deletion. You can retain these report comments, which include an asterisk in column 1, in the IMS sysgen source as presented because the asterisk makes them a comment within the IMS gen source. Because the first entry in the report is a delete of database AAA, the macro is preceded by three asterisks, making this line a comment in the IMS sysgen source, as well.

The second entry shows a database, DBSHR0, which was updated in two resource update lists. It shows the user ID that installed each resource update list, as well as the time stamp when the resource update list was installed. The DATABASE macro that follows the comments shows the database as it should be defined to reflect the original definition and the two updates.

The first APPLCTN entry shows an example of an updated program definition. The two comments show the update user and time stamps, and the definition that follows shows how the APPLCTN macro should be coded to reflect the changes made in the two resource update lists that were installed. Following the APPLCTN macro is a TRANSACT definition for transaction A. This transaction appears in this location because it must follow the APPLCTN definition for the prior APPLCTN macro. The comment immediately preceding the TRANSACT macro for transaction A states that the transaction must be associated with PSB DFSSAM01, the prior PSB name in the report.

Following the comments is the TRANSACT macro, itself, as it should appear in the sysgen source.

Maintaining the log

The IMS HP Sysgen Tools log data set might become filled with resource update list entries. Also, you might want to remove entries from the log when the IMS sysgen source is updated to reflect the entries in the log. To remove log entries, use the log maintenance function.

About this task

Because the IMS HP Sysgen Tools log is used only for historical reporting, there is no requirement to maintain log entries for any reason other than the reporting functions documented in this section. The log is not used by IMS or IMS HP Sysgen Tools to maintain the sysgen definitions.

To remove entries from the log:

1. Select option **3** (Maintain) from the IMS HP Sysgen Tools History Log menu. The IMS HP Sysgen Tools log maintenance panel is displayed:

```
LOG          IMS HP Sysgen Tools - HP Sysgen Log Maintenance
Command ==> -----

Option ==>
1 DATE      Delete History entries by Date
2 GEN SRC   Delete History entries with GEN SRC = Y

For option 1 or 2:
  IMSID ==> ----

For option 1: Select resource type(s) to Delete
  Command
  _ Database / Program / Transaction / Route Code
  _ IMS Security (TCOMMAND / AGN / TERMSEC)

For option 1: Specify Date range (current julian date is 2020.088)
  Start Date ==> 0000.000
  Stop Date  ==> 2020.365
```

Figure 61. Maintaining an IMS HP Sysgen Tools log

2. Select a method for determining which log entries are to be deleted. You can either delete entries based on their date, or you can delete entries based on the setting of the GEN SRC flag.

1 (DATE)

Option **1** allows you to specify start and stop dates for log entries to be deleted.

If you select entries by date, you must specify the type of log entries to be deleted. Select any or all of the three types of log entries by placing a non-blank character next to the record type description. You must also specify a start and stop date for entries to be deleted. These dates must be Julian dates with a 4-digit year (for example, 2020.001 for January 1, 2020). The current Julian date always appears on the panel for reference.

2 (GEN SRC)

Option **2** allows you to delete only database, program, transaction, or route code add/delete/update records which have the GEN SRC field set to Yes (indicating that IMS sysgen source has been updated to reflect the change indicated by the log entry).

If you select option **2**, you need only to populate the **IMSID** field.

No Command, Reload, Zap, or IMS Security records are deleted.

3. The **IMSID** field is required for both options **1** and **2**. Enter a valid IMSID, which defines the HP Sysgen log data set to be updated by the maintenance process.
4. Press Enter.

The Log Status panel is displayed, which shows the number of log records before and after the log maintenance and the number of log entries that were removed.

```
LOG          IMS HP Sysgen Tools - HP Sysgen Log Maintenance
Command ==>

Completed removing records from the IOHLOG dataset.

Number of log records before cleanup . . . 7
Number of log records after cleanup . . . 0
Number of log records deleted. . . . . 7
```

Figure 62. Log Status panel

Reversing changes (undo)

You can use IMS HP Sysgen Tools to reverse changes to IMS resource and security definitions. By using the IMS HP Sysgen Tools history log, you can select specific resource or security updates, and generate a resource update list that reverses the effects of the selected log entries.

About this task

To use the UNDO function:

1. Select option **4** from the IMS HP Sysgen Tools History Log menu.

The IMSID selection panel for undo is displayed:

```
UNDO      IMS HP Sysgen Tools - Select Resource Updates to Undo
Command ===> _____

The UNDO option allows you to select History Log entries used to create a
Resource Update List which will reverse the effects of the selected entries.

IMSID    ===> IMS9

Enter the IMSID of the IMS system for which History Log entries will be
displayed. You will then be presented with a list of History Log entries,
from which you can mark entries with a "U" to create undo entries.

When finished marking entries to undo, you will specify a Resource Update List
name which will be used to hold the undo entries you selected.
```

Figure 63. The IMSID selection panel for Undo

2. Enter the IMSID for the resource updates that are to be backed out, and press Enter.

The Selecting Log Entries to Undo panel is displayed:

```
UNDO      IMS HP Sysgen Tools - Select Resource Updates to Undo Row 1 to 14 of 18
Command ===> _____ Scroll ===> CSR

Select entries to undo with a U and press Enter with no changes to continue.

      Primary Commands:          Line Commands:
      SORT Sort the Log Entries  S View Entry Details
      L Locate a Log Entry      U Create an UNDO Entry

CMD  Function  Resource  Name    List    Userid    Time          GEN
-    -        -        -        -        -        -            SRC
-    UPDATE   TRANSACT  ADDINV  ADDINV  P390M    2020.296 09:45:31 NO
-    ADD      DATABASE  ZZZ     DBDADD  P390M    2020.277 12:49:16 NO
-    ADD      DATABASE  LAB3    DBDADD  P390M    2020.277 12:49:16 NO
-    ADD      DATABASE  LAB2    DBDADD  P390M    2020.277 12:49:16 NO
-    ADD      DATABASE  LAB1    DBDADD  P390M    2020.277 12:49:16 NO
-    ADD      DATABASE  MMM     DBDADD  P390M    2020.277 12:49:16 NO
-    ADD      DATABASE  MMM     DBDADD  P390M    2020.215 06:53:09 NO
-    ADD      DATABASE  ZZZ     DBDADD  P390M    2020.215 06:53:09 NO
-    ADD      DATABASE  AAA     DBDADD  P390M    2020.215 06:53:09 NO
-    ADD      DATABASE  MMM     DBDADD  P390M    2020.196 19:44:15 NO
-    ADD      DATABASE  ZZZ     DBDADD  P390M    2020.196 19:44:15 NO
-    ADD      DATABASE  AAA     DBDADD  P390M    2020.196 19:44:15 NO
-    UPDATE   TRANSACT  IMSCMD  IMSCMD2 P390M    2020.196 11:41:09 NO
-    UPDATE   TRANSACT  IMSCMD  IMSCMD2 P390M    2020.196 09:50:05 NO
```

Figure 64. Selecting log entries to undo

This panel contains a table of history log entries of IMS resource updates that have been installed for the selected IMS subsystem. It also shows an example of a history log undo list. This panel is the same as the view log panel, except that IMS command entries are not included in the display, because those entries cannot be undone.

3. Use the **S** line command to view details of a log entry such as which attributes were changed and what the old and new values are.
4. Use the **U** line command to mark a log entry for undo processing.

You can continue to scroll through the list of log entries, select entries to review the details of a change, and mark entries for undo processing.

The marked entries will be used to create a new resource update list, which will have the effect of reversing the entries that you marked. Because a resource update list can have only a single entry that affects a given resource, make sure that you select only one log entry for a given resource. For example, the last two entries show updates to transaction IMSCMD. You should not select both of these entries to undo because this will generate two transaction updates in the resource update list that will be created. If you try to install the new resource update list, an error will result because transaction IMSCMD has two updates in the resource update list.

When multiple entries occur in the log, make sure that you select the correct entry to undo. For example, in [Figure 64](#) on [page 90](#), there are two entries in the panel that update transaction IMSCMD. Selecting the IMSCMD update entry with time stamp 11:41:09 will back out only that log entry. The IMSCMD update entry with time stamp 09:50:05 becomes the new entry because that definition of IMSCMD was active when the 11:41:09 entry was installed. If, however, you choose the 09:50:05 entry to back out, both the 09:50:05 and the 11:41:09 updates to transaction IMSCMD would be backed out, reverting the definition to the way it was before the 09:50:05 install.

5. Press Enter.

6. Press Enter again.

If you press Enter again without making any changes or scrolling, you will set the entries to be backed out and will proceed to the next panel, where you specify the name of the resource update list to be created.

```
UNDO      IMS HP Sysgen Tools - Select Resource Updates to Undo
Command ==> -----

You have selected 2      entries to undo.

Member ==> _____ IOHPDS Member Name where UNDO entries will be stored

Enter the Resource Update List name (member of the IOHPDS data set) that will
be created to hold entries that will undo the effects of the entries you
selected. This must be a new member of the IOHPDS data set.

Once you have successfully entered a new Member name, you will be placed in
Edit mode for the newly created Resource Update List. You can review the
contents of the generated Resource Update List entries before saving the new
Resource Update List.

Press Enter to create the Resource Update List.
Press the End Key to cancel.
```

Figure 65. Specify the undo resource update list member name

7. Specify a resource update list name where the undo entries will be created.

The member name that you specify must be a new member name in the IOHPDS data set. If an existing member name is entered, a warning message will be displayed, and you must change the member name to a name that is not already in use.

After you specify a valid member name, the edit panel is displayed:

```

EDIT          IMS HP Sysgen Tools - Update List Entries          Row 1 to 2 of 2
Command ==>> ----- Scroll ==>>
CUR
IMSID ==>> IMS9 (Target IMSID - Required)
Comment ==>> UNDO-----

Primary Commands:          Line Commands:
  Ins Insert an Entry      D Delete an Entry      S Edit an Entry
  COPY Copy an Update List I Insert an Entry      R Replicate an Entry
  CAN Cancel (do not
save)

CMD  Function Resource  Name
-   UPDATE   TRANSACT  ADDINV
-   UPDATE   TRANSACT  IMSCMD
***** Bottom of data *****

```

Figure 66. Editing the undo resource update list

8. Review the entries that were generated by the undo process and make changes to the entries, or add and delete entries from the update list.
9. Press End (**PF3**) to save the new resource update list.

You can now verify and install the update list or leave the update list for installation at a later time.

Chapter 10. Issuing IMS commands

IMS HP Sysgen Tools allows you to enter an IMS command and receive the output of the command.

Use option **C** from the Primary Options menu, [Figure 25 on page 57](#), to enter IMS commands. Specify an IMSID or a group name and an IMS type-1 or type-2 command to see results displayed as in the following figure:

```
CMD                                     Line 00000000 Col 001 080
Command ===> _____ Scroll ===> CSR

Target ===> IMS9           (IMSID or group name)
IMS CMD ===> /DIS A_____
-----

Enter an IMSID or a group name and an IMS type-1 or type-2 command to issue
a command. To refresh a command, type GO on the Command line.

***** Top of Data *****
/DIS A
  REGID JOBNAME  TYPE  TRAN/STEP PROGRAM  STATUS          CLASS
    1 IMS9M001  TP      NONE          WAITING        1, 2, 3, 4
    JIMPRGN    JMP      NONE
    JBPRGN     JBP      NONE
    BATCHREG   BMP      NONE
    DBTRGN     DBT      NONE
    IMS9DBRC   DBRC
    IMS9DLI    DLS
VTAM ACB OPEN          -LOGONS ENABLED
IMSLU=P390.IMS9PPC     APPC STATUS=ENABLED  TIMEOUT= 0
OTMA GROUP=OTMAGRP9   STATUS=ACTIVE
APPC/OTMA SHARED QUEUE STATUS - LOCAL=INACTIVE  GLOBAL=INACTIVE
APPC/OTMA RRS MAX TCBS - 40 ATTACHED TCBS - 1 QUEUED RRSWKS- 0
APPLID=IMS9          GRSNAME=          STATUS=DISABLED
LINE ACTIVE-IN - 1 ACTIV-OUT - 0
NODE ACTIVE-IN - 0 ACTIV-OUT - 0
LINK ACTIVE-IN - 0 ACTIV-OUT - 0
*05296/191856*
```

Figure 67. Command output

You can scroll the output by using standard ISPF scroll keys. You can enter another command on the panel. The output of that command will replace that of the initial command.

To re-issue the previous command, enter the **GO** command on the command line and press Enter. The updated results are displayed. Any IMS commands that are issued this way (other than **/DISPLAY** commands and **QUERY** commands) are logged in the HP Sysgen log for the specified IMSID.

Chapter 11. Dynamic Resource Definition (DRD) status

By using the ISPF panel provided by IMS HP Sysgen Tools, you can query the status of the Dynamic Resource Definition (DRD) and the IMS resource definition (IMSRSC) repository, as well as information about the system RDDSs or the IMSRSC repository that IMS uses.

If you select this ISPF option and specify an IMS system that has DRD disabled, the DRD status panel will indicate that DRD is disabled. If you specify an IMS system that has DRD enabled, the DRD status panel will list all the system RDDSs or the IMSRSC repository. The panel shows a list of the status and the last update time stamp for each RDDS or IMSRSC repository.

To display the DRD status panel, select option **D (DRD)** from the IMS HP Sysgen Tools main menu. Complete the prompt to enter an IMSID that is known to IMS HP Sysgen Tools.

If DRD is enabled and IMSRSC repository is not enabled, the following panel is displayed:

```
DRD          IMS HP Sysgen Tools - DRD Status          Row 1 to 3
Command ==>  _____ Scroll ==>

Enter IMSID ==> IMS1

Dynamic Resource Definition (DRD) Status . . . . . ENABLED
IMS resource definition (IMSRSC) repository Status . . DISABLED

The IMS System Resource Definition Data Set (RDDS) names are listed below.
Note that if DRD is inactive, there will not be any RDDS data set names shown.

Resource Definition Data Set Name      Status or Timestamp
IMS11.IMS1.RDDS1                      2020.107 22:31:35.479699-UTC
IMS11.IMS1.RDDS2                      2020.102 16:57:32.556037-UTC
IMS11.IMS1.RDDS3                      2020.102 17:26:30.258770-UTC
***** Bottom of data *****
```

Figure 68. DRD Status panel example 1

If DRD and IMSRSC repository are both enabled, the following panel is displayed:

```
DRD          IMS HP Sysgen Tools - DRD Status          Row 1 to 1
Command ==>  _____ Scroll ==>

Enter IMSID ==> IMS1

Dynamic Resource Definition (DRD) Status . . . . . ENABLED
IMS resource definition (IMSRSC) repository Status . . ENABLED

The IMSRSC repository name is listed below. Note that if the target IMS
system is not running, there will not be any IMSRSC repository name shown.

IMSRSC Repository Name                Timestamp
IMS11.IMS1.REPO.IMPRI.RMD             2020.107 22:31:34.479699-UTC
***** Bottom of data *****
```

Figure 69. DRD Status panel example 2

Chapter 12. Storage functions

IMS HP Sysgen Tools provides functions that address use of MVS virtual storage. By using these functions, you can:

- Review MVS virtual storage area boundaries and use, and receive information such as private area sizes and CSA utilization.
- Review CSA utilization by subpool and key.
- View virtual storage being used by an IMS control region, and change that storage.

Access to these functions is provided by selecting option **S** (Storage) of the Primary Options menu, (see [Figure 25 on page 57](#)). Selecting option **S** displays the menu shown in the following figure:

```
STORAGE      IMS HP Sysgen Tools - Virtual Storage Utilities
Option ==>-----
1 Map          Virtual Storage Map for this MVS system
2 CSA          Common Storage allocation by subpool and key
3 Storage      IMS Control Region Storage Display/Alter
```

Figure 70. Storage menu

The following options are available:

- 1**
Provides access to virtual storage boundaries and usage.
- 2**
Provides access to CSA usage by subpool and key.
- 3**
Provides access to the virtual storage Display and Alter function.

Topics:

- [“Option 1. Virtual storage map for this MVS system” on page 97](#)
- [“Option 2. CSA map for this MVS system” on page 98](#)
- [“Option 3. Virtual storage display and alter” on page 99](#)
- [“Storage display panel” on page 100](#)
- [“Storage Zap panel” on page 101](#)
- [“Zap Verify panel” on page 102](#)

Option 1. Virtual storage map for this MVS system

Option **1** of the Storage menu provides information about MVS virtual storage configuration for the system where the TSO user is logged on. It provides the length of storage areas as well as the starting and ending addresses of those areas. For CSA and SQA areas of storage, it also provides information about the percent utilization of the area of storage.

[Figure 71 on page 98](#) shows an example of the information displayed when you select option **1**.

SMAP IMS HP Sysgen Tools - Storage Map				
Command ==> -----				
Virtual Storage Area	Length	Start Address	End Address	Pct Alloc
Extended Private Area	1870M	0B200000	7FFFFFFF	
Extended CSA (Common Storage Area)	80736K	06328000	0B1FFFFF	56.6%
Extended Link Pack Area				
MLPA (Modifiable Link Pack Area)		00000000	00000000	
FLPA (Fixed Link Pack Area)	12288	06325000	06327FFF	
PLPA (Pageable Link Pack Area)	57760K	02ABD000	06324FFF	
Extended SQA (System Queue Area)	13932K	01D22000	02ABCFFF	40.7%
Extended Nucleus	13448K	01000000	01D21FFF	
----- 16M -----				
Nucleus	208K	00FCC000	00FFFFFF	
SQA (System Queue Area)	1504K	00E54000	00FCBFFF	19.1%
Link Pack Area				
PLPA (Pageable Link Pack Area)	2068K	00C4F000	00E53FFF	
FLPA (Fixed Link Pack Area)		00000000	00000000	
MLPA (Modifiable Link Pack Area)		00000000	00000000	
CSA (Common Storage Area)	5436K	00700000	00C4EFFF	28.9%
Private Area	7168K	00000000	006FFFFF	

Figure 71. Virtual storage map

This panel shows the virtual storage areas, the length of each area, and the starting and ending virtual storage addresses. For common storage pools (CSA, ECSA, SQA, and ESQA), the panel shows the percent of the area in use.

The **Pct Alloc** column shows the percent of the storage area that is allocated and used. Common areas are always allocated in 4K storage areas, even if an application requests 1K area of the pool. The percent allocated column shows only the storage actually being used. In this case, it would show that 3K of the 4K area is free.

This information can be useful for determining private area sizes that are available to applications, as well as showing the utilization of the CSA and ECSA storage areas. IMS uses significant amounts of both CSA and ECSA; therefore, this information might be useful when reviewing IMS tuning parameters.

Option 2. CSA map for this MVS system

Option **2** of the Storage menu provides information about common storage area (CSA) and extended common storage area (ECSA) storage allocated by subpool and storage protect key.

The following figure shows an example of the displayed information when you select option **2**:

CSA IMS HP Sysgen Tools - CSA Utilization by Subpool and Key									
Command ==>									
Storage		Total Size		Allocated		Percent			
Above the line ECSA		749999K		110720K		14.7%			
Below the line CSA		4435K		1816K		40.9%			
Sub-Pool	MVS	JES					IMS	USER	
	KEY0	KEY1	KEY2	KEY3	KEY4	KEY5	KEY6	KEY7	KEY8+
								More:	+
227	136K	148K	0K	0K	0K	8K	2180K	1476K	0K
228	1120K	32K	172K	0K	56K	2672K	1176K	1256K	0K
231	1032K	28K	0K	0K	0K	2364K	2480K	35280K	0K
241	45108K	3284K	116K	0K	1428K	856K	2612K	5700K	0K
SQA	0K	0K	0K	0K	0K	0K	0K	0K	0K
Total	47396K	3492K	288K	0K	1484K	5900K	8448K	43712K	0K
----- 16M Line -----									
227	28K	0K	0K	0K	0K	0K	12K	48K	0K
228	40K	4K	0K	0K	0K	0K	56K	80K	0K
231	4K	0K	0K	0K	0K	0K	12K	456K	0K
241	624K	48K	40K	0K	8K	8K	12K	336K	0K
SQA	0K	0K	0K	0K	0K	0K	0K	0K	0K

Figure 72. CSA utilization by subpool and key

This panel shows four CSA subpools and any overflow SQA allocated from CSA storage. In the center of the panel, you can see one set of subpools above and one set below the 16 megabyte line. The subpools above the 16M line are in the ECSA storage, and the subpools shown below the 16M line are in the CSA storage.

In addition, the total size of ECSA and CSA, along with the amount and percentage of the storage areas, are shown at the top of the panel.

Option 3. Virtual storage display and alter

Option **3** of the Storage menu provides access to the IMS control region storage Display and Alter function. This option allows you to display contents of storage in the IMS, DLISAS, or DBRC address spaces.

Storage request panel

The storage request panel allows you to display storage in one of the IMS address spaces.

When option **3** of the Storage menu is selected, the Storage Request panel is displayed, as shown in the following figure:

```

STOR      IMS HP Sysgen Tools - Storage Display and Zap      Row 1 to 2 of 2
Command ==> ----- Scroll ==> PAGE

Enter New Storage Request Information:

      IMSID ==> ----- (The IMSID of an active IMS system)
Address Space ==> ----- (IMS, DLISAS, DBRC)
      Address ==> -----
      Length ==> ----- (In hex bytes)
      Comment ==> -----

Past Storage Display Information (S=Redisplay, D=Delete)

CMD  IMSID  Region  Length  Storage request
-    IMS8   IMS    00001060  SCD
-    Address: 00BD0840 Comments:
-    IMS9   IMS    00000090  TRAN (PART)
-    Address: 09ADBAF0 Comments:
***** Bottom of data *****

```

Figure 73. Storage request panel

The storage request panel allows you to display storage in one of the IMS address spaces. You can specify a request by using the five entry fields in the panel. These fields are described as follows:

IMSID

The IMSID of an IMS subsystem that is defined to IMS HP Sysgen Tools and is currently active.

Address Space

The address space that contains the storage to be displayed. This must be specified as IMS DLISAS, or DBRC.

Address

The address of the storage to be displayed. IMS HP Sysgen Tools allows you to use symbolic values when specifying the address. For details on how to specify an address, see [“Specifying an address” on page 100](#).

Length

The length of storage to be displayed. If you specify the address as a symbolic address, IMS HP Sysgen Tools determines the length of the control block or module you request. If you want IMS HP Sysgen Tools to determine the length to be displayed, leave the **Length** field blank.

Comment

This is an optional field that you can use to document the storage being displayed. It is saved in Past Storage Display Information in the bottom portion of the panel.

You can use Past Storage Display Information entries in the following ways:

- Select one of the entries and retrieve storage from the requested IMS system.
- Delete entries in the table by entering a **/D** line command.
- Update the **Comments** field by entering or updating the information in the **Comments** field.

Specifying an address

You can specify the **Address** field of the Storage Request panel as a hexadecimal address or as a symbolic address.

IMS HP Sysgen Tools supports symbolic values that can be used in the **Address** field. The following symbolic names are supported:

Table 8. Valid symbolic values for Address field of Storage Request panel

Value	Description
CVT	Displays the MVS communication vector table
SCD	Displays the IMS system contents directory
MOD (name)	Displays the specified module name
CLB(name) or NODE(name)	Displays the CLB for the node name entered
CNT(name) or LTERM(name)	Displays the CNT for the LTERM name entered
SMB(name) or TRAN(name)	Displays the SMB for the transaction name entered
DDIR(name) or DBD(name)	Displays the DDIR for the database name entered
PDIR(name) or PSB(name)	Displays the PDIR for the PSB name entered
RCTE(name)	Displays the RCTE for the route code name entered
LINK(number)	Displays the LLB for the MSC link number entered
MSPLINK(name)	Displays the LCB for the MSPLINK name entered
MODLIST	Displays a list of all modules loaded in the target address space

In addition to the symbolic names in this table, you can include offsets and indirection. An offset is specified by adding a plus (+) or minus (-) after an address followed by a hexadecimal number. Indirection causes the four bytes at the specified address to be used as the address to be displayed. The percent sign (%) indicates that the four-byte address is to be treated as a 24-bit address, while a question mark (?) indicates that the four-byte address is to be treated as a 31-bit address.

Combining the symbolic address with offset and indirection allows the **Address** field to become a powerful storage tool. For example, address **SCD+1D8?** causes IMS HP Sysgen Tools to find the IMS SCD, go to offset 1D8 of the SCD, and then use the 31-bit address at offset 1D8 as the starting address of storage to be displayed. In an IMS 13 environment, this would display the first PDIR control block defined in the last IMS sysgen.

Storage display panel

After a valid request is entered on the Storage Request panel, storage is displayed, and the panel shows hexadecimal and text format displays of the storage requested, as well as the address and offset on each line.

You can also use the indirection operators (%) for a 24-bit address or ? for a 31-bit address) on any fullword on the panel to display the storage at the address in that fullword.

The following figure shows the Storage Display panel:

```

STOR      IMS HP Sysgen Tools - Storage Display and Zap  Row 1 to 16 of 16
Command ==> ----- Scroll ==> PAGE

```

```

Primary Commands:
ZAP Switch to screen where changes to storage vaues can be entered

```

```
Storage display: SCD+1D87
```

096A5A10	+0000	-	00000000	-	00000000	-	C2C3D4C9	-	E5D7E2F1	BCMIVPS1	
096A5A20	+0010	-	00000000	-	00041600	-	005B005C	-	FFFF0026	\$.*....	
096A5A30	+0020	-	40020000	-	09626340	-	096762F0	-	096A5A58	0.!!	
096A5A40	+0030	-	0040000B	-	00000000	-	00000000	-	00000000		
096A5A50	+0040	-	00000000	-	00000000	-	00000000	-	00000000		
096A5A60	+0050	-	C3C1D3D3	-	E2E4C240	-	00000000	-	20000000		CALLSUB	
096A5A70	+0060	-	00030003	-	FFFF0000	-	80240000	-	00000000		
096A5A80	+0070	-	00000000	-	096A5AA0	-	00000003	-	00000000	 !.....	
096A5A90	+0080	-	00000000	-	00000000	-	00000000	-	00000000		
096A5AA0	+0090	-	00000000	-	00000000	-	C3C3C6C3	-	D4C4F0F0	CCFCMD00	
096A5AB0	+00A0	-	00000000	-	20000000	-	00030003	-	FFFF0000		
096A5AC0	+00B0	-	80200000	-	00000000	-	00000000	-	096A5AE8	 !Y	
096A5AD0	+00C0	-	00000003	-	00000000	-	00000000	-	00000000		
096A5AE0	+00D0	-	00000000	-	00000000	-	00000000	-	00000000		
096A5AF0	+00E0	-	C3C3C6D9	-	C5C4D6F0	-	00000000	-	20000000		CCFRED00.....	
096A5B00	+00F0	-	00030003	-	FFFF0000	-	80200000	-	00000000		

Figure 74. Storage display panel

The panel shows the address of the storage in the first column and the offset from the beginning of the display in the second column. The next four columns are 16 bytes of storage at that address. The last column is the EBCDIC text representation of the 16 bytes of storage.

Preceding each hexadecimal word of storage is a column where an indirection operator can be placed. Placing a percent sign (%) before a word causes that word to be treated as a 24-bit address, and causes the storage at that address to be displayed.

From the storage display panel, you can press the End key (typically **PF3**) to return to the Storage Request panel, or enter the **/ZAP** command on the **Command** line. The **/ZAP** command allows you to change the storage currently displayed.

Storage Zap panel

The Storage Zap panel allows you to update storage displayed on the panel.

The Storage Zap panel, shown in Figure 75 on page 102, allows you to type over any of the hexadecimal storage values. This is the first step in the storage alter process.

```

STOR      IMS HP Sysgen Tools - Storage Zap          Row 1 to 16 of 16
Command ==> ----- Scroll ==> PAGE

```

```

Primary Commands:
GO Display the updates you've requested

```

Storage display: SCD+1D8?

096A5A10	+0000	00000000	00000000	C2C3D4C9	E5D7E2F1BCMIVPS1
096A5A20	+0010	00000000	00041600	005B005C	FFFF0026\$.*....
096A5A30	+0020	40020000	09626340	096762F0	096A5A580.!!
096A5A40	+0030	0040000B	00000000	00000000	00000000
096A5A50	+0040	00000000	00000000	00000000	00000000
096A5A60	+0050	C3C1D3D3	E2E4C240	00000000	20000000	CALLSUB
096A5A70	+0060	00030003	FFFF0000	80240000	00000000
096A5A80	+0070	00000000	096A5AA0	00000003	00000000 !.....
096A5A90	+0080	00000000	00000000	00000000	00000000
096A5AA0	+0090	00000000	00000000	C3C3C6C3	D4C4F0F0CCFCMD00
096A5AB0	+00A0	00000000	20000000	00030003	FFFF0000
096A5AC0	+00B0	80200000	00000000	00000000	096A5AE8 !Y
096A5AD0	+00C0	00000003	00000000	00000000	00000000
096A5AE0	+00D0	00000000	00000000	00000000	00000000
096A5AF0	+00E0	C3C3C6D9	C5C4D6F0	00000000	20000000	CCFRED00.....
096A5B00	+00F0	00030003	FFFF0000	80200000	00000000

Figure 75. Storage zap panel

To update the storage that IMS is using, simply type over the current values displayed on the Zap panel with new values. Entering the values on this panel does not cause the storage to be updated until you verify the updates on the next panel.

You can press the End key (typically, **PF3**) to return to the storage display panel, or update one or more hexadecimal values on the panel, and enter the **/GO** command on the Command line. The **/GO** command provides a summary of the changes made and allows you to verify them before installing the changes to the storage values.

Zap Verify panel

The Zap Verify panel shows all changes that were entered on the Zap panel. It allows you to verify that the changes were what you intended.

An example of the Zap Verify panel is shown in the following figure:

```

STOR      IMS HP Sysgen Tools - Storage Zap Summary    Row 1 to 2 of 2
Command ==> ----- Scroll ==> PAGE

```

```

Primary Commands:
ZAP Update the storage as shown

```

Storage Request: SCD+1D8?

Address	Offset	Old Hex Value	Old Text	New Hex Value	New Text
096A5A20	+0010	00000000	...	FFFFFFFF	...
096A5A68	+0058	00000000	...	FFFFFFFF	...

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

Figure 76. Zap verify panel

The Zap Verify panel displays old and new values for each storage change that was entered on the Storage Zap panel. This panel shows the address and offset as well as the old and new hexadecimal and text values of all updated storage values.

You should carefully review the information displayed on the Zap Verify panel. If there are unintended or incorrect updates, use the End key (typically, **PF3**) to return to the Storage Display panel. If the changes are correct, enter the **/ZAP** command on the Command line to update the storage values.



Attention: If you change a storage value, the results may be unpredictable. Be sure that you understand all implications of a storage change before you update storage values.

Chapter 13. Generating JCL for batch utilities

The IMS HP Sysgen Tools ISPF interface includes a function that can be used to generate JCL for many of the IMS HP Sysgen Tools batch utilities.

Option **U** (Utilities) on the IMS HP Sysgen Tools Primary Options menu provides access to this function.

As shown in the following figure, the JCL Generator menu shows the batch utilities that are available through this process.

```
JCL          IMS HP Sysgen Tools - JCL Generator
Option ==>  -----

 0 Setup      Set Data Set Names used in Generated JCL
 1 Fastgen    Perform a Fast IMS MODBLKS Sysgen
 2 JCLIN      Create JCLIN from a MODBLKS data set
 3 Verify     Verify a Resource Update List in Batch
 4 Install    Install a Resource Update List in Batch
 5 Synchronize Create a Resource Update List to Synchronize Gen Source
 6 Convert    Convert IMS sysgen source to a Resource Update List
 7 Compare    Compare two sets of IMS MODBLKS data sets
 8 Reverse    Create IMS Sysgen Source from IMS INCORE/MODBLKS/RDDS/REPO
 9 Search     Search IMS and generate corresponding Sysgen source

IMSID ==> IMS9
```

Figure 77. Utilities menu for generating JCL for running batch utilities

Topics:

- [“Setting up to use the JCL generator” on page 103](#)
- [“Using the JCL generator” on page 104](#)

Setting up to use the JCL generator

Before using any of the other options, you should use option **0** to specify a JOB card and provide the data set name of the SIOHLINK library which should be used by the generated jobs. Select option **0** to provide this required information to IMS HP Sysgen Tools.

If you select a different option before selecting option **0**, the Setup panel will be displayed before you can proceed.

The following figure shows an example of a completed setup screen:

```
UTIL          IMS HP Sysgen Tools - Utilities
Command ==>  -----

JOB Card statements:
//IOHJOB JOB (ACCT#),MARKA,CLASS=A,MSGCLASS=X,NOTIFY=P390M,-----
// REGION=4M-----
//*-----
//*-----

HP Sysgen Load Library ==> IMS.IOH240.SIOHLINK-----
                        (fully qualified dsn with no quotes)

Enter required JOB card information and the data set name of the HP Sysgen
Load Library, and press the End Key to save this information.
```

Figure 78. JCL generator setup screen for running batch utilities

When initially displayed, the Setup panel has no JOB card JCL or the data set name for the load library. You should enter valid JOB card information on the four lines provided, and enter the fully-qualified data set name of the SIOHLINK data set. Press the Save key (usually **PF3**) to save this information in your ISPF profile, where it will be retained for future use.

Using the JCL generator

To use the JCL Generator, return to the JCL Generator menu.

The JCL Generator menu is shown in [Figure 77 on page 103](#).

To create JCL, simply specify the IMSID for which you want to create JCL, and then select the option number corresponding to the batch utility you want to run.

The IMSID must be defined for use by IMS HP Sysgen Tools through the IMSID Setup process.

The batch utilities for which the JCL Generator will produce JCL include the following:

Fastgen

The Fast IMS sysgen utility, which performs a single step IMS MODBLKS stage 1, stage 2, and security gen.

JCLIN

The IMS HP Sysgen Tools JCLIN Generator, which generates an IMS stage 2 job stream that can be used by the SMP/E JCLIN function.

Verify

The batch Resource Update List utility, which verifies a resource update list.

Install

The batch Resource Update List utility, which installs a resource update list.

Synchronize

The stage 1 convert utility for converting sysgen macro to resource update list, which synchronizes your IMS stage 1 sysgen source with a running IMS subsystem.

Convert

The stage 1 convert utility for converting sysgen macro to resource update list, which converts a subset of IMS sysgen source into a resource update list.

Compare

Compares two sets of MODBLKS and MATRIX data sets.

Reverse

Generates IMS sysgen source from either an active IMS system or from the active MODBLKS, RDDS, or IMSRSC repository data set for an IMS subsystem.

Search

Searches definitions of databases, programs, transactions, and route codes in active IMS system control blocks (CORE) or data sets (MODBLKS, RDDS, or IMSRSC repository) for user-specified search words, and generates corresponding sysgen source macros (DATABASE, APPLCTN, TRANSACT, and RTCODE).

When you select a function and press Enter, IMS HP Sysgen Tools displays a batch job in an ISPF Edit session. You can use the **CREATE** or **REPLACE** ISPF command to save the generated JCL, make changes to the JCL using standard ISPF Edit commands, or use the ISPF **SUBMIT** command to submit the batch job for processing.

When you are finished with the generated JCL, press the End key (usually, PF3) to return to the JCL generator menu.

Important: You must use the **CREATE** or **REPLACE** ISPF command to save the generated JCL, or it is discarded.

It is recommended that you always review generated JCL before submitting it. In the example in [Figure 79 on page 105](#), Fastgen JCL was created by the JCL generator. All data set names were retrieved from the IMSID options for the selected IMS subsystem, but in some jobs, certain data set names may not be stored in the IMSID options. In such cases, the JCL generator typically creates JCL symbols, which are placed at the top of the JCL. Options that can be documented as JCL symbols are also placed at the top of the job, such as the **TARGET= JCL symbols** shown in [Figure 79 on page 105](#).

When control card input is required for a utility, the JCL generator typically places question marks in a control card that requires user input. You should always review any control cards in generated JCL to ensure that the options you want to process are specified.

An example of generated JCL is shown as follows:

```

EDIT                                         Columns 00001 00072
Command ==>                               Scroll ==> CSR
***** ***** Top of Data *****
000001 //IOHJOB   JOB (ACCT#),MARKA,CLASS=A,MSGCLASS=X,NOTIFY=P390M,
000002 // REGION=4M
000003 //*
000004 //*
000005 //*****
000006 //*
000007 //*          IMS HP SYSGEN FASTGEN BATCH JCL FOR IMS IMS9
000008 //*
000009 //* SPECIFY THE FOLLOWING VARIABLES:
000010 //*
000011 // SET TARGET=S                      TARGET LIBRARIES TO BE UPDATED (S,I,A,B)
000012 //*
000013 //*****
000014 //FGEN      EXEC PGM=IOHFGEN,PARM=' IMSID=IMS9,TARGET=(&TARGET) '
000015 //STEPLIB   DD DSN=IMS.IOH240.SIOHLINK,DISP=SHR
000016 //        DD DSN=IMS.SDFSRESL,DISP=SHR
000017 //IOHOPT   DD DSN=IOH.IOHOPT,DISP=SHR
000018 //IOHPRINT DD SYSOUT=*
000019 //IMSGEN    DD SYSOUT=*
000020 //SECGEN    DD SYSOUT=*
000021 //IMSRPT   DD SYSOUT=*
000022 //SECRPT   DD SYSOUT=*
000023 //SYSABEND DD SYSOUT=*
000024 //
***** ***** Bottom of Data *****

```

Figure 79. Sample generated JCL for running batch utilities

Related information

Converting IMS sysgen macros to resource update list entries in batch

IMS HP Sysgen Tools includes a utility that you can use to convert IMS sysgen macros to IMS HP Sysgen Tools resource update list entries.

Using the Batch Update List utility

By using the Batch Update List utility, you can verify or install an IMS HP Sysgen Tools resource update list in a batch job.

Using the Fast Sysgen utility

The Fast Sysgen utility can perform an IMS MODBLKS sysgen and IMS security gen in a single batch step.

Using the JCLIN Generator

The JCLIN Generator provides a way to create SMP/E JCLIN input from a MODBLKS data set. This allows you to run a JCLIN before SMP/E maintenance is applied.

Using the Sysgen Compare utility

IMS HP Sysgen Tools includes the Sysgen Compare utility, which lets you compare two sets of IMS control blocks. You can use this utility to verify that two sets of MODBLKS and MATRIX modules are exactly the same.

Using the Batch Reverse Sysgen utility

The IMS HP Sysgen Tools generates HP sysgen source macros from either the incore IMS control blocks or from the active IMS MODBLKS, RDDS, or IMSRSC repository data set.

Part 4. Installing IMS resources by using a resource update list

The IMS HP Sysgen Tools resource update list provides the capability to create a group of IMS sysgen changes to be implemented simultaneously.

A *resource update list* is a group of IMS changes and commands that are implemented simultaneously and that provide incremental sysgen changes.

Topics:

- [Chapter 14, “Managing a resource update list ,” on page 109](#)
- [Chapter 15, “Editing a resource update list,” on page 111](#)
- [Chapter 16, “Verifying a resource update list,” on page 143](#)
- [Chapter 17, “Installing a resource update list,” on page 147](#)
- [Chapter 18, “Converting IMS sysgen macros to resource update list entries in batch,” on page 153](#)
- [Chapter 19, “Using the Resource Update List Generator,” on page 159](#)
- [Chapter 20, “Using the Batch Update List utility ,” on page 171](#)

Chapter 14. Managing a resource update list

A resource update list is created by one user and then, later, installed by a different user. Each resource update list entry defines an action to be taken when the resource update list is installed.

The types of actions that can be performed by the resource update lists include:

- Adding, deleting, updating, or renaming an IMS resource (database, program, transaction, or route code) definition
- Reloading an IMS ACBLIB member
- Reloading a Data Entry Database (DEDB) randomizer module
- Issuing an IMS command
- Updating an IMS terminal security for an LTERM
- Updating an IMS Application Group Name (AGN) definition

To create a resource update list, you can use the IMS HP Sysgen Tools ISPF interface.

The Edit function allows you to define up to 32,000 individual resource update list entries. Each entry defines an action to be taken when the resource update list is installed. You can perform several types of updates, including the following:

- Add, delete, update, or rename an IMS resource (database, program, transaction, or route code) definition
- Reload an IMS ACBLIB member
- Reload a Data Entry Database (DEDB) randomizer module
- Issue an IMS command
- Update IMS terminal security for an LTERM
- Update an IMS Application Group Name (AGN) definition
- Update IMS Transaction Command security

You can use the editor to view and update existing definitions. After all related IMS resource changes are defined, the entries are saved as a single resource update list.

You can use the Resource Update List Generator to create or delete a resource update list. For details, see [Chapter 19, “Using the Resource Update List Generator,” on page 159](#).

You can verify that the changes that are defined in a resource update list are compatible with a specified IMS system or group of IMS systems. When you use the Verify option, checks are performed to ensure that the entries in a resource update list are compatible with the target IMS subsystem(s); for example, to ensure that remote and local MSC SYSIDs are valid. In fact, a single resource update list can be verified and installed in multiple IMS subsystems without any changes to the resource update list. Verification of an update list is optional. The installation process performs an internal verification prior to making any changes.

Installation of a resource update list is initiated through the ISPF Install option. However, the actual installation runs in an APPC/MVS initiator on the MVS system where each IMS subsystem is running. The IMS subsystem must be active for a resource update list to be installed.

The installation process follows these procedures:

1. IMS HP Sysgen Tools verifies that all entries in the resource update list can be installed on the target IMS subsystem.
2. After verification has completed, any IMS commands (with sequence "before") are issued.
3. Existing MODBLKS/MATRIX definitions are read from the active data sets, updated to reflect entries in the resource update list, and written to the inactive MODBLKS/MATRIX data sets.

4. After inactive libraries are updated, IMS resource definitions in memory are dynamically updated by IMS HP Sysgen Tools.
5. IMS HP Sysgen Tools coordinates an IMS online change to bring the updated MODBLKS data set into sync with the already updated IMS control blocks, to add or delete any IMS resource definitions and to install any IMS security updates requested in resource update list entries.
6. After the online change completes, any IMS ACBLIB reload entries are processed.
7. Any IMS command (with sequence "after") are issued.

While it uses online change to make the changes permanent, this resource list installation process implements almost all resource updates dynamically before the online change occurs. This process makes the online change much less likely to encounter problems that might cause the online change process to fail. This *online change assist* is used only when installing a resource update list.

Chapter 15. Editing a resource update list

A resource update list is a group of IMS sysgen changes that are to be implemented simultaneously. The features of a resource update list are introduced in [“Resource update lists” on page 8](#). Use option **2** of the IMS HP Sysgen Tools Primary Options menu to create a resource update list.

The IMS HP Sysgen Tools Primary Options menu contains a field for the IOHPDS data set name. The IOHPDS data set is where resource update lists are stored. Each resource update list comprises a member of the IOHPDS data set. Each user can have his or her own IOHPDS data set, or the IOHPDS data set can be shared. The data set name on the Primary Options menu is carried across ISPF sessions, so there is no need to remember the name between IMS HP Sysgen Tools uses.

Topics:

- [“Starting an edit session” on page 111](#)
- [“Selecting a resource update list” on page 111](#)
- [“Performing an edit” on page 114](#)
- [“Updating an AGN definition” on page 134](#)
- [“Reloading an ACBLIB member” on page 138](#)

Starting an edit session

Before selecting option **2** from the Primary Options menu, you must enter a valid data set name in the **IOHPDS Data Set Name** field.

About this task

See an example in the following figure:

```
IMS HP Sysgen Tools
Option ==> -----
0 Setup          IMS Configuration          User      P390M
1 View          Display IMS Resource Definitions Date     20/11/03
2 Edit          Create an IMS Resource Update List Time      21:46
3 Verify        Verify an IMS Resource Update List z/OS      01.07.00
4 Install       Implement an IMS Resource Update List Sysname   ADCD
5 Validate      Syntax Check Stage 1 Sysgen Source JESNode   N1
6 Fastgen       Perform a Fast IMS Sysgen Sysplex   ADCDPL
7 Reverse       Create Stage 1 Source from MODBLKS
8 History       Review Historical Log Information
C Command       Issue an IMS Command
D DRD           Dynamic Resource Definition Status
S Storage       z/OS Virtual Storage Utilities
U Utilities     Generate JCL for HP Sysgen Batch Jobs

IOHPDS Data Set Name ==> IMS.IOH.IOHPDS
                        (Fully qualified DSNAME without quotes)
```

Figure 80. HP Sysgen primary options menu

Selecting a resource update list

After you enter the IOHPDS data set name and select option **2**, the existing members, if any, of the IOHPDS data set are displayed.

The following panel shows existing members of the IOHPDS data set, also called the existing resource update lists.

Figure 81. Screen 1 of sample list of data set members in resource update list

```

EDIT      IMS HP Sysgen Tools - Update List Selection      Row 20 to 34 of 167
Command ==> -----      Scroll ==> CUR
                                <- More ->

Primary Commands:      Line Commands:
S  Add/Edit a Member    S Edit a Member        E Edit a Member
L  Locate a Member      D Delete a Member      V Verify a Member
SORT Sort the List      R Rename a Member      I Install a Member

Name      Updated      Upd-ID  Installed      Inst-ID
- #TERMSE4 2020/05/06 13:46:45 P390M  2019/03/18 0:00:00 P390M
- A        2020/05/06 13:47:03 P390M
- ADDINV   2020/05/06 13:47:11 P390M  2019/03/18 0:00:00 P390M
- ANDREW1  2020/05/06 13:48:08 P390M
- ANDREW2  2020/05/06 13:48:01 P390M
- ANDREW3  2020/05/06 13:48:26 P390M
- ANDREW4  2020/05/06 13:48:35 P390M
- ANDREW5  2020/05/06 13:48:43 P390M
- A1       2020/05/06 13:23:55 P390M  2019/03/18 0:00:00 P390M
- BCMIVPS1 2020/05/06 13:49:18 P390M  2019/03/18 0:00:00 P390M
- CCFAOPGM 2020/05/06 13:49:35 P390M  2019/03/18 0:00:00 P390M
- CLSTIMS6 2020/05/06 13:50:07 P390M
- CLSTIMS7 2020/05/06 13:50:19 P390M
- CLSTIMS9 2020/05/06 13:50:37 P390M
- CMD1     2020/05/06 13:50:52 P390M  2019/03/18 0:00:00 P390M

```

Figure 82. Screen 2 of sample list of data set members in resource update list

The second screen shows the following fields:

Installed

The time stamp showing when this resource update list was last installed.

Inst-ID

The user ID that last installed this resource update list.

The third screen can be displayed using the **RIGHT** command or by pressing **PF11** a second time. An example of the third screen is shown in the following figure:

```

EDIT      IMS HP Sysgen Tools - Update List Selection      Row 20 to 34 of 167
Command ==> -----      Scroll ==> CSR
                                <- More

Primary Commands:      Line Commands:
S  Add/Edit a Member    S Edit a Member        E Edit a Member
L  Locate a Member      D Delete a Member      V Verify a Member
SORT Sort the List      R Rename a Member      I Install a Member

CMD      Name      Comments
- #TERMSE4 TEST TERMINAL SECURITY
- A        TEST
- ADDINV   UPDATE ADDINV
- ANDREW1  ANDREW CHANGES
- ANDREW2  ANDREW CHANGES
- ANDREW3  ANDREW CHANGES
- ANDREW4  ANDREW CHANGES
- ANDREW5  ANDREW CHANGES
- A1       MIXED RELOAD AND SECURITY
- BCMIVPS1 PRF
- CCFAOPGM ADD CCF AND IMSCMD
- CLSTIMS6 GENERATED UPDATE LIST
- CLSTIMS7 GENERATED UPDATE LIST
- CLSTIMS9 GENERATED UPDATE LIST
- CMD1     TEST COMMANDS

```

Figure 83. Screen 3 of sample list of data set members in resource update list

The third screen shows the following field:

Comments

A comment field that can be edited using a resource update list editor.

Sorting the list

The Update List Selection panel can be sorted on any column.

The default is to sort by the **Name** field. To sort on any other column, simply enter SORT and the column name on the command line. For example, to sort by creation date, enter SORT CREATED.

You can scroll through the resource list names using the typical UP and DOWN commands or PF keys. You can also use the L (Locate) command to automatically scroll to a specific entry. The Locate command works based on the current SORT column, or the Name column if no sort has been requested. In the default sort order, the L MAA command would scroll down to the first entry beginning with MAA. To find the first resource update list created in 2020, enter SORT CREATED and then L 2020.

Additional command line functions

The **D** and **R** line commands allow you to delete or rename, respectively, resource update list names.

The **S** primary command allows you to create a new resource update list that has a new member name. For example, on the command line you could enter **S NEWLIST**.

You can also use **S** in the CMD column to edit an existing update list. Simply enter **S** next to the name you choose. IMS HP Sysgen Tools then displays the existing entries defined in that resource update list.

You can also verify or install an existing resource update list from the Update List Selection panel. Use the **V** or **I** line commands to verify or install a single resource update list.

Performing an edit

When an existing resource update list is selected, the entries in the list are displayed.

The example in [Figure 84 on page 115](#) contains three entries; in this case, they are all ADDs for databases. The database names to be added are AAA, ZZZ, and MMM. The last update information is also shown for each entry in the resource update list, showing the last user ID which updated the update list entry as well as the time stamp the entry was updated.

The following primary commands are available while you are editing a resource update list:

Ins

Inserts a new entry in the resource update list. You can abbreviate this command by entering an I on the command line or you can use the **I** line command.

COPY

Copies the contents of another resource update list into this resource update list. You can specify a member name on the command (for example, COPY LIST1), or you can enter the **COPY** command without any other operands to display the names of the update lists in the IOHPDS data set that you are currently editing.

CAN

Cancels any changes that you have made to this resource update list during this edit session.

SORT

Sorts the table by the specified column. To sort the table by the updated date, for example, enter SORT UPDATED. If you edit table entries or add new entries after using the **SORT** command, all the table entries will be re-sorted instantly by the column that the **SORT** command specifies.

L (Locate)

Scrolls the table to a specific entry. The **Locate** command works on the column by which the table is sorted using the **SORT** command. If you enter SORT NAME and then enter L MAA, the table scrolls to the first entry whose Name field starts with MAA.

To locate the first entry that was updated in 2020, enter SORT UPDATED to sort the table by the Updated column, and then enter L 2020. If you want to include the updated time, specify the time value in the same format as you see on the panel, such as L 2020/10/03 2:28. To specify a time between 0 AM and 9 AM, separate the date and the time with two spaces.

F (Find)

Scrolls down to the entry whose Name column includes the specified text string. To find the first entry that includes Z in its name, enter F Z. To find an entry that ends with A, enter F 'A '. The **RFIND** command finds the next entry that includes the string specified by the **Find** command.

The following line commands are available from the Update List Entries panel:

D

Deletes a resource update list entry.

I

Inserts a new entry in the resource update list. This command can be used as either a line command or as a primary command on the command line.

R

Replicates an existing entry and displays the attributes of the new entry so that changes can be made.

S

Allows an entry to be edited.

```
EDIT      IMS HP Sysgen Tools - Update List DBDADD      Row 1 to 3 of 3
Command ==>      Scroll ==> CUR

Target ==> IFV9      (IMSID or group name)
Comment ==> TEST DBD ADD

Primary Commands:      Line Commands:
  Ins Insert an Entry      SORT Sort the List      I Insert  D Delete
  COPY Copy an Update List  L  Locate an Entry      S Edit   R Replicate
  CAN Cancel (do not save)  F  Find an Entry

CMD  Function  Resource  Name      Updated      ID
ADD   DATABASE AAA      2020/10/03  2:28:49  TSSYI
ADD   DATABASE ZZZ      2020/10/03  2:28:24  TSSYI
ADD   DATABASE MMM      2020/10/03  2:28:09  TSSYI
***** Bottom of data *****
```

Figure 84. Edit a Resource Update List panel

Inserting a new entry

When you insert a new entry in a resource update list, you must select a resource type and action.

The following figure shows an example of the panel for selecting the resource type and action.

```
EDIT      IMS HP Sysgen Tools - Insert a new Update List DBDADD (IMS9)
Command ==> -----

Resource ==>
1 DATABASE  Perform action on an IMS Database Definition
2 PROGRAM   Perform action on an IMS Program definition
3 TRAN      Perform action on an IMS Transaction definition
4 RTCODE    Perform action on an IMS Fast Path Route Code Definition
5 AGN       Update resources defined in an IMS Application Group Name (AGN)
6 TCOMMAND  Update IMS Transaction Command SMU Security
7 TERMSEC   Update IMS Terminal (LTERM) SMU Security
8 Command   Issue an IMS Command as part of the Resource Update List
9 Randomizer Reload a DEDB Randomizer Routine
A ACB       Reload an IMS ACBLIB member (PSB or DBD)

Action ==>      (for Resource types 1, 2, 3, and 4 only)
1 UPDATE    Modify an existing IMS definition
2 ADD       Add a new IMS definition
3 DELETE    Delete an existing IMS definition
4 RENAME    Rename an existing IMS definition

Name ==>      (Optional) Name of existing resource. For an ADD request,
              this name will be used as a model for the resource to be added.
```

Figure 85. Insert a new Update List panel

To add a new entry to the resource update list, you must select the resource type, the action to perform (depending on the resource type chosen), and optionally a resource name.

First you must select the resource type to be acted upon. There are several types of resources from which to choose. You can select an IMS sysgen resource: database, program, transaction, or route code. For an IMS 9 or earlier IMS environment, there are also several IMS security gen resources, including AGN, TCOMMAND, and terminal security. There is also an option to include an IMS command as part of the installation of a resource update list. Finally, there are two additional resource types that allow changes to non-sysgen resources. You can reload a DEDB randomizer load module or reload an ACBLIB member (PSB or DBD).

If you select an IMS Sysgen resource (DATABASE, PROGRAM, TRAN, or RTCODE), you must select the action to perform. You can select UPDATE to update an existing resource definition, ADD, to add a new resource definition, DELETE, to delete an existing definition, or RENAME to change the name of an existing resource.

If you select an IMS security gen resource (AGN, TCOMMAND, or TERMSEC), you need not specify an action. The action to be performed is always an update to the security definition. If you select the COMMAND option, you need not specify an action because the command is the action that will be performed. In addition, the actions of the randomizer reload and ACB reload always update existing resources.

Optionally, you can specify a resource name. Depending on the action that you select, the name is used as follows:

Update

The name of the resource to be updated. You can also enter this name while you are editing the attribute values for the resource.

Add

The name of an existing resource whose definition will be used to initially populate the attribute values of the resource to be added. If not specified on this panel, you can use the COPY command on the resource definition screen (for example, on the panel shown in [Figure 86 on page 117](#)) to populate attribute values from an existing resource definition.

Delete

The name of the resource to be deleted. You can also enter this name while you are editing the attribute values for the resource.

Rename

The name of the existing resource that is to be renamed. You can also enter the resource name while you are editing the attribute values for the resource.

When adding a new program by copying the definitions of an existing program, you can also add transactions by copying the transactions that are associated with that existing program. For details, see [“Adding program definitions with associated transactions” on page 121](#).

Specifying attribute values

Attribute value specifications for an IMS resource are specified when a resource update list entry is edited.

[Figure 86 on page 117](#) shows a typical panel for specifying how a resource definition would be changed. The example shows a resource update list entry that changes the definition of program DFSSAM01 from schedule type serial to schedule type parallel. The Current column shows the current definition of the program, while the New column shows what the value will be after the resource update list is installed. The Parameter column shows the IMS sysgen macro keyword parameter, documented in the *IMS Installation* for your installed version of IMS, which provides a reference for further information about the parameter. Additional information about each parameter is also available by placing the cursor in the New column for a parameter, and pressing the Help key (usually, **PF1**).

Note that, depending on your installation options (IMS HP Sysgen Tools profile, user, and user group definitions), some resource attributes may be protected. If your administrator has chosen to restrict access to some resource attributes, those attribute fields will show on the panel as display only fields,

which means the fields cannot be updated. In addition, the value that is displayed in the **New** column is the default value specified for your user profile, user group profile, or the actual value in use by IMS, and cannot be changed. The value to be displayed in the **New** column is determined by the **Default Value Enforce option**.

```

EDIT      IMS HP Sysgen Tools - Update Program Definition
Command ==> -----

      Primary Commands:
      COPY      Copy Attributes from an Existing Program Definition

Parameter  New      Current  Description
PSB Name   DFSSAM01  DFSSAM01  PSB (or GPSB) Name
RESIDENT   NO        NO        PSB to remain resident in storage (YES or NO)
DOPT       NO        NO        Reload PSB for each execution (YES or NO)
GPSB       NO        NO        Generic PSB (YES or NO)
FPATH      NO        NO        Fast Path Exclusive Program (YES or NO)
LANG       NO        NO        GPSB Language (ASSEM, COBOL, PASCAL, PL/I, JAVA)
PGMTYPE    BATCH     BATCH     Program Type (BATCH or TP)
SCHDTYP    PARALLEL  SERIAL    Schedule Type (SERIAL or PARALLEL)

```

Figure 86. Update Program Definition panel

Each time a Resource List Entry is edited, the current definitions are retrieved from the IMS control region. Thus, the current definitions are always the actual values in use by IMS.

You can use the New column to specify values that determine how the resource definition will be changed. The values are checked to verify that they are valid IMS values, but they are not validated for any specific IMS control region environment. For example, the value for the FPATH parameter could be changed to YES, which would be accepted as valid input. But, when the resource update list is verified, the entry would be rejected if Fast Path is not defined in that IMS control region. Similarly, JAVA could be specified for the LANG parameter, but if the resource update list is checked against an IMS 7 subsystem, the value will be rejected as invalid for that IMS release.

In summary, values entered on the panel are only checked for syntax validity when editing the list entry. Validation for a specific IMS subsystem environment is not done until the resource update list is verified.

Updating database entries

Each database list entry panel shows the current and/or new values for each parameter associated with an IMS sysgen database definition.

Adding database definitions

To add database definitions, use the Add Database Definition panel.

About this task

When an Add Database Definition is initially requested, the panel in [Figure 87 on page 118](#) is displayed.

Enter a value for the database name, and verify that the other parameter values are correct for this definition, or update the values as appropriate.

- Use the **COPY** command to change parameter values to match the values of an existing database definition.
- Press the Enter key to validate and refresh values on the panel. Press the End key (usually, **PF3**) to save the list entry and return to the display of all entries in the resource update list.
- Enter the **CANCEL** or **CAN** command to return to the display of all entries in the resource update list without saving the entry being viewed.

```

EDIT          IMS HP Sysgen Tools - Add Database Definition
Command ==>  -----

      Primary Commands:
      COPY      Copy Attributes from an Existing Database Definition

Parameter  Value      Description
NAME       DBD name
RESIDENT   NO         DMB is retained in storage (NO or YES)
Access     EX         Subsystem access intent (R0, RD, UP, or EX)

```

Figure 87. Add Database Definition panel

The Add Database Definition panel uses the primary command, **COPY**. To update parameter values to those used by an existing resource of the same type, enter **COPY** on the command line, followed by the name of an existing resource. For example, to update parameter values to those currently in use by the DI21PART database, you would enter:

```
COPY DI21PART
```

Updating database definitions

To update database definitions, use the Update Database Definition panel.

About this task

When an Update Database Definition is initially requested, the panel in [Figure 88 on page 118](#) is displayed. Enter a database name to populate the current values column and to set the Update values column to the current values. If the database name is later changed, the Current and Update values will both be reset to the current values of the parameters.

```

EDIT          IMS HP Sysgen Tools - Update Database Definition
Command ==>  -----

      Primary Commands:
      COPY      Copy Attributes from an Existing Database Definition

Parameter  Update      Current      Description
NAME       DBD name
RESIDENT   DMB is retained in storage (NO or YES)
Access     Subsystem access intent (R0, RD, UP, or EX)

```

Figure 88. Update Database Definition panel (1 of 2)

After a valid database name is entered, the values in the Current and Update columns are displayed as shown in [Figure 89 on page 118](#). After the name is entered, you can use the **COPY** command to change values in the Update column to match values in use by another existing database. You should then update any values that are to be changed and save the list entry by pressing the End key (usually, **PF3**).

```

EDIT          IMS HP Sysgen Tools - Update Database Definition
Command ==>  -----

      Primary Commands:
      COPY      Copy Attributes from an Existing Database Definition

Parameter  Update      Current      Description
NAME       DI21PART    DI21PART    DBD name
RESIDENT   NO          NO          DMB is retained in storage (NO or YES)
Access     UP          UP          Subsystem access intent (R0, RD, UP, or EX)

```

Figure 89. Update Database Definition panel (2 of 2)

The Update Database Definition panel uses the primary command, **COPY**. To update parameter values to those used by an existing resource of the same type, enter **COPY** on the command line, followed by the

name of an existing resource. For example, to update parameter values to those currently in use by the DI21PART database, you would enter:

```
COPY DI21PART
```

Deleting database definitions

To delete database definitions, use the Delete Database Definition panel.

About this task

The initial Delete Database Definition panel allows you to enter a database name that is to be deleted. An example of the panel is shown in [Figure 90 on page 119](#).

```
EDIT      IMS HP Sysgen Tools - Delete Database Definition
Command ==> -----

Verify that the following database definition is to be deleted.

Parameter  Value  Description
NAME       DBD name
RESIDENT   DMB is retained in storage
Access     Subsystem access intent
```

Figure 90. Delete Database Definition panel (1 of 2)

To populate current system definition parameter values for the database, you would enter a database name. With the exception of the database name, you cannot change these values. If the database name is changed, the values are updated on the panel when the Enter key is pressed. The following figure shows an example of a populated panel:

```
EDIT      IMS HP Sysgen Tools - Delete Database Definition
Command ==> -----

Verify that the following database definition is to be deleted.

Parameter  Value  Description
NAME       DI21PART  DBD name
RESIDENT   NO        DMB is retained in storage
Access     UP        Subsystem access intent
```

Figure 91. Delete Database Definition panel (2 of 2)

Renaming database definitions

To rename database definitions, use the Rename Database Definition panel.

About this task

The initial Rename Database Definition panel (if you do not include a database name on the panel shown in [Figure 85 on page 115](#)) allows you to enter the name of an existing database that is to be renamed. An example of the panel is shown in the following figure:

```

EDIT      IMS HP Sysgen Tools - Rename Database Definition
Command ==> -----

      Primary Commands:
      COPY      Copy Attributes from an Existing Database Definition

Parameter  Update  Current  Description
NAME                               Current DBD name
NEW NAME                                 New DBD name
RESIDENT   DMB is retained in storage (NO or YES)
Access     Subsystem access intent (EX, UP, RD, or R0)

```

Figure 92. Rename Database Definition panel (1 of 2)

To populate current system definition parameter values for the database, enter the name of the database to be renamed. When the database name is entered or changed, values in the Current column are updated when the Enter key is pressed. The following figure shows an example of a populated panel:

```

EDIT      IMS HP Sysgen Tools - Rename Database Definition
Command ==> -----

      Primary Commands:
      COPY      Copy Attributes from an Existing Database Definition

Parameter  Update  Current  Description
NAME       DI21PART                               Current DBD name
NEW NAME                                 New DBD name
RESIDENT   NO      NO      DMB is retained in storage (NO or YES)
Access     UP      UP      Subsystem access intent (EX, UP, RD, or R0)

```

Figure 93. Rename Database Definition panel (2 of 2)

After the current database attributes are populated, you must enter the new name for the specified database, and you can enter changes for the other attribute values, such as RESIDENT or ACCESS. After the new name and any attribute value changes have been entered, pressing the End key (usually **PF3**), saves the information and returns you to the list of resource update list entries.

Special considerations for databases

The RESIDENT parameter can be changed, and a database with RESIDENT attribute can be added, but the DMB will not be loaded to the resident DMB pool until IMS is shut down and restarted. This is because resident databases have DMBs loaded only at IMS initialization time and cannot be added to the resident DMB pool while IMS is running.

The ACCESS= parameter can be changed for an existing database, but the updated value will not take effect until the next IMS cold start. HP Sysgen does not stop the database and issue the **/START DB** command with the ACCESS= parameter to cause the access intent to be changed. You must issue IMS commands **/STOP DB** and **/START DB ACCESS=xx** to cause the current access intent to be changed.

Updating program entries

Each program list entry panel shows the current and/or new values for each parameter associated with an IMS sysgen program definition (APPLCTN macro).

Adding program definitions

To add program definitions, use the Add Program Definition panel.

About this task

When an Add Program Definition is initially requested, the panel in [Figure 94 on page 121](#) is displayed.

Enter a value for the program name, and verify that the other parameter values are correct for this definition, or update the values as appropriate.

- Use the **COPY** command to change parameter values to match the values of an existing program definition.
- Press the Enter key to validate and refresh values on the panel. Press the End key (usually, **PF3**) to save the list entry and return to the display of all entries in the resource update list.
- Enter the **CANCEL** or **CAN** command to return to the display of all entries in the resource update list without saving the entry being viewed.

```

EDIT          IMS HP Sysgen Tools - Add Program Definition
Command ==>> -----

Primary Commands:
COPY          Copy Attributes from an Existing Program Definition
COPYTRAN      Copy Attributes from an Existing PSB Associated Transactions

Parameter  Value      Description
PSB NAME    PSB (or GPSB) Name
RESIDENT    NO         PSB to remain resident in storage (NO or YES)
Access      EX         Subsystem access intent (RO, RD, UP, or EX)
DOPT        NO         Reload PSB for each execution (No or YES)
GPSB        NO         Generic PSB (NO or YES)
FPATH       NO         Fast Path Exclusive Program (YES or NO)
LANG        ASSEMB     GPSB Language (ASSEMB, COBOL, PASCAL, PL/I, JAVA)
PGMTYPE     TP         Program Type (BATCH or TP)
SCHEDTYPE   SERIAL     Schedule Type (SERIAL or PARALLEL)

```

Figure 94. Add Program Definition panel

The Add Program Definition panel uses the primary command, **COPY**. To update parameter values to those used by an existing program, enter **COPY** on the command line, followed by the name of an existing program. For example, to update parameter values to those currently in use by the DFSSAM02 program, you would enter:

```
COPY DFSSAM02
```

Adding program definitions with associated transactions

You can optionally add transactions by copying the transactions that are associated with an existing program.

Procedure

1. In the Update List Selection panel, enter the **INS** primary command on the command line.
2. In the Insert New List Entry panel, select **PROGRAM** as the resource and **ADD** as the action.
3. Specify the name of the existing PSB that you want to use by either of the following ways:
 - In the Insert New List Entry panel, enter the PSB name of an existing program.
 - In the Add Program Definition panel, use the **COPY** command to specify the PSB name of an existing program.
4. In the Add Program Definition panel, change the PSB name, and enter **COPYTRAN** on the command line.

If there are transactions that are associated with the existing program that you specified, a list of the associated transactions will be displayed in the Copy Associated Transactions panel. In this panel, the associated PSB name has been replaced with the new name that you specified in step [“4”](#) on [page 121](#).

5. By using the **S** line command, select one or more transactions that you want to associate with the new program.
6. In the Add a Transaction Definition panel, change the attributes of the transaction that you selected, including the transaction code, and press **PF3**.

7. Repeat step “6” on page 121 for every transaction that you selected in step “5” on page 121. When you have finished adding all transactions, you will return to the Copy Associated Transactions panel.
8. In the Copy Associated Transactions panel, press **PF3**. The Add Program Definition panel is displayed.
9. Press **PF3** to exit.

If you enter the **CANCEL** command, all the transactions that you added in steps “5” on page 121 through “7” on page 122 will be canceled.

In the Update List panel, you will see the new program and the transactions that you just added.

10. Press **PF3** to exit.

If you enter the **CANCEL** command, the program and all the transactions that you added will be canceled.

Updating program definitions

To update program definitions, use the Update Program Definition panel.

About this task

When a Update Program Definition is initially requested, the panel in [Figure 95 on page 122](#) is displayed. Enter a program name to populate the Current values column and to set the Update values column to the current values. If the program name is later changed, the Current and Update values will both be reset to the current values of the parameters.

```

EDIT      IMS HP Sysgen Tools - Update Program Definition
Command ==> -----

Primary Commands:
COPY      Copy Attributes from an Existing Program Definition

Parameter  New      Current  Description
PSB NAME   PSB (or GPSB) Name
RESIDENT   PSB to remain resident in storage (NO or YES)
DOPT       Reload PSB for each execution (No or YES)
GPSB       Generic PSB (NO or YES)
FPATH      Fast Path Exclusive Program (YES or NO)
LANG       GPSB Language (ASSEM, COBOL, PASCAL, PL/I, JAVA)
PGMTYPE    Program Type (BATCH or TP)
SCHEDTYPE  Schedule Type (SERIAL or PARALLEL)

```

Figure 95. Update Program Definition panel (1 of 2)

After a valid program name is entered, the values in the Current and Update columns are displayed as shown in [Figure 96 on page 122](#). After entering the name, you can use the **COPY** command to change values in the Update column to match values in use by another existing program. You should then update any values that are to be changed and save the list entry by pressing the End key (usually, **PF3**).

```

EDIT      IMS HP Sysgen Tools - Update Program Definition
Command ==> -----

Primary Commands:
COPY      Copy Attributes from an Existing Program Definition

Parameter  New      Current  Description
PSB NAME   DFSSAM02  DFSSAM02  PSB (or GPSB) Name
RESIDENT   NO         NO        PSB to remain resident in storage (NO or YES)
DOPT       NO         NO        Reload PSB for each execution (NO or YES)
GPSB       NO         NO        Generic PSB (NO or YES)
FPATH      NO         NO        Fast Path Exclusive Program (YES or NO)
LANG       NO         NO        GPSB Language (ASSEM, COBOL, PASCAL, PL/I, JAVA)
PGMTYPE    TP         TP        Program Type (BATCH or TP)
SCHEDTYPE  PARALLEL  PARALLEL  Schedule Type (SERIAL or PARALLEL)

```

Figure 96. Update Program Definition panel (2 of 2)

The Update Program Definition panel uses the primary command, **COPY**. To update parameter values to those used by an existing program, enter **COPY** on the command line, followed by the name of an existing program. For example, to update parameter values to those currently in use by the DFSSAM02 program, you would enter:

```
COPY DFSSAM02
```

Deleting program definitions

To delete program definitions, use the Delete Program Definition panel.

About this task

The initial Delete Program Definition panel allows you to enter a program name that is to be deleted. An example of the panel is shown in the following figure:

```
EDIT      IMS HP Sysgen Tools - Delete Program Definition
Command ==> -----

Verify that the following program definition is to be deleted.

Parameter  Value  Description
PSB NAME   PSB (or GPSB) Name
RESIDENT   PSB to remain resident in storage
DOPT       Reload PSB for each execution
GPSB       Generic PSB
FPATH      Fast Path
LANG       GPSB Language
PGMTYPE    Program Type
SCHEDTYPE  Schedule Type
```

Figure 97. Delete Program Definition panel (1 of 2)

To populate current system definition parameter values for the program, you would enter a program name. With the exception of the program name, you cannot change these values. If the program name is changed, the values are updated on the panel when the Enter key is pressed. The following figure is an example of a populated panel:

```
EDIT      IMS HP Sysgen Tools - Delete Program Definition
Command ==> -----

Verify that the following program definition is to be deleted.

Parameter  Value  Description
PSB NAME   DFSSAM02  PSB (or GPSB) Name
RESIDENT   NO        PSB to remain resident in storage
DOPT       NO        Reload PSB for each execution
GPSB       NO        Generic PSB
FPATH      NO        Fast Path
LANG       GPSB Language
PGMTYPE    TP        Program Type
SCHEDTYPE  PARALLEL  Schedule Type
```

Figure 98. Delete Program Definition panel (2 of 2)

Renaming program definitions

To rename program definitions, use the Rename Program Definition panel.

About this task

The initial program rename panel (if you do not include a program name on the panel shown in [Figure 85 on page 115](#)) allows you to enter the name of an existing program which is to be renamed. An example of this panel is shown in the following figure:

```

EDIT          IMS HP Sysgen Tools - Rename Program Definition
Command ==>  -----

    Primary Commands:
    COPY      Copy attributes from an existing program definition.

Parameter New      Current  Description
PSB Name           Current PSB (or GPSB) Name
NEW NAME           New PSB Name
RESIDENT           PSB to remain resident in storage (YES or NO)
DOPT               Reload PSB for each execution (YES or NO)
GPSB               Generic PSB (YES or NO)
FPATH              Fast Path Exclusive Program (YES or NO)
LANG               GPSB Language (ASSEM, COBOL, PASCAL, PL/I, JAVA)
PGMTYPE            Program Type (BATCH or TP)
SCHDTYP            Schedule Type (SERIAL or PARALLEL)

```

Figure 99. Rename Program Definition panel (1 of 2)

To populate current system definition parameter values for the program, enter the name of the program to be renamed. When the program name is entered or changed, values in the Current column are updated when the Enter key is pressed. The following figure is an example of a populated panel.

```

EDIT          IMS HP Sysgen Tools - Rename Program Definition
Command ==>  -----

    Primary Commands:
    COPY      Copy attributes from an existing program definition.

Parameter New      Current  Description
PSB Name DFSSAM02  DFSSAM02 Current PSB (or GPSB) Name
NEW NAME NEW       NEW       New PSB Name
RESIDENT NO        NO        PSB to remain resident in storage (YES or NO)
DOPT     NO        NO        Reload PSB for each execution (YES or NO)
GPSB     NO        NO        Generic PSB (YES or NO)
FPATH    NO        NO        Fast Path Exclusive Program (YES or NO)
LANG     NO        NO        GPSB Language (ASSEM, COBOL, PASCAL, PL/I, JAVA)
PGMTYPE  TP        TP        Program Type (BATCH or TP)
SCHDTYP  SERIAL    SERIAL    Schedule Type (SERIAL or PARALLEL)

```

Figure 100. Rename Program Definition panel (2 of 2)

After the program attributes are populated, you must enter the new name for the specified program, and you can enter changes for other attribute values, such as RESIDENT or DOPT. After the new name and any attribute value changes have been entered, pressing the End key (usually **PF3**) saves the information and returns you the list of resource update list entries.

Note that when you rename a program definition, all transaction and route code definitions associated with the old program name are changed so that they are associated with the new program name when the resource update list is installed.

Special considerations for programs

- The RESIDENT parameter can be changed, and a program with RESIDENT attribute can be added, but the PSB will not be loaded to the resident PSB pool until IMS is shut down and restarted. This is because resident programs have PSBs loaded only at IMS initialization time and cannot be added to the resident PSB pool while IMS is running.
- In IMS systems that use an ACBLIB, changing the value of the GPSB attribute also requires that an online change for the IMS ACBLIB be performed to implement the change.
- The SYSID parameter permitted in the IMS sysgen macro definition is not permitted in HP Sysgen. A remote PSB definition does not generate any control blocks; it is used only to provide default values for the SYSID parameter on all transaction codes associated with the program. HP Sysgen requires that all SYSID values be explicitly defined for each transaction.

Updating transaction code entries

Each transaction list entry panel shows the current and/or new values for each parameter associated with an IMS sysgen transaction definition (TRANSACT macro).

Adding transaction definitions

To add transaction definitions, use the Add a Transaction Definition panel.

About this task

When an Add Transaction Definition is initially requested, the panel in [Figure 101 on page 125](#) is displayed.

Enter a value for the transaction code, and verify that the other parameter values are correct for this definition, or update the values as appropriate.

- Use the **COPY** command to change parameter values to match the values of an existing transaction definition.
- Press the Enter key to validate and refresh values on the panel. Press the End key (usually, **PF3**) to save the list entry and return to the display of all entries in the resource update list.
- Enter the **CANCEL** or **CAN** command to return to the display of all entries in the resource update list without saving the entry being viewed.

```
EDIT          IMS HP Sysgen Tools - Add a Transaction Definition
Command ==>> -----

      Primary Commands:
      COPY          Copy Attributes from an Existing Transaction Definition

Parameter      Value      Description
-----
Tran Code      Transaction Code
PSB Name       Associated PSB Name
DCLWA          YES        DC Log Write Ahead (YES or NO)
Edit Case      UC         Upper Case (UC) or Upper/Lower Case (ULC)
EDIT Name      Transaction Edit Routine Module Name
FPATH          NO         Fast Path Specification (NO, YES or 12-30720)
INQUIRY        NO         Inquiry Mode (NO or YES)
RECOVER        RECOVER    Recoverable Transaction (RECOVER or NORECOV)
MAXRGN         0         Maximum regions (0-255)
MODE           MULT       Mode (SNGL or MULT)
MSGTYPE        MULTSEG    Segments (SNGLSEG or MULTSEG)
RESPONSE       NO         Response mode (NO or YES)
CLASS          1          Transaction Class (1-999)
PARLIM         NONE       Parallel Limit Count (NONE or 0-32767)
COUNT         65535      PROCLIM Count (0-65535)
SECONDS        65535      PROCLIM Time (0-65535)
PRIORITY1      1          Normal Priority (0-14)
PRIORITY2      1          Limit Priority (0-14)
PRIORITY3      65535      Limit Count (1-65535)
ROUTING        NO         Routing (NO or YES)
SCHD           1          Scheduling Option (1-4)
SEGNO          0          Number of Output Segments (0-65535)
SEGSIZE        0          Size of Output Segments (0-65535)
SERIAL         NO         Serial Processing of Input Messages (NO or YES)
SPA SIZE       SPA Size (blank or 16-32767)
SPA TYPE       SPA Truncation Option (blank,RTRUNC,STRUNC)
RMT SYSID      Remote SYSID (blank or 1-2036)
LCL SYSID      Local SYSID (blank or 1-2036)
WFI            NO         Wait for Input (blank or WFI)
AOI            NO         Automated Operator (NO,YES,TRAN, CMD)
```

Figure 101. Add a transaction definition panel

The Add a Transaction Definition panel uses the primary command, **COPY**. To update parameter values to those used by an existing transaction, enter **COPY** on the command line, followed by the name of an

existing transaction. For example, to update parameter values to those currently in use by transaction PART, you would enter:

```
COPY PART
```

When adding a new program by copying the definitions of an existing program, you can optionally add transactions by copying the transactions that are associated with that existing program. For details, see [“Adding program definitions with associated transactions” on page 121](#).

Updating transaction definitions

To update transaction definitions, use the Update a Transaction Definition panel.

About this task

When a Update a Transaction Definition is initially requested, the panel in [Figure 102 on page 126](#) is displayed. Enter a transaction code to populate the Current values column and to set the Update values column to the current values. If the transaction code is later changed, the Current and Update values will both be reset to the current values of the parameters.

```
EDIT          IMS HP Sysgen Tools - Update a Transaction Definition
Command ==>> -----

      Primary Commands:
      COPY          Copy Attributes from an Existing Transaction Definition

Parameter  Value      Current      Description
Tran Code
PSB Name   Associated PSB Name
DCLWA      DC Log Write Ahead (YES or NO)
Edit Case  Upper Case (UC) or Upper/Lower Case (ULC)
EDIT Name  Transaction Edit Routine Module Name
FPATH      Fast Path Specification (NO, YES or 12-30720)
INQUIRY    Inquiry Mode (NO or YES)
RECOVER    Recoverable Transaction (RECOVER or NORECOV)
MAXRGN     Maximum regions (0-255)
MODE       Mode (SINGL or MULT)
MSGTYPE    Segments (SINGLSEG or MULTSEG)
RESPONSE   Response mode (NO or YES)
CLASS      Transaction Class (1-999)
PARLIM     Parallel Limit Count (NONE or 0-32767)
COUNT     PROCLIM Count (0-65535)
SECONDS    PROCLIM Time (0-65535)
PRIORITY1  Normal Priority (0-14)
PRIORITY2  Limit Priority (0-14)
PRIORITY3  Limit Count (1-65535)
ROUTING    Routing (NO or YES)
SCHD       Scheduling Option (1-4)
SEGN0      Number of Output Segments (0-65535)
SEGSIZE    Size of Output Segments (0-65535)
SERIAL     Serial Processing of Input Messages (NO or YES)
SPA SIZE   SPA Size (blank or 16-32767)
SPA TYPE   SPA Truncation Option (blank,RTRUNC,STRUNC)
RMT SYSID  Remote SYSID (blank or 1-2036)
LCL SYSID  Local SYSID (blank or 1-2036)
WFI        Wait for Input (NO or YES)
AOI        Automated Operator (NO,YES,TRAN, CMD)
```

Figure 102. Update a transaction definition panel (1 of 2)

After a valid transaction code is entered, the values in the Current and Update columns are displayed as shown in [Figure 103 on page 127](#). After entering the transaction code, you can use the **COPY** command to change values in the Update column to match values in use by another existing transaction. You should then update any values that are to be changed and save the list entry by pressing the End key (usually, **PF3**).

EDIT IMS HP Sysgen Tools - Update a Transaction Definition			
Command ==> -----			
Primary Commands:			
COPY Copy Attributes from an Existing Transaction Definition			
Parameter	Value	Current	Description
Tran Code	PART	PART	Transaction Code
PSB Name	DFSSAM02	DFSSAM02	Associated PSB Name
DCLWA	YES	YES	DC Log Write Ahead (YES or NO)
Edit Case	UC	UC	Upper Case (UC) or Upper/Lower Case (ULC)
EDIT Name			Transaction Edit Routine Module Name
FPATH	NO	NO	Fast Path Specification (NO, YES or 12-30720)
INQUIRY	YES	YES	Inquiry Mode (NO or YES)
RECOVER	NORECOV	NORECOV	Recoverable Transaction (RECOVER or NORECOV)
MAXRGN	0	0	Maximum regions (0-255)
MODE	SNGL	SNGL	Mode (SNGL or MULT)
MSGTYPE	SNGLSEG	SNGLSEG	Segments (SNGLSEG or MULTSEG)
RESPONSE	NO	NO	Response mode (NO or YES)
CLASS	1	1	Transaction Class (1-999)
PARLM	NONE	NONE	Parallel Limit Count (NONE or 0-32767)
COUNT	65535	65535	PROCLIM Count (0-65535)
SECONDS	65535	65535	PROCLIM Time (0-65535)
PRIORITY1	7	7	Normal Priority (0-14)
PRIORITY2	10	10	Limit Priority (0-14)
PRIORITY3	2	2	Limit Count (1-65535)
ROUTING	NO	NO	Routing (NO or YES)
SCHD	1	1	Scheduling Option (1-4)
SEGN0	0	0	Number of Output Segments (0-65535)
SEGSIZE	0	0	Size of Output Segments (0-65535)
SERIAL	NO	NO	Serial Processing of Input Messages (NO or YES)
SPA SIZE			SPA Size (blank or 16-32767)
SPA TYPE			SPA Truncation Option (blank,RTRUNC,STRUNC)
RMT SYSID			Remote SYSID (blank or 1-2036)
LCL SYSID			Local SYSID (blank or 1-2036)
WFI	NO	NO	Wait for Input (NO or YES)
AOI			Automated Operator (NO,YES,TRAN, CMD)

Figure 103. Update a transaction definition panel (2 of 2)

The Update a Transaction Definition panel uses the primary command, **COPY**. To update parameter values to those used by an existing transaction, enter **COPY** on the command line, followed by the name of an existing transaction. For example, to update parameter values to those currently in use by transaction PART, you would enter:

```
COPY PART
```

Deleting transaction definitions

To delete transaction definitions, use the Delete Transaction Definition panel.

About this task

The initial Delete Transaction Definition panel allows you to enter a transaction code that is to be deleted. An example of the panel is shown in the following figure:

```

EDIT          IMS HP Sysgen Tools - Delete Transaction Definition
Command ==>  -----

    Verify that the following transaction definition is to be deleted.

Parameter      Value      Description
-----
Tran Code      -----    Transaction Code
PSB Name       -----    Associated PSB Name
DCLWA          -----    DC Log Write Ahead
Edit Case      -----    Upper Case or Upper/Lower Case
EDIT Name      -----    Transaction Edit Routine Module Name
FPATH          -----    Fast Path Specification
INQUIRY        -----    Inquiry Mode
RECOVER        -----    Recoverable Transaction
MAXRGN         -----    Maximum regions
MODE           -----    Mode
MSGTYPE        -----    Segments
RESPONSE       -----    Response mode
CLASS          -----    Transaction Class
PARLIM         -----    Parallel Limit Count
COUNT        -----    PROCLIM Count
SECONDS        -----    PROCLIM Time
PRIORITY1      -----    Normal Priority
PRIORITY2      -----    Limit Priority
PRIORITY3      -----    Limit Count
ROUTING        -----    Routing
SCHD           -----    Scheduling Option
SEGNO          -----    Number of Output Segments
SEGSIZE        -----    Size of Output Segments
SERIAL         -----    Serial Processing of Input Messages
SPA SIZE       -----    SPA Size
SPA TYPE       -----    SPA Truncation Option (blank,RTRUNC,STRUNC)
RMT SYSID      -----    Remote SYSID
LCL SYSID      -----    Local SYSID
WFI            -----    Wait for Input
AOI            -----    Automated Operator (NO,YES,TRAN, CMD)

```

Figure 104. Delete transaction definition panel (1 of 2)

To populate current system definition parameter values for the transaction, you would enter a transaction code. With the exception of the transaction code, you cannot change these values. If the transaction code is changed, the values are updated on the panel when the Enter key is pressed. The following figure is an example of a populated panel:

EDIT IMS HP Sysgen Tools - Delete Transaction Definition

Command ==> -----

Verify that the following transaction definition is to be deleted.

Parameter	Value	Description
Tran Code	PART	Transaction Code
PSB Name	DFSSAM02	Associated PSB Name
DCLWA	YES	DC Log Write Ahead
Edit Case	UC	Upper Case or Upper/Lower Case
EDIT Name		Transaction Edit Routine Module Name
FPATH	NO	Fast Path Specification
INQUIRY	YES	Inquiry Mode
RECOVER	NORECOV	Recoverable Transaction
MAXRGN	0	Maximum regions
MODE	SNGL	Mode
MSGTYPE	SNGLSEG	Segments
RESPONSE	NO	Response mode
CLASS	1	Transaction Class
PARLIM	NONE	Parallel Limit Count
COUNT	65535	PROCLIM Count
SECONDS	65535	PROCLIM Time
PRIORITY1	7	Normal Priority
PRIORITY2	10	Limit Priority
PRIORITY3	2	Limit Count
ROUTING	NO	Routing
SCHD	1	Scheduling Option
SEGNO	0	Number of Output Segments
SEGSIZE	0	Size of Output Segments
SERIAL	NO	Serial Processing of Input Messages
SPA SIZE		SPA Size
SPA TYPE		SPA Truncation Option (blank,RTRUNC,STRUNC)
RMT SYSID		Remote SYSID
LCL SYSID		Local SYSID
WFI	NO	Wait for Input
AOI		Automated Operator (NO,YES,TRAN, CMD)

Figure 105. Delete transaction definition panel (2 of 2)

Renaming transaction definitions

To rename transaction definitions, use the Rename Transaction Definition panel.

About this task

The initial Rename Transaction Definition panel (if you do not include a transaction name on the panel shown in [Figure 85 on page 115](#)) allows you to enter the name of an existing transaction which is to be renamed. An example of the panel is shown in the following figure:

```

EDIT          IMS HP Sysgen Tools - Rename Transaction Definition
Command ==>  -----

      Primary Commands:
      COPY          Copy attributes from an existing transaction definition

Parameter  Value      Current  Description
-----
Tran Code                      Current Transaction Code
NEW NAME                      New Transaction Code
PSB Name                      Associated PSB Name
DCLWA                        DC Log Write Ahead(YES or NO
Edit Case                    Upper Case UC) or Upper/Lower Case (ULC)
EDIT Name                    Transaction Edit Routine Module Name
FPATH                      Fast Path Specification
                          (NO, YES or 12-30720)
INQUIRY                      Inquiry Mode (NO or YES)
RECOVER                      Recoverable Transaction (RECOVER or NORECOV)
MAXRGN                      Maximum regions (0-255)
MODE                        Mode (SINGL or MULT)
MSGTYPE                      Segments (SINGLSEG or MULTSEG)
RESPONSE                    Response mode (YES or NO)
CLASS                      Transaction Class (1-999)
PARLIM                      Parallel Limit Count (NONE or 0-32767)
COUNT                      PROCLIM Count (0-65535)
SECONDS                      PROCLIM Time (0-65535)
PRIORITY1                  Normal Priority (0-14)
PRIORITY2                  Limit Priority (0-14)
PRIORITY3                  Limit Count (1-65535)
ROUTING                    Routing (NO or YES)
SCHD                      Scheduling Option (1-4)
SEGNO                      Number of Output Segments (0-65535)
SEGSIZE                    Size of Output Segments (0-65535)
SERIAL                    Serial Processing of Input Messages (NO or YES)
SPA SIZE                  SPA Size (blank or 16-32767)
SPA TYPE                  SPA Truncation Option (blank,RTRUNC,STRUNC)
RMT SYSID                  Remote SYSID (blank or 1-2036)
LCL SYSID                  Local SYSID (blank or 1-2036)
WFI                      Wait for Input (NO or YES)
AOI                      Automated Operator (NO,YES,TRAN, CMD)

```

Figure 106. Rename Transaction Definition panel (1 of 2)

To populate current system definition parameter values for the transaction, enter the name of the transaction code that is to be renamed. When the transaction name is entered or changed and the Enter key is pressed, the values in the Current column are updated. The following figure is an example of a populated panel:

EDIT IMS HP Sysgen Tools - Rename Transaction Definition			
Command ==> -----			
Primary Commands:			
COPY	Copy attributes from an existing transaction definition		
Parameter	Value	Current	Description
Tran Code	PART	PART	Current Transaction Code
NEW NAME			New Transaction Code
PSB Name	DFSSAM02	DFSSAM02	Associated PSB Name
DCLWA	YES	YES	DC Log Write Ahead(YES or NO
Edit Case	UC	UC	Upper Case UC) or Upper/Lower Case (ULC)
EDIT Name			Transaction Edit Routine Module Name
FPATH	NO	NO	Fast Path Specification (NO, YES or 12-30720)
INQUIRY	YES	YES	Inquiry Mode (NO or YES)
RECOVER	RECOVER	RECOVER	Recoverable Transaction (RECOVER or NORECOV)
MAXRGN	0	0	Maximum regions (0-255)
MODE	SNGL	SNGL	Mode (SNGL or MULT)
MSGTYPE	MULTSEG	MULTSEG	Segments (SNGLSEG or MULTSEG)
RESPONSE	NO	NO	Response mode (YES or NO)
CLASS	1	1	Transaction Class (1-999)
PARLIM	NONE	NONE	Parallel Limit Count (NONE or 0-32767)
COUNT	65535	65535	PROCLIM Count (0-65535)
SECONDS	65535.00	65535.00	PROCLIM Time (0-65535)
PRIORITY1	7	7	Normal Priority (0-14)
PRIORITY2	10	10	Limit Priority (0-14)
PRIORITY3	65535	65535	Limit Count (1-65535)
ROUTING	NO	NO	Routing (NO or YES)
SCHD	1	1	Scheduling Option (1-4)
SEGNO	0	0	Number of Output Segments (0-65535)
SEGSIZE	0	0	Size of Output Segments (0-65535)
SERIAL	NO	NO	Serial Processing of Input Messages (NO or YES)
SPA SIZE			SPA Size (blank or 16-32767)
SPA TYPE			SPA Truncation Option (blank,RTRUNC,STRUNC)
RMT SYSID			Remote SYSID (blank or 1-2036)
LCL SYSID			Local SYSID (blank or 1-2036)
WFI	NO	NO	Wait for Input (NO or YES)
AOI	NO	NO	Automated Operator (NO,YES,TRAN, CMD)

Figure 107. Rename Transaction Definition panel (2 of 2)

After the current transaction attributes are populated, you must enter the new name for the specified transaction, and you can enter changes for the other attribute values, such as PSB Name or DCLWA. After the new name and any attribute value changes have been entered, pressing the End key (usually, **PF3**) saves the information and returns you to the list of resource update list entries.

Updating route code entries

Each program list entry panel shows the current and/or new values for each parameter associated with an IMS sysgen program definition (APPLCTN macro).

Adding route code definitions

To add route code definitions, use the **Add Route Code Definition** panel.

About this task

When a Add Route Code Definition is initially requested, the panel in [Figure 108 on page 132](#) is displayed.

Enter a value for the route code, and verify that the other parameter values are correct for this definition, or update the values as appropriate.

- Use the **COPY** command to change parameter values to match the values of an existing route code definition.
- Press the Enter key to validate and refresh values on the panel. Press the End key (usually, **PF3**) to save the list entry and return to the display of all entries in the resource update list.
- Enter the **CANCEL** or **CAN** command to return to the display of all entries in the resource update list without saving the entry being viewed.

```

EDIT      IMS HP Sysgen Tools - Add Route Code Definition
Command ===> -----

Primary Commands:
COPY      Copy Attributes from an Existing Route Code Definition

Parameter Value      Description
ROUTCDE      Route Code Name
PSB Name      Name of PSB associated with this Route Code
Inquiry      NO        Inquiry Mode (NO or YES)

```

Figure 108. Add route code definition panel

The Add Route Code Definition panel uses the primary command, **COPY**. To update parameter values to those used by an existing route code, enter **COPY** on the command line, followed by the name of an existing route code. For example, to update parameter values to those currently in use by the DFSIVD route code, you would enter:

```
COPY DFSIVD
```

Updating route code definitions

To update route code definitions, use the Update Route Code Definition panel.

About this task

When a Update Route Code Definition is initially requested, the panel in [Figure 109 on page 132](#) is displayed. Enter a route code to populate the Current values column and to set the Update values column to the current values. If the route code is later changed, the Current and Update values will both be reset to the current values of the parameters.

```

EDIT      IMS HP Sysgen Tools - Update Route Code Definition
Command ===> -----

Primary Commands:
COPY      Copy Attributes from an Existing Route Code Definition

Parameter New      Current      Description
ROUTCDE      Route Code Name
PSB Name      Name of PSB associated with this Route Code
Inquiry      Inquiry Mode (NO or YES)

```

Figure 109. Update route code definition panel (1 of 2)

After a valid route code is entered, the values in the Current and Update columns are displayed as shown in [Figure 110 on page 132](#). After entering the route code, you can use the **COPY** command to change values in the Update column to match values in use by another existing route code. You should then update any values that are to be changed and save the list entry by pressing the End key (usually, PF3).

```

EDIT      IMS HP Sysgen Tools - Update Route Code Definition
Command ===> -----

Primary Commands:
COPY      Copy Attributes from an Existing Route Code Definition

Parameter New      Current      Description
ROUTCDE      IVTFD      IVTFD      Route Code Name
PSB Name      DFSIVP4    DFSIVP4    Name of PSB associated with this Route Code
Inquiry      NO        NO        Inquiry Mode (NO or YES)

```

Figure 110. Update route code definition panel (2 of 2)

The Update Route Code Definition panel uses the primary command, **COPY**. To update parameter values to those used by an existing route code, enter **COPY** on the command line, followed by the name of an

existing route code. For example, to update parameter values to those currently in use by the DFSIVD route code, you would enter:

```
COPY DFSIVD
```

Deleting route code definitions

To delete route code definitions, use the Delete Route Code Definition panel.

About this task

The initial Delete Route Code Definition panel allows you to enter a route code that is to be deleted. An example of the panel is shown in the following figure:

```
EDIT      IMS HP Sysgen Tools - Delete Route Code Definition
Command ==> -----

Verify that the following Route Code definition is to be deleted.

Parameter      Value      Description
ROUTCODE      Route Code Name
PSB Name      Name of PSB associated with this Route Code
Inquiry      Inquiry Mode
```

Figure 111. Delete route code definition panel

To populate current system definition parameter values for the route code, you would enter a valid route code. With the exception of the route code, you cannot change these values. If the route code is changed, the values are updated on the panel when the Enter key is pressed. The following figure is an example of a populated panel.

```
EDIT      IMS HP Sysgen Tools - Delete Route Code Definition
Command ==> -----

Verify that the following Route Code definition is to be deleted.

Parameter      Value      Description
ROUTCODE      IVTFD      Route Code Name
PSB NAME      DFSIVP4      Name of PSB associated with this Route Code
Inquiry      NO      Inquiry Mode
```

Figure 112. Delete route code definition panel (2 of 2)

Renaming route code definitions

To rename route code definitions, use the **Rename Route Code Definition** panel.

About this task

The initial Rename Route Code Definition panel (if you do not include a route code name on the panel shown in [Figure 85 on page 115](#)) allows you to enter the name of an existing route code which is to be renamed. An example of the panel is shown in the following figure:

```

EDIT          IMS HP Sysgen Tools - Rename Route Code Definition
Command ==>> -----

      Primary Commands:
      COPY          Copy attributes from an existing route code definition

Parameter  Value  Current  Description
ROUTCDE
NEW NAME
PSB Name
Inquiry
Current Route Code Name
New Route Code Name
Name of PSB associated with this Route Code
Inquiry Mode (NO or YES)

```

Figure 113. Rename Route Code Definition panel (1 of 2)

To populate current system definition parameter values for this route code, enter the name of the route code which is to be renamed. When the route code name is entered or changed, the values in the Current column are updated. The following figure is an example of a populated panel.

```

EDIT          IMS HP Sysgen Tools - Rename Transaction Definition
Command ==>> -----

      Primary Commands:
      COPY          Copy attributes from an existing transaction definition

Parameter  Value  Current  Description
ROUTCDE
NEW NAME
PSB Name
Inquiry
IVTFD
DFSIVP4
NO
IVTFD
DFSIVP4
NO
Current Route Code Name
New Route Code Name
Name of PSB associated with this Route Code
Inquiry Mode (NO or YES)

```

Figure 114. Rename Route Code Definition panel (2 of 2)

After the current route code attributes are populated, you must enter the new name for the specified route code, and you can enter changes for the other attribute values, such as PSB Name or Inquiry. After the new name and any attribute value changes have been entered, pressing the End key (usually, **PF3**) saves the information and returns you to the list of resource update list entries.

Updating an AGN definition

When inserting a new resource update list entry, selecting resource type **5** allows you to make a change to an IMS Application Group Name (AGN) definition. AGN definitions are used to protect IMS resources using your z/OS security subsystem. You can restrict which user IDs are allowed to access specific program names, transaction codes, and logical terminal (LTERM) names.

AGN definitions allow you to group a set of IMS resource names into a single name for your security subsystem. These definitions are defined in the IMS security gen source, and are placed in the IMS MATRIX data set.

IMS HP Sysgen Tools allows you to update an AGN definition in order to add or delete a specific IMS resource name from the definition. To update an AGN definition, you select resource type **5** (AGN) from the **Edit Resource Update List** panel, as shown in Figure 85 on page 115. After selecting Option **5**, you specify the AGN name, resource type, resource name, and action to be performed on the screen shown in the following figure:


```

EDIT          IMS HP SYSGEN Tools  -  Update AGN Definition
Command ==>>-----

Specify a single resource name to be added or deleted from an AGN
definition.

Parameter      Value      Description
Name           -----      AGN name
Action         -           A to ADD the resource name, D to DELETE the resource name
Type           -           Resource type (T=TRAN, P=PROGRAM, or L=LTERM)
Resource       -----      Resource name

```

Figure 115. Update AGN definition panel

On this panel, specify the following fields:

Name

The name of an existing AGN, as defined in your IMS security gen source. The name is verified for the target IMS subsystem when you enter the value.

Action

Enter either **A** to add a new resource name to this AGN, or **D** to delete an existing resource that is defined in the AGN.

Type

The resource type. Enter **T** for a transaction, **P** for a program, or **L** for an LTERM name.

Resource

The name of the transaction, program, or LTERM name to be added or deleted from the AGN. The resource name is checked when you press the Enter key. If you requested a **DELETE**, the resource name must be defined in the AGN. If you requested an **ADD**, the resource name must not already be defined in the AGN. If the existing definition of the AGN specifies **ALL** for this type of resource (for example, AGLTERM ALL), you cannot add or delete a specific entry from the list. When you press Enter, the AGN definition is checked to ensure that **ALL** was not specified.

Updating transaction command SMU security

When inserting a new resource update list entry, selecting resource type 6 allows you to make a change to the IMS command security defined for a transaction. This is the IMS type 1 command security which provides access to the IMS CMD and GCMD calls, as defined in the IMS security gen source using the TCOMMAND and CTRANS statements.

About this task

This transaction command security should not be confused with IMS security for ICMD and RCMD calls, which is based on z/OS security subsystem, or the AOI= parameter that can be specified on the TRANSACT macro in IMS 9 and later.

IMS HP Sysgen Tools allows you to update IMS SMU TCOMMAND security definitions. To update a TCOMMAND definition, select resource type 6 (TCOMMAND) from the **Edit Resource Update List** panel, as shown in [Figure 85 on page 115](#). After selecting option **6**, specify the transaction code to be updated. The current IMS TCOMMAND security specifications are displayed, as shown in [Figure 116 on page 136](#). This panel contains the same commands found on the **Edit Resource Update List** panel plus additional commands. Use the ISPF Up and Down commands (typically **PF7** and **PF8**) to scroll through all the IMS commands.

All the listed IMS commands may not be available for a specific release of IMS. For example, the **/DIAGNOSE** command was introduced in IMS 8. Any value that you enter for the **/DIAGNOSE** command for an IMS 7 system or earlier will be ignored. In such a case, the description for a command indicates that it is not available for specific releases of IMS.

The panel also shows which commands are authorized for the specified transaction code. A slash is displayed in the Current column for every authorized transaction command. You can update the New column with a non-blank value to authorize the transaction for a command. To remove security for a command, simply change the slash in the New column to a blank.

You can copy the TCOMMAND security specification of an existing transaction code using the **COPY** command. Just enter the **COPY** command, followed by the transaction code from which security is to be copied on the command line. The New column is updated to reflect the authorization provided for the transaction code specified in the **COPY** command.

```

EDIT      IMS HP SYSGEN Tools - Update IMS Transaction Command Security
Command ===> _____

      Primary Commands:
      COPY      Copy transaction command security from an existing transaction
Parameter  Value      Description
Trancode   PART_____ Transaction name

CMD   New   Current      Description

/ACT   -           /ACTIVATE command authorization
/ALL   -           /ALLOCATE command authorization
/ASS   -           /ASSIGN command authorization
/BRO   -           /BROADCAST command authorization
/CHA   -           /CHANGE command authorization
/CHE   -           /CHECKPOINT command authorization
/CLS   -           /CLSDST command authorization
/COM   -           /COMPT command authorization
/CQC   -           /CQCHKPT command authorization (Ignored for IMS V5-V6)
/CQQ   -           /CQQUERY command authorization (Ignored for IMS V5-V6)
/CQS   -           /CQSET command authorization (Ignored for IMS V5-V6)
/DBD   -           /DBDUMP command authorization
/DBR   -           /DBRECOVERY command authorization
/DEL   -           /DELETE command authorization
/DEQ   -           /DEQUEUE command authorization
/DIA   -           /DIAGNOSE command authorization (Ignored for IMS V5-V8)
/DIS   /           /DISPLAY command authorization
/END   -           /END command authorization
/EXC   -           /EXCLUSIVE command authorization
/EXI   -           /EXIT command authorization

```

Figure 116. Update TCOMMAND definition panel

Updating IMS terminal SMU security

When inserting a new resource update list entry, selecting resource type **7** allows you to make a change to IMS terminal security.

About this task

IMS terminal security is specified in your IMS security gen source, and provides the ability to restrict access to IMS transactions and commands to a limited number of static IMS LTERM names. Note that this does not affect any dynamic ETO terminals, which are typically secured using your z/OS security subsystem.

Terminal security defines which IMS commands and transactions are protected. If a transaction or command is not currently protected, allowing one specific LTERM to access the resource causes all other LTERMs to be disallowed from the resource. For this reason, IMS HP Sysgen Tools does not allow you to define security for a transaction code or command that is not currently protected. To define security for a currently unprotected transaction or command, or to remove all security from a transaction or command, you should update your IMS security gen source, perform a security gen, and implement the updated security using IMS online change.

IMS HP Sysgen Tools allows you to update IMS terminal security definitions to allow or disallow access to a resource from a specified LTERM name. To update IMS terminal security, select resource type **7** (TERMSEC) from the **Edit Resource Update List** panel, as shown in [Figure 85 on page 115](#). After selecting option **7**, specify the LTERM name, action, and resource name for which security will be updated. The IMS terminal security panel is shown in [Figure 117 on page 137](#).

```

EDIT      IMS HP SYSGEN Tools  -  Update IMS Terminal Security
Command ==>-----

    Define a security update that will allow or disallow access to the
    specified resource from the specified logical terminal (LTERM) name.

Parameter      Value      Description
Name           -----    LTERM name (must be defined as a static LTERM name)
Action         -          A to Allow or D to Disallow access to the resource
Resource       -----    Resource name (Trancode or command-including the slash)

```

Figure 117. Update terminal security panel

Fields to be completed are:

Name

The name of an existing static LTERM name, as defined in your IMS sysgen source. The name is verified for the target IMS subsystem when you enter the value.

Action

Enter either A to allow access or D to disallow access for the specified LTERM name.

Resource

The name of the transaction or command for which access is to be allowed or disallowed. The transaction code or command name is checked to ensure it is valid in the target IMS system. For an IMS command, specify a slash and the first three letters of the command; for example, **/DIS**.

Issuing an IMS command in a resource update list

When inserting a new resource update list entry, selecting resource type **8** allows you to process an IMS command as part of the installation of the resource update list.

About this task

The order of entries in a resource update list does not define the order used when installing the resource update list. Instead, IMS command entries allow you to specify whether to run the IMS command before or after IMS HP Sysgen Tools installs other changes defined by resource update list entries.

If IMS commands are to be run before other resource updates, they are run immediately after the resource update list is verified. If they are to be run after other resource updates, they are run after changes in all other types of update list entries have been installed. This would happen after all IMS resource updates and security updates, as well as after any IMS ACBLIB reload requests.

If installation of a resource update list fails during resource updates, online changes, or reloads, IMS commands specified to run after resource updates are still processed after the failure occurs. If a failure occurs before any "before" IMS commands are issued, none of the "after" IMS commands are processed. The intent is to either run none of the IMS commands or all the IMS commands.

The following panel shows the fields you use to insert a new resource update list entry.

```

EDIT      IMS HP SYSGEN Tools  -  Resource Update List, IMS Command Entry
Command ==>-----

    Define a security update that will allow or disallow access to the
    specified resource from the specified logical terminal (LTERM) name.

Parameter      Value      Description
Sequence       -----    Sequence (BEFORE or AFTER) IMS resource updates
Command        -----

```

Figure 118. Resource Update List entry IMS command panel

Fields to be completed are:

Sequence

Defines whether the command will be processed BEFORE other resource updates, or AFTER other resource updates.

Command

The IMS commands to be processed. Only type 1 commands are supported. The command must start with a slash (/).

Reloading a DEDB randomizer

IMS HP Sysgen Tools provides an automated way to reload a Fast Path Data Entry Database (DEDB) randomizer module.

About this task

IMS provides the capability to reload a DEDB randomizer; specifically, after all databases using the randomizer are processed by the **/DBR** command, IMS recognizes that the randomizer is no longer in use and deletes it from memory. Subsequently, when one of the databases using the randomizer is started, IMS loads the new version of the randomizer module from the IMS control region STEPLIB.

IMS HP Sysgen Tools automates the process of performing **/DBR** of all databases that use the specified randomizer name and then automates the startup of the databases as well as any areas associated with the databases that were available before the **/DBR** was initiated.

In order to reload a DEDB randomizer module, you should first review which databases will be impacted when the randomizer is reloaded. You can use IMS HP Sysgen Tools Option 1 to view a list of all DEDB randomizer module names, and which databases use each randomizer name. When the resource update list is installed, all the listed databases are taken offline, which makes them unavailable to any IMS application programs. You should carefully consider the impact before performing the install of a resource update list that includes a reload DEDB randomizer entry.

Remember that the updated DEDB randomizer load module must be copied into the IMS control region STEPLIB before the resource update list is installed. Also, note that IMS HP Sysgen Tools takes no action until the resource update list is installed.

To create a resource update list entry to perform a DEDB randomizer reload:

1. Insert a new entry into a resource update list.
2. Select resource type **9** on the **Edit Resource Update List** panel shown in [Figure 85 on page 115](#).
3. Specify the randomizer load module name in the name field.
4. Enter the randomizer name on the panel that appears next (the Reload DEDB Randomizer entry panel shown in [Figure 119 on page 138](#)).

```
EDIT      IMS HP SYSGEN Tools  -  Reload DEDB Randomizer
Command ==>-----
Parameter      Value      Description
Name           -----      DEDB Randomizer load module name
```

Figure 119. Reload DEDB Randomizer entry panel

The name of the DEDB randomizer load module is required. If you specified this name on the panel in [Figure 85 on page 115](#), the name is automatically populated to the Reload DEDB Randomizer panel.

Reloading an ACBLIB member

You can dynamically reload a specific ACBLIB member into the PSB or DMB pool of the IMS control region, without locating all changed ACBLIB members and reloading them.

IMS HP Sysgen Tools provides two methods for reloading an ACBLIB member: using HP Sysgen ACB reload or using IMS member level global online change.

- The HP Sysgen ACB reload method involves copying the ACBLIB member to the active ACBLIB, and might not require any changes to the IMS environment.

- The IMS ACB member level global online change method might require changes to the IMS environment, but it also provides additional capabilities that HP Sysgen ACB reload does not offer. For example, you can reload database definitions (DBD) for Data Entry Databases (DEDB) and if a DBD is updated, all PSBs that are affected by the DBD change can be automatically reloaded.

You can also activate a pending ACB in the IMS directory staging data set and load it into the PSB or DMB pool of the IMS control region.

IMS HP Sysgen Tools provides the IMS Managed ACB Activate method for activating pending ACBs in the IMS directory staging data set. The IMS Managed ACB Activate method might require changes to the IMS environment.

Reloading an ACBLIB member by using HP Sysgen ACB reload

You can use HP Sysgen ACB reload to reload a single updated PSB or DBD.

About this task

Restriction: Fast Path database DBDs cannot be reloaded.

All releases of IMS are supported by the HP Sysgen ACB reload method.

Procedure

To reload an ACBLIB member:

1. Request an ACB reload by adding an entry to a resource update list. In the panel shown in [Figure 85 on page 115](#), use option **A** to insert a new resource update list entry.

```

EDIT      IMS HP Sysgen Tools - Reload ACBLIB Member
Command ===>-----

Parameter  Value  Description
Type       -----  Type of resource to be Reloaded (PSB or DBD)
Name       -----  Name of Resource to be Reloaded
Process    1       Process to use to reload an ACBLIB member (1, 2 or 3)
                  1 = HP Sysgen ACB Reload
                  2 = IMS Member Level Global Online Change
                  3 = IMS Managed ACBs Activate
PSB's      N       Reload PSBs affected by a DBD change? (Y, N or blank)

Note: The Process option allows you to select either the HP Sysgen internal
      ACB reload process or the IMS Member level ACB reload feature of Global
      Online Change or IMS Managed ACBs Activate. Note that DEDB database
      reloads require using IMS Member level ACB reload or IMS Managed ACBs
      Activate.

Note: The Reload PSB's option must be set to "N" for HP Sysgen ACB Reload
      and blank for IMS Managed ACBs Activate.

```

Figure 120. Reload ACBLIB member panel

2. Create an entry in a resource update list. To use the HP Sysgen reload option, specify the following:
 - a) For the **Process** field, select **1** (HP Sysgen ACB Reload) .
 - b) For the **PSB's** field, you must select **N** because HP Sysgen ACB reload does not support automatic reloading of a PSB that is affected by a DBD change.
3. Copy the updated ACB member to the active ACBLIB, and install the resource update list to reload the ACBLIB member specified in the resource update list.

Reloading an ACBLIB member by using IMS member level global online change

You can use IMS member level global online change to reload a single updated PSB or DBD.

Before you begin

For information about the prerequisites for the following procedure, see [“Enabling the use of IMS ACB member level global online change” on page 53.](#)

Procedure

To reload an ACBLIB member:

1. Request an ACB reload by adding an entry to a resource update list. In the panel shown in [Figure 85 on page 115](#), use option **A** to insert a new resource update list entry.

```
EDIT      IMS HP Sysgen Tools - Reload ACBLIB Member
Command ===>-----

Parameter  Value      Description
Type       -----      Type of resource to be Reloaded (PSB or DBD)
Name       -----      Name of Resource to be Reloaded
Process    2           Process to use to reload an ACBLIB member (1, 2 or 3)
                        1 = HP Sysgen ACB Reload
                        2 = IMS Member Level Global Online Change
                        3 = IMS Managed ACBs Activate
PSB's      N           Reload PSBs affected by a DBD change? (Y, N or blank)

Note: The Process option allows you to select either the HP Sysgen internal
      ACB reload process or the IMS Member level ACB reload feature of Global
      Online Change or IMS Managed ACBs Activate. Note that DEDB database
      reloads require using IMS Member level ACB reload or IMS Managed ACBs
      Activate.

Note: The Reload PSB's option must be set to "N" for HP Sysgen ACB Reload
      and blank for IMS Managed ACBs Activate.
```

Figure 121. Reload ACBLIB member panel

2. Create an entry in a resource update list to reload an ACB.
 - a) For the **Process** field, select **2** (IMS Member Level Global Online Change).
 - b) For the **PSB's** field, specify either **Y** or **N**.

The use of the **PSB's** field only applies when the **TYPE** field specifies that a DBD is to be reloaded. This field is used to populate the NAMEONLY parameter of the **INITIATE OLC PHASE (PREPARE) TYPE (ACBMBR)** command.

N

If you specify **N**, IMS tries to reload only the specified DBD, and does not reload any PSB that has access to the specified DBD.

Y

If you specify **Y**, IMS reloads the specified DBD and every PSB that has access to that database.
3. Copy the updated ACB member to the staging ACBLIB, and install the resource update list to reload the ACBLIB member specified in the resource update list.

Important: IMS HP Sysgen Tools does not stop a DBD or PSB before it is reloaded. You must verify that the DBD or PSB is not in use at the time the reload is performed.

If an error occurs when installing a resource update list entry with an IMS member level global online change request, the IMS return codes and reason codes, along with any text associated with the error, are returned.

For information about CSLOMCMDB request return and reason codes, see *IMS System Programming APIs*. For return and reason codes associated with commands in messages IOH4725E through IOH4728E, see *IMS Commands*.

If you specify **Y** for the **PSB's** field, message CSLN030W might be returned. This means that the IMS command was timed out. You can avoid a time out by using the WAIT parameter. For details about the WAIT parameter, see [Chapter 17, “Installing a resource update list,” on page 147](#) and [Chapter 20, “Using the Batch Update List utility,” on page 171](#).

Activating a pending ACB member in IMS directory staging data set by using IMS Managed ACBs Activate

You can use IMS Managed ACBs Activate to activate all pending PSBs and DBDs in the IMS directory staging data set.

Before you begin

For information about the prerequisites for the following procedure, see [“Enabling the IMS Managed ACBs Activate method” on page 54](#).

Procedure

To reload an ACBLIB member:

1. Request an ACB reload by adding an entry to a resource update list. In the panel shown in [Figure 85 on page 115](#), use option **A** to insert a new resource update list entry.

```

EDIT      IMS HP Sysgen Tools - Reload ACBLIB Member
Command ===>-----

Parameter  Value      Description
Type       -----
Name       -----
Process    3          Process to use to reload an ACBLIB member (1, 2 or 3)
                        1 = HP Sysgen ACB Reload
                        2 = IMS Member Level Global Online Change
                        3 = IMS Managed ACBs Activate
PSB's      Reload PSBs affected by a DBD change? (Y, N or blank)

Note: The Process option allows you to select either the HP Sysgen internal
ACB reload process or the IMS Member level ACB reload feature of Global
Online Change or IMS Managed ACBs Activate. Note that DEDB database
reloads require using IMS Member level ACB reload or IMS Managed ACBs
Activate.

Note: The Reload PSB's option must be set to "N" for HP Sysgen ACB Reload
and blank for IMS Managed ACBs Activate.

```

Figure 122. Reload ACBLIB member panel

2. Create an entry in a resource update list to reload an ACB.
 - a) For the **Process** field, select **3** (IMS managed ACBs Activate).
 - b) Leave the **PSB's** field blank.
3. Populate the updated ACB member to the IMS directory staging data set, and install the resource update list to activate the ACB member specified in the resource update list.

Important:

- IMS HP Sysgen Tools does not stop a DBD or PSB before it is reloaded. You must verify that the DBD or PSB is not in use at the time the reload is performed.
- If an IMS system that is configured as ACBSHR=Y is included in the target group, you cannot select option **3** for the **Process** field.

If you specify an IMS system that is configured as ACBSHR=Y singly as the target IMSID, you can select option **3** for the **Process** field. In this case, however, the IMS type-2 **IMPORT DEFN SOURCE (CATALOG)** command is processed by all the IMS systems in the IMSplex that specify ACBSHR=Y.

For detailed information about the **IMPORT DEFN SOURCE (CATALOG)** command, see *IMS Commands*.

If an error occurs when installing a resource update list entry with an IMS Managed ACBs Activate request, the IMS return codes and reason codes, along with any text associated with the error, are returned.

For information about CSLOMCMC request return and reason codes, see *IMS System Programming APIs*. For return and reason codes associated with commands in messages IOH4725E through IOH4728E, see *IMS Commands*.

Chapter 16. Verifying a resource update list

The Verify option ensures that a resource update list will install successfully in one or more specific IMS subsystems.

During the process of creating a resource update list, IMS resource definition values are verified as valid, but the values are not verified as valid for any specific IMS subsystem. Thus, resource update lists are not associated with any specific IMS subsystem and can be installed for different target IMS subsystems or groups.

The Verify option ensures that a resource update list will install successfully in one or more specific IMS subsystems. This verification can take place before you actually install the resource update list.

It is not required that a resource update list be verified. The install process performs a verification check prior to making any changes. The Verify option provides a means for you to know if the resource update list installation will be successful before actually doing the installation.

Topics:

- [“Verification methods” on page 143](#)
- [“Completed verification” on page 146](#)

Verification methods

You can use one of the three methods to verify a resource update list.

Use any of the following methods to verify a resource update list:

- Select option **3** (Verify) from the IMS HP Sysgen Tools Primary Options menu ([Figure 25 on page 57](#)).

By using this method, you can select multiple resource update lists to verify in a single pass as though they were a single resource update list. This feature is useful if you need to verify that multiple resource update lists be installed at the same time (perhaps by a batch job scheduled during a maintenance window).

- Use the resource update list edit selection panel ([Figure 81 on page 112](#)).

Use the **V** line command on the Edit member selection list to verify a resource update list from the same panel where you can edit a resource update list. If you previously created a resource update list and want to verify that it can be installed, issue the **V** line command after you save the resource update list.

- Perform the verify function by using a batch job.

Refer to [Chapter 20, “Using the Batch Update List utility,” on page 171](#) for details about how to set up JCL and control cards to verify one or more resource update lists.

To use option **3** on the IMS HP Sysgen Tools Primary Options menu to verify one or more resource update lists, complete the following steps:

1. Select option **3** from the IMS HP Sysgen Tools Primary Options menu and press Enter.

The Update List Selection panel, [Figure 123 on page 144](#), is displayed.

```

VERIFY IMS HP Sysgen Tools - Update List Selection Row 20 to 34 of 167
Command ==> ----- Scroll ==> CUR
More ->

Primary Commands:

S Select a Member Select one or more Resource Update Lists you
L Locate a Member want to verify. Press Enter without any
SORT Sort the List changes to the screen to continue.

Name Target Status Lines Created Updated Upd-ID
- #TERMSE4 IMS9 1 2019/03/17 2020/05/06 13:46 P390M
- A IMS7 20 2019/02/02 2020/05/06 13:47 P390M
- ADDINV IMS7 VERIFY 1 2018/09/04 2020/05/06 13:47 P390M
- ANDREW1 IMS7 1 2018/11/17 2020/05/06 13:48 P390M
- ANDREW2 IMS7 6 2018/11/17 2020/05/06 13:48 P390M
- ANDREW3 IMS7 2 2018/11/20 2020/05/06 13:48 P390M
- ANDREW4 IMS7 2 2018/11/20 2020/05/06 13:48 P390M
- ANDREW5 IMS7 3 2018/11/20 2020/05/06 13:48 P390M
- A1 IMS9 6 2019/03/12 2020/05/06 14:23 P390M
- BCMIVPS1 IMS7 1 2018/09/14 2020/05/06 13:49 P390M
- CCFAOPGM IMS9 VERIFY 3 2019/06/29 2020/05/06 13:49 P390M
- CLSTIMS6 IMS9 VERIFY 1 2019/06/16 2020/05/06 13:50 P390M
- CLSTIMS7 IMS7 152 2019/09/14 2020/05/06 13:50 P390M
- CLSTIMS9 IMS9 5 2019/06/16 2020/05/06 13:50 P390M
- CMD1 IMS7 VERIFY 2 2019/01/26 2020/05/06 13:50 P390M

```

Figure 123. Sample panel for verifying resource update list (1 of 3)

Scroll the Update List selection panel by using the **RIGHT** and **LEFT** commands or **PF11** and **PF10**. Verify that panels 1, 2, and 3 have the same fields as edit screens 1, 2, and 3. Sample VERIFY panels 2 and 3 are shown in figures [Figure 124 on page 144](#) and [Figure 125 on page 145](#).

```

VERIFY IMS HP Sysgen Tools - Update List Selection Row 1 to 34 of 184
Command ==> ----- Scroll ==> CUR
More ->

Primary Commands:

S Select a Member Select one or more Resource Update Lists you
L Locate a Member want to verify. Press Enter without any
SORT Sort the List changes to the screen to continue.

Name Updated Upd-ID Installed Inst-ID
- #TERMSE4 2020/05/06 13:46:45 P390M 2019/03/18 0:00:00 P390M
- A 2020/05/06 13:47:03 P390M
- ADDINV 2020/05/06 13:47:11 P390M 2019/09/08 0:00:00 P390M
- ANDREW1 2020/05/06 13:48:08 P390M
- ANDREW2 2020/05/06 13:48:01 P390M
- ANDREW3 2020/05/06 13:48:26 P390M
- ANDREW4 2020/05/06 13:48:35 P390M
- ANDREW5 2020/05/06 13:48:43 P390M
- A1 2020/05/06 14:23:55 P390M 2019/03/18 0:00:00 P390M
- BCMIVPS1 2020/05/06 13:49:18 P390M 2019/01/02 0:00:00 P390M
- CCFAOPGM 2020/05/06 13:49:35 P390M 2019/06/29 0:00:00 P390M
- CLSTIMS6 2020/05/06 13:50:07 P390M
- CLSTIMS7 2020/05/06 13:50:19 P390M
- CLSTIMS9 2020/05/06 13:50:37 P390M
- CMD1 2020/05/06 13:50:52 P390M 2019/02/04 0:00:00 P390M

```

Figure 124. Sample panel for verifying resource update list (2 of 3)

```

VERIFY      IMS HP Sysgen Tools - Update List Selection      Row 20 to 34 of 167
Command ==> ----- Scroll ==> CSR
                                     <- More

Primary Commands:
S   Select a Member      Select one or more Resource Update Lists you
L   Locate a Member      want to verify. Press Enter without any
SORT Sort the List       changes to the screen to continue.

CMD   Name      Comments
-   #TERMSE4    TEST TERMINAL SECURITY
-   A           TEST
-   ADDINV      UPDATE ADDINV
-   ANDREW1     ANDREW CHANGES
-   ANDREW2     ANDREW CHANGES
-   ANDREW3     ANDREW CHANGES
-   ANDREW4     ANDREW CHANGES
-   ANDREW5     ANDREW CHANGES
-   A1          MIXED RELOAD AND SECURITY
-   BCMIVPS1    PRF
-   CCFAOPGM    ADD CCF AND IMSCMD
-   CLSTIMS6    GENERATED UPDATE LIST
-   CLSTIMS7    GENERATED UPDATE LIST
-   CLSTIMS8    GENERATED UPDATE LIST
-   CMD1        TEST COMMANDS

```

Figure 125. Sample panel for verifying resource update list (3 of 3)

2. Use the **S** line command to select resource update lists to verify. You can select up to 255 resource update lists to verify simultaneously. Press Enter to initiate the verification process.

The update list entries from the update lists are shown in the following panel:

```

VERIFY      IMS HP Sysgen Tools - Update List Entries      Row 1 to 3 of 3
Command ==> ----- Scroll ==> CUR
                                     More ->

Target ==> IMS8_____ (IMSID or Group Name)

Primary Commands:
GO   Verify this Update List

Function  Resource   Name      ListName   List TGT Updated      ID
ADD       APPLCTN    DFSSAM0A  DFSSAM0A   IMS8      2020/05/06 20:47:44 P390M
ADD       DATABASE   DI21PART  DI21PART   IMS8      2020/05/06 20:48:06 P390M
UPDATE    TRANSACT     PART      DI21PART   IMS8      2020/05/06 20:48:06 P390M
***** Bottom of data *****

```

Figure 126. Update list entries panel

3. Validate that the correct resource update lists are selected and specify the **Target** name (either IMSID or group name) for which the entries are to be verified.
4. Enter the **GO** primary command to initiate the verification process.

If the verification process identifies any conflicts that would prevent the update list entries from being installed, messages are displayed that describe these conditions. Example errors are shown in the following figure:

```

BROWSE      Verify Update List Results      Line 00000000 Col 001 080
Command ==> ----- Scroll ==> CSR
***** Top of Data *****
SUMMARY OF VERIFY PROCESSING:
IMS9: VERIFY FAILED
----- MESSAGES FOR IMS IMS9 -----
IOH4104E ADD FOR DATABASE DI21PART FAILED BECAUSE IT IS ALREADY DEFINED
***** Bottom of Data *****

```

Figure 127. Resource update list verification error message

Completed verification

When a verification process is successful, the verify status (and the target that was used for the verify) are stored in the IOHPDS data set.

The Status field is updated to reflect the last successful function that was performed on the member. Figure 128 on page 146 shows that resource update list ADDINV was successfully verified. The asterisk before the VERIFY status shows that the status of this update list was changed in this HP Sysgen ISPF session. Member CCFAOPGM also shows a VERIFY status without the asterisk, which means that it was not verified during this IMS HP Sysgen Tools ISPF session.

EDIT				IMS HP Sysgen Tools - Update List Selection				Verify Successful			
Command ==>				-----				Scroll ==> CUR			
Primary Commands:				Line Commands:							
S Add/Edit a Member				S Edit a Member				E Edit a Member			
L Locate a Member				D Delete a Member				V Verify a Member			
SORT Sort the List				R Rename a Member				I Install a Member			
Name		Target	Status	Lines	Created	Updated		Upd-ID			
-	#TERMSE4	IMS9		1	2019/03/17	2020/05/06	13:46	P390M			
-	A	IMS7		20	2019/02/02	2020/05/06	13:47	P390M			
-	ADDINV	IMS9	*VERIFY	1	2018/09/04	2020/05/06	20:59	P390M			
-	ANDREW1	IMS7		1	2018/11/17	2020/05/06	13:48	P390M			
-	ANDREW2	IMS7		6	2018/11/17	2020/05/06	13:48	P390M			
-	ANDREW3	IMS7		2	2018/11/20	2020/05/06	13:48	P390M			
-	ANDREW4	IMS7		2	2018/11/20	2020/05/06	13:48	P390M			
-	ANDREW5	IMS7		3	2019/11/20	2020/05/06	13:46	P390M			
-	A1	IMS9		6	2019/03/12	2020/05/06	14:23	P390M			
-	BCMIVPS1	IMS7		1	2018/09/14	2020/05/06	13:49	P390M			
-	CCFAOPGM	IMS9	VERIFY	3	2019/06/29	2020/05/06	0:00	P390M			
-	CLSTIMS6	IMS9	VERIFY	1	2019/06/16	2020/05/06	13:50	P390M			
-	CLSTIMS7	IMS7		152	2019/09/14	2020/05/06	13:50	P390M			
-	CLSTIMS9	IMS9		5	2019/06/16	2020/05/06	13:50	P390M			
-	CMB1	IMS7	VERIFY	2	2019/01/26	2020/05/06	13:50	P390M			

Figure 128. Resource update list after verification

Chapter 17. Installing a resource update list

After you create and verify a resource update list, you can install it. When you install a resource update list, verification is performed as the first step of the installation process.

Topics:

- “Installation methods” on page 147
- “Completed installation” on page 150

Installation methods

You can install a resource update list by using one of the three methods.

Use any of the following methods to install a resource update list:

- Select option **4** (Install) from the IMS HP Sysgen Tools Primary Options menu (Figure 25 on page 57).

By using this method you can select multiple resource update lists to install in a single pass as though they were a single resource update list. This feature is useful if you need to install multiple resource update lists at the same time. For example, for multiple application maintenance releases in a single maintenance window.

- Use the Resource update list edit selection panel (Figure 81 on page 112).

Use the **I** line command on the Edit member selection list to install a resource update list from the same panel where you can edit a resource update list. If you previously created a resource update list and want to install it, issue the **I** line command after you save the resource update list.

- Perform the installation by using a batch job.

Refer to Chapter 20, “Using the Batch Update List utility,” on page 171 for details about how to set up JCL and control cards to install one or more resource update lists.

To use option **4** on the IMS HP Sysgen Tools Primary Options menu, Figure 25 on page 57, to install one or more resource update lists, complete the following steps:

1. Select option **4** from the HP Sysgen Primary Options menu and press Enter.

The Update List Selection panel is displayed.

```
INSTALL      IMS HP Sysgen Tools - Update List Selection      Row 20 to 34 of 167
Command ==> ----- Scroll ==> CUR
                                     More ->

Primary Commands:
  S Select a Member
  L Locate a Member
  SORT Sort the List

Select one or more Resource Update Lists you
want to install. Press Enter without any
changes to the screen to continue.

  Name      Target      Status      Lines      Created      Updated      Upd-ID
- #TERMSE4  IMS9              1  2019/03/17  2020/05/06 13:46  P390M
- A          IMS7              20 2019/02/02  2020/05/06 13:47  P390M
- ADDINV     IMS7      VERIFY      1  2018/09/04  2020/05/06 13:47  P390M
- ANDREW1    IMS7              1  2018/11/17  2020/05/06 13:48  P390M
- ANDREW2    IMS7              6  2018/11/17  2020/05/06 13:48  P390M
- ANDREW3    IMS7              2  2019/11/20  2020/05/06 13:48  P390M
- ANDREW4    IMS7              2  2019/11/20  2020/05/06 13:48  P390M
- ANDREW5    IMS7              3  2019/11/20  2020/05/06 13:48  P390M
- A1         IMS9              6  2019/03/12  2020/05/06 14:23  P390M
- BCMIVPS1   IMS7              1  2018/09/14  2020/05/06 13:49  P390M
- CCFAOPGM   IMS9      VERIFY      3  2019/06/29  2020/05/06 13:49  P390M
- CLSTIMS6   IMS9      VERIFY      1  2019/06/16  2020/05/06 13:50  P390M
- CLSTIMS7   IMS7              152 2019/09/14  2020/05/06 13:50  P390M
- CLSTIMS9   IMS9              5  2019/06/16  2020/05/06 13:50  P390M
- CMD1       IMS7      VERIFY      2  2019/01/26  2020/05/06 13:50  P390M
```

Figure 129. Initial panel for installing resource update list

Scroll the Update List Selection panel by using the **RIGHT** and **LEFT** commands or **PF11** and **PF10**. Install panels 1, 2, and 3 have the same fields as edit panels 1, 2, and 3. Sample Install panels 2 and 3 are shown in [Figure 130 on page 148](#) and [Figure 131 on page 148](#).

```

INSTALL      IMS HP Sysgen Tools - Update List Selection      Row 27 to 60 of 184
Command ==>> ----- Scroll ==>> CUR
                                   <- More ->

  Primary Commands:
    S   Select a Member      Select one or more Resource Update Lists you
    L   Locate a Member      want to install. Press Enter without any
    SORT Sort the List       changes to the screen to continue.

  Name      Updated      Upd-ID      Installed      Inst-ID
- #TERMSE4  2020/05/06 13:46:45 P390M      2019/03/18 0:00:00 P390M
- A         2020/05/06 13:47:03 P390M
- ADDINV    2020/05/06 13:47:11 P390M      2019/09/08 0:00:00 P390M
- ANDREW1   2020/05/06 13:48:08 P390M
- ANDREW2   2020/05/06 13:48:01 P390M
- ANDREW3   2020/05/06 13:48:26 P390M
- ANDREW4   2020/05/06 13:48:35 P390M
- ANDREW5   2020/05/06 13:48:43 P390M
- A1        2020/05/06 14:23:55 P390M      2019/03/18 0:00:00 P390M
- BCMIVPS1  2020/05/06 13:49:18 P390M      2019/01/02 0:00:00 P390M
- CCFAOPGM  2020/05/06 13:49:35 P390M      2019/06/29 0:00:00 P390M
- CLSTIMS6  2020/05/06 13:50:07 P390M
- CLSTIMS7  2020/05/06 13:50:19 P390M
- CLSTIMS9  2020/05/06 13:50:37 P390M
- CMD1      2020/05/06 13:50:52 P390M      2019/02/04 0:00:00 P390M

```

Figure 130. Sample resource update list install panel (1 of 2)

```

IINSTALL     IMS HP Sysgen Tools - Update List Selection      Row 20 to 340 of 167
Command ==>> ----- Scroll ==>> CSR
                                   <- More
  Primary Commands:
    S   Select a Member      Select one or more Resource Update Lists you
    L   Locate a Member      want to install. Press Enter without any
    SORT Sort the List       changes to the screen to continue.

CMD  Name      Comments
-   #TERMSE4  TEST TERMINAL SECURITY
-   A         TEST
-   ADDINV    UPDATE ADDINV
-   ANDREW1   ANDREW CHANGES
-   ANDREW2   ANDREW CHANGES
-   ANDREW3   ANDREW CHANGES
-   ANDREW4   ANDREW CHANGES
-   ANDREW5   ANDREW CHANGES
-   A1        MIXED RELOAD AND SECURITY
-   BCMIVPS1  PRF
-   CCFAOPGM  ADD CCF AND IMSCMD
-   CLSTIMS6  GENERATED UPDATE LIST
-   CLSTIMS7  GENERATED UPDATE LIST
-   CLSTIMS9  GENERATED UPDATE LIST
-   CMD1      TEST COMMANDS

```

Figure 131. Sample resource update list install panel (2 of 2)

2. Use the **S** line command to select resource update lists to install. You can select up to 255 resource update lists to install simultaneously. Press Enter to initiate the installation process.

The update list entries from the update lists are shown in the following panel:

```

INSTALL    IMS HP Sysgen Tools - Update List Entries           Row 1 to 3 of 3
                                                    More ->
Target ==> IFVX          (IMSID or Group Name)          Wait ==>

  Primary Commands:
    GO    Install these Resource Update Entries

Function  Resource   Name      List Name  List TGT      Updated          ID
ADD       APPLCTN    DFSSAM0A  DFSSAM0A   IMS8          2020/05/06 20:47:44 P390M
ADD       DATABASE  DI21PART  DI21PART   IMS8          2020/05/06 20:48:06 P390M
UPDATE    TRANSACT  PART      DI21PART   IMS8          2020/05/06 20:48:06 P390M
***** Bottom of data *****

```

Figure 132. Update list entries panel

3. Validate that the correct resource update lists are selected and specify the target name for which the entries are to be installed.
4. If necessary, specify how long an IMS OM waits for a response of the IMS member level global online change process from all the members of the IMSplex. The wait value is in seconds (1 - 99999). If you do not specify the wait value, the default value of 300 seconds is used. If the resource update list includes entries that require reloading of many ACBLIB members by use of IMS member level global online change, the wait interval might expire. In this case, the IMS OM returns an error response to IMS HP Sysgen Tools, and the installation process fails.
5. Enter the GO primary command to initiate the installation process.

If the installation process identifies any conflicts that would prevent the update list entries from being successfully installed, messages are displayed that describe these conditions. Example errors are shown in the following panel:

```

INSTALL    Implement Update List Results           Line 00000000 Col 001 080
Command ==> ----- Scroll ==> CSR
***** Top of Data *****
SUMMARY OF INSTALL PROCESSING:
  IMS9: VERIFY FAILED
----- MESSAGES FOR IMS IMS9 -----
IOH4104E ADD FOR DATABASE DI21PART FAILED BECAUSE IT IS ALREADY DEFINED
***** Bottom of Data *****

```

Figure 133. Resource update list installation error message

After an action has completed for a member, the Update List Selection panel is updated with the current status of a member. When the status of a member is updated, the Status field is updated. For example in Figure 134 on page 150, *EDIT appears in the Status column to show that member A has been edited. When the Status column shows an asterisk (*) before the status, it means that this action occurred during the current IMS HP Sysgen Tools ISPF session. Status of VERIFY or INSTALL is maintained across ISPF sessions, while status of EDIT or FAILED are not carried across ISPF sessions.

```

EDIT      IMS HP Sysgen Tools - Update List Selection      Install Successful
Command ==> ----- Scroll ==> CUR
                                     More ->

Primary Commands:      Line Commands:
S Add/Edit a Member    S Edit a Member      E Edit a Member
L Locate a Member      D Delete a Member    V Verify a Member
SORT Sort the List     R Rename a Member    I Install a Member

Name      Target      Status      Lines      Created      Updated      Upd-ID
- #TERMSE4 IMS9          *EDIT      1 2019/03/17  2020/05/06  13:46  P390M
- A        IMS7          *EDIT      20 2019/02/02  2020/05/06  21:21  P390M
- ADDINV   IMS9          *VERIFY    1 2018/09/04  2020/05/06  0:00   P390M
- ANDREW1  IMS7          *VERIFY    1 2018/11/17  2020/05/06  13:48  P390M
- ANDREW2  IMS7          *VERIFY    6 2018/11/17  2020/05/06  13:48  P390M
- ANDREW3  IMS7          *VERIFY    2 2018/11/20  2020/05/06  13:48  P390M
- ANDREW4  IMS7          *VERIFY    2 2018/11/20  2020/05/06  13:48  P390M
- ANDREW5  IMS7          *VERIFY    3 2018/11/20  2020/05/06  13:48  P390M
- A1       IMS9          *FAILED    6 2019/03/12  2020/05/06  14:23  P390M
- BCMIVPS1 IMS7          *FAILED    1 2018/09/14  2020/05/06  13:49  P390M
- CCFAOPGM IMS9          *FAILED    3 2019/06/29  2020/05/06  0:00   P390M
- CLSTIMS6 IMS9          *INSTALL   1 2019/06/16  2020/05/06  13:50  P390M
- CLSTIMS7 IMS7          *INSTALL  152 2019/09/14  2020/05/06  13:50  P390M
- CLSTIMS9 IMS9          *INSTALL   5 2019/06/16  2020/05/06  13:50  P390M
- CMD1     IMS7          *INSTALL   2 2019/01/26  2020/05/06  13:50  P390M

```

Figure 134. Resource update list after installation

Completed installation

When an installation completes successfully, the status panel displays the information about installation status.

As shown in [Figure 135 on page 151](#), a summary of installation status appears at the beginning of the report, showing all IMS subsystems affected by the installation and each IMS subsystem's status for the installation. This status indicates whether the install was successful, failed, or was backed out.

When installing a resource update list for a group of IMS subsystems, the installation process is synchronized among the systems. If an error occurs in one subsystem, the installation is backed out in all other IMS subsystems affected by the change. The resource update list installation goes through the following steps for each target IMS subsystem.

1. The resource update list is verified. Error conditions are displayed on the status screen as shown in [Figure 133 on page 149](#).
2. IMS commands that were requested before installation are issued. Command responses are displayed on the screen.
3. Inactive MODBLKS and MATRIX data sets are updated, and the list of data sets and information about updated modules are displayed.
4. IMS HP Sysgen Tools updates the IMS incore control blocks for any resource update list entries that update a resource, and performs an IMS online change. The online change process switches the MODBLKS and MATRIX data sets to the updated inactive libraries, which causes the libraries to become active. This ensures that the next IMS restart includes the changes being installed. IMS HP Sysgen Tools displays the IMS online change status both before and after the online change process is completed.
5. IMS HP Sysgen Tools performs any requested ACBLIB reload functions, verifies that new programs and databases have a PSB or DBD in the IMS ACBLIB or IMS directory (and issues a warning message if not), and issues IMS commands that were issued after the installation process. The IMS commands and responses are displayed on the screen.

[Figure 135 on page 151](#) shows an example of a successful installation and the messages that IMS HP Sysgen Tools issued during the installation. In this example, installation was performed for a group of IMS systems, which included IMS7 and IMS9. Because there were two IMS subsystems in this installation, the output shows status information for each IMS subsystem.


```

COMMAND   HP Sysgen Error Messages                               Line 00000000 Col 001 080
Command ==> ----- Scroll ==> CSR
***** Top of Data *****
SUMMARY OF INSTALL PROCESSING:
IMS7: INSTALLATION SUCCESSFUL
IMS9: INSTALLATION SUCCESSFUL
-----
----- MESSAGES FOR IMS IMS7 -----
UPDATING INACTIVE MODBLKS DATASET IMS710.MODBLKSA
  MODULE      CSECT      ENTRY      SIZE      AMODE      RMODE      ATTRIBUTES
  -----
  DFSDDIRI    DFSIDMD0             1200      31      ANY      REUS
  DFSPDIRI    DFSIDIR0             1680      31      ANY      REUS
  DFSRCTEI    DBFIRCT0             100      31      ANY      REUS
  DFSSMB0I    DFSISMB0             3168      31      ANY      REUS
  DFSISDBI    DFSISDB0             748      24      24      REUS

UPDATING INACTIVE MATRIX DATASET IMS710.MATRIXA
  MODULE      CSECT      ENTRY      SIZE      AMODE      RMODE      ATTRIBUTES
  -----
  DFSISPB0I    DFSISPB0              48      31      ANY      OL
  DFSISPLI    DFSISPL0             378      31      ANY      OL
  DFSISTBI    DFSISTB0              38      31      ANY      OL
  DFSISTLI    DFSISTL0             178      31      ANY      OL
  DFSISTCI    DFSISTC0              30      31      ANY      OL
  DFSISTTI    DFSISTT0             100      31      ANY      OL

ONLINE CHANGE STATUS BEFORE INSTALLATION: MODBLKSB IMSACBA FORMATB
ONLINE CHANGE STATUS AFTER  INSTALLATION: MODBLKSA IMSACBA FORMATB

IOH7204W ACBLIB MEMBER FOR NEW/UPDATED PSB DFSSAM0A WAS NOT FOUND
-----
----- MESSAGES FOR IMS IMS9 -----
UPDATING INACTIVE MODBLKS DATASET IMS910.MODBLKSB
  MODULE      CSECT      ENTRY      SIZE      AMODE      RMODE      ATTRIBUTES
  -----
  DFSDDIR9    DFSIDMD0             540      31      ANY      REUS
  DFSPDIR9    DFSIDIR0            1098      31      ANY      REUS
  DFSRCTE9    DBFIRCT0              58      31      ANY      REUS
  DFSSMB09    DFSISMB0             E10      31      ANY      REUS
  DFSISDB9    DFSISDB0             340      24      24      REUS

UPDATING INACTIVE MATRIX DATASET IMS910.MATRIXB
  MODULE      CSECT      ENTRY      SIZE      AMODE      RMODE      ATTRIBUTES
  -----
  DFSISPB9    DFSISPB0              48      31      ANY      OL
  DFSISPL9    DFSISPL0             258      31      ANY      OL
  DFSISTB9    DFSISTB0              30      31      ANY      OL
  DFSISTL9    DFSISTL0              F8      31      ANY      OL
  DFSISTC9    DFSISTC0              38      31      ANY      OL
  DFSISTT9    DFSISTT0              78      31      ANY      OL
  DFSAGT09    DFSAGT00              38      31      ANY      OL

ONLINE CHANGE STATUS BEFORE INSTALLATION: MODBLKSA IMSACBA FORMATA
ONLINE CHANGE STATUS AFTER  INSTALLATION: MODBLKSB IMSACBA FORMATA

IOH7204W ACBLIB MEMBER FOR NEW/UPDATED PSB DFSSAM0A WAS NOT FOUND
***** Bottom of Data *****

```

Figure 135. Installation status panel (1 of 3)

It is possible that the library and module summaries will be displayed even if the installation fails. The status shown at the beginning of the report indicates whether the installation was successful. The following figure shows an example of a failed installation. The IOH4902E message at the end of the report shows the reason for the failure.

```

COMMAND   HP Sysgen Error Messages                               Line 00000000 Col 001 080
Command ==> ----- Scroll ==> CSR
***** Top of Data *****
SUMMARY OF INSTALL PROCESSING:
IMS7: ERROR DURING VERIFY
IMS9: VERIFY SUCCESSFUL, INSTALL BACKED OUT
-----
----- MESSAGES FOR IMS IMS7 -----
IOHC025 THE HP SYSGEN PSB NAME DEFINED IN THE SETUP OPTION FOR THIS IMSID WAS NO
IOH4902E THE HP SYSGEN PSB NAME DEFINED IN THE SETUP OPTIONS WAS NOT FOUND
***** Bottom of Data *****

```

Figure 136. Installation status panel (2 of 3)

Press the End key (usually, **PF3**) from the Update List Results panel to return to the resource update member list. The selected member is updated to include a status of either *INSTALL if the installation was successful, or *FAILED if the installation was unsuccessful.

The following figure shows another example of failed installation. The panel indicates that installation of IMS9 was not successful because the IMS was not active but that the installation information was stored in the store/forward data set for later processing. Detailed information follows message IOHF0621I.

```
SUMMARY OF INSTALL PROCESSING:
IOHF061I STORE/FORWARD ACTIVE DSN=IMS.IOH.IOHSTFWD
  IMS8: INSTALLATION SUCCESSFUL
  IMS9: ERROR DURING VERIFY, INSTALL COMMAD SAVED IN IOHSTFWD
  IMSA: ERROR DURING VERIFY, INSTALL COMMAD SAVED IN IOHSTFWD
----- STORE/FORWARD KEY INFORMATION -----
IOHF062I STORE/FORWARD KEY DSN=IMS.IOH.IOHPDS
  IMSID   DATE       TIME       CMD      GROUP
-----
  IMS9 2020.288 030815.257739 I GROUP@A
  IMSA 2020.288 030815.257788 I GROUP@A
----- MESSAGES FOR IMS IMS8 -----
UPDATING INACTIVE MODBLKS DATASET IMS.IMS8.MODBLKSB
  MODULE   CSECT     ENTRY      SIZE    AMODE  RMODE  ATTRIBUTES
-----
  DFSDDIRI DFSIDMD0           41B90    31    ANY    REUS
  DFSPDIRI DFSIDIR0           19A60    31    ANY    REUS
  DFSRCTEI DBFIRCT0             90     31    ANY    REUS
  DFSSMB0I DFSISMB0   DFSISMB      1E30    31    ANY    REUS

ONLINE CHANGE STATUS BEFORE INSTALLATION: MODBLKSA IMSACBA FORMATA
ONLINE CHANGE STATUS AFTER  INSTALLATION: MODBLKSB IMSACBA FORMATA

IOH7204W ACBLIB MEMBER FOR NEW/UPDATED DBD TESTDB12 WAS NOT FOUND
IOH7204W ACBLIB MEMBER FOR NEW/UPDATED DBD TESTDB11 WAS NOT FOUND
----- MESSAGES FOR IMS IMS9 -----
IOHF003 IMS IS NOT RUNNING. UNABLE TO PROCESS THE COMMAND
----- MESSAGES FOR IMS IMSA -----
IOHF003 IMS IS NOT RUNNING. UNABLE TO PROCESS THE COMMAND
```

Figure 137. Installation status panel (3 of 3)

Chapter 18. Converting IMS sysgen macros to resource update list entries in batch

IMS HP Sysgen Tools includes a utility that you can use to convert IMS sysgen macros to IMS HP Sysgen Tools resource update list entries.

The Resource Update List Create utility (IOHCLIST) reads a set of IMS sysgen macros, compares the definitions to those present in an IMS subsystem, and creates a resource update list to synchronize the sysgen source macros with the definitions in the IMS subsystem.

You can supply either a partial set of IMS sysgen macros, or the full sysgen source. If a partial set of sysgen macros is supplied, the utility synchronizes only the macros presented and does not delete definitions which are missing from the sysgen source. If a full set of sysgen macros is supplied, the utility generates resource update list entries to delete resources defined to the IMS subsystem which are no longer in the sysgen source.

Running the utility in “full” mode provides the ability to re-synchronize IMS definitions with your current IMS sysgen source. The utility also shows which IMS resources do not match your IMS sysgen source.

In addition, you can supply special \$IOHGEN macros, which allow you to have the IOHCLIST utility generate ACB reload entries and AGN update entries.

Processing the Resource Update List Create utility

When you run the Resource Update List Create utility (IOHCLIST), IMS HP Sysgen Tools reads the IMS sysgen source you define in the IOHGEN DD name. The sysgen source is validated and stored in internal control block format. If the sysgen source is successfully processed, IMS HP Sysgen Tools obtains the resource definitions from the IMS subsystem for comparison.

If CTLBLKS=DASD was requested, IMS HP Sysgen Tools compares sysgen source definitions with definitions from one of the following:

- MODBLKS data set
- RDDS
- IMSRSC repository data set

If CTLBLKS=CORE was requested, IMS HP Sysgen Tools compares sysgen source definitions with IMS incore resource definitions .

IMS HP Sysgen Tools creates resource update list entries for the following purposes:

- To add any sysgen source definitions that are not present in the active MODBLKS, RDDS, or IMSRSC repository data set
- To update definitions that have been updated in the IMS sysgen source

In addition, if the IOHCLIST utility was run with SOURCE=FULL, it creates entries to delete IMS resources that are not present in the IMS sysgen source.

Running IOHCLIST with SOURCE=PARTIAL

PARTIAL mode allows you to supply a subset of IMS sysgen macros, for example, only updated DATABASE, APPLCTN, TRANSACT, or RTCODE macros; and to create a resource update list that updates or adds IMS resource definitions to allow the new sysgen macros to be implemented in a running IMS subsystem. You can use this process if a subset of IMS sysgen source has been updated and you want to install only those changes to IMS sysgen source.

To use PARTIAL mode with TRANSACT or RTCODE macros, you must also include the APPLCTN macro associated with each TRANSACT or RTCODE macro. This is required to ensure that transaction and route codes are assigned to the proper program names. Failure to provide the proper APPLCTN macro prior to

each TRANSACT or RTCODE macro results in either a syntax error while processing the IMS sysgen source or a change to the program name associated with the transaction or route code. The change will result in an unexpected APPLCTN program definition

Running IOHCLIST with SOURCE=FULL

FULL mode processing allows you to synchronize the entire IMS sysgen source with a running IMS subsystem. You must supply your entire IMS sysgen source when using FULL mode or the resource update list will contain entries to delete resources you may not want to delete.

The sysgen source you supply need not include terminal macros, but it must include any MSC link definitions.

Running IOHCLIST with SOURCE=DELETE

SOURCE=DELETE mode allows you to delete database, program, transaction, and route codes from the IMS incore resource definitions, MODBLKS data set, RDDS, or the IMSRSC repository data set.

Using the \$IOHGEN macro

IMS HP Sysgen Tools supports the use of an internal macro, \$IOHGEN, to allow the inclusion of ACB reload entry requests and selected MATRIX security update entry requests. The IOHCLIST utility allows you to specify the name of a PSB or DBD ACB to be reloaded, or the name of an AGN definition to be updated. AGN updates include specification of the name of a PSB, transaction, or LTERM to be connected to or disconnected from the Application Group Name (AGN).

Simply include the new macro in the gen source for the IOHCLIST utility. IOHCLIST reads the \$IOHGEN macro and creates resource update list entries to make the changes you request.

For an ACB reload request, simply code a sysgen source statement using one of the following statements:

```
$IOHGEN RELOAD,PSB=psbname  
$IOHGEN RELOAD,DBD=dbdname
```

For an AGN update request, use a \$IOHGEN macro statement of the following format:

```
$IOHGEN AGN=agn-name,AGPSB=psbname,ACTION=CONNECT  
$IOHGEN AGN=agn-name,AGPSB=psbname,ACTION=DISCONN  
$IOHGEN AGN=agn-name,AGTRAN=trancode,ACTION=CONNECT  
$IOHGEN AGN=agn-name,AGTRAN=trancode,ACTION=DISCONN  
$IOHGEN AGN=agn-name,AGLTERM=lterm,ACTION=CONNECT  
$IOHGEN AGN=agn-name,AGLTERM=lterm,ACTION=DISCONN
```

The \$IOHGEN macro statement follows standard assembler syntax rules. At least one blank must precede and follow the \$IOHGEN operation code. Statements can be continued by including a non-blank character in column 72 and leaving columns 1-15 of the continued line blank. Each \$IOHGEN statement specifies one and only one change to be made to the IMS environment. If, for example, there are two PSB members of ACBLIB to be reloaded, you would code two different \$IOHGEN macros.

The keywords and operands for the \$IOHGEN macro are described as follows:

ACTION=

Use this keyword to specify whether a resource name is to be added to (ACTION=CONNECT) or removed from (ACTION=DISCONN) an AGN. When you specify this keyword, the AGN= keyword is required together with only one of the following keywords: AGLTERM=, AGPSB=, AGTRAN=.

AGN=

Use this keyword to specify the name of the AGN to be updated. When you specify this keyword, the ACTION= keyword is required together with only one of the following keywords: AGLTERM=, AGPSB=, AGTRAN=.

AGLTERM=

Use this keyword to specify the name of an IMS LTERM to be added to or removed from an AGN, as specified with the ACTION= keyword. If you specify this keyword, then the AGN= and ACTION= keywords are required. No other keywords are permitted.

AGPSB=

Use this keyword to specify the name of the PSB to be added to or removed from an AGN (as specified with the ACTION= keyword). If you specify this keyword, then the AGN= and ACTION= keywords are required. No other keywords are permitted.

AGTRAN=

Use this keyword to specify the name of the transaction to be added to or removed from an AGN (as specified with the ACTION= keyword). If you specify this keyword, then the AGN= and ACTION= keywords are required. No other keywords are permitted.

DBD=

Use this keyword to specify the name of the DBD to be reloaded. If this keyword is specified, then the RELOAD keyword is required. No other keywords are permitted.

PSB=

Use this keyword to specify the name of the PSB to be reloaded. If this keyword is specified, then the RELOAD keyword is required. No other keywords are permitted.

RELOAD

Use this keyword to specify that an ACBLIB reload resource update list entry is to be created. If this keyword is specified, then either the DBD= or PSB= keyword is required, and no other keywords are permitted.

For example, the following macros would create resource update list entries to reload the DFSSAM02 PSB and to update the AGN named IVP by adding PSB name DFSSAM02.

```
$IOHGEN RELOAD,PSB=DFSSAM02
$IOHGEN AGN=IVP,AGPSB=DFSSAM02,ACTION=CONNECT
```

IOHCLIST JCL requirements

Sample JCL for the IOHCLIST utility is included in the SIOHSAMP data set in member IOHCLIST. The sample job also shows the DD statements required for the IOHCLIST utility.

The DD statements are listed as follows:

STEPLIB

Must reference the IMS HP Sysgen Tools SIOHLINK library.

IOHPRINT

Specifies the output report DD definition. DCB attributes are RECFM=FBA and LRECL=133.

SYSABEND

Dump output DD.

IOHGEN

IMS sysgen source macros. This DD can reference a sequential data set, a member of a PDS, or a PDS without a member name. When specifying a PDS without a member name, the SELMBR statement must specify one or more member names. If a PDS data set is specified without a member name, only one data set name can be specified for this DD statement. Multiple sequential data sets (or PDS data sets with member names) can be specified by concatenating.

IOHOPT

IMS HP Sysgen Tools IOHOPT data set. This data set must include the options member for the IMSID specified on the IMSID control card.

IOHPDS

IMS HP Sysgen Tools data set. This is the PDS where the resource update list is stored.

SYSIN

Specifies the location of the data set that contains IMS HP Sysgen Tools control cards.

IOHCLIST control cards

As shown in the sample job, control cards are used to specify the parameters for running the IOHCLIST utility.

Control cards may include comment cards which are identified with an asterisk (*) in column 1 of the statement. Each record in the SYSIN file can specify only one statement. Statements are written in the form **KEYWORD= value**. At least one blank must follow the value specified, and any information following the blank is ignored.

Each control card must include a keyword. The keyword can be in any position on the record. The keyword must be followed by zero or more blanks, an equal sign (=), and the value for the keyword. The value may be enclosed in parentheses.

There can be only one occurrence of each keyword in the SYSIN records, with the exception of the SELMBR keyword. It can be included as many times as necessary to define all the required IOHGEN member names to be processed.

The following statements are supported by the IOHCLIST utility:

IMSID=

This statement is required. Defines the IMSID of a running IMS subsystem. The IMS subsystem need not be running on the same MVS system as the IOHCLIST utility.

LIST=

This statement is required. It defines the name of the resource update list to be created by the IOHCLIST utility. The resource update list is saved in the data set defined by the IOHPDS DD. In addition to the resource update list member name, if the resource update list already exists in the IOHPDS data set, the REPLACE keyword must be specified. To include this specification, add a blank or comma and the word REPLACE following the update list name.

DCLWA=

This statement is optional. If specified, it must have a value of YES or NO. This keyword allows you to specify the default value of the DCLWA attribute for each transaction. If the IMSCTRL macro with the DCLWA keyword is included in the sysgen source processed by the IOHCLIST utility, the IMSCTRL specification overrides the value specified on this statement.

SELMBR=

This statement is optional. It specifies the member name(s) of the IOHGEN data set to be processed by the IOHCLIST utility. If the IOHGEN DD references a PDS data set without a member name, use this statement. Otherwise, you should omit it. You may specify the SELMBR statement multiple times in a single execution of the IOHCLIST utility. The value specified for this keyword must be one or more member names which are to be included when processing the IOHCLIST utility. Generic member names are permitted. Use an asterisk (*) to replace any single character in a member name. For example, SELMBR=****STG1 would include all members with STG1 in positions 5-8 of the member name. It would not include a member named IMSSTG1 because STG1 occurs in positions 4-7 of that member name.

SOURCE=

This statement is required. It specifies whether the IOHCLIST utility is to run in PARTIAL mode, FULL mode, or DELETE mode. It must specify a value of PARTIAL, FULL, or DELETE.

FULL mode creates delete entries in the resource update list to delete all resources not included in the IMS sysgen source.

CTLBLKS=

This statement is required. It specifies where the IOHCLIST utility is to obtain IMS resource definitions from the MODBLKS data set (CTLBLKS=DASD) or use the incore IMS resource definitions (CTLBLKS=CORE). It must specify a value of DASD or CORE.

CORE

You can use CTLBLKS=CORE to reset IMS definitions back to their IMS sysgen status, undoing the effect of any **/ASSIGN** type commands (such as **/ASSIGN**, **/STA DB ACCESS=parameter**, **/MSASSIGN**, or **/CHANGE**).

DASD

You can use CTLBLKS=DASD to ignore any changes from **/ASSIGN** type commands. Note that the database ACCESS intent is one of the resource attributes affected by an **/ASSIGN** type command.

IOHCLIST return codes

The IOHCLIST utility indicates success or failure by the condition code presented at the end of the job step.

The following condition codes are possible:

0

The utility completed successfully, and a resource update list was created.

4

The utility completed successfully, but no changes were required to the IMS control blocks. No changes were made to the IOHPDS data set.

8

An error occurred while the utility was running. Review the job output to determine the cause of the error.

Output of the IOHCLIST utility

The output of the IOHCLIST utility has four sections.

First, input control cards are listed, along with any error messages associated with processing the control cards. IOH3241I messages follow the control cards and summarize the options used while the utility was processing.

Next, IOH3243I messages describe the IMS resource definition and release information retrieved from the IMS subsystem.

Next, the sysgen source presented to the utility is listed, along with any warning or error messages associated with the sysgen macros.

Finally, the final output listing section shows the resource update list entries that were generated for synchronization with the sysgen source.

```

*
  HP SYSGEN TOOLS IOHCLIST CONTROL CARDS
*
IMSID=IMS7          * IMSID OF ACTIVE IMS SYSTEM
LIST=NEW1,REPLACE   * NAME OF UPDATE LIST AND OPTIONAL REPLACE
*                  * KEYWORD (UPDATES AN EXISTING UPDATE LIST)
DCLWA=NO            * DEFAULT FOR DCLWA KEYWORD OF TRANSACT MACRO
SELMBR=( )          * OPTIONAL MEMBER NAME(S) FOR IOHGEN DD
SOURCE=PARTIAL      * SOURCE=PARTIAL (INSERT/UPDATE.DO NOT DELETE)
*                  * SOURCE=DELETE (DELETE)
*                  * SOURCE=FULL (FULL COMPARE, INSERT/UPDATE
*                  * AND DELETE )
CTLBLKS=DASD        * CTLBLKS=DASD (COMPARE WITH MODBLKS DATASET)
*                  * CTLBLKS=CORE (COMPARE WITH IMS INCORE)

IOH3241I OPTIONS IN USE: IMSID=IMS7 SOURCE=PARTIAL CTLBLKS=DASD
IOH3241I OPTIONS IN USE: LIST=NEW1 REPLACE
IOH3241I OPTIONS IN USE: DCLWA=NO

IOH3243I IMS IMS7 INFORMATION RETRIEVED - IMS VERSION 13.1
IOH3243I  NUMBER OF DEFINED DATABASES          10
IOH3243I  NUMBER OF DEFINED PROGRAMS           40
IOH3243I  NUMBER OF DEFINED TRANS             19
IOH3243I  NUMBER OF DEFINED RTCODES           0

  1 *****
  2 *   DATABASES DEFINITION
  3 *****
  4     DATABASE DBD=ZG1REF0U
  5     DATABASE INDEX,DBD=ZG1REF0I,ACCESS=UP
  6 *****
  7 *   BATCH/BMP APPLICATION DEFINITION
  8 *****
  9     APPLCTN PSB=ZGBREF0U,PGMTYPE=BATCH
 10     APPLCTN PSB=ZGBREF0I,PGMTYPE=BATCH,SCHDTYP=PARALLEL
 11 *****
 12 *   APPLICATIONS DEFINITION FOR DB/DC
 13 *****

 14     APPLCTN PSB=ZG1REV0I,PGMTYPE=TP,SCHDTYP=PARALLEL
 15     TRANSACT CODE=ZG1REV0I,MODE=SNGL,INQUIRY=YES,          X
      MSGTYPE=(SNGLSEG,NONRESPONSE,1)

 16 *
 17     APPLCTN PSB=ZG1REV0U,PGMTYPE=TP
 18     TRANSACT CODE=ZG1REV0U,MODE=SNGL,                      X
      MSGTYPE=(SNGLSEG,NONRESPONSE,1)

IOH3342I UPDATE LIST ENTRY CREATED TO ADD DATABASE ZG1REF0I
IOH3342I UPDATE LIST ENTRY CREATED TO ADD DATABASE ZG1REF0U
IOH3342I UPDATE LIST ENTRY CREATED TO ADD APPLCTN ZGBREF0I
IOH3342I UPDATE LIST ENTRY CREATED TO ADD APPLCTN ZGBREF0U
IOH3342I UPDATE LIST ENTRY CREATED TO ADD APPLCTN ZG1REV0I
IOH3342I UPDATE LIST ENTRY CREATED TO ADD APPLCTN ZG1REV0U
IOH3342I UPDATE LIST ENTRY CREATED TO ADD TRANSACT ZG1REV0I
IOH3342I UPDATE LIST ENTRY CREATED TO ADD TRANSACT ZG1REV0U

```

Figure 138. IOHCLIST job output

Chapter 19. Using the Resource Update List Generator

The Resource Update List Generator runs as an MVS batch job. It generates resource update lists and stores them in the IOHPDS data set by using the control statements specified in the SYSIN DD statement. It can also delete resource update lists from the IOHPDS data set.

For details on how to specify control statements, see [“How to write Resource Update List Generator control statements” on page 160](#).

The profiles and user definitions stored in the IOHOPT data set are not applied to the Resource Update List Generator.

Topics:

- [“Resource Update List Generator JCL” on page 159](#)
- [“Resource Update List Generator control statements” on page 160](#)
- [“Resource Update List Generator reports” on page 166](#)
- [“Resource Update List Generator return codes” on page 168](#)

Resource Update List Generator JCL

The Resource Update List Generator requires JCL for processing. Sample JCL is provided in the IOHRULG member of the SIOHSAMP data set.

PARM field specifications

The PARM field specifications for the Resource Update List Generator are described in this topic.

The PARM field of the EXEC statement in the JCL can be specified as follows:

PARM='ALL'

Control statements are checked and the resource update list is generated.

PARM='CHK'

Control statements are checked but the resource update list is not generated.

PARM='ALL,DIAG'

PARM='CHK,DIAG'

Use one of these options only if a problem occurs with the Resource Update List Generator and IBM Software Support asks you to specify it. You should generally avoid using these options because a lot of diagnosis information is generated in the data set specified by the SYSTSPRT DD statement.

Resource Update List Generator DD statements

To use the Resource Update List Generator, you must specify DD statements in the JCL.

The following DD statements are valid for this utility:

STEPLIB

(Required) This statement specifies the IMS HP Sysgen Tools load library (SIOHLINK).

SYSEXEC

(Required) This statement specifies the IMS HP Sysgen Tools EXEC library (SIOHEXEC).

SYSTSPRT

(Required) This statement specifies the output report DD definition for REXX error messages. The SYSTSPRT DD statement is used when an REXX error occurred.

IOHCSRPT

(Required) This statement specifies the output report DD definition of the control statement analysis. The DCB attribute of RECFM is FBA. The LRECL value is determined by the LRECL value of SYSIN, as follows:

- If the LRECL of SYSIN is equal to or less than 130, the LRECL value is 133
- If the LRECL of SYSIN is greater than 130, the LRECL value will be calculated as follows:
$$LRECL_value_of_SYSIN + 3$$

IOHPRINT

(Required) This statement specifies the output report DD definition of the resource update list generation status. The DCB attributes are RECFM=FBA and LRECL=133.

SYSUDUMP

(Optional) This statement specifies the dump output DD.

IOHPDS

(Required) This DD statement specifies the library in which the resource update lists are to be stored.

IOHWK1

(Required) This statement specifies the temporary data set.

The DCB attributes are DSORG=PS, LRECL=248, and RECFM=FB.

Specify a data set that is large enough to store the same number of records as the number of control statements specified.

SYSIN

(Required) This statement specifies the control statements that define one or more entries of the resource update list. To specify control statements in a data set, the DCB attributes of that data set must be DSORG=PS and RECFM=FB, and the LRECL value must be equal to or greater than 80.

Resource Update List Generator control statements

Control statements specify the parameters for running the Resource Update List Generator.

How to write Resource Update List Generator control statements

Control statements must be specified in the SYSIN DD statement.

By using the **DELMBR** and **ADDMBR** commands, you can delete or add resource update lists. You cannot delete or update individual entries within a resource update list. **DELMBR** and **ADDMBR** commands are also called *primary commands*.

The resource update list entries that can be handled by the Resource Update List Generator are the same as the entries that can be edited by use of the ISPF interface. You can create one or more entries for a single resource update list.

As the actions for IMS resource definitions, you can either specify **CREATE** (creating resources) or **DELETE** (deleting resources). The syntax of these commands conforms to IMS **CREATE** and **DELETE** commands, with the following exceptions:

- The LIKE keyword is not supported.
- You can specify only one resource name with NAME(*name*); wildcards such as 'ABC*' are not supported.
- To create an IMS resource definition in a resource update list, you must specify all the required attributes for IMS resources in the same way as the SET keyword of the IMS **CREATE** command. If these attributes are not specified correctly, an error occurs during installation of the resource update list.
- Default attribute values for IMS resources conform to the default attribute values of the IMS **CREATE** command.
- The following keywords for the IMS **CREATE TRAN** command are not supported:
 - FP(P)

- MSNAME(*msname*)
- REMOTE(N | Y)

Syntax of Resource Update List Generator control statements

If you specify SYSIN control statements in a job stream, they must be specified between columns 1-80. If you specify them in a data set defined by the SYSIN DD statement, they must be specified between column 1 and the LRECL value of the SYSIN data set. If the last eight characters on a line are all numeric, these characters will be ignored.

Continuation of the SYSIN control statements is specified by a plus sign (+) or a minus sign (-) as the last non-blank character of the line. A plus sign removes the leading spaces from the next line; a minus sign keeps leading spaces.

You can add comments either at the beginning of a line or following a control statement. Your comments must be enclosed with `'/*'` and `'*/'`, as shown in the following example:

```
/* this is a comment */
    ADDMBR(name) /* this is a comment for ADDMBR*/ +
IMSID(IMS1) /* this a comment too */
```

To specify a parameter that includes one or more space characters, enclose it with double quotation marks, as follows:

```
IMSCMD SEQ(AFTER) CMD("/DIS DB MYDB1")
```

Keywords of Resource Update List Generator control statements

The following keywords are supported in the control statements for the Resource Update List Generator:

ADDMBR

Use this keyword to add a resource update list.

The syntax of this keyword is as follows:

```

➤ ADDMBR — NAME( name ) — IMSID( target ) — CMT( comment ) →
                                     |
                                     +— GROUP( target ) —+

```



```

      N
     / \
    /   \
REPLACE( — Y — ) ➤

```

NAME(*name*)

Specify the name of the resource update list you want to add, which should be the same as the IOHPDS member name. The name must be up to eight alphanumeric characters (A-Z, #, \$, @, or 0-9). It can also contain X'C0' (that is, a 'I' for a 037 code page), but not as the first character. The first character must be alphabetic (A-Z, \$, @, or #).

This keyword is required.

IMSID(*target*) | GROUP(*target*)

Specify the IMSID or the group name as the valid installation target.

For GROUP(*target*), the target name must be up to eight alphanumeric characters (A-Z, #, \$, @, or 0-9). It can also contain X'C0' (that is, a 'I' for a 037 code page), but not as the first character. The first character must be alphabetic (A-Z, \$, @, or #).

The Resource Update List Generator does not check whether an IMSID or a group exists in the IOHOPT data set.

Either `IMSID(target)` or `GROUP(target)` must be specified.

CMT(comment)

You can optionally specify comments for the resource update list. The comment must be up to 66 bytes.

REPLACE(N | Y)

Specify whether the resource update list is to be replaced (Y) or not (N). The default is N.

DELMBR

Use this keyword to delete a resource update list.

The syntax of this keyword is as follows:

► DELMBR — NAME(*name*) ◄

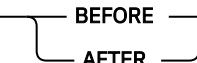
NAME(name)

Specify the name of the resource update list that you want to delete. This keyword is required.

IMSCMD

Use this keyword to run an IMS command before or after the resource updates are installed.

The syntax of this keyword is as follows:

► IMSCMD — SEQ() — CMD(*command*) ◄

SEQ(BEFORE | AFTER)

Specify whether you want to run the IMS command before or after the resource updates are installed. This keyword is required.

For example, specify as follows:

```
IMSCMD SEQ(BEFORE) CMD("/DBR DB MYDB1")
```


CMD(command)

Specify the IMS command that you want to run. The command must be up to 133 bytes. This keyword is required.

RELOAD RAND

Use this keyword to reload a DEDB randomizer.

The syntax of this keyword is as follows:

►  NAME(*name*) ◄

NAME(name)

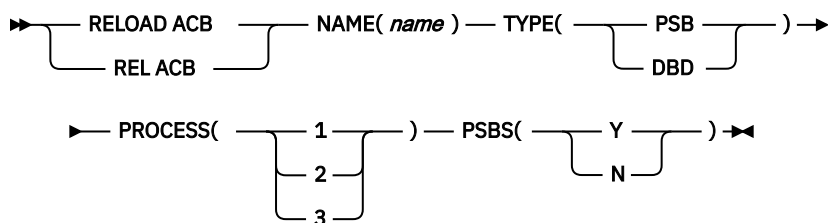
Specify the name of the DEDB randomizer load module to be reloaded.

The name must be up to eight alphanumeric characters (A-Z, #, \$, @, or 0-9). It can also contain X'C0' (that is, a '{' for a 037 code page), but not as the first character. The first character must be alphabetic (A-Z, \$, @, or #).

RELOAD ACB

Use this keyword to reload a PSB or a DBD.

The syntax of this keyword is as follows:



NAME(name)

Specify the name of the resource to be reloaded. For the naming rules of *name*, see the description of the **CREATE DB** or the **CREATE PGM** command in *IMS Commands*. This keyword is required.

TYPE(PSB | DBD)

Specify the type of resource to be reloaded (PSB or DBD). This keyword is required.

PROCESS(1 | 2 | 3)

Specify which process to use to reload an ACBLIB member. This keyword is required.

- 1: HP Sysgen ACB reload
- 2: IMS member level global online change
- 3: IMS Managed ACBs Activate

PSBS(Y | N)

Specify whether you want to reload the PSBs that are affected by a DBD change. This keyword is required if PROCESS(1) or PROCESS(2) is specified.

The following table contains the keywords that correspond to IMS type-2 **DELETE** commands.

For detailed information about the syntax of each command, see *IMS Commands*.

Table 9. **DELETE** commands for IMS resources (DB, PGM, TRN, and RTC)

Command	Keyword	Required?	ISPF field (*1)	ISPF field explanation (*1)
DELETE DB	NAME(name)	Required	NAME	DBD name
DELETE PGM	NAME(name)	Required	PSB Name	PSB (or GPSB) name
DELETE TRAN	NAME(name)	Required	Tran Code	Transaction code
DELETE RTC	NAME(name)	Required	ROUTCDE	Route code name

Note:

- *1: These columns show the ISPF field and its description of each command keyword. For details, see [Chapter 15, "Editing a resource update list,"](#) on page 111.

The following table contains the keywords that correspond to IMS type-2 **CREATE** commands. The keywords that are supported by IMS but not by the Resource Update List Generator are indicated as such in the notes that follow this table.

Table 10. **CREATE** commands for IMS resources (DB, PGM,TRAN, and RTC)

Command and keyword	Required? / Remarks	Default value	ISPF field (*1)	ISPF field description (*1)
CREATE DB command				
NAME(name)	Required		Name	DBD name
SET(A)	ACCTYPE(EXCL BRWS READ UPD)	UPD	Access	Access
	RESIDENT (N Y)	N	RESIDENT	DMB is retained in storage (NO or YES)
CREATE PGM command				

Table 10. **CREATE** commands for IMS resources (DB, PGM,TRAN, and RTC) (continued)

Command and keyword		Required? / Remarks	Default value	ISPF field (*1)	ISPF field description (*1)
NAME(<i>name</i>)				PSB Name	PSB (or GPSB) name
SET(A)	BMPTYPE(Y N)		N	PGMTYPE	Program type (BATCH or TP)
	DOPT(N Y)		N	DOPT	Reload PSB for each execution (NO or YES)
	FP(N E)		N	FPATH	Fast Path exclusive program (YES or NO)
	GPSB(N Y)		N	GPSB	Generic PSB (NO or YES)
	LANG(ASSEM COBOL PL/I JAVA PASCAL)			LANG	GPSB language (ASSEM, COBOL, PASCAL, PL/I, JAVA)
	RESIDENT(N Y)		N	RESIDENT	PSB to remain resident in storage (NO or YES)
	SCHDTYPE(SERIAL PARALLEL)		PARALLEL	SCHDTYP	Schedule type (SERIAL or PARALLEL)
	TRANSTAT(N Y)		N	TRANSTAT	Transaction level statistics (NO or YES)
CREATE TRAN command					
NAME(<i>name</i>)		Required		Tran Code	Transaction code
SET(A)	AOCMD(N TRAN Y CMD)		N	AOI	Automated operator (NO, YES, TRAN, CMD)
	CLASS(1 - 999)		1	CLASS	Transaction class (1-999 and <= MAXCLAS in IMS)

Table 10. **CREATE** commands for IMS resources (DB, PGM,TRAN, and RTC) (continued)

Command and keyword		Required? / Remarks	Default value	ISPF field (*1)	ISPF field description (*1)
SET(A) (cont.)	CMTMODE(SNGL MULT)		SNGL	MODE	Mode (SNGL or MULT)
	CONV(N Y)		N	-	* If you specify SPASIZE in the ISPF panel, this indicates conversational.
	DCLWA(Y N)		Y	DCLWA	DC log write ahead (YES or NO)
	DIRROUTE(N Y)		N	ROUTING	Routing (NO or YES)
	EDITRTN(name)			EDITName	Transaction edit routine module name
	EDITUC(Y N)		Y	EditCase	Uppercase (UC) or upper/lowercase (ULC)
	EMHBSZ(0 - 30720)			FPATH	Fast Path specification (NO, YES, or 12-30720)
	EXPTIME(0 - 65535)			EXPTIME	Transaction expiration time (0-65535)
	FP(N E)	*2	N	FPATH	Fast Path specification (NO, YES, or 12-30720)
	INQ(N Y)		N	INQUIRY	Inquiry mode (NO or YES)
	LCT(1 - 65535)		65535	PRIORITY3	Limit count (1-65535)
	LPRI(0 -14)		1	PRIORITY2	Limit priority (0-14)
	MAXRGN(0 - MAXPST_value)	*3	0	MAXRGN	Maximum regions (0-255)
	MSGTYPE(MULTSEG SNGLSEG)		MULTSEG	MSGTYPE	Segments (SNGLSEG or MULTSEG)
	MSNAME(name)	*4			
	NPRI(0 - 14)		1	PRIORITY1	Normal priority (0-14)
	PARLIM(65535 0 - 32767)	*5	65535	PARLIM	Parallel limit count (NONE or 0-32767)
	PGM(name)	Required		PSBName	Associated PSB name
	PLCT(0 - 65535)		65535	COUNT	PROCLIM count (0-65535)
	PLCTTIME(1 - 6553500)		6553500	SECONDS	PROCLIM time (.01-65535)
	RECOVER(Y N)		Y	RECOVER	Recoverable transaction (RECOVER or NORECOV)
	REMOTE(N Y)	*4			
	RESP(N Y)		N	RESPONSE	Response mode (NO or YES)
	SEGNO(0 - 65535)		0	SEGNO	Number of output segments (0-65535)
	SEGSZ(0 - 65535)		0	SEGSIZE	Size of output segments (0-65535)
	SERIAL(N Y)		N	SERIAL	Serial processing of input messages (NO or YES)
	SIDL(localsysid: 1-2036 0)			LCLSYSID	Local SYSID (blank or 1-2036)
	SIDR(remotesysid: 1-2036 0)			RMTSYSID	Remote SYSID (blank or 1-2036)

Table 10. **CREATE** commands for IMS resources (DB, PGM,TRAN, and RTC) (continued)

Command and keyword		Required? / Remarks	Default value	ISPF field (*1)	ISPF field description (*1)
SET(A) (cont.)	SPASZ(16 - 32767)			SPASIZE	SPA size (blank or 16-32767)
	SPATRUNC(S R)			SPATYPE	SPA truncation option (blank, RTRUNC, STRUNC)
	TRANSTAT(N Y)		N	TRANSTAT	Transaction level statistics (NO or YES)
	WFI(N Y)		N	WFI	Wait for input (blank or WFI)
CREATE RTC command					
	NAME(name)	Required		ROUTCDE	Route code name
SET(A)	INQ(N Y)		N	Inquiry	Inquiry mode (NO or YES)
	PGM(name)	Required		PSBName	Name of PSB associated with this route code

Notes:

- *1: These columns show the ISPF field and its description of each command keyword. For details, see [Chapter 15, “Editing a resource update list,” on page 111](#).
- *2: FP(P) is not supported.
- *3: A number between 0-255 is allowed, but you must specify a value that is equal to or less than the value specified on the MAXPST=IMS control region parameter.
- *4: Keyword is not supported.
- *5: Specify 65535 or a value in the range of 0-32767.

Resource Update List Generator reports

The Resource Update List Generator generates two types of reports: the Control Statement Analysis report and the Status report.

Control Statement Analysis report

The Control Statement Analysis report shows the control statements that were specified and the results of their analysis.

The following figures show examples of the Control Statement Analysis report:


```

PAGE      1                      IMS HIGH PERFORMANCE SYSGEN GENERATION TOOLS 2.4.0 (5655-P43)          DATE: 02/06/2020
                                RESOURCE UPDATE LIST GENERATOR          TIME: 21:50:07

*** RESOURCE UPDATE LIST GENERATOR CONTROL STATEMENTS: ***
|...+...1...+...2...+...3...+...4...+...5...+...6...+...7...+...8...+...9...+...0...+...1...+...2...+...3
*
* 1) Continuation of the SYSIN control statements is specified by on
* a plus sign (+) or a minus sign (-) as the last non-blank
* character of the line.
* A plus sign removes the leading spaces from the next line, and
* a minus sign keeps leading spaces.
*
* 2) You can add comments by the following ways.
* 1. The beginning of a line is '*' or '/*'
* 2. Comments enclosed with '/*' and '*/'
*
* Example:
* * This is a comment line
* /* this is a comment line */
* ADDMBR(name) IMSID(IMS1) /* this is a comment for ADDMBR */
*
* 3) Example statements:
/* ---- 00 DELMBR ----- */
DELMBR NAME(MBRXX01)
DELMBR NAME(MBRXX02)
DELMBR NAME(MBRXX03)
* DELMBR NAME(MBRXX04)
* DELMBR NAME(MBRXX05)
* DELMBR NAME(MBRXX06)
/* ---- 01 DB ----- */
ADDMBR NAME(MBRXX01) REPLACE(Y) IMSID(IMS1) CMT("ADD DB - 01/07/2020")
CREATE DB NAME(XDBDX01) SET(ACCTYPE(UPD),RESIDENT(Y))
IMSCMD SEQ(AFTER) CMD("/DIS DB XDBDX01")

/* ---- 02 PGM ----- */
ADDMBR NAME(MBRXX02) REPLACE(Y) IMSID(IMS1) CMT("PGM")
CREATE PGM NAME(XPGMX01) /* 01-07-2020 */
SET(
  RESIDENT(N) ,
  DOPT(N) , /* 01-07-2020 */
  GPSB(N) ,
  FP(N) ,
  BMPTYPE(N) ,
  SCHDTYPE(PARALLEL) ,
  TRANSTAT(N)
)

CREATE PGM NAME(XPGMX02) /* 01-07-2020 */
SET(
  RESIDENT(N) ,
  DOPT(N) , /* 01-07-2020 */
  GPSB(N) ,
  FP(E) ,
  TRANSTAT(N)
)

IMSCMD SEQ(AFTER) CMD("/DIS PSB XPGMX01 XPGMX02")

/* ---- 03 TRAN ----- */
ADDMBR NAME(MBRXX03) REPLACE(Y) IMSID(IMS1) CMT("TRN")
PAGE      2                      IMS HIGH PERFORMANCE SYSGEN GENERATION TOOLS 2.4.0 (5655-P43)          DATE: 02/06/2020
                                RESOURCE UPDATE LIST GENERATOR          TIME: 21:50:07

*** RESOURCE UPDATE LIST GENERATOR CONTROL STATEMENTS: ***
|...+...1...+...2...+...3...+...4...+...5...+...6...+...7...+...8...+...9...+...0...+...1...+...2...+...3
CREATE TRAN NAME(XTRNX01)
SET(
  PGM(XPGMX01) ,
  FP(E) ,
  EMHBSZ(2400) ,
  MAXRGN(2) ,
  CLASS(2) ,
  PARLIM(32000) ,
  PLCT(4600) ,
  NPRI(7) ,
  LPRI(10) ,
  LCT(5500) ,
  SEGNO(32000) ,
  SEGSZ(2400) ,
  DCLWA(N) ,
  EDITUC(N) ,
  INQ(N) ,
  RECOVER(Y) ,
  CMTMODE(SNGL) ,
  MSGTYPE(SNGLSEG) ,
  RESP(Y) ,
  DIRROUTE(N) ,
  SERIAL(N) ,
  WFI(N) ,
  AOCMD(N) ,
  CONV(N) ,
  SPATRUNC(S) ,
  PLCTTIME(6553500) ,
  TRANSTAT(N) ,
  EXPRTIME(200)
)

IMSCMD SEQ(AFTER) CMD("/DIS TRAN XTRNX01")
*** END OF CONTROL STATEMENTS ***

```

Figure 139. Sample Control Statement Analysis report (no control statement errors)

```

PAGE          1                      IMS HIGH PERFORMANCE SYSGEN GENERATION TOOLS 2.4.0 (5655-P43)          DATE: 02/06/2020
                                      RESOURCE UPDATE LIST GENERATOR          TIME: 21:54:09
*** RESOURCE UPDATE LIST GENERATOR CONTROL STATEMENTS: ***
|...+...1...+...2...+...3...+...4...+...5...+...6...+...7...+...8...+...9...+...0...+...1...+...2...+...3
/*----- 01 DB -----*/
ADDMBR NAME(MBRY01) REPLACE(X) IMSID(IMS1) CMT("ADD DB - 01/07/2020")
IOH7641E ERROR IN 'ADDMBR' COMMAND, INVALID VALUE - REPLACE(X), ALLOWABLE VALUES: (N,Y)
CREATE DB NAME(XDBDX01) SET(ACCTYPE(UPD),RESIDENT(Y))

/*----- 02 PGM -----*/
ADDMBR NAME(MBRY02) REPLACE(Y) IMSID(IMS1) CMT("PGM")
CREATE PGM NAMEIS(XPGMX01) /* 01-07-2020 */
SET(
  RESIDENT(N) ,
  DOPT(N) , /* 01-07-2020 */
  GPSB(N) ,
  FP(N) ,
  BMPTYPE(N) ,
  SCHDTYPE(PARALLEL) ,
  TRANSTAT(N)
)
IOH7641E ERROR IN 'CREATE PGM' COMMAND, UNSUPPORTED KEYWORD - NAMEIS
IOH7641E ERROR IN 'CREATE PGM' COMMAND, REQUIRED KEYWORD MISSING - NAME *
*** END OF CONTROL STATEMENTS ***

```

Figure 140. Sample Control Statement Analysis report (with control statement errors)

Status report

The Status report, which is generated in the IOHPRINT data set, shows the processing results of the resource update lists.

The following figures show examples of the Status report:

```

PAGE          1                      IMS HIGH PERFORMANCE SYSTEM GENERATION TOOLS 2.4.0 (5655-P43)          DATE: 02/06/2020
                                      RESOURCE UPDATE LIST GENERATOR          TIME: 21:57:42
*** RESOURCE UPDATE LIST GENERATOR STATUS ***
IOH7640I RESOURCE UPDATE LIST GENERATION STARTED: DATE-TIME=2020.037-215742.561408 USER=TS0ID1
IOH7642I DELMBR(MBRXX01) RESULT=DELETED
IOH7642I DELMBR(MBRXX02) RESULT=DELETED
IOH7642I DELMBR(MBRXX03) RESULT=DELETED
IOH7642I ADDMBR(MBRXX01) RESULT=ADDED
IOH7642I ADDMBR(MBRXX02) RESULT=ADDED
IOH7642I ADDMBR(MBRXX03) RESULT=ADDED
IOH7645I RESOURCE UPDATE LIST GENERATION COMPLETED: DATE-TIME=2020.037-215742.603261 USER=TS0ID1 RC=00

```

Figure 141. Sample Status report for the Resource Update List Generator (RC=00)

```

PAGE          1                      IMS HIGH PERFORMANCE SYSTEM GENERATION TOOLS 2.4.0 (5655-P43)          DATE: 02/06/2020
                                      RESOURCE UPDATE LIST GENERATOR          TIME: 21:50:07
*** RESOURCE UPDATE LIST GENERATOR STATUS ***
IOH7640I RESOURCE UPDATE LIST GENERATION STARTED: DATE-TIME=2020.037-215007.671032 USER=TS0ID1
IOH7643W DELMBR(MBRXX01) RESULT=NOT FOUND
IOH7643W DELMBR(MBRXX02) RESULT=NOT FOUND
IOH7643W DELMBR(MBRXX03) RESULT=NOT FOUND
IOH7642I ADDMBR(MBRXX01) RESULT=ADDED
IOH7642I ADDMBR(MBRXX02) RESULT=ADDED
IOH7642I ADDMBR(MBRXX03) RESULT=ADDED
IOH7645I RESOURCE UPDATE LIST GENERATION COMPLETED: DATE-TIME=2020.037-215007.712348 USER=TS0ID1 RC=04

```

Figure 142. Sample Status report for the Resource Update List Generator (RC=04)

```

PAGE          1                      IMS HIGH PERFORMANCE SYSTEM GENERATION TOOLS 2.4.0 (5655-P43)          DATE: 02/06/2020
                                      RESOURCE UPDATE LIST GENERATOR          TIME: 21:54:09
*** RESOURCE UPDATE LIST GENERATOR STATUS ***
IOH7640I RESOURCE UPDATE LIST GENERATION STARTED: DATE-TIME=2020.037-215409.782950 USER=TS0ID1
IOH7648E RESOURCE UPDATE LIST GENERATOR DETECTED CONTROL STATEMENT ERROR
IOH7646E RESOURCE UPDATE LIST GENERATION FAILED: DATE-TIME=2020.037-215409.801177 USER=TS0ID1 RC=12

```

Figure 143. Sample Status report for the Resource Update List Generator (RC=12)

Resource Update List Generator return codes

The Resource Update List Generator indicates success or failure with a return code at the end of the job step.

The following return codes are used by the Resource Update List Generator utility:

0

The utility completed successfully, and all resource update lists have been generated in the IOHPDS data set.

4

The utility completed with a warning message, and all resource update lists have been generated in the IOHPDS data set.

A warning message might be issued if the DELMBR keyword was specified but the specified member did not exist in the IOHPDS data set. To solve this problem, review the job output.

8

The utility failed in generating one or more resource update lists in the IOHPDS data set. To solve this problem, review the job output.

12

An error occurred while the utility was running. To determine the cause of the error, review the job output.

Chapter 20. Using the Batch Update List utility

By using the Batch Update List utility, you can verify or install an IMS HP Sysgen Tools resource update list in a batch job.

Sometimes changes to IMS sysgen resource definitions must be installed while an application is being upgraded. The batch interface to the IMS HP Sysgen Tools Verify and Install functions allows the installation of one or more resource update lists in a batch job that can be scheduled and run by the production job scheduling group or by the application software installers.

Topics:

- [“JCL requirements” on page 171](#)
- [“Control cards used for Batch Update List processing ” on page 171](#)
- [“Batch Update List return codes” on page 172](#)

JCL requirements

A sample job to perform batch verify or install processes is included in the IMS HP Sysgen Tools sample library, SIOHSAMP, in member IOHBLST.

The following DD statements are used to run the Batch Update List utility:

STEPLIB

This DD statement must refer to the IMS HP Sysgen Tools load library, SIOHLINK.

IOHOPT

This DD statement must refer to the IMS HP Sysgen Tools options library where the IMSID options are stored.

IOHPDS

This DD statement must refer to the library where the resource update lists to be processed are stored. This library name is also specified on the IMS HP Sysgen Tools ISPF Primary Options menu.

IOHPRINT

This DD statement is used for output messages from the Batch Update List utility. It will typically be a SYSOUT file, although it can be used to place utility output in a data set.

SYSUDUMP

This optional DD statement is used to record diagnostic information in the event a failure in the Batch Update List utility occurs.

SYSIN

This DD statement is required and must specify the control cards that are used by the Batch Update List utility. The control cards can be included in the JCL (by using DD *) or can be in a data set. If a data set is used, it must have DCB attributes LRECL=80 and RECFM=FB.

Control cards used for Batch Update List processing

Control cards are used by the Batch Update List utility to specify the functions that you want. Because the only functions the Batch Update List utility can perform are Verify and Install, there are two control cards that can be used with this utility. The following general syntax rules apply to the control cards that are supplied by using the SYSIN DD statement.

- An asterisk (*) in column 1 indicates that this is a comment statement. It is ignored by the utility. A comment card cannot be continued; you must code any following comment statements with an asterisk in column 1.
- The first word on a statement must be either VERIFY or INSTALL, depending on the function that you want to perform.

- Two keywords are required for each VERIFY or INSTALL statement, IMSID= and either IMSID= or TARGET=.
- You must specify the target IMS system for the VERIFY or INSTALL function. You can specify a single IMSID using the IMSID= or TARGET= keywords, or a group of IMS systems by using the TARGET= keyword. Whatever IMSID or group name you specify must be defined to IMS HP Sysgen Tools through the IMSID or GROUP SETUP panels.
- The NAME= keyword identifies one or more resource update list member names that are to be verified or installed. If more than one name is specified, separate the member names with a comma, and enclose the list in parentheses. For example, NAME=(MEMBER1,MEMBER2) will select resource update lists that are named MEMBER1 and MEMBER2.
- You can specify, by using the WAIT= keyword for the INSTALL statement, how long an IMS OM waits for a response of IMS member level global online change process from all the members of the IMSplex. The wait value is in seconds (1 - 99999). If you do not specify the WAIT= keyword, the default value of 300 seconds is used. If the resource update list includes entries that require reloading of many ACBLIB members by use of IMS member level global online change, the wait interval might expire. In this case, the IMS OM returns an error response to IMS HP Sysgen Tools, and the installation process fails.
- Continuation of a statement is permitted. A comma at the end of a card indicates that the statement is continued on the next line.

The following figure shows some examples of valid control cards:

```
INSTALL NAME=MEMBER1,IMSID=IMSA
      VERIFY  IMSID=IMSA NAME=( MEMBER1 , MEMBER2 )
INSTALL TARGET=GROUP2,NAME=MEMBER1,WAIT=600
      VERIFY  TARGET=GROUP1,
      NAME=(MEMBER1,
            MEMBER2)
```

Figure 144. Sample batch update list control cards

You can include multiple control cards in a single issuance of the Batch Update List utility. Each statement is processed individually. When multiple members are specified on a single control card, the members are merged and processed simultaneously. When multiple members are specified on separate control cards, they are processed individually.

To install several resource update lists in a single batch job, it is more efficient to install all the resource update lists at once (by specifying them all in a single statement). However, if one entry fails, none of the entries in any of the update lists will be installed.

Batch Update List return codes

The Batch Update List utility ends with one of three possible return codes. The higher the return code value, the more severe the error.

The following three return codes are used by the Batch Update List utility:

0

All functions completed successfully.

4

All functions completed successfully, but the printed job output contains warning messages. This return code is typically issued when a new resource that is being added does not have a definition in the IMS ACBLIB or IMS directory data set.

8

At least one request failed. Refer to the printed output for error messages that describe the reason for the failure.

Part 5. Batch utilities

The batch utilities are used to run IMS HP Sysgen Tools in batch mode.

Topics:

- [Chapter 21, “Using the Fast Sysgen utility,” on page 175](#)
- [Chapter 22, “Using the JCLIN Generator,” on page 189](#)
- [Chapter 23, “Using the Sysgen Compare utility,” on page 191](#)
- [Chapter 24, “Using the Batch Reverse Sysgen utility,” on page 195](#)
- [Chapter 25, “Using the Batch Search utility,” on page 197](#)
- [Chapter 26, “Using the Batch IMSID Options utility,” on page 199](#)
- [Chapter 27, “Using the Merge Clone utility,” on page 205](#)

Chapter 21. Using the Fast Sysgen utility

The Fast Sysgen utility can perform an IMS MODBLKS sysgen and IMS security gen in a single batch step.

Fast Sysgen runs as a single job step in batch mode. You control the Fast Sysgen process through the PARM field of the EXEC statement and various optional and required DD statements.

Topics:

- [“Fast Sysgen JCL” on page 175](#)
- [“Fast Sysgen batch output” on page 178](#)
- [“First-time run suggestions” on page 183](#)
- [“Fast Sysgen restrictions and requirements” on page 183](#)

Fast Sysgen JCL

Fast Sysgen in batch requires JCL for processing. Sample JCL is included in SIOHSAMP as member IOHFGEN. You can also generate JCL for the Fast Sysgen utility by using ISPF option **U.1**.

PARM field specifications

The PARM field specifications for the Fast Sysgen utility are described in this topic.

The EXEC statement in the batch JCL contains two keyword specifications in the PARM field: IMSID= and TARGET=.

IMSID = *imsid*

This optional keyword parameter may be specified to allow IMS HP Sysgen Tools to dynamically allocate any data sets not included in the batch JCL. The IMSID options stored in the IOHOPT data set are used to determine the data set names of the MODBLKS, MATRIX, and gen source data sets. If any of these data sets is not included in the JCL for the Fastgen job step, IMS HP Sysgen Tools determines the data set names from the IMSID options and dynamically allocates the data sets.

TARGET = (*v1,v2,...*)

This keyword parameter specifies which MODBLKS and MATRIX data sets are to be updated by this run of the Fast Sysgen utility. Possible values for TARGET are:

blank

No data sets are updated while Fast Sysgen utility is processing. You can specify TARGET= or TARGET=() to perform a syntax check of your IMS sysgen source statements.

A

The A libraries identified by the MODBLKSA and MATRIXA DD statements.

B

The B libraries identified by the MODBLKSB and MATRIXB DD statements.

S

The staging libraries identified by the MODBLKS and MATRIX DD statements.

I

The inactive MODBLKS and MATRIX data sets. These might be specified by the MODBLKSA and MATRIXA DD statements or the MODBLKSB and MATRIXB DD statements depending on the currently active suffix. IMS HP Sysgen Tools uses either the MODSTAT or OLCSTAT data set to determine which MODBLKS/MATRIX data set is inactive and which is active. If you do not specify TARGET=I, the MODSTAT or OLCSTAT DD statements are not required for the Fastgen batch job.

You can update multiple libraries by running the Fast Sysgen utility one time. To update multiple libraries, simply specify the desired one-character identifiers in parentheses separated by commas. For example, to update the inactive and staging libraries, specify TARGET=(S, I). If only one library identifier is used, the parentheses are optional; TARGET=S and TARGET=(S) are both valid.

The sample job IOHFGEN in the SIOHSAMP data set contains sample JCL for batch processing.

Fast Sysgen utility DD statements

The DD statements for the Fast Sysgen utility are described in this topic.

Required DD statements

STEPLIB

The STEPLIB DD must include both the IMS HP Sysgen Tools program library and the IMS RESLIB data set. The RESLIB data set specified must be the RESLIB data set used by the IMS control region or a copy of that data set. Two members are read from the RESLIB data set: DFSVC000, from which the IMS release is determined, and DFSISDCx (where x is the nucleus suffix specified in the IMS stage 1 sysgen macro MSGEN SUFFIX=) from which the IMS DC component names are determined.

Caution: If the wrong RESLIB data set is specified, unpredictable (and undesirable) results will occur.

IOHPRINT

This DD statement specifies the location of the output from the IMS Fast Sysgen process. Based on specifications in the Fast Sysgen control cards, it might contain only Fast Sysgen process summary information, or it might also include input listings, reports, and error messages.

If this DD statement directs the data to DASD, the data set will have LRECL=133 and RECFM=FBA.

IMSGEN

IMS stage 1 macro listings and error messages are written to this DD name. If this DD statement directs the data DASD, the data set will have LRECL=133 and RECFM=FBA.

IMSRPT

IMS sysgen reports are written to this DD name. If this data is sent to a DASD data set, the data set will have LRECL=133 and RECFM=FBA.

SECGEN

IMS security generation input statements and error messages are written to this DD name. If this data is sent to a DASD data set, the data set will have LRECL=133 and RECFM=FBA.

SECRPT

IMS security generation reports are written to this DD name. If this data is sent to a DASD data set, the data set will have LRECL=133 and RECFM=FBA.

IOHOPT

The IOHOPT DD defines the data set name of the IOHOPT data set. The IOHOPT data set is used if the IMSID= keyword is included in the PARM= field of the JCL. It is used to retrieve the data set names of the MODBLKS, MATRIX, and IMS and security gen source data sets.

Optional DD statements

MODSTAT

The MODSTAT DD statement is optional. If present, it defines the data set name of the IMS MODSTAT data set. If not specified, and the IMSID= keyword is specified in the PARM field, IMS HP Sysgen Tools dynamically allocates the MODSTAT data set, if required. If this DD statement is included in the JCL, it overrides the data set name defined in the IMSID options. Note that if the IMS system uses Global Online Change, you should omit the MODSTAT DD and use the OLCSTAT DD instead. If the MODSTAT DD is included in the JCL, it should refer to the same data set which the IMS control region uses. The MODSTAT DD is used only if the TARGET= keyword in the PARM field includes "I", indicating that the inactive MODBLKS and MATRIX libraries should be updated by the Fastgen process.

OLCSTAT

The OLCSTAT DD statement is optional. If present, it defines the data set name of the IMS OLCSTAT data set. If not specified, and the IMSID= keyword is specified in the PARM field, IMS HP Sysgen Tools dynamically allocates the OLCSTAT data set, if required. If this DD statement is included in the JCL, it overrides the data set name defined in the IMSID options. Note that if the IMS system uses Local Online Change, you should omit the OLCSTAT DD and use the MODSTAT DD instead. If the OLCSTAT

DD is included in the JCL, it should refer to the same data set which the IMS control region uses. The OLCSTAT DD is used only if the TARGET= keyword in the PARM field includes "I", indicating that the inactive MODBLKS and MATRIX libraries should be updated by the Fastgen process.

MODBLKS

The MODBLKS DD statement is optional and defines the data set name of the staging MODBLKS data set. If not specified, and the IMSID= keyword is specified in the PARM field, IMS HP Sysgen Tools dynamically allocates the MODBLKS DD, if required. If this DD statement is included in the JCL, it overrides the data set name defined in the IMSID options. MODBLKS DD is used only if the TARGET= keyword in the PARM field includes "S", indicating that the staging MODBLKS and MATRIX libraries should be updated by the Fastgen process.

MODBLKSA

The MODBLKSA DD statement is optional and defines the data set name of the A version of the MODBLKS data set. If not specified, and the IMSID= keyword is specified in the PARM field, IMS HP Sysgen Tools dynamically allocates the MODBLKSA DD, if required. If this DD statement is included in the JCL, it overrides the data set name defined in the IMSID options.

If the MODBLKSA DD statement is included in the JCL, it should refer to the same data set which the IMS control region uses.

MODBLKSA DD is used only if the TARGET= keyword in the PARM field includes "A" or "I", indicating that the A MODBLKS and MATRIX libraries or the inactive MODBLKS and MATRIX libraries should be updated by the Fastgen process.

MODBLKSB

The MODBLKSB DD statement is optional and defines the data set name of the B version of the MODBLKS data set. If not specified, and the IMSID= keyword is specified in the PARM field, IMS HP Sysgen Tools dynamically allocates the MODBLKSB DD, if required. If this DD statement is included in the JCL, it overrides the data set name defined in the IMSID options.

If the MODBLKSB DD statement is included in the JCL, it should refer to the same data set which the IMS control region uses.

MODBLKSB DD is used only if the TARGET= keyword in the PARM field includes "B" or "I", indicating that the B MODBLKS and MATRIX libraries or the inactive MODBLKS and MATRIX libraries should be updated by the Fastgen process.

MATRIX

The MATRIX DD statement is optional and defines the data set name of the staging MATRIX data set. If not specified, and the IMSID= keyword is specified in the PARM field, IMS HP Sysgen Tools dynamically allocates the MATRIX DD, if required. If this DD statement is included in the JCL, it overrides the data set name defined in the IMSID options. The MATRIX DD statement is used only if the TARGET= keyword in the PARM field includes "S" for the staging MODBLKS and MATRIX libraries, and if IMS security gen source is included in the Fastgen process.

MATRIXA

The MATRIXA DD statement is optional and defines the data set name of the A version of the MATRIX data set. If not specified, and the IMSID= keyword is specified in the PARM field, IMS HP Sysgen Tools dynamically allocates the MATRIXA DD, if required. If this DD statement is included in the JCL, it overrides the data set name defined in the IMSID options.

If the MATRIXA DD statement is included in the JCL, it should refer to the same data set which the IMS control region uses.

The MATRIXA DD statement is used only if the TARGET= keyword in the PARM field includes "A" or "I" for the A or Inactive MODBLKS and MATRIX libraries, and if IMS security gen source is included in the Fastgen process.

MATRIXB

The MATRIXB DD statement is optional and defines the data set name of the B version of the MATRIX data set. If not specified, and the IMSID= keyword is specified in the PARM field, IMS HP Sysgen Tools dynamically allocates the MATRIXB DD, if required. If this DD statement is included in the JCL, it overrides the data set name defined in the IMSID options.

If the MATRIXB DD statement is included in the JCL, it should refer to the same data set which the IMS control region uses.

The MATRIXB DD statement is used only if the TARGET= keyword in the PARM field includes "B" or "I" for the B or Inactive MODBLKS and MATRIX libraries, and if IMS security gen source is included in the Fastgen process.

IOHGEN

The IOHGEN DD is an optional DD statement that can be used to define the IMS sysgen stage 1 macro source data sets. If this DD statement is not specified, and the IMSID = keyword is specified in the PARM field, IMS HP Sysgen Tools dynamically allocates the IMS sysgen source data sets. If this DD statement is included in the JCL, it overrides data set names defined in the IMSID options.

If specified in the JCL, the IOHGEN DD defines a concatenation of sequential data sets (or PDS data sets with member names). When JCL is used to specify the IMS sysgen source data sets, the COPY assembler statement cannot be included in the source statements. If you use COPY, you should use the IMS HP Sysgen Tools IMSID options to define the location of your IMS sysgen source libraries rather than specifying the data sets in the JCL.

IOHSEC

The IOHSEC DD is an optional DD statement that can be used to define the IMS security gen source data set(s). If not specified, and the IMSID = keyword is specified in the PARM field, IMS HP Sysgen Tools dynamically allocates the IMS sysgen source data sets. If this DD statement is included in the JCL, it overrides data set names defined in the IMSID options.

If specified in the JCL, the IOHSEC DD defines a concatenation of sequential data sets (or PDS data sets with member names).

SYSUDUMP

Although not required, this DD statement can often provide useful information about abnormal termination conditions. In the unlikely occurrence of a Fast Sysgen problem, IBM Software Support might need the output from this DD statement for diagnostics.

Fast Sysgen batch output

There are five kinds of output from the batch Fast Sysgen process. The five types of output are written to five different DD statements, allowing you to control where diagnostic and report information is stored, and who has access to view the information.

The IOHPRINT DD contains IMS HP Sysgen Tools control information and all warning and error messages associated with the execution of the utility. If there is an error in the IMS stage 1 macro source, the macro statement in error is written to the IOHPRINT DD, followed by the error message.

The IMSGEN DD contains a full listing of the IMS stage 1 sysgen source macros and any associated error messages.

The IMSRPT DD is used to provide a tabular report showing all the IMS sysgen resource definitions and their options. If desired, you can download this information to a PC for processing in a spreadsheet application.

The SECGEN DD contains a full listing of all IMS security gen source statements and any associated error messages.

The SECRPT DD provides security reports which display information about the IMS resources which are protected using SMU security, and about which resources have access to each protected resource. For security reasons, this output should probably not be available to most users. Consider writing this output to a data set with appropriate security.

Output examples

The control report information written to the IOHPRINT DD begins with a box indicating that the Fastgen process has started. If IMS stage 1 sysgen error messages are present, the follow Immediately, along with the macro that caused the error message to be generated, if appropriate.

Following the IMS sysgen process, Fast Sysgen performs the IMS security generation process, identified in the following figure:

```

PAGE 3      IMS SYSGEN TOOLS VERSION 2.4.0  (5655-P43) FASTGEN UTILITY
DATE: 05/03/2020
IMS/ESA SECURITY GEN TIME:  14:37:03

*****
*
*          FASTGEN SCAN OF IMS SECURITY INPUT MEMBER DEV5GEN          *
*                                                                 *
*****

```

Figure 145. IMS security generation listing example

Any error messages associated with the IMS security generation process will follow the box indicating that the IMS security generation process is running. If appropriate, these will include the statement that caused the error.

Following the IMS security generation process, Fast Sysgen updates the MODBLKS and MATRIX libraries with specifications from the IMS sysgen and IMS security generation processes. The linkage editor report shows the requested suffixes to be updated, the data set names associated with those suffixes, and the block size of each library. The report also indicates each module name created and the characteristics of the module. An example of this report is shown in [Figure 146 on page 179](#).

```

PAGE 4      IMS SYSGEN TOOLS VERSION 2.4.0  (5655-P43) FASTGEN UTILITY
DATE: 05/03/2020
FASTGEN LINKAGE EDITOR  TIME:  14:37:03

*****
*
*          FASTGEN LINKAGE EDITOR SUMMARY                            *
*                                                                 *
*****
MODBLKS DATA SET(S) BEING UPDATED

  SUFFIX  DDNAME  BLKSIZE  DSNAME
  -----
  INACT, A  MODBLKSA      6233  P390M.TEST.MODBLKSA
  SUFFIX B  MODBLKSB      6233  P390M.TEST.MODBLKSB

  MODULE  CSECT    ENTRY    SIZE    AMODE  RMODE  ATTRIBUTES
  -----
  DFSDDIR5 DFSIDMD0             254C8    31    ANY    REUS
  DFSPDIR5 DFSIDIR0             38568    31    ANY    REUS
  DFSSMB05 DFSISMB0  DFSISMB    79DB0    31    ANY    REUS
  DFSISDB5 DFSISDB0  DFSISDB   11340    24    24    REUS

MATRIX DATA SET(S) BEING UPDATED

  SUFFIX  DDNAME  BLKSIZE  DSNAME
  -----
  INACT, A  MATRIXA      6233  P390M.TEST.MATRIXA
  SUFFIX B  MATRIXB      6233  P390M.TEST.MATRIXB

  MODULE  CSECT    ENTRY    SIZE    AMODE  RMODE  ATTRIBUTES
  -----
  DFSISPB5 DFSISPB0             48     31    ANY    OL
  DFSISPL5 DFSISPL0            49D8     31    ANY    OL
  DFSISTB5 DFSISTB0             60     31    ANY    OL
  DFSISTL5 DFSISTL0            1D60     31    ANY    OL
  DFSISTC5 DFSISTC0             28     31    ANY    OL
  DFSISTT5 DFSISTT0            1CF0     31    ANY    OL
  DFSISS05 DFSISS00             5D8     31    ANY    OL

```

Figure 146. Linkage editor report example

IMSGEN report DD

The IMSGEN report DD contains a full listing of the IMS stage 1 sysgen source macros and any error messages that occurred during the IMS stage 1 sysgen process.

A sample listing is shown in the following figure:

```

PAGE          1                      IMS SYSGEN TOOLS VERSION 2.4.0  (5665-P43) F
IMS/ESA SYSGEN IMS RELEASE 13.1

      1      IMSCTRL  SYSTEM=(VS/2,(&SYSPARM,DB/DC),390),                      X
                IRLM=YES,                                                    X
                IRLMMN=IRLM,                                                  X
                CMDCHAR=,                                                      X
                DBRC=(YES,YES),                                                X
                DBRCNM=IMS81RC1,                                              X
                DLINM=IMS81DL1,                                              X
                DCLWA=YES,                                                    X
                IMSID=IMS8,                                                    X
                HSB=YES,                                                       X
                NAMECHK=(YES,S1),                                              X
                MAXREGN=(005,512K,A,A),                                        X
                MCS=(2,7),                                                     X
                DESC=7,                                                         X
                ETOFEAT=(YES,YES,ALL),                                         X
                MAXCLAS=016

      2 *
      3 * IMSCTF   MACRO  --
      4 *
      5      IMSCTF  SVCN0=(,203,202),                      X
                LOG=SNGL,                                    X
                CPLOG=500000,                                X
                RDS=(LGDK,4096),                              X
                PRDR=IMS81RD1

      6 *
      7 * MSGQUEUE MACRO  --
      8 *
      9      MSGQUEUE DSETS=(LGDK,LGDK,LGDK),              X
                RECLNG=(336,3360),                          X
                BUFFERS=(5,6720),                            X
                SHUTDWN=100

     10 *
     11 * FPCTRL   MACRO  --
     12 *
     13      FPCTRL  OTHREAD=5,                              X

```

Figure 147. Stage 1 sysgen source macros

IMSRPT report DD

The IMSRPT report DD contains a listing of all the resources defined during the IMS stage 1 sysgen processing.

A table of each transaction, program route code, and database are presented, with all the characteristics listed for each resource defined. [Figure 148 on page 181](#) shows an example of the transaction portion of the report.

```
*****
*
* TRANSACTION SPECIFICATIONS: 93 TRANSACTIONS
*
*****
```

TRANCODE	D C E W L D F W I I A T	EDIT NUM FPATH	R E I C N O Q V	MAX RGN	M O S E D E S E G P	CLS	PAR LIM	PROCLIM COUNT TIME	PRIORITY N L PLMCT	R S O C U H T D	SEG
A	N Y U		N Y		S M N	1	65535	65535	1 1	65535	N 1
ADDINV	N Y U		N Y		S M N	1	65535	65535	7 10	2	N 1
ADDPART	N Y U		N Y		S M N	1	65535	65535	7 10	2	N 1
CALLSUB	N Y U		N Y		S S N	1	65535	65535	1 1	65535	N 1
CLOSE	N Y U		N Y		S M N	1	65535	65535	7 10	2	N 1
DBPROD1	N Y U		N Y		S M N	1	65535	65535	1 1	65535	N 1
DBPROD2	N Y U		N Y		S M N	1	65535	65535	1 1	65535	N 1
DBPROD3	N Y U		N Y		S M N	1	65535	65535	1 1	65535	N 1
DISBURSE	N Y U		N Y		S M N	1	65535	65535	7 10	2	N 1
DLETINV	N Y U		N Y		S M N	1	65535	65535	7 10	2	N 1
DLETPART	N Y U		N Y		S M N	1	65535	65535	7 10	2	N 1
DSPALLI	N Y U		N Y		S M N	1	65535	65535	7 10	2	N 1
DSPINV	N Y U		Y Y		S M N	1	65535	65535	7 10	2	N 1

Figure 148. Stage 1 sysgen processing

SECGEN report DD

The SECGEN report DD contains a full listing of all the IMS SMU security gen input, and any error messages that occurred while processing the IMS security gen input.

Because this report could contain sensitive information such as passwords or IMS terminal names that are authorized to issue transactions or commands, you may want to protect this output information from general access. A sample listing of the SMU security input is shown in the following figure:

PAGE 1 IMS SYSGEN TOOLS VERSION 2.4.0 (5665-P43) F
IMS/ESA SECURITY GEN

1) (PASSWORD	IVP	/* GENERATE PASSWORD SECURITY */
2		COMMAND	DELETE	
3) (TERMINAL	DFSTCF	/* TCO FACILITY */
4		COMMAND	ASSIGN	
5		COMMAND	CHANGE	
6		COMMAND	CHECKPOINT	
7		COMMAND	CLSDST	
8		COMMAND	COMPT	
9		COMMAND	DBDUMP	
10		COMMAND	DBRECOVERY	
11		COMMAND	DISPLAY	
12		COMMAND	IDLE	
13		COMMAND	OPNDST	
14		COMMAND	PSTOP	
15		COMMAND	RMGENJCL	
16		COMMAND	RSTART	
17		COMMAND	SMCOPY	
18		COMMAND	SSR	
19		COMMAND	START	
20		COMMAND	STOP	
21		COMMAND	SWITCH	
22		COMMAND	TRACE	
23) (TERMINAL	DFSTCFI	/* TCO FACILITY */
24		COMMAND	ASSIGN	
25		COMMAND	CHANGE	

Figure 149. SMU security gen input

SECRIPT report DD

The SECRIPT report DD contains a tabular listing of the resources defined to the IMS system, and the security protections requested by the IMS SMU security statements.

This example shows the report generated by IMS security gen processing.

```
PAGE          1                      IMS SYSGEN TOOLS VERSION 2.4.0  (5665-P43) F
IMS/ESA SECURITY GEN

*****
*
*          IMS/ESA SECURITY GEN - DC CONFIGURATION INFORMATION
*
*****

NUMBER OF DEFINED COMMANDS              63

    ACTIVATE  ALLOCATE  ASSIGN  BROADCAST  CANCEL  CHANGE  CHECKPOINT
    CLSDST    COMPT    CQCHKPT CQQUERY   CQSET    DBDUMP  DBRECOVERY
    DELETE    DEQUEUE  DISPLAY  END      ERESTART EXCLUSIVE EXIT
    FORMAT    HOLD     IAM      IDLE     LOCK     LOG      LOOPTEST
    MODIFY    MONITOR  MSASSIGN MSVERIFY NRESTART OPNDST  PSTOP
    PURGE     QUIESCE  RCLSDST RCOMPT  RDISPLAY RECOVER  RELEASE
    RESET     RMCHANGE RMDELETE RMGENJCL RMINIT  RMLIST  RMNOTIFY
    RSTART    RTAKEOVER SECURE  SET      SIGN     SMCOPY  SSR
    START     STOP     SWITCH  TEST     TRACE    UNLOCK  VUNLOAD

NUMBER OF DEFINED PTERMS                33

NUMBER OF DEFINED NODES                  9

    LF02      LF04      P390D      LOCLMOD4 SC0TCP02 SC0TCP05 RT0TCP01 SLU1CONX
    SLUPCONX

NUMBER OF DEFINED LTERMS                41

    DFSMTCNT DFSRMCNT DFSTCF  DFSTCFI  HOWARD  IVPprt1  IVPSPL1  LF02
    LOCLMOD4 MIMSH180 MIMSH181 MIMS6060 MIMS6061 MIMS8080 MIMS8081 MIMS9090
    MIMS9091 MSNI1    MSNI2    MSNI3    MSNI4    MSNI5    MSNI6    MSNI7
    MSNI8    MSNS1    MSNS2    MSNS3    MSNS4    PMASTER P390D    P390E
    SC0TCP02 SC0TCP05 SLUPCONX SLU1CONX SMASTER  USER1    USER2    WTOR
    1T0TCP01

*****
*
*          FASTGEN SECURITY CONFIGURATION REPORT
*
*****

THE FOLLOWING PASSWORDS HAVE BEEN DEFINED:
    IVP

TYPE OF ENTRY  NAME          PASSWORDS PROTECTING THIS RESOURCE
COMMAND        DELETE        IVP

TYPE OF ENTRY  NAME          TERMINALS PROTECTING THIS RESOURCE
COMMAND        ACTIVATE      PMASTER  WTOR
COMMAND        ALLOCATE      PMASTER  WTOR
COMMAND        ASSIGN        DFSTCF    DFSTCFI   PMASTER  WTOR
COMMAND        CHANGE        DFSTCF    DFSTCFI   PMASTER  WTOR
COMMAND        CHECKPOINT     DFSTCF    DFSTCFI   PMASTER  WTOR
COMMAND        CLSDST        DFSTCF    DFSTCFI   PMASTER  WTOR
COMMAND        COMPT         DFSTCF    DFSTCFI   PMASTER  WTOR
```

Figure 150. Resources defined to the IMS system

First-time run suggestions

The first time you run a batch Fast Sysgen process for each IMS system, it is suggested that you use the IMS Sysgen Compare utility, IOHCOMP, to verify that the output of the Fast Sysgen process exactly matches the output from a traditional IMS sysgen.

If there are any differences that were not caused by changes in IMS sysgen source, those differences should be reported to IBM Software Support.

Related information

Using the Sysgen Compare utility

IMS HP Sysgen Tools includes the Sysgen Compare utility, which lets you compare two sets of IMS control blocks. You can use this utility to verify that two sets of MODBLKS and MATRIX modules are exactly the same.

Fast Sysgen restrictions and requirements

The Fast Sysgen supports all IMS macros.

There are some restrictions and requirements for running Fast Sysgen processes that read IMS sysgen source. For more information, see *IMS System Definition* for your installed version of IMS.

Topics:

- [“Restrictions on assembler language facilities” on page 183](#)
- [“Converting restricted facilities to Fast Sysgen compatible source” on page 184](#)
- [“IMS stage 1 macro requirements” on page 184](#)
- [“Fast Sysgen processing” on page 185](#)
- [“IMS maintenance impacts” on page 187](#)

Restrictions on assembler language facilities

Fast Sysgen does not support all statements and features of z/OS assembler language. However, a supplied facility allows conversion from any z/OS assembler language constructs to a source compatible with Fast Sysgen.

The following list shows the supported assembler statements. Any deviations from the assembler-supported syntax or function are noted.

- COPY
- EJECT
- END - not required and not processed
- MNOTE - statement is permitted, but is not processed.
- PRINT
- SPACE
- TITLE

The Fast Sysgen process does not support symbolic variables, SET statements (such as SETC), or conditional assembly statements such as AIF and AGO.

If any restricted features of z/OS assembler language are present in IMS sysgen source, the Fast Sysgen conversion utility allows conversion from assembler source with restricted statements to IMS sysgen source that includes none of the restricted features.

Converting restricted facilities to Fast Sysgen compatible source

IMS HP Sysgen Tools provides the capability to convert any valid IMS sysgen source to IMS HP Sysgen Tools compatible IMS sysgen source.

This capability is useful for converting IMS sysgen source that has conditional assembler or symbolics included. The conversion process runs as a batch z/OS assembler step. The sample job IOHCGEN in the SIOHSAMP data set contains sample JCL for converting restricted facilities to sysgen source that is IMS HP Sysgen Tools compatible.

The SYSPUNCH DD defines the output of the conversion process (IMS HP Sysgen Tools compatible IMS sysgen source). The SYSPUNCH output can then be used as the IMS stage 1 sysgen input to the Fastgen batch process (the IOHGEN DD). All assembler conditional assembly and symbolic variables will be resolved.

The SYSIN DD statement must include the SIOHMACS data set member name IOHGEN before all IMS sysgen stage 1 sysgen source. The data sets that follow the SIOHMACS data set should be exactly the same as the SYSIN DD statement in the IMS stage 1 sysgen job.

The SYSLIB DD statement must specify the SIOHMACS data set first, followed by any user stage 1 source data sets that are present in the IMS stage 1 sysgen job's SYSLIB DD statement.

IMS stage 1 macro requirements

IMS stage 1 sysgen macro requirements are discussed using the following four categories: application, MSC link, system, and terminal.

Application macros are required to build the MODBLKS modules and can be updated from the prior IMS sysgen. These macro statements include:

- APPLCTN
- DATABASE
- RTCODE
- TRANSACT

MSC link related macro definitions used in the last CTLBLKS or high level IMS sysgen must be included in the Fast Sysgen source. If no MSC links were defined in the previous sysgen, there should be no MSC link related macros in the Fast Sysgen source. The following MSC related macros are valid SYSID values that are permitted on APPLCTN and TRANSACT macros.

- MSLINK
- MSNAME
- MSPLINK

System macro statements occur no more than one time in the IMS sysgen source. Any of the following macro statements used in the prior IMS sysgen must be included in the Fast Sysgen source. There are few changes permitted to these macro definitions during a MODBLKS type sysgen. For details, see *IMS System Definition* for your installed version of IMS.

- BUFPOOLS
- COMM
- FPCTRL
- IMSCTF
- IMSCTRL
- MSGEN
- MSGQUEUE
- SECURITY
- SPAREA

Terminal related macro statements are not required for Fast Sysgen processing, but might be included in the stage 1 source. These macro statements are checked for assembler syntax, but their keyword values are not validated. If there are a large number of macro statements, they might be excluded from Fast Sysgen processing. Because only basic syntax checking is performed, and no keyword value validation is performed, the effect of including these macro statements in the Fast Sysgen source on the processing time is minimal.

- CONFIG
- CTLUNIT
- IDLIST
- LINE
- LINEGRP
- NAME
- POOL
- STATION
- SUBPOOL
- TERMINAL
- TYPE
- VTAMPOOL

Note: The Fast Sysgen process does cross-check LTERM names with transaction code names.

Fast Sysgen processing

Fast Sysgen processes input in multiple phases.

The first phase reads IMS sysgen macros and creates temporary internal sysgen definitions in storage. These definitions remain in storage until all sysgen input is read. After all stage 1 input is read, IMS resource definitions are created in storage. Control blocks vary in size depending on the IMS release. The following table shows the size of control blocks required for each IMS resource type.

Table 11. IMS resource control block sizes

Resource type	Internal size	IMS V13 - V15
Database	16 bytes	200 bytes
Program	28 bytes	112 bytes
Transaction	68 bytes	184 bytes
Route Code	24 bytes	48 bytes

Storage for these resources is in the extended (above the 16-megabyte line) private storage. This includes private storage for Fast Sysgen processing.

The second phase of Fast Sysgen processing involves security. Security statements are read and validated, and the resulting definitions are held in extended private area storage.

The approximate storage requirements for security definitions are shown in the following table:

Table 12. Security storage requirements

Matrix table	Internal of bytes
A	Number of passwords times the maximum password length
B	(Number of passwords/8) times the number of password protected resources

Table 12. Security storage requirements (continued)

Matrix table	Internal of bytes
C	(Number of terminals/8) times the number of terminal protected resources
D	2 bytes per transaction definition
E	2 bytes per LTERM defined in the last CTLBLKS or higher sysgen
F	2 bytes per DATABASE definition
G	2 bytes per program definition
H	2 bytes per command verb
I	2 bytes per terminal defined in the last CTLBLKS or higher sysgen
J	2 bytes per transact macro
K	2 bytes per command verb
L	(Number of commands/8) times the number of transaction definitions
M	8 bytes per transaction with TCOMMAND authorization
N	2 bytes per transaction definition
O	Number of terminal definitions/8

Application group name (AGN) security definitions require additional storage. Each AGN definition included in the security generation source requires 24 bytes, and an additional 8 bytes per entry in the security source (AGLTERM, AGTRAN, or AGPROG statements).

Because of the processing that occurs during the security phase, there are transitional storage requirements during MATRIX row reduction and converting from temporary storage to final module creation. To take this additional storage into account, the largest of the storage areas in the preceding list should be added to the total storage requirement.

After final storage resident modules are successfully created, the third phase of processing begins. The Fast Sysgen process uses its own linkage editing process to create load modules in the MODBLKS and MATRIX data sets. When Fast Sysgen writes modules to the MODBLKS and MATRIX data sets, it uses the same approach to integrity that the IMS sysgen uses.

When updating a staging library, Fast Sysgen issues a reserve on the volume where the library is located, using the same QNAME (SYSIEWLP) and same RNAME as the linkage editor. When updating the A and B libraries, Fast Sysgen uses the QNAME (DFSOC001) and RNAME (library data set name). This enqueue processing ensures that other processes do not destroy the integrity of these data sets during the Fast Sysgen process.

During updates to the MATRIX data sets, Fast Sysgen first deletes any modules that could be created by this sysgen process. Because MATRIX modules are suffix dependent, only modules with the current sysgen suffix (as specified on the IMSGEN macro SUFFIX= parameter) are deleted. If MATRIX data sets are shared among multiple IMS systems and suffixes, this process will not interfere with the modules of other IMS systems.

MATRIX modules are deleted prior to MATRIX data set updates to ensure that only those MATRIX modules that are created by this security generation are included by the Fast Sysgen process during security processing. For example, if all passwords are removed from the IMS security source statements, Fast Sysgen ensures that no password-related MATRIX modules remain in the MATRIX data set after the Fast Sysgen process completes.

Fast Sysgen processing is fully compatible with IMS security generation processing. If desired, the IMS security generation process can be run after you run Fast Sysgen. Fast Sysgen processing creates the

DFSISDBx module in the MODBLKS data set that the IMS security generation process requires to accurately produce MATRIX modules.

IMS maintenance impacts

Regular PTF maintenance to IMS stage 2 macros could result in SMP/E installing updates to the staging MODBLKS library as defined in the IMS target zone. Because the HP system definition process does not provide stage 2 JCL for SMP/E JCLIN, such maintenance would require an IMS MODBLKS system definition and JCLIN prior to the SMP/E APPLY.

Chapter 22. Using the JCLIN Generator

The JCLIN Generator provides a way to create SMP/E JCLIN input from a MODBLKS data set. This allows you to run a JCLIN before SMP/E maintenance is applied.

This section explains how to use the JCLIN Generator to run JCLIN after an IMS sysgen.

Topics:

- [“When you should run JCLIN ” on page 189](#)
- [“Creating JCLIN” on page 189](#)
- [“When to use the JCLIN Generator” on page 190](#)

When you should run JCLIN

It is strongly recommended that you run JCLIN after every IMS sysgen, including a MODBLKS type sysgen.

MODBLKS sysgens update five modules in the MODBLKS data set. The source for these five modules is stored in SMP/E by means of the JCLIN process.

The macros used for creating these modules can be changed by normal IMS maintenance. The macros are: DFSPSBD, DFSSMB, DFSDMD, and DBFRCT. If a PTF updates one of these macros, SMP/E automatically reassembles the appropriate MODBLKS modules using the most recent source available to SMP/E, which is the stage 2 job stream processed by JCLIN.

Creating JCLIN

It is strongly recommended that you run JCLIN after every IMS sysgen, including a MODBLKS type sysgen.

Because IMS HP Sysgen Tools updates the MODBLKS data sets without creating a stage 2 job stream, the HP Sysgen JCLIN Generator was created to enable you to create and run JCLIN and to create and run JCLIN to ensure that the information on MODBLKS modules is current with the modules created by IMS HP Sysgen Tools.

A batch utility is available in the IOHJCLIN sample member of the SIOHSAMP data set. You can use the IOHJCLIN sample member to generate the input to the SMP/E JCLIN process. The utility reads the MODBLKS data set and creates the source code for the MODBLKS modules, which can be used for JCLIN.

The following PARM parameter is included in the JCL for this utility:

PARM=

Specifies the IMS nucleus suffix for which JCLIN statements are to be created. Multiple suffix identifiers can be specified by enclosing values in parentheses and separating them with commas. For example the following two PARM= specifications are valid:

```
PARM=' SUFFIX=A '  
PARM=' SUFFIX=(A,B,C) '
```

The following DD statements are included in the JCL for this utility:

STEPLIB

Must specify both the IMS HP Sysgen Tools load library and the IMS RESLIB data set associated with the MODBLKS data sets specified in the JCL.

IOHPRINT

Shows any diagnostic messages associated with the running this utility.

SYSUDUMP

Provides dump diagnostics for abends.

IOHPUNCH

The stage 2 job stream created by the utility, which can be used as input to the SMP/E JCLIN process.

MODSTAT/OLCSTAT

Use the MODSTAT or OLCSTAT data set (but not both) to provide the information required for IMS HP Sysgen Tools to determine which MODBLKS data set is active (MODBLKSA or MODBLKSB). Ensure that you specify the MODSTAT or OLCSTAT data set name which is used by the IMS subsystem with the same SUFFIX= and MODBLKS data sets specified in this job. You can include both the MODSTAT and OLCSTAT DD statements, as long as one of the DD statements is a DD DUMMY (or DSN=NULLFILE).

MODBLKSA, MODBLKSB

The MODBLKS data sets used by the IMS system with the same SUFFIX and MODSTAT data set specified in this job. The MODSTAT data set is queried to identify the current data set which is used as the definition of the current IMS resources.

When to use the JCLIN Generator

The JCLIN Generator ensures that SMP/E is consistent with the MODBLKS target library.

You must run the utility before applying maintenance that impacts the MODBLKS data set. Maintenance would be necessary if the macros DFSPSBD, DFSSMB, DFSDMD, and/or DBFRCT are updated by IMS base product maintenance. If such maintenance occurs for the base product, it would have a HOLD for IOGEN, which would indicate that the JCLIN process might need to be run. However, you can run the JCLIN process whenever SMP/E maintenance is applied, which reduces the possibility of problems that could be caused by forgetting to update the JCLIN information held by SMP/E.

Chapter 23. Using the Sysgen Compare utility

IMS HP Sysgen Tools includes the Sysgen Compare utility, which lets you compare two sets of IMS control blocks. You can use this utility to verify that two sets of MODBLKS and MATRIX modules are exactly the same.

Topics:

- [“What Sysgen Compare does ” on page 191](#)
- [“Sysgen Compare JCL” on page 191](#)
- [“Sample Sysgen Compare report” on page 192](#)

What Sysgen Compare does

Sysgen Compare analyzes and reports on the members present in each of the libraries, noting any size differences.

It lists the number of each kind of resource defined in the two MODBLKS data sets. It also provides a dump format listing of each control block that is different in the two MODBLKS data sets or is present in only one data set.

It is recommended that the initial run of Fast Sysgen be performed using test versions of the output MODBLKS and MATRIX data sets. The compare utility can then be used to compare the current traditional IMS sysgen control blocks with those generated by the Fast Sysgen process. Any discrepancies should be investigated to see if they were caused by changes to the IMS sysgen source statements, and if not, the discrepancies should be reported to IBM Software Support.

Sysgen Compare JCL

For a sample job that runs the Sysgen Compare utility, see sample member IOHCOMP in the SIOHSAMP data set.

PARM field specification

The EXEC statement for the compare utility contains one keyword parameter in the PARM field.

SUFFIX = (v1,v2,...)

This keyword identifies the suffix (or suffixes) of the modules to be compared by the utility. A suffix value is the same as that specified by the SUFFIX keyword of the IMSGEN macro in the IMS stage 1 source. It is also referred to as the nucleus suffix. It is one character in length.

Multiple suffixes can be specified in a single process by enclosing the suffix characters in parentheses and separating them with commas. For example, to compare both suffixes 0 and 1, use PARM= ' SUFFIX=(0 , 1) '. To specify a single suffix for comparison, the parentheses are optional. For example, both PARM= ' SUFFIX=(0) ' and PARM= ' SUFFIX=0 ' are valid.

Sysgen Compare DD statements

The DD statements for Sysgen Compare are described in this topic.

STEPLIB

The STEPLIB DD statement must include both the IMS HP Sysgen Tools program library and the IMS RESLIB data set. The RESLIB data set is used to determine the release of IMS by examining module DFSVC000.

IOHPRINT

This DD statement specifies the location of the output from the compare process.

MODBLKS1

The MODBLKS1 DD statement identifies the first of the two MODBLKS data sets to be compared.

MODBLKS2

The MODBLKS2 DD statement identifies the second of the two MODBLKS data sets to be compared.

MATRIX1

The MATRIX1 DD statement identifies the first of the two MATRIX data sets to be compared.

MATRIX2

The MATRIX2 DD statement identifies the second of the two MATRIX data sets to be compared.

SYSUDUMP

Although not required, this DD statement sometimes provides useful information about abnormal termination conditions. In the unlikely event of a Sysgen Compare problem, IBM Software Support might need the output from this DD statement for diagnostics.

Sample Sysgen Compare report

A sample report from the Sysgen Compare utility is described in this topic.

The first section of the report lists the IMS release, suffix, and the names of the data sets to be compared.

The second section of the report lists each MODBLKS and MATRIX module name for that suffix. It shows the length of the module in both data sets, the status of the comparison, and a brief description of the module.

The Compare Status field can contain one of the following values:

IDENTICAL

Indicates that the data in the modules match exactly.

IDENTICAL*

The asterisk indicates that a difference was found in a MATRIX module that does not affect the security definitions. This occurs because some MATRIX tables do not use all the fields in the MATRIX header, and the traditional IMS security generation process puts different values in these unused fields.

NOT PRESENT

Indicates that the module was not present in either data set being compared, and is a normal status.

DIFFERENT SIZE

Indicates that the modules were not the same size. The modules are different.

DIFFERENT

Indicates that the modules were the same size, but did not contain the same data.

IMS/ESA SYSGEN CONTROL BLOCK COMPARISON

IMS CONTROL BLOCK COMPARISON - IMS/ESA 14.1.0
COMPARISON REQUESTED FOR SUFFIXES: M

COMPARE DDNAME MODBLKS1 IS DSNAME=TEST.MODBLKS
COMPARE DDNAME MODBLKS2 IS DSNAME=IMS.MODBLKS
COMPARE DDNAME MATRIX1 IS DSNAME=TEST.MATRIX
COMPARE DDNAME MATRIX2 IS DSNAME=IMS.MATRIX

MODULE NAME	MODBLKS1 LENGTH	MODBLKS2 LENGTH	COMPARE STATUS	DESCRIPTION
DFSDDIRM	001450	001450	IDENTICAL	DATABASE BLOCKS
DFSPDIRM	001248	001248	IDENTICAL	PROGRAM BLOCKS
DFSSMB0M	001430	001430	IDENTICAL	TRANCODE BLOCKS
DFSRCITEM	000058	000058	IDENTICAL	ROUTCODE BLOCKS
DFSISDBM	000518	000518	IDENTICAL	SECURITY BLOCKS
MODULE NAME	MATRIX1 LENGTH	MATRIX2 LENGTH	COMPARE STATUS	DESCRIPTION
DFSISPBIM	000058	000058	IDENTICAL	PASSWORD MATRIX
DFSISPLM	0002B0	0002B0	IDENTICAL	PASSWORD TABLES
DFSISTBM	000030	000030	IDENTICAL	TERMINAL MATRIX
DFSISTLM	000108	000108	IDENTICAL	TERMINAL TABLES
DFSISTCM	000030	000030	IDENTICAL*	TCOMMAND MATRIX
DFSISTTM	000090	000090	IDENTICAL	TCOMMAND TABLES
DFSISSOM	000030	000030	IDENTICAL	SIGNON MATRIX
DFSAGTOM	009758	009758	IDENTICAL	AGN MATRIX

DATABASE COMPARISON FOR SUFFIX M (MODULE DFSDDIRM):
MODBLKS1 HAS 50 DATABASES
MODBLKS2 HAS 50 DATABASES

PROGRAM COMPARISON FOR SUFFIX M (MODULE DFSPDIRM):
MODBLKS1 HAS 65 PROGRAMS
MODBLKS2 HAS 65 PROGRAMS

TRANSACTION COMPARISON FOR SUFFIX M (MODULE DFSSMB0M):
MODBLKS1 HAS 38 TRANSACTIONS
MODBLKS2 HAS 38 TRANSACTIONS

RTCODE COMPARISON FOR SUFFIX M (MODULE DFSRCITEM):
MODBLKS1 HAS 3 RTCODES
MODBLKS2 HAS 3 RTCODES

Figure 151. Sample Sysgen Compare utility report

The third section of the report lists the number of MODBLKS resources defined. If differences in MODBLKS modules are found, a hexadecimal dump of the differences will be listed.

If a resource is defined in one MODBLKS library but not the other, the following output will be produced for each unmatched resource. The dump shows the entire control block for the resource.

```

UNMATCHED DATABASE DEFINITION PRESENT IN MODBLKS2
+000 00000000 00000000 C4C2C4E4 D4D4E840 *.....DBDUMMY *
+010 00000000 00000000 00000000 FFFF0001 *.....*
+020 00000000 00000000 03000000 00000000 *.....*
+030 00000000 00000000 00000000 00000000 *.....*
+040 00000000 00000000 00000000 00000000 *.....*
+050 00000000 00000000 00000000 00000000 *.....*
+060 00000000 00000000 *.....*
```

If differences are found in a control block defined to both MODBLKS data sets, the following information will be listed for each resource that does not match. Comparing the dump format data for each resource can reveal the control block differences using the control block DSECT information.

```

DIFFERENCES FOUND IN PROGRAM IRTIVPS1
DUMP OF MODBLKS1 PDIR
+000 00000000 00000000 C9D9E3C9 E5D7E2F1 *.....IRTIVPS1*
+010 00000000 00000000 00000000 FFFF0000 *.....*
+020 40000000 00000000 00000000 00000000 *.....*
+030 00000000 FFFFFFFF 00000000 00000000 *.....*
+040 00000000 00000000 *.....*
```

DUMP OF MODBLKS2 PDIR

+000	00000000	00000000	C9D9E3C9	E5D7E2F1	*.....IRTIVPS1*
+010	00000000	00000000	00000000	FFFF0000	*.....*
+020	40040000	00000000	00000000	00000000	*
+030	00000000	FFFFFFFF	00000000	00000000	*.....*
+040	00000000	00000000			*.....*

Chapter 24. Using the Batch Reverse Sysgen utility

The IMS HP Sysgen Tools generates HP sysgen source macros from either the incore IMS control blocks or from the active IMS MODBLKS, RDDS, or IMSRSC repository data set.

You can use parameters passed to the utility to select whether to generate sysgen source to match the IMS control region incore control blocks or one of the following: IMS MODBLKS, RDDS, or IMSRSC repository data set.

Topics:

- [“Batch Reverse Sysgen utility JCL” on page 195](#)
- [“Batch Reverse Sysgen utility PARM field” on page 195](#)
- [“Batch Reverse Sysgen utility return codes” on page 196](#)
- [“Batch Reverse Sysgen utility output report” on page 196](#)

Batch Reverse Sysgen utility JCL

You can modify the JCL for the Batch Reverse Sysgen Utility.

To view the sample JCL for the Batch Reverse Sysgen utility, see sample job IOHBRVRS in the SIOHSAMP data set. The sample job also shows the DD statements required for the Batch Reverse Sysgen utility.

The following statements are supported.

STEPLIB

(Required) It must reference the IMS HP Sysgen Tools load library (SIOHLINK).

IOHOPT

(Required) It specifies the IMS HP Sysgen Tools IOHOPT data set. This data set must include the options member for the IMSID specified in the PARM field.

IOHPRINT

(Required) It specifies the output report DD definition. The DCB attributes are RECFM=FBA and LRECL=133.

SYSABEND

(Optional) It specifies the dump output DD.

IOHPUNCH

(Required) It specifies the output DD statement. IMS sysgen source macros are written to this DD statement. The DCB information must be RECFM=FB and LRECL=80. The data set specified for this DD may be either a sequential data set (DSORG=PS) or a PDS with a member name specified in the JCL.

Batch Reverse Sysgen utility PARM field

Options for running the Batch Reverse Sysgen utility are specified in the PARM field of the job step.

You can specify two parameters, both of which are specified in the form keyword=value. The sample job provides JCL symbols to assist with specifying the PARM field. The following keywords are permitted; each is required.

IMSID=

IMSID= defines the IMSID of an IMS subsystem. The IMS subsystem need not be running on the same MVS system as the Batch Reverse Sysgen utility.

If the CTLBLKS= parameter is specified as CORE, IMS must be running when the Batch Reverse Sysgen utility runs. If the CTLBLKS= parameter is specified as DASD, IMS need not be running.

The specified IMSID must have an IMSID options member in the IOHOPT DD statement in the Batch Reverse Sysgen utility JCL.

CTLBLKS=

CTLBLKS= defines where the Batch Reverse Sysgen utility obtains the definitions from which IMS sysgen source macros are generated.

CORE

Specifying CTLBLKS=CORE causes the Batch Reverse Sysgen utility to find the specified IMS subsystem and to obtain IMS sysgen resource attributes from the incore control blocks currently being used by that IMS subsystem.

DASD

Specifying CTLBLKS=DASD obtains IMS sysgen resource attributes from the currently active MODBLKS, RDDS, or IMSRSC repository data set.

Batch Reverse Sysgen utility return codes

The Batch Reverse Sysgen utility indicates success or failure by means of a return code presented at the end of the job step.

The following return codes are possible:

0

The utility completed successfully, and all IMS sysgen macros required to reproduce the IMS configuration were written to the IOHPUNCH DD.

8

An error occurred while the utility was running. Review the job output (either in the IOHPRINT or JES job log) to determine the cause of the error.

Batch Reverse Sysgen utility output report

The Batch Reverse Sysgen utility provides a short report describing the input parameters and the number of resources for which IMS sysgen macros were created.

Here is a Batch Reverse Sysgen utility sample report.

```

PAGE 1 IMS SYSGEN TOOLS VERSION 2.4.0 (5665-P43) FASTGEN UTILITY
                                     DATE: 05/05/2020
                                     TIME: 22:35:00

      IOHBRVRS - REVERSE IMS SYSGEN

IOH3241I OPTIONS IN USE: IMSID=IMS9 CTLBLKS=CORE

IOH3243I IMS IMS9 INFORMATION RETRIEVED - IMS VERSION 13.1
IOH3243I   NUMBER OF DEFINED DATABASES           13
IOH3243I   NUMBER OF DEFINED PROGRAMS            59
IOH3243I   NUMBER OF DEFINED TRANS               26
IOH3243I   NUMBER OF DEFINED RTCODES              3

```

Figure 152. Batch Reverse Sysgen utility sample output

In addition to this report, IMS sysgen macros are written to the data set described by the IOHPUNCH DD statement.

Chapter 25. Using the Batch Search utility

The Batch Search utility searches definitions of databases, programs, transactions, and route codes in IMS active system control blocks (CORE) or data sets (MODBLKS, RDDS, or IMSRSC repository) for user-specified search words. It then generates corresponding sysgen source macros (DATABASE, APPLCTN, TRANSACT, and RTCODE).

Topics:

- “Batch Search utility JCL” on page 197
- “Batch Search utility return codes” on page 198

Batch Search utility JCL

You can modify the JCL for the Batch Search utility.

To view sample JCL for the Batch Search utility and its required DD statements, see sample job IOHBSRCH in the SIOHSAMP data set.

Batch Search utility DD statements

The following DD statements are supported:

STEPLIB

(Required) This statement must reference the IMS HP Sysgen Tools load library (SIOHLINK).

IOHOPT

(Required) This statement specifies the IMS HP Sysgen Tools IOHOPT data set. This data set must include the options member for the IMSID specified in the IMSID= control card.

IOHPRINT

(Required) This statement specifies the output report DD definition. The DCB attributes are RECFM=FBA and LRECL=133.

SYSABEND

(Optional) This statement specifies the dump output DD.

IOHPUNCH

(Required) This statement specifies the output DD statement. IMS sysgen source macros are written to the data set specified by this DD statement. The DCB information must be RECFM=FB and LRECL=80. The data set specified for this DD can be a sequential data set (DSORG=PS) or a partitioned data set (PDS) with a member name specified in the JCL.

SYSIN

(Required) This statement specifies the location of the data set that contains IMS HP Sysgen Tools control cards.

Batch Search utility control cards

As shown in the sample job, control cards specify the parameters for running the Batch Search utility.

Control cards might include comment cards, which are identified with an asterisk (*) in column 1 of the statement. Each record in the SYSIN file can specify only one statement. Statements are written in the form *keyword=value*. At least one blank must follow the value specified; any information that follows the blank is ignored.

Each control card must include a keyword. The keyword can be in any position on the record. The keyword must be followed by zero or more blanks, an equal sign (=), and the value for the keyword. The value can be enclosed in parentheses.

IMSID=

Defines the IMSID of an IMS subsystem. The IMS subsystem does not need to be running on the same MVS system as the Batch Search utility.

If the CTLBLKS= parameter is specified as CORE or as DASD for the repository data set, IMS must be running when the Batch Search utility is running. If the CTLBLKS= parameter is specified as DASD for MODBLKS or RDDS, IMS does not need to be running.

The specified IMSID must have an IMSID options member in the IOHOPT DD statement in the Batch Search utility JCL.

CTLBLKS=

Defines where the Batch Search utility searches to obtain definitions of databases, programs, transactions, and route codes, which are used for generating IMS sysgen source macros.

CORE

If CTLBLKS=CORE is specified, the Batch Search utility searches the specified IMS subsystem and obtains IMS sysgen resource attributes from the incore control blocks currently being used by that IMS subsystem.

DASD

If CTLBLKS=DASD is specified, the Batch Search utility obtains IMS sysgen resource attributes from the currently active MODBLKS, RDDS, or IMSRSC repository data set.

SRCHLST=

Defines search words. Search words can be DBD names, PSB names, transaction codes, and route codes. The maximum number of search words is 2560. If more than one search word is specified, separate the search words with a comma, and enclose the list in parentheses. For example, SRCHLST=(dbdname1,dbdname2) searches the definitions that are named dbdname1 and dbdname2.

Batch Search utility return codes

The Batch Search utility indicates success or failure with a return code at the end of the job step.

The following return codes are possible:

0

The utility completed successfully. All search words that you specified were processed and all corresponding sysgen source macros were written to the IOHPUNCH DD.

4

The utility completed successfully, but target definitions were not found for some of the search words you specified. Therefore, one or more sysgen source macros were not written to the IOHPUNCH DD. The search words that were not found are identified in the IOH3204E message.

8

An error occurred while the utility was running. Review the job output in the IOHPRINT data set or JES job log to determine the cause of the error.

Chapter 26. Using the Batch IMSID Options utility

The HP Sysgen Batch IMSID Options utility, IOHBIMS, lists or updates the IMSID options module stored in the IOHOPT data set.

The batch utility provides an alternative to the ISPF interface documented in section [“Defining IMS HP Sysgen Tools options”](#) on page 30.

Using the batch utility has advantages and disadvantages over using the ISPF interface to edit IMSID options modules. The ISPF interface automatically captures the IMS system data set names allocated to the IMS control region, such as the RESLIB, MODSTAT/OLCSTAT, MODBLKS and MATRIX data sets. However, the ISPF interface requires APPC/MVS to be configured properly in order to obtain information from the IMS control region. If APPC/MVS is not configured or if IMS is not started, the ISPF interface cannot be used to create IMSID options modules.

IOHBIMS, on the other hand, can be used when IMS is not started or when APPC/MVS is not configured. The Batch IMSID Options utility can be used to list the information present in IMSID options modules, or to create and update IMSID options modules.

Topics:

- [“IMSID options values”](#) on page 199
- [“Batch IMSID Options utility JCL”](#) on page 202
- [“Batch IMSID Options utility LIST function”](#) on page 203
- [“Batch IMSID Options utility UPDATE function”](#) on page 203

IMSID options values

The IMSID options module stores information about each IMS system.

It is used by the ISPF interface, by HP Sysgen running in an APPC initiator on the target MVS system, and by many HP Sysgen batch utilities. HP Sysgen attempts to validate the options variables whenever possible. However, use care in specifying the values in the options module, as an incorrect data set name could result in an update of the wrong data set, which could cause an IMS control region abend during the next IMS restart.

The options values that can be specified are listed in the following table, along with a description of each value.

Table 13. Batch IMSID options values

Options values	Description
AUTH_USERID	The HP Sysgen authorized user ID. Use this user ID to perform activities associated with the installation of an HP Sysgen resource update list. This value must be specified as a name of 8 characters or less.
PSB_NAME	The HP Sysgen PSB name. This is the PSB name that is used by HP Sysgen to issue IMS commands when APPC/IMS is not available. This value must be specified as a name of 8 characters or less.
AGN_NAME	The Application Group Name to be used with the HP Sysgen PSB name. This option is only required if you use AGN security. If AGN security is not in use, leave the value blank or omit the statement completely. If AGN security is active, specify a name of 8 characters or less.

Table 13. Batch IMSID options values (continued)

Options values	Description
TP_NAME	The APPC TP name created for the HP Sysgen APPC transaction program and specified in the IOHTPADD job. This value must be specified as a name of 64 characters or less.
SYMDEST	The APPC symbolic destination associated with the MVS system where this IMS subsystem runs. This name may have been created using the IOHSIADD job. This value must be specified as a name of 8 characters or less.
SUFFIX	The IMS nucleus suffix. This name is the same as that specified in the IMS control region PROC or in the DFSPBxxx member of the IMS PROCLIB data set. This value must be specified as a single character.
OLC	This value specifies whether IMS online change is LOCAL or GLOBAL. This value must be specified as either LOCAL or GLOBAL.
IOHLOG	The data set name of the HP Sysgen log data set for this IMS system.
RESLIB	The data set name of the IMS RESLIB data set used by this IMS subsystem. The RESLIB must contain modules DFSISDCx and DFSVNUCx (where “x” is the SUFFIX).
MODSTAT	The data set name of either the MODSTAT or OLCSTAT data set that is used by this IMS subsystem.
MODBLKS	The data set name of the staging MODBLKS data set.
MODBLKSA	The data set name of the MODBLKSA data set used by this IMS subsystem.
MODBLKSB	The data set name of the MODBLKSB data set used by this IMS subsystem.
USER_MODBLKS	The data set name of an optional backup data set where the current MODBLKS data set members are to be maintained.
MATRIX	The data set name of the staging MATRIX data set.
MATRIXA	The data set name of the MATRIXA data set used by this IMS subsystem.
MATRIXB	The data set name of the MATRIXB data set used by this IMS subsystem.
USER_MATRIX	The data set name of an optional backup data set where the current MATRIX data set members are to be maintained.
GEN_MEMBER	The member name of the initial IMS Sysgen source. If the GEN_MEMBER field is specified, the data set names in the GEN_SOURCE variable must be PDS data sets without member names. If the GEN_MEMBER field is blank, then the GEN_SOURCE data sets must be either sequential data sets or PDS data sets with member names specified.

Table 13. Batch IMSID options values (continued)

Options values	Description
GEN_SOURCE	<p>The data set names where IMS Sysgen source is located. There may be up to 30 data set names specified. All data sets specified must have the same data set organization – either sequential (or PDS with a member name) or PDS without a member name. When PDS data sets are specified, the GEN_MEMBER field must not be blank, as it contains the base Sysgen source member (that may contain assembler COPY statements).</p> <p>When specifying multiple GEN_SOURCE data sets, each data set must be completely specified on a line, and a comma must be used to separate data set names.</p>
SEC_SOURCE	<p>The data set names where IMS security gen source is located. There may be up to 10 data set names specified. Each specified data set must be either a sequential data set or a PDS with a member name specified.</p> <p>When specifying multiple SEC_SOURCE data sets, each data set must be completely specified on a line, and a comma must be used to separate data set names.</p>
DRD	<p>Indicates whether IMS Dynamic Resource Definition (DRD) is active in this IMS system.</p> <p>The value must be specified as either ENABLED or DISABLED. If a value is not specified, the default is DISABLED.</p> <p>If DRD=ENABLED is specified, you must also code values for the RDDS option to define the data set names that are used by IMS for DRD.</p>
REPOSITORY	<p>Indicates whether IMS resource definition (IMSRSC) repository is active in this IMS system.</p> <p>The value must be specified as either ENABLED or DISABLED. If a value is not specified, the default is DISABLED.</p>
RDDS	<p>Defines the data set names of the RDDSs that are used by this IMS system.</p> <p>Specify the data sets that are used by IMS to store resource definitions. IMS HP Sysgen Tools automatically determines which data set contains the current definitions.</p> <p>Data sets must be separated by commas, and each data set must be coded completely on a statement. The RDDSs can be coded on multiple statements by leaving a comma at the end of each statement to continue coding additional data set names on the next line.</p> <p>IMS HP Sysgen Tools supports the specification of up to 24 RDDS names.</p>

If you are using the Batch IMSID Options utility because you do not want to install or use the ISPF interface, and you only plan to use the batch Fastgen process, you need only specify values for the following keywords:

- SUFFIX
- OLC
- RESLIB
- MODSTAT
- MODBLKS

- MODBLKSA/B
- MATRIX
- MATRISA/B
- GEB_MEMBER
- GEN_SOURCE
- SEC_SOURCE

All values except SUFFIX and OLC can be overridden by specifying data set names in IOHFGEN JCL.

Batch IMSID Options utility JCL

You can modify the JCL for the Batch IMSID Options utility.

For the Batch IMSID Options utility sample JCL, see the IOHBIMS member in the SIONSAMP data set.

The following DD names are used by the IOHBIMS utility:

Table 14. Batch IMSID Options DD statements

DD names	Description
STEPLIB	Specifies the data set name of the HP Sysgen load library, SIOHLINK.
IOHOPT	Specifies the data set name of the IOHOPT data set. This library must be a PDS with RECFM=U and a block size of a least 4096. When using the LIST function to show the options currently defined, this library must contain a member named IOH@ followed by the IMSID. When using the UPDATE function, the IOH@ims ID member will be created or replaced.
IOHPRINT	Report output file. The DCB attributes for the output file are RECFM=FBA and LRECL=133. The reports produced by the utility are documented in “Batch IMSID Options utility LIST function” on page 203 and “Batch IMSID Options utility UPDATE function” on page 203 .
SYSABEND	Dump output file.
SYSIN	Input file used for the UPDATE function. This DD is not used and can be omitted for the LIST function. For the UPDATE function, the statements included in the SYSIN file are documented in “Batch IMSID Options utility UPDATE function” on page 203 .

The following figure shows the four symbolic JCL parameters that are included in the sample job to simplify JCL customization:

Table 15. Batch IMSID Options Symbolic JCL variables

JCL parameters	Description
SIOHLINK	The data set name of the HP Sysgen load library. This value is used in the STEPLIB DD of the utility JCL.
IOHOPT	The data set name of the IOHOPT data set. This value is used in the IOHOPT DD of the utility JCL.
FUNCTION	The function that the utility is to perform. This value is required, and it must be specified as either LIST or UPDATE. Batch IMSID Options utility functions are further described in the sections that follow.

Table 15. Batch IMSID Options Symbolic JCL variables (continued)

JCL parameters	Description
IMSID	The IMSID whose options values are to be listed or updated. This value must be specified, and it must be four characters in length.

Batch IMSID Options utility LIST function

The LIST function provides the capability to list the currently-specified IMSID options values in report form.

The sample JCL in SIOHSAMP member IOHBIMS can be used for both the LIST function and the UPDATE function. Note that the statements present in the SYSIN DD are not read when executing the LIST function.

The IOHPRINT output report produced by the LIST function shows each value specified in the IMSID options module. The following figure shows a sample report:

```

LIST OF OPTIONS VALUES FOR IMS MAA1

AUTH_USERID   = IOHAUTH
PSB_NAME      = IOHPSB
AGN_NAME      =
TP_NAME       = IOH240_IMS_HP_SYSGEN
SYMDEST       = SYS1
SUFFIX        = 9
OLC           = LOCAL
DRD           = ENABLED
REPOSITORY    = DISABLED
IOHLOG        = IMS.MAA1.IOH.IOHLOG
RESLIB        = IMS.MAA1.SDFSRESL
MODSTAT       = IMS.MAA1.MODSTAT
MODBLKS       = IMS.MAA1.MODBLKS
MODBLKSA      = IMS.MAA1.MODBLKSA
MODBLKSB      = IMS.MAA1.MODBLKSB
USER_MODBLKS  =
MATRIX        =
MATRIXA       =
MATRIXB       =
USER_MATRIX   =
GEN_MEMBER    =
GEN_SOURCE    = IMS.MAA1.IMSGEN.CNTL(MAA1MACS)
               IMS.MAA1.IMSGEN.CNTL(END)
SEC_SOURCE    =
RDDS          = IMS.MAA1.RDDS1
               IMS.MAA1.RDDS2
               IMS.MAA1.RDDS3

```

The variables that are shown in this sample are documented in [“IMSID options values” on page 199](#). The last three options, GEN_SOURCE, SEC_SOURCE, and RDDS can have multiple data set names. For example, in this sample report, two data set names are listed for GEN_SOURCE and three for RDDS. Also, the RDDS option is included only if DRD=ENABLED is specified.

Batch IMSID Options utility UPDATE function

The UPDATE function provides the capability to create or update the values specified in the IMSID options stored in the IOHOPT data set.

All values stored in the IMSID options are replaced with the specifications read from the SYSIN DD. When using the update function, you should always specify all the values in the IMSID options, not just specific values being updated. Other than syntax checking, no validation is completed for the values specified, so use caution when specifying the values in the SYSIN data.

When using the UPDATE function, the statements coded in the SYSIN DD are used to populate a new version of the IMSID options module. All statements are coded in a keyword = value type of syntax. Statements with an asterisk (*) in the first position of a statement are considered comment statements.

Only GEN_SOURCE, SEC_SOURCE, and RDDS statements can be continued. To continue one of these statements, code a comma after the data set name and continue with the next data set name on the next statement. An example of continuation is shown in the sample SYSIN data.

An example of the SYSIN statements is included in the sample job distributed in the SIOHSAMP data set member IOHBIMS.

Note that comment statements are present in the first 5 statements. The remaining statements show the keyword=value syntax used. Blanks are not required between the keyword, the equal sign, and the value, but they may be present. The keywords need not start in the first position of the statement, even though the example shows all keywords starting in column 1 for readability.

The last two statements show examples of continuation statements. The GEN_SOURCE and SEC_SOURCE statements are the only statement types that allow continuations, which show multiple data set names specified for each value.

Chapter 27. Using the Merge Clone utility

The Merge Clone utility creates a common set of application, transaction, and database definitions across multiple IMS systems.

Topics:

- [“What Merge Clone does” on page 205](#)
- [“Merge Clone utility restrictions” on page 205](#)
- [“Conflict resolution” on page 205](#)
- [“Merge Clone JCL” on page 207](#)
- [“Merge Clone reports” on page 210](#)
- [“Merge Clone return codes” on page 211](#)

What Merge Clone does

The IMS Merge Clone utility reads the IMS MODBLKS data sets and combines the definitions of up to 64 IMS systems.

After the process has completed, each IMS system will have the same set of APPLCTN, TRANSACT and DATABASE definitions. Each application and transaction definition will have the same attributes across all systems with the possible exception of the SYSID value. Each database definition will have the same attributes across all systems with the possible exception of the ACCESS value.

The Merge Clone program performs automatic generation of SYSID values. It does this by analyzing the PSB (from PSBLIB) and determining which IMS region has the proper database access to meet the PSB PROCOPT requirements. For each IMS system where the PROCOPT requirements are met, the transaction is defined as local. For systems that do not meet the PROCOPT requirements, a SYSID value is added to the definition to route the message to an IMS where the requirements are met.

Transaction routing can be forced by providing input to the Merge Clone program. Using control cards, you can specify on which system a transaction must run. You can specify the same transaction on any or all IMS regions.

Automatic determination of the SYSID value is done only for the transactions that are local somewhere inside a sysplex. SYSID values are not changed for transactions that are remote outside of the sysplex. For example, if you are merging IMS1 and IMS2, and they have transactions that are remote to IMS3, the transactions that run on IMS3 will not have their SYSIDs changed on IMS1 or IMS2.

Merge Clone utility restrictions

The Merge Clone utility requires that resources with the same name are, in fact, the same entity. If you are merging IMS1 and IMS2 and they both have database DB01 defined, it must be the same database. It must use the same DBD and it must have the same DSN. This is true for applications, as well. If you are merging IMS1 and IMS2 and they both have application PGM1, it must be the same PSB in both systems.

Conflict resolution

When merging systems, it is possible that conflicts exist among the attributes assigned to a resource defined in multiple systems.

The Merge Clone program will resolve these conflicts using the following philosophy:

1. Use the least restrictive parameter.

For example, if there is a conflict in the SNGLSEG/MULTSEG parameter, MULTSEG would be used because it is less restrictive than SNGLSEG. A program that processes single segment messages can work when the transaction is defined as MULTSEG, but the reverse is not true.

2. Use the largest value.

For example, if one system had an SPA size of 100 and the other had 500, Merge Clone would define SPA=500 on all systems.

3. Use the default option.

If steps 1 and 2 do not resolve a conflict for a parameter, Merge Clone selects a default option. See the default options listed for each resource.

4. Set in any system, set it in all.

For example, if one system has a database defined as RESIDENT, the resident option will be set for all systems.

Resolving TRANSACT conflicts

Merge clone utility TRANSACT conflicts are resolved by using a specific criteria.

The following illustrates how conflicts are resolved for all TRANSACT options:

- **Least restrictive**

- MSGTYPE=(SNGLSEG | MULTSEG)

- **Largest value**

- SPA size
- EMHB size
- SEGSZ (0 being the largest)
- SEGNO (0 being the largest)
- PROCLIM count
- PROCLIM seconds
- PARLIM
- MAXRGN
- PRTY limit count
- PRTY normal
- PRTY limit

- **Default option**

- MSGTYPE=(class)
- MSGTYPE=(RESPONSE | NONRESPONSE)
- EDIT=(UC | ULC)
- MODE=MULT | SNGL
- DCLWA=YES | NO
- ROUTING=NO | YES
- WFI
- SCHD=1 | 2 | 3 | 4
- SERIAL=NO | YES
- FPATH=NO | YES | size
- Program name used by transaction
- SYSID if remote outside of sysplex

- **Set in any, set in all**

- INQ=NO (else set to INQ=YES)
- INQ=RECOVER (else set to INQ=NORECOV)

- EDIT=(name)
- RTRUNC/STRUNC (Uses first defined value. This is because the default option might be from an IMS 5 system that does not support these options.)

Resolving APPLCTN conflicts

Merge clone utility APPLCTN conflicts are resolved by using a specific criteria.

The following illustrates how conflicts are resolved for application definitions:

- **Default option**

- FPATH=NO|YES|size (value is obtained from the transaction assigned to this application)
- LANG= (only if GSPB selected)

- **Set in any, set in all**

- RESIDENT
- DOPT (unless set to Resident in any system)
- SCHDTYP=PARALLEL (otherwise set to Serial)
- PGMTYPE=(TP) (otherwise set to Batch)
- GPSB (If GPSB is set in some but not in all, the Merge Clone program will see if a PSB really exists in PSBLIB. If so, GPSB is removed. If there is no PSBLIB member, GPSB is added to all systems.)

Resolving database conflicts

Merge clone utility database conflicts are resolved by using a specific criteria.

The following list illustrates how conflicts are resolved for database definitions:

Set in any, set in all

- RESIDENT
- ACCESS=

Database ACCESS is determined by using the first rule that applies:

1. If the database is set to Update as part of the IOHSHLVL input, (see [“IOHSHLVL \(forced update access control\)”](#) on page 209) it will be set to ACCESS=UP on all IMS systems.
2. If ACCESS=EX is found in any system, ACCESS=RO will be added to any system where the database is being added for the first time (other systems will not have their ACCESS changed).
3. If ACCESS=UP found on more than one system, it is assumed the database is SHARELVL(3) in the RECON data sets and is made ACCESS=UP on all IMS systems.
4. If ACCESS=UP on only one IMS system, then ACCESS=RO for any system where the database is being added for the first time (other systems will not have their ACCESS changed).
5. If ACCESS=RO or RD, use the first ACCESS parameter as the default for all systems where the database is being added for the first time.

Merge Clone JCL

The JCL that is used by the Merge Clone utility is composed of DD names that are required every time you run the program and DD names that are dependent upon user-supplied control cards.

For a sample of the required Merge Clone JCL, see member IOHMERGE in the SIOHSAMP library.

Merge Clone DD statements

The DD statements for the Merge Clone utility are described as follows:

STEPLIB

The STEPLIB must refer to the library where the IMS HP Sysgen Tools were installed.

IOHLIST

This DD statement specifies the location for the output from the control card analysis and environment setup processing. This includes source listings and error messages.

It is recommended this be a SYSOUT data set, but if placed to DASD the DCB requirements are LRECL=121 and RECFM=FBA.

IOHEXCPT

This DD statement specifies the location of the output from conflict resolution processing, PSBLIB/DBDLIB analysis, and the stage 1 generation reports.

It is recommended this be a SYSOUT data set, but if placed on DASD the DCB requirements are LRECL=121 and RECFM=FBA.

Error messages (any message ID that ends with a "W") written to this file will have a character string of two asterisks ("**") that can be used to locate the messages. This should aid in finding any errors in the program listings.

IMS

This DD statement specifies the location from which the Merge Clone program will load the PSB and DBD modules. The Merge Clone program uses the PSBs and DBDs loaded from this DD statement to perform the transaction routing analysis and build. The members in this data set concatenation must accurately reflect the members used in your IMS systems.

IOHPUNCH

This DD statement specifies the location for the stage 1 IMS sysgen source output created by Merge Clone. Two members are created in this library for each IMSID processed by the utility. All program and transaction related macros for an IMS system are placed in a member named xxxxPGMS, where xxxx is the IMSID of that system. The database related macros for that IMS are place in a member named xxxxDBDS.

The data set defined by this DD statement must be a PDS (DSORG=PO) with LRECL=80 and RECFM=FB. Be sure to allocate sufficient space and directory blocks for the size and number of members created.

MBLKxxxx DD

Merge Clone requires a DD statement for the IMS MODBLKS data set of each IMSID specified in the IOHIMSID control cards. (See IOHIMSID (specifying IMS systems).) The DD name is determined by appending the four byte IMSID to the constant 'MBLK'. The example shown following [Table 20 on page 210](#) would require the following DD statements:

```
//MBLKIMS1 DD DISP=SHR,DSN=modblks-dsn for IMS1
//MBLKIMS2 DD DISP=SHR,DSN=modblks-dsn for IMS2
//MBLKIMS3 DD DISP=SHR,DSN=modblks-dsn for IMS3
```

IOHAFFIN (forced transaction routing control)

This DD statement specifies the location from where the control cards are read to force transaction routing. A control card contains the IMSID of where a transaction needs to run and the actual transaction name. The input data must have an LRECL of 80 and the control cards must conform to the syntax shown as follows:

Table 16. Forced transaction routing control card syntax

Columns	Contents
1 - 4	ims-id or an asterisk (*) for a comment card
5	blank
6 on	transaction name

For example:

```
IMS1 PART
```

A separate control card is required for each transaction. The same transaction can be forced to run on multiple IMS systems.

IOHSHLVL (forced update access control)

This DD statement specifies the location from where the control cards are read to force ACCESS=UP on databases. A control card contains the name of the database that will be made ACCESS=UP in all IMS systems. The input data set must have an LRECL of 80 and the control cards must conform to the syntax shown as follows:

Table 17. Forced ACCESS=UP control card syntax

Columns	Contents
1 - 8	Database name or an asterisk (*) for a comment card

For example:

```
DI21PART
```

IOHIMSID (specifying IMS systems)

This DD statement specifies the location from where the control cards are read that inform the Merge Clone program what systems are to be merged or cloned. There are three types of control cards and at least one of each is required for each IMS system being processed.

The three types of control cards are SUFFIX, VERSION, and SYSID. If you are processing more than two IMS regions, you will need more than one SYSID card for each IMS. The input data set must have an LRECL of 80. The control card statements must not go beyond column 72.

The Suffix control card must conform to the syntax shown as follows:

Table 18. Suffix control card syntax

Columns	Contents
1 - 4	<i>ims-id</i> or an asterisk (*) for a comment card
5	blank
6 on	SUFFIX=x, where x is the gen suffix for the IMS system

The value specified for the suffix must be the gen suffix for the IMSID starting in column 1. For example:

```
IMS1 SUFFIX=1
```

The Merge Clone program uses this value to determine which modules to load from the associated MODBLKS data set.

The VERSION control card must conform to the syntax shown as follows:

Table 19. Version control card syntax

Columns	Contents
1 - 4	<i>ims-id</i> or an asterisk (*) for a comment card
5	blank
6 on	VERSION=(v.r), the version and release

The value specified for the version must match the IMS version of the MODBLKS data set associated with the IMSID. Valid values for *v.r* are 13.1 and later. For example:

```
IMS1 VERSION=(13.1)
```

Merge Clone uses this value to determine which IOH module to use to read the MODBLKS.

The SYSID control card must conform to the syntax shown as follows:

Table 20. SYSID control card syntax

Columns	Contents
1 - 4	<i>ims-id</i> or an asterisk (*) for a comment card
5	blank
6 on	SYSID=(<i>rmt,lcl</i>), the remote and local IDs

The SYSID parameter tells Merge Clone about the environment that it is processing. You must supply an SYSID control card for all systems that you want to process. For each IMSID that you specify, you must include every SYSID that is local to that system. And you must make each IMSID's local SYSID a remote SYSID in the other IMS systems being processed. Simply put, each IMS in this sysplex must have a remote SYSID that points to all other IMS systems local SYSIDs. There might still exist SYSIDs that are outside the sysplex.

For example, assume that your configuration consists of IMS1, IMS2, IMS3 and IMS4. IMS1, IMS2, and IMS3 reside in the same shared DASD complex and are being merged. IMS4 resides in a separate JES complex and, therefore is not participating in the merge. The IMS systems contain the following local SYSIDs.

```
IMS1 - 11
IMS2 - 21
IMS3 - 31
IMS4 - 41
```

IMS1, IMS2, and IMS3 must each define all of their local SYSIDs to the Merge Clone program. They must also define remote SYSIDs to each of the other system's local SYSIDs. The IOHIMSID SYSID control cards to process this example are:

```
IMS1 SYSID=(21,11)
IMS1 SYSID=(31,11)

IMS2 SYSID=(11,21)
IMS2 SYSID=(31,21)

IMS3 SYSID=(11,31)
IMS3 SYSID=(21,31)
```

In this example, IMS4 will be treated as being outside of the sysplex so any transactions routed to IMS4 will be unaffected by the Merge Clone program.

Merge Clone reports

The Merge Clone utility produces several reports listing things such as control card input, processing exceptions, and program processing status. The reports are written to the data sets identified by the IOHLIST and IOHEXCPT DD statements.

IOHLIST reports

The IOHLIST DD statement data set contains several reports that list the control card input and the current IMS system contents.

The reports written to IOHLIST include:

- Control Statement listing. This is a listing of the input records read from file IOHIMSID and any error messages associated with this input.
- MODBLKS Extraction Services listing. This report contains the number of DATABASE, APPLICTN and TRANSACT macros currently defined in each IMS region.
- Transaction Affinity Input listing. This report lists all user-forced routed transactions.
- Data Base Sharelvl(3) listing. This report lists the databases that will be set to ACCESS=UP in all IMS regions.

IOHEXCPT reports

The IOHEXCPT DD statement data set contains several reports that show the results of conflict resolution, routing analysis, and stage 1 build phases.

The reports written to IOHEXCPT include:

- Gen Definition Edit/Resolution listing. This is the conflict resolution report. It lists the discrepancies among the different members of the sysplex and identifies what options were chosen to resolve most of the conflicts.
- PSBLIB/DBDLIB ANALYSIS listing. This report identifies the conflicts and error conditions encountered while analyzing the PSBLIB and DBDLIB members.
- IMS Stage 1 Generation listing. This reports shows the progress of the IMS stage 1 macro generation as well as any error conditions.

Merge Clone return codes

The Merge Clone utility will end with one of four possible return codes. The higher the return code value, the more severe the error. The following illustrates how each return code value should be handled:

0

No errors were detected.

4

Discrepancies were encountered but none were considered severe enough to stop program execution. After the program completes, an analysis of the IOHEXCPT output listings as well of the IMS stage 1 macros might be in order.

8

Program ran to normal completion, all stage 1 members were generated but manual editing of the stage 1 macros is required before an IMS sysgen can be run. An analysis of the IOHEXCPT output as well as the IMS stage 1 macros might also be in order.

12

A critical error was encountered that forced immediate program termination. No stage 1 macros were created. Analyze the output reports and correct any error conditions.

Part 6. Troubleshooting

Use these topics to diagnose and correct problems that you experience with IMS HP Sysgen Tools.

Topics:

- [Chapter 28, “Troubleshooting overview,” on page 215](#)
- [Chapter 29, “Abend codes,” on page 217](#)
- [Chapter 30, “Runtime messages \(IOH\),” on page 219](#)
- [Chapter 31, “ISPF messages \(IOH\[A-F\]\),” on page 363](#)
- [Chapter 32, “IMS sysgen messages \(IOHG\),” on page 417](#)
- [Chapter 33, “Gathering diagnostic information,” on page 433](#)

Chapter 28. Troubleshooting overview

Problem determination for IMS HP Sysgen Tools becomes easier if you know where to look for messages, dumps, and related documentation.

Batch utilities function as standard MVS jobs. There might be WTO messages written to the MVS syslog, as well as SYSOUT reports with error messages and dumps.

Most ISPF functions run within the TSO address space. When investigating problems with the ISPF functions, check first within the TSO user's address space. If there is a standard ISPF message issued by IMS HP Sysgen Tools, be sure to use the Help key (usually, **PF1**) to obtain additional information about the message. All ISPF messages have long messages (obtained by using **PF1**) that include an IMS HP Sysgen Tools message ID that is documented in this document.

Other ISPF diagnostic information can be found in WTO messages that might appear in the MVS syslog or, in the event of an abend, in the SYSUDUMP or SYSABEND output of the TSO user.

IMS HP Sysgen Tools uses APPC/MVS to run functions on the MVS system where a particular IMS system is running. If an abend occurs while running in an APPC/MVS initiator, IMS HP Sysgen Tools creates an SVC dump to document the problem. When investigating an IMS HP Sysgen Tools problem, be sure to review the SVC dumps generated on the MVS system where the target IMS system is running.

Chapter 29. Abend codes

This reference section provides detailed reason code information for the service and logicabend codes issued by IMS HP Sysgen Tools. The explanations provided in this reference can help you diagnose, troubleshoot, and solve IMS HP Sysgen Tools problems.

IMS HP Sysgen Tools abnormally ends when it encounters any condition that prevents the continuation of normal operation. There are several types ofabend codes issued by IMS HP Sysgen Tools.

U40xx

Explanation

A fatal error occurred. For an explanation of the reason for theabend, see the output produced by the batch execution of an IMS HP Sysgen Tools job. If thisabend occurs in the online system, messages will be written to the JES log of the IMS control region address space, describing the reason for the failure.

This explanation is applicable forabend codes U40xx, where xx is one of the following: 00, 01, 02, 21, 22, 50, or 81.

System action

Theabend ends the address space.

User response

Investigate the messages that describe the reason for theabend.

Chapter 30. Runtime messages (IOH)

This reference section provides detailed information about the error messages that are issued by IMS HP Sysgen Tools. The technical information in this section can help you troubleshoot and diagnose IMS HP Sysgen Tools problems.

Message format

IMS HP Sysgen Tools runtime messages adhere to the following format:

`IOHnnnnx`

Where:

IOH

Indicates that the message was issued by IMS HP Sysgen Tools

nnnn

Indicates the message identification number

x

Indicates the severity of the message:

S

Indicates that operator intervention is required before processing can continue.

E

Indicates that an error occurred, which might or might not require operator intervention.

I

Indicates that the message is informational only.

W

Indicates that the message is a warning to alert you to a possible error condition.

Each message also includes the following information:

Explanation:

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

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.

Severity:

A number between 2 and 16 that indicates the severity of the error. The severity of warning messages is usually 2 or 4, whereas severe errors are usually severity 16.

IOH001E

**IMS TRAN EDIT NAME FIND
FAILED - REASON=a**

System action

Processing fails.

Explanation

While attempting to read the nucleus to determine the IMS transaction edit routine names included in the IMS nucleus, an unexpected condition occurred. The reason code (A-I) provides an internal indication of the reason for the condition.

User response

Contact IBM Software Support for assistance.

Severity

In a batch environment, the job abends with a U4022 code. In an ISPF environment, the function fails.

IOH003E ALESERV function FAILED RC=rc

Explanation

An MVS ALESERV macro failed for function ADD or DELETE for addressability to the IMS control region address space, as identified in the message text.

System action

The request is stopped.

User response

Contact IBM Software Support for assistance.

Severity

N/A

**IOH004E BLDL FAILED FOR MEMBER
 mmmmmmmm RC=nn**

Explanation

BLDL could not find the IMS nucleus member of RESLIB (member name *mmmmmmm*). The indicated return code is the return code from the BLDL macro.

System action

Processing fails.

User response

Verify that the proper IMS RESLIB data set and the proper IMS nucleus suffix are being used.

Severity

In a batch environment, the job abends with a U4022 code. In an ISPF environment, the function fails.

**IOH005E FIND FAILED FOR MEMBER
 mmmmmmmm RC=nn**

Explanation

An MVS FIND macro failed when attempting to find the IMS nucleus member of RESLIB (member name *mmmmmmm*). The indicated return code is the return code from the FIND macro.

System action

Processing fails.

User response

Verify that the proper IMS RESLIB data set and the proper IMS nucleus suffix are being used.

Severity

In a batch environment, the job abends with a U4022 code. In an ISPF environment, the function fails.

**IOH006E POINT FAILED IN MEMBER
 mmmmmmmm RC=nn**

Explanation

An MVSPPOINT macro failed when attempting to point within the IMS nucleus member of RESLIB (member name *mmmmmmm*). The indicated return code is the return code from the POINT macro.

System action

Processing fails.

User response

Verify that the proper IMS RESLIB data set and the proper IMS nucleus suffix are being used.

Severity

In a batch environment, the job abends with a U4022 code. In an ISPF environment, the function fails.

**IOH101S INVALID PARM PASSED TO
 IOHCBMG**

Explanation

An internal error occurred.

System action

The sysgen fails. In batch mode, the job abends and produces a dump. In online mode, the **/MODIFY** request is canceled.

User response

Contact IBM Software Support for assistance.

Severity

Abend U4021

IOH111S	INVALID PARM PASSED TO xxxxxxx
----------------	---

Explanation

An internal error occurred.

System action

The sysgen fails. In batch mode, the job abends and produces a dump. In online mode, the **/MODIFY** request is canceled.

User response

Contact IBM Software Support for assistance.

Severity

Abend U4021

IOH112S	IMSGEN MACRO SUFFIX (a) DOES NOT MATCH THE IMS ONLINE SUFFIX (b)
----------------	---

Explanation

An online IMS sysgen request specified a SUFFIX= value on the IMSGEN macro that did not match the running IMS system's suffix as specified in the DFSPBxxx member of PROCLIB.

System action

The **/MODIFY** command fails.

User response

Verify that the proper IMSGEN macro and values are being included in the IMS sysgen input. Correct the inconsistency by changing the IMSGEN macro or the running IMS system's suffix.

Severity

None. This error only occurs in an online request.

IOH113S	MULTIPLE SPECIFICATIONS OF xxxxxxx MACRO
----------------	---

Explanation

Multiple IMSCTRL or IMSGEN macros were encountered in the specified IMS sysgen source. Only one occurrence of each of these macros is permitted.

System action

The sysgen fails. In batch mode, the job ends with a condition code indicated in the Severity section. In online mode, the **/MODIFY** request is canceled.

User response

Correct the IMS sysgen input to include only one occurrence of the macro specified in the error message text.

Severity

16

IOH121S	INVALID PARM PASSED TO IOHDDIR
----------------	---

Explanation

An internal error occurred.

System action

The sysgen fails. In batch mode, the job abends and produces a dump. In online mode, the **/MODIFY** request is canceled.

User response

Contact IBM Software Support for assistance.

Severity

Abend U4021

IOH131S	PARM FIELD REQUIRED FOR KEYWORD TARGET=
----------------	--

Explanation

The DBD name included in the message was specified more than once in the IMS sysgen input.

System action

The sysgen fails. In batch mode, the job ends with the specified condition code. In online mode, the **/MODIFY** request is canceled.

User response

Review the IOHPimid member of the PROCLIB DD statement, where imid is the online system's IMSID.

Severity

16

IOH132S	INVALID KEYWORD IN PARM FIELD
----------------	--------------------------------------

Explanation

The PARM= value specified in the invocation of IOHFGEN (on the EXEC JCL statement or TSO CALL statement) was not valid.

System action

The sysgen fails. The job ends with the specified condition code.

User response

Review the PARM passed to program IOHFGEN. It should specify SUFFIX= (a 1-4 character member name suffix for IOHPxxxx) and TARGET= (which can be S, I, A, and/or B).

Severity

16

IOH133S	INVALID VALUE IN PARM FIELD FOR KEYWORD <i>aaaaaaaa</i>
----------------	--

Explanation

The PARM= on the EXEC JCL statement or TSO CALL statement specified an invalid value for the keyword noted in the message. SUFFIX= specifies a 1-4 character member name suffix. TARGET= specifies the target libraries (which can be S, I, A, and/or B).

System action

The sysgen fails. The job ends with the specified condition code.

User response

Review the value specified for the keyword noted in the message.

Severity

16

IOH134E	LOAD FAILED FOR <i>module</i> RC=<i>nnnn</i> ABCODE=<i>abcode</i>
----------------	--

Explanation

A LOAD for a required module failed. The abend code and reason code are described in the message.

System action

The job step abends.

User response

Verify that the STEPLIB concatenation for the Fastgen utility is correct.

Severity

16

IOH135E	FASTGEN PROCESS TERMINATED DUE TO IMS SYSGEN ERROR(S)
----------------	--

Explanation

Prior errors encountered cause the IMS sysgen to fail.

System action

The job ends with the specified condition code.

User response

When encountered in batch mode, review the output to find the cause of the errors, and correct the problem. When encountered in online mode, review the JES log of the IMS control region to identify possible Fast Sysgen system errors or run the utility in batch mode to identify the IMS sysgen source statements in error.

Severity

16

IOH136E	FASTGEN PROCESS TERMINATED DUE TO MODULE LINK ERROR(S)
----------------	---

Explanation

Errors encountered cause the IMS sysgen to fail. See detailed output of the Fast Sysgen process to determine if any updates were implemented in the requested target libraries.

System action

The job ends with the specified condition code.

User response

When encountered in batch mode, review the output to find the cause of the errors, and correct the problem. When encountered in online mode, review the JES log of the IMS control region to identify

possible Fast Sysgen system errors or run the utility in batch mode to identify the cause of the error.

Severity

16

IOH137S	ABEND REQUESTED BY IOHP* PARAMETER MEMBER OPTIONS STATEMENT
----------------	--

Explanation

The OPTIONS statement in the Fast Sysgen control card member specifies ABEND=YES.

System action

The job abnormally ends.

User response

To eliminate the abend, remove the OPTIONS control card from the member.

Severity

16

IOH138E	FASTGEN PROCESS TERMINATED DUE TO IMS SECURITY GEN ERROR(S)
----------------	--

Explanation

Prior errors encountered cause the IMS security gen to fail.

System action

The job ends with the specified condition code.

User response

When encountered in batch mode, review the output to find the cause of the errors, and correct the problem. When encountered in online mode, review the JES log of the IMS control region to identify possible Fast Sysgen system errors or run the utility in batch mode to identify the IMS security source statements in error.

Severity

16

IOH139W	STORAGE CLEANUP EXPERIENCED AN ERROR FREEING STORAGE
----------------	---

Explanation

A storage FREEMAIN failed.

System action

The job ends with the specified condition code.

User response

Contact IBM Software Support for assistance.

Severity

2

IOH140E	THE SUFFIX PARAMETER IS NO LONGER SUPPORTED
----------------	--

Explanation

The SUFFIX= keyword is no longer supported in IMS HP Sysgen Tools. Review the new PARM field requirements for IOHFGEN in Chapter 21, [“Using the Fast Sysgen utility,”](#) on page 175.

System action

The job step ends.

User response

Update the PARM field specified in the IOHFGEN job. Remove the SUFFIX= and value, and include the IMSID= keyword with an appropriate value.

Severity

8

IOH141E	THE IMSID SPECIFIED IN THE PARM FIELD EXCEEDS FOUR CHARACTERS
----------------	--

Explanation

The IMSID= keyword parameter value specified exceeds four characters.

System action

The job fails.

User response

Review the value specified in the PARM field of the Fastgen job step EXEC card for the value of the IMSID= keyword. It exceeds the maximum length of 4 characters.

Severity

8

IOH142E	IMSID WAS NOT SPECIFIED AND REQUIRED DD STATEMENT ddname WAS NOT SPECIFIED
----------------	---

Explanation

The Fastgen job step did not include the specified DD statement and could not be dynamically allocated because the IMSID= keyword was not specified in the EXEC card PARM field.

System action

The job fails.

User response

Either add the specified DD statement, or add the IMSID= keyword to the Fastgen job step PARM field so that IMS HP Sysgen Tools can dynamically allocate the required DD statement.

Severity

8

IOH151E	MISSING KEYWORD TABLE FOR MACRO aaaaaaaaa
----------------	--

Explanation

An error was encountered processing the internal keyword table for the specified macro.

System action

The job ends with the specified condition code.

User response

Contact IBM Software Support for assistance.

Severity

16

IOH152E	INVALID MACRO NAME/OPCODE - aaaaaaaa
----------------	---

Explanation

An invalid or unsupported operation code aaaaaaaaa was found in the IMS stage 1 source.

System action

The job ends with the specified condition code.

User response

Review the statement in error and correct the problem.

Severity

16

IOH153E	INVALID KEYWORD FOR MACRO mmmmmmmm - kkkkkkkk
----------------	--

Explanation

An unidentified keyword was found on the specified macro statement.

System action

The job ends with the specified condition code.

User response

Review the statement in error and correct the problem.

Severity

16

IOH154E	KEYWORD SPECIFIED EXCEEDS 8 CHARACTERS
----------------	---

Explanation

A keyword specified in the IMS stage 1 source was longer than 8 characters.

System action

The job ends with the specified condition code.

User response

Review the statement in error and correct the problem.

Severity

16

IOH155E	DUPLICATE SPECIFICATION OF KEYWORD aaaaaaaaa
----------------	---

Explanation

The specified keyword was included more than once on a macro invocation.

System action

The job ends with the specified condition code.

User response

Review the statement in error and correct the problem.

Severity

16

IOH156E	UNBALANCED QUOTE MARKS
----------------	-------------------------------

Explanation

A statement with a value that included quotation marks (') had unbalanced quotation marks.

System action

The job ends with the specified condition code.

User response

Review the statement in error and correct the problem.

Severity

16

IOH157E	INVALID SYNTAX (OPEN PAREN IN MID-WORD)
----------------	--

Explanation

An open parenthesis was found without a preceding blank or comma.

System action

The job ends with the specified condition code.

User response

Review the statement in error and correct the problem.

Severity

16

IOH158E	UNBALANCED PARENTHESIS
----------------	-------------------------------

Explanation

An open parenthesis was found without a matching close parenthesis.

System action

The job ends with the specified condition code.

User response

Review the statement in error and correct the problem.

Severity

16

IOH159E	VALUE SPECIFIED FOR KEYWORD xxxxxxx EXCEEDS 8 CHARS
----------------	--

Explanation

The value specified for the indicated keyword exceeds 8 characters. The maximum length for specification of this keyword is 8 characters.

System action

The job ends with the specified condition code.

User response

Review the statement in error and correct the problem.

Severity

16

IOH160E	TOO MANY VALUES SPECIFIED FOR KEYWORD aaaaaaaaa
----------------	--

Explanation

The indicated keyword had more values specified than are valid.

System action

The job ends with the specified condition code.

User response

Review the statement in error and correct the problem.

Severity

16

IOH161E	POSITIONAL PARAMETER IS FOLLOWED BY "a"
----------------	--

Explanation

A positional parameter contained or was followed by an open or close parenthesis or an equal sign.

System action

The job ends with the specified condition code.

User response

Review the statement in error and correct the problem.

Severity

16

IOH162E NO COMMA FOLLOWING ")"

Explanation

The statement in error contained a close parenthesis that was not followed by either a blank or a comma.

System action

The job ends with the specified condition code.

User response

Review the statement in error and correct the problem.

Severity

16

IOH163E SYNTAX ERROR

Explanation

The statement in error was unable to complete parsing due to an unidentified syntax error. This might be caused by previous errors for the same statement.

System action

The job ends with the specified condition code.

User response

If there are other errors for this statement, correct the other identified errors. If this error occurs without obvious reason or other errors, contact IBM Software Support for assistance.

Severity

16

IOH164E UNMATCHED QUOTES

Explanation

A statement with a value that included quotation marks (') had unbalanced quotation marks.

System action

The job ends with the specified condition code.

User response

Review the statement in error and correct the problem.

Severity

16

IOH165E UNSUPPORTED IMS RELEASE

Explanation

The IMS release identifier in the modify work area extension was not valid.

System action

The job ends with the specified condition code.

User response

Contact IBM Software Support for assistance.

Severity

16

IOH166E MSNAME STMTS MISSING-SYSID CHECKING BYPASSED

Explanation

The IMS sysgen source did not include MSC link definitions. However, transactions were present in the sysgen source that included *sysid=* specifications.

System action

The request fails. Syntax checking continues, although IMS HP Sysgen Tools is unable to verify transaction SYSID specifications.

User response

Ensure that the MSNAME macros are included in the IMS sysgen source.

Severity

N/A

IOH172E INVALID VALUE SPECIFIED FOR KEYWORD *name*

Explanation

The \$IOHGEN statement that was flagged in error contains an invalid value for the named keyword.

System action

Syntax checking for the statement fails, but syntax checking continues for the next sysgen source statement.

User response

Verify that the value specified for the named keyword is valid, and correct any invalid values.

Severity

8

IOH173E	REQUIRED KEYWORD NOT SPECIFIED (AGN OR RELOAD REQUIRED)
----------------	--

Explanation

The \$IOHGEN statement that was flagged in error is missing a required keyword. Either the RELOAD or AGN= keyword is required.

System action

Syntax checking for the statement fails, but syntax checking continues for the next sysgen source statement.

User response

Check the syntax of the \$IOHGEN statement to ensure that you have specified either the RELOAD keyword or the AGN= keyword.

Severity

8

IOH174E	REQUIRED KEYWORD NOT SPECIFIED <i>keyword</i>
----------------	--

Explanation

The \$IOHGEN statement that was flagged in error is missing a required keyword. The missing keyword (or list of possible keywords) is included in the message.

System action

Syntax checking for the statement fails, but syntax checking continues for the next sysgen source statement.

User response

Check the syntax of the \$IOHGEN statement to ensure that you have specified all required keywords for the form of the \$IOHGEN statement being used.

Severity

8

IOH175E	INVALID COMBINATION OF KEYWORDS SPECIFIED <i>keywords</i>
----------------	--

Explanation

The \$IOHGEN statement that was flagged in error includes an invalid keyword for this form of the \$IOHGEN statement. The conflicting keywords are specified in the message text.

System action

Syntax checking for the statement fails, but syntax checking continues for the next sysgen source statement.

User response

Check the syntax of the \$IOHGEN statement to ensure that you have specified only the keywords permitted for the form of the \$IOHGEN statement being used.

Severity

8

IOH176E	INVALID KEYWORD SPECIFIED FOR <i>type</i> STATEMENT <i>keyword</i>
----------------	---

Explanation

The \$IOHGEN statement that was flagged in error includes an invalid keyword for this form of the \$IOHGEN statement. The type of \$IOHGEN statement (either RELOAD or AGN) and the unexpected keyword name are specified in the message text.

System action

Syntax checking for the statement fails, but syntax checking continues for the next sysgen source statement.

User response

Check the syntax of the \$IOHGEN statement to ensure that you have specified only the keywords permitted for the form of the \$IOHGEN statement being used.

Severity

8

IOH181I	IMS HP SYSGEN /MOD PREPARE FASTGEN CMD NOT AVAILABLE WHEN xxx IS ACTIVE
----------------	--

Explanation

Your environment is not compatible with the **/MOD PREPARE FASTGEN** command. The message indicates whether Global Online Change (GOC) or Dynamic Resource Definition (DRD) is the incompatible feature in use.

System action

The **/MOD PREPARE FASTGEN** command is ignored.

User response

Use a resource update list to change IMS system definitions.

Severity

N/A

IOH185E	LOAD FAILED FOR aaaaaaaaaa RC=nnnn ABCODE=cccc
----------------	---

Explanation

A load for the specified module name failed. Had the condition not been intercepted, the result would have been an abend with abend code cccc reason code nnnn.

System action

The batch job or IMS control region abends.

User response

Verify that the STEPLIB concatenation is correct for batch processing or that the IMS control region STEPLIB concatenation is correct.

Severity

U4021 abend code.

IOH187E	DELETE FAILED FOR aaaaaaaaaa RC=nnnn
----------------	---

Explanation

An attempted delete of a module failed with the indicated return code.

System action

Processing continues.

User response

Review the JES log of the job that encountered the error for indications of the problem. Contact IBM Software Support for assistance.

Severity

0

IOH188S	SCD ADDRESS RECEIVED BY IOHINIT IS INVALID
----------------	---

Explanation

DFSXCIC0 passed an invalid SCD address to IOHINIT.

System action

The IMS control region abends.

User response

Contact IBM Software Support for assistance.

Severity

The IMS control region abends with a U4021 abend code.

IOH189S	DFSVC000 LOADED FROM STEPLIB IS INVALID
----------------	--

Explanation

Module DFSVC000 is not valid.

System action

The batch job abends.

User response

Verify that the STEPLIB concatenation for the job does not contain any data sets with module name DFSVC000 other than the RESLIB data set. If an IMS

sysgen was done recently, verify that the sysgen was successful.

Severity

U4021 abend code

IOH190S UNSUPPORTED IMS RELEASE

Explanation

An unsupported release of IMS/ESA® was found in module DFSVC000.

System action

The job abends.

User response

Verify that the IMS RESLIB in the STEPLIB concatenation contains a supported release of IMS. Upgrade the IMS Sysgen Tool if the release is not supported.

Severity

U4021 abend code

**IOH192E LOAD FAILED FOR aaaaaaaaaa
RC=nnnn ABCODE=aaaaa**

Explanation

A load for the specified module name failed. Had the condition not been intercepted, the result would have been an abend with abend code cccc reason code nnnn.

System action

The batch job or IMS control region abends.

User response

Verify that the STEPLIB concatenation is correct for a batch execution or that the IMS control region STEPLIB concatenation is correct.

Severity

U4021 abend code.

**IOH202S FIND FAILED FOR aaaaaaaaaa
MEMBER bbbbbbbb.**

Explanation

An attempt was made to locate the specified member name in the DDNAME specified. The request was unsuccessful.

System action

The batch job abends. In an online environment, the Fast Sysgen request fails.

User response

Verify that the COPY statement or the member name specified on the IMSGEN or SEC GEN MEMBER= keyword exists in the library or libraries specified for the gen source.

Severity

U4021 abend code.

**IOH205S INVALID PARM PASSED TO
IOHIOS00**

Explanation

An internal error occurred in IOHIOS00.

System action

The batch job abends. In an online environment, the Fast Sysgen request fails.

User response

Contact IBM Software Support for assistance.

Severity

U4021 abend code.

**IOH206E INTERNAL ERROR - INVALID
OPEN REQUEST**

Explanation

An internal error occurred in IOHIOS00.

System action

The batch job abends. In an online environment, the Fast Sysgen request fails.

User response

Contact IBM Software Support for assistance.

Severity

U4021 abend code.

IOH207E	INTERNAL ERROR - INVALID GET REQUEST
----------------	---

Explanation

An internal error occurred in IOHIOS00.

System action

The batch job abends. In an online environment, the Fast Sysgen request fails.

User response

Contact IBM Software Support for assistance.

Severity

U4021 abend code.

IOH208E	MISSING OPCODE - STMT IGNORED
----------------	--------------------------------------

Explanation

An internal error occurred in IOHIOS00.

System action

The batch job abends. In an online environment, the Fast Sysgen request fails.

User response

Contact IBM Software Support for assistance.

Severity

U4021 abend code.

IOH209E	INTERNAL ERROR - INVALID LENGTH
----------------	--

Explanation

An internal parsing error occurred in IOHIOS00.

System action

The batch job abends. In an online environment, the Fast Sysgen request fails.

User response

Contact IBM Software Support for assistance.

Severity

U4021 abend code.

IOH210E	INTERNAL PARM ERROR - GENTYPE NOT SPECIFIED
----------------	--

Explanation

An internal error occurred in IOHIOS00.

System action

The batch job abends. In an online environment, the Fast Sysgen request fails.

User response

Contact IBM Software Support for assistance.

Severity

U4021 abend code.

IOH211E	OPCODE EXCEEDS 8 CHARACTERS - STMT IGNORED
----------------	---

Explanation

An internal error occurred in IOHIOS00.

System action

The batch job abends. In an online environment, the Fast Sysgen request fails.

User response

Contact IBM Software Support for assistance.

Severity

U4021 abend code.

IOH212E	BEGIN TO CONTINUE COLUMNS NOT BLANK
----------------	--

Explanation

A macro statement was continued (as indicated by a non-blank character in column 72), but the first 15 columns on the following statement were not blank.

System action

The statement is ignored.

User response

Review the macro statement in error and correct the problem.

Severity

16

IOH213E	TITLE MUST HAVE A SINGLE OPERAND ENCLOSED IN QUOTES
----------------	--

Explanation

A TITLE statement was encountered containing more than one operand or whose operand was not enclosed in quotation marks.

System action

The statement is ignored.

User response

Review the macro statement in error and correct the problem.

Severity

16

IOH214E	TITLE VALUE EXCEEDS 100 BYTES
----------------	--------------------------------------

Explanation

A TITLE statement with title text exceeding 100 bytes was encountered.

System action

The statement is ignored.

User response

Reduce the length of the title text to less than 100 bytes.

Severity

16

IOH215E	LABEL TOO LONG (EXCEEDS 63 CHARACTERS)
----------------	---

Explanation

A control statement had a label beginning in column 1 that exceeded 63 characters in length.

System action

The statement is ignored.

User response

Reduce the length of the label to less than 63 characters.

Severity

16

IOH216E	TOO MANY CONTINUATION CARDS (EXCEEDS 10 CARDS)
----------------	---

Explanation

A single macro statement was composed of more than 10 source lines (or exceeded the maximum length available for a single macro statement - approximately 720 characters).

System action

The statement is ignored.

User response

Review the source macro that caused the error. Reduce the number of text lines comprising the macro or reduce the entire length of the macro statement by eliminating parameters with default values.

Severity

16

IOH217E	UNMATCHED QUOTE
----------------	------------------------

Explanation

A macro statement with a value in quotation marks did not have an ending quotation mark.

System action

The statement is ignored.

User response

Review the macro statement in error and correct the problem.

Severity

16

IOH218E	TOO MANY NESTED COPY STATEMENTS (EXCEEDS 10)
----------------	---

Explanation

The number of active (open) COPY members exceeded the limit of 10. Fast Sysgen has a limit of 10 nested COPY levels.

System action

The COPY statement is ignored.

User response

Restructure the source code to reduce the number of nested COPY statements.

Severity

16

IOH219E	COPY OPERAND EXCEEDS 8 CHARACTERS
----------------	--

Explanation

A COPY statement specified a member name of more than 8 characters.

System action

The statement is ignored.

User response

Review the macro statement in error and correct the problem.

Severity

16

IOH220E	RECURSIVE COPY MEMBER REQUESTED
----------------	--

Explanation

A COPY statement was included in a COPIED member that referred back to a member already open. This would result in an endless loop of COPY members.

System action

The statement is ignored.

User response

Review the COPY statements included in the gen source, and correct the COPY statements to prevent a recursive COPY.

Severity

16

IOH221E	COPY STATEMENT FOUND IN SEQUENTIAL INPUT
----------------	---

Explanation

A COPY statement was included in a COPIED member that referred back to a member already open. This would result in an endless loop of COPY members.

System action

The Fast Sysgen process ends.

User response

Review the COPY statements included in the gen source, and remove COPY statements or make the input a PDS member.

Severity

For batch jobs, a U4021 abend occurs. For online Fast Sysgen requests, the command is canceled.

IOH222W	WARNING - CONTINUED STATEMENT DOES NOT END WITH A COMMA
----------------	--

Explanation

An input line had a non-blank continuation character, indicating that the statement is continued, but the statement does not end with a comma. While this is valid syntax, it might indicate that a comma is missing.

System action

The remainder of the macro statement is treated as comments.

User response

Verify that the continued statement is coded correctly.

Severity

2.

IOH223E	COPY STATEMENT INVALID IN PROCLIB MEMBER
----------------	---

Explanation

While processing member IOHPimid in the IMS PROCLIB DD, a COPY statement was encountered.

COPY statements are not permitted in the IOHP*imid* member of the PROCLIB.

System action

The Fast Sysgen process ends.

User response

Remove any COPY statements from the IOHPimid member of the PROCLIB.

Severity

The **/MODIFY** command is canceled.

```
IOH231I      j j j j j j j j WAITING FOR DATASET dsn
              volser
```

Explanation

Jobname *jjjjj* is waiting for an enqueue or reserve for an output data set. The data set name (*dsn*) and volume serial (*volser*) are indicated in the message.

System action

The job waits for the holder of the resource to release control.

User response

If the wait continues, investigate which job is holding the resource required. For example, a batch Fast Sysgen that requests an update to the active MODBLKS/MATRIX data sets will encounter this problem.

Severity

0

IOH234S	STOW FAILED FOR MEMBER aaaaaaaa IN DD bbbbbbbb RC=nn SC=ssss
---------	--

Explanation

A STOW request for the indicated member and DDNAME failed. The return code and subcode issued by the STOW macro appear in the message.

System action

The Fast Sysgen process ends.

User response

Review the JES log of the failing job for other messages relating to the indicated DDNAME. Review the JCL for proper specification of the indicated DDNAME. Ensure there is sufficient space in both the data set and the directory.

Severity

For batch jobs, a U4021 abend occurs. For online Fast Sysgen requests, the command is canceled.

IOH235E *ffffff* FOR COMPRESS WORK
 AREA FAILED RC=*rc*

Explanation

A GETMAIN or FREEMAIN, as specified in the message, failed when attempting to access below the line storage for a work area to be used to perform a compress of a MODBLKS or MATRIX data set.

System action

The Fast Sysgen process ends.

User response

Review storage available in the address space that experienced the problem. Because this storage is below the 16M line, ensure that sufficient region is available.

Severity

If the error occurs in a batch job, the job abends. In an IMS or ISPF environment, the requested function fails.

IOH236S	NOTE MACRO FAILED FOR DDNAME <i>aaaaaaaa</i> RC= <i>nn</i>
---------	---

Explanation

A NOTE macro request for the indicated DDNAME failed. The return code from NOTE appears in the message.

System action

The Fast Sysgen process ends.

User response

Review the JES log of the failing job for other messages relating to the indicated DDNAME. Review the JCL for proper specification of the indicated DDNAME.

Severity

For batch jobs, a U4021 abend occurs. For online Fast Sysgen requests, the command is canceled.

IOH237S	INVALID PARAMETER PASSED TO IOHLMOD
----------------	--

Explanation

An internal error occurred passing a parameter to module IOHLMOD.

System action

The Fast Sysgen process ends.

User response

Contact IBM Software Support for assistance.

Severity

For batch jobs, a U4021 abend occurs. For online Fast Sysgen requests, the command is canceled.

IOH238S	MODULE SIZE REQUESTED NOT DOUBLEWORD ALIGNED
----------------	---

Explanation

An internal error occurred related to the size of the module to be written.

System action

The Fast Sysgen process ends.

User response

Contact IBM Software Support for assistance.

Severity

For batch jobs, a U4021 abend occurs. For online Fast Sysgen requests, the command is canceled.

IOH239S	ERROR PARSING MODSTAT RECORD
----------------	-------------------------------------

Explanation

An error occurred while interpreting the information in the MODSTAT data set.

System action

The Fast Sysgen process ends.

User response

Verify that the MODSTAT data set contains valid information. If the MODSTAT record is valid, contact IBM Software Support . Save a copy of the MODSTAT data set record for review by IBM Software Support.

Severity

For batch jobs, a U4021 abend occurs. For online Fast Sysgen requests, the command is canceled.

IOH240S	aaaaaaaa ERROR FOR bbbbbbbb RC=nn
----------------	--

Explanation

An ENQ or RESERVE macro for QNAME bbbbbbbb failed with the indicated return code.

System action

The Fast Sysgen process ends.

User response

Contact IBM Software Support for assistance.

Severity

For batch jobs, a U4021 abend occurs. For online Fast Sysgen requests, the command is canceled.

IOH241S	DFSOC001 ENQUEUE FAILED FOR dsn
----------------	--

Explanation

The online IMS control region issued an ENQ for the indicated data set. The ENQ would have resulted in the IMS control region waiting for exclusive use of the resource.

System action

The IMS HP Sysgen Tools process ends to prevent the IMS control region from waiting for the resource.

Severity

The request for IMS HP Sysgen Tools is canceled.

IOH242S	UNABLE TO LOCATE TIOT ENTRY FOR DDNAME aaaaaaaaa
----------------	---

Explanation

The specified DDNAME was not found in the TIOT.

System action

The Fast Sysgen process ends.

User response

Ensure that the indicated DDNAME is included in the JCL for the failing address space.

Severity

For batch jobs, a U4021 abend occurs. For online Fast Sysgen requests, the command is canceled.

IOH243S SWAREQ FAILED RC=nn

Explanation

An SWAREQ macro failed with the indicated return code.

System action

The Fast Sysgen process ends.

User response

Contact IBM Software Support for assistance.

Severity

For batch jobs, a U4021 abend occurs. For online Fast Sysgen requests, the command is canceled.

**IOH244W WARNING - ALL xxxxxxxx
DATASETS DO NOT HAVE THE
SAME BLKSIZE**

Explanation

The 3 data sets (staging, A, and B) of the type indicated by the message do not all have the same block size.

System action

The smallest block size is used for all the indicated data sets.

User response

All MATRIX data sets and all MODBLKS data sets should have the same block size. Reallocate the data sets to specify the same block size for all 3 data sets.

Severity

0

**IOH245E ERROR PROCESSING
RELOCATABLE ADDRESSES**

Explanation

An internal error occurred processing the AGN matrix table.

System action

The Fast Sysgen process ends.

User response

Contact IBM Software Support for assistance.

Severity

For batch jobs, a U4021 abend occurs. For online Fast Sysgen requests, the command is canceled.

**IOH246E ABEND Saaa RCrr DDNAME
dddddddd - SYSGEN ABORTED**

Explanation

An abend was intercepted during an I/O operation for the indicated DDNAME.

System action

The Fast Sysgen process ends.

User response

Review the JES log of the failing job for other messages relating to the indicated DDNAME. For D37 or E37 abend codes, review the space available in the indicated data set and compress the data set as required.

Severity

For batch jobs, a U4021 abend occurs. For online Fast Sysgen requests, the command is canceled.

**IOH247E TASK NOT APF AUTHORIZED -
UNABLE TO COMPRESS OUTPUT
LIBRARY**

Explanation

IMS HP Sysgen Tools was unable to automatically compress the output library because the job step task was not running APF authorized.

System action

Processing fails because output to the MODBLKS or MATRIX library that experienced the D37 or E37 abend could not continue without compressing the library.

Severity

For batch job, a U4021 abend occurs. For online Fast Sysgen requests, the **/MODIFY** command fails.

IOH248E	SPACE ABEND RECURRED AFTER OUTPUT LIBRARY WAS COMPRESSED
----------------	---

Explanation

HP Sysgen compressed the library that experienced the D37/E37 abend, but the abend reoccurred.

System action

Processing fails because output to the MODBLKS or MATRIX library that experienced the D37 or E37 abend could not continue.

User response

Review space allocation for the library that experienced the D37 or E37 abend, and ensure that sufficient space is available.

Severity

For batch job, a U4021 abend occurs. For online Fast Sysgen requests, the **/MODIFY** command fails.

IOH249E	COMPRESS FAILED - ATTACH TO IEBCOPY FAILED RC=<i>rc</i>COMPRESS FAILED - IEBCOPY RETURN CODE <i>rc</i>
----------------	---

Explanation

HP Sysgen compressed the library that experienced the D37/E37 abend, but the abend reoccurred.

System action

Processing fails because output to the MODBLKS or MATRIX library that experienced the D37 or E37 abend could not continue without compressing the library.

User response

Review the return code/abend code and any messages in the MVS SYSLOG to determine the cause of the IEBCOPY failure. Contact IBM Software Support for assistance.

Severity

For batch job, a U4021 abend occurs. For online Fast Sysgen requests, the **/MODIFY** command fails.

IOH250I	COMPRESS SUCCESSFUL DDNAME
----------------	-----------------------------------

Explanation

HP Sysgen compressed the library that experienced a D37/E37 abend. HP Sysgen retries the output processing that was in progress at the time of the abend.

System action

None.

User response

None. This message is informational.

Severity

0

IOH251S	<i>aaaaaaaa</i> FAILED FOR <i>bbbbbbbb</i> STORAGE RC=<i>nn</i>
----------------	--

Explanation

A storage request for I/O related storage failed with the indicated return code. *aaaaaaaa* indicates whether a GETMAIN or FREEMAIN. *bbbbbbbb* indicates the storage use - either DCB, DSNENT, or BUFFER.

System action

The function fails. In a batch environment, the job abends. In an online environment, the **/MODIFY** command fails.

User response

Contact IBM Software Support for assistance.

Severity

For batch job, a U4021 abend occurs. For online Fast Sysgen requests, the **/MODIFY** command fails.

IOH261E	ERROR - <i>reason</i>
----------------	------------------------------

Explanation

An error occurred processing the Fast Sysgen control statements. As indicated in the message, either an invalid operation code (such as IMSGEN or SECGEN) or

an invalid keyword (such as DDNAME= or MEMBER=) was encountered.

System action

The Fast Sysgen process ends.

User response

Review the Fast Sysgen control statements in the IOHPxxxx member of the PROCLIB DD and correct the problem.

Severity

16

IOH262E	KEYWORD VALUE FOR kkkkkkkk reason
----------------	--

Explanation

The indicated keyword specified a value that was either missing, invalid, or too long, as indicated in the error message text.

System action

The Fast Sysgen process ends.

User response

Review the Fast Sysgen control statements in the IOHPxxxx member of the PROCLIB DD and correct the problem.

Severity

16

IOH263E	MULTIPLE SPECIFICATIONS OF PARM aaaaaaaa
----------------	---

Explanation

The indicated parameter was already specified - either on this statement or a prior statement.

System action

The Fastgen process ends.

User response

Review the Fast Sysgen control statements in the IOHPxxxx member of the PROCLIB DD and correct the problem. There should be only one occurrence of each type of statement (such as IMSGEN, SECGEN) in the control statement member.

Severity

16

IOH264E	DD NAME AND DSN KEYWORDS ARE MUTUALLY EXCLUSIVE
----------------	--

Explanation

Both the DD name and DSN keyword were specified. Only one of these keywords is permitted on as IMSGEN or SECGEN statement.

System action

The Fastgen process ends.

User response

Remove one of the keyword specifications from the statement.

Severity

16

IOH265E	CLOSE PAREN WITHOUT MATCHING OPEN PAREN
----------------	--

Explanation

The value for a keyword began with an open parenthesis, but no close parenthesis was found by the end of the statement.

System action

The Fastgen process ends.

User response

Review the parenthesis specified on the statement.

Severity

16

IOH266E	DSNAME EXCEEDS 44 CHARACTERS
----------------	-------------------------------------

Explanation

A data set name was specified for the source keyword, but the length of the name exceeded 44 characters.

System action

The Fastgen process ends.

User response

Correct the data set name.

Severity

16

IOH267E	MORE THAN 50 DSNAME SPECIFIED
----------------	--

Explanation

The DSN keyword specified more than the maximum number of data set names.

System action

The Fastgen process ends.

User response

Reduce the number of data set names.

Severity

16

IOH268E	DYNAMIC XXXXXXXXXXXXXXXX FAILED RC=XX ERROR CODE=XXXX INFO CODE=XXXX
----------------	---

Explanation

A dynamic allocation/concatenation/unallocation request failed. One or both IOH268I messages might appear along with the IOH268E message.

System action

The Fastgen process ends.

User response

Check the error and information codes returned, and correct the error.

Severity

16

IOH268I	DSN XXXXXXXXXXXXXXXXXXXXXXXXXXXX
----------------	---

Explanation

A dynamic allocation/concatenation/unallocation request completed.

System action

None.

User response

None. This message is informational.

Severity

16

IOH269W	DSN=XXXXXXXXXXXXXXXXXX
----------------	-------------------------------

Explanation

Dynamic allocation information returned an unexpected value for the DSORG of the specified data set.

System action

The Fastgen process ends.

User response

Verify that the DSORG of the identified data set is valid.

Severity

16

IOH270E	SOURCE DATA SETS HAVE INCONSISTENT DSORG
----------------	---

Explanation

Concatenated data sets do not all have the same data set organization. Some are sequential (PS), and others are PDS(PO).

System action

The Fastgen process ends.

User response

Verify the data set names specified in the IOHPxxxx member in order to ensure that all data sets in a concatenation have the same data set organization.

Severity

16.

IOH271S	INVALID PARM PASSED TO IOHPDIR
----------------	---

Explanation

An internal error occurred due to an invalid parameter being passed to module IOHPDIR.

System action

The Fast Sysgen process ends.

User response

Contact IBM Software Support for assistance.

Severity

A batch job receives a U4021abend. In an online environment, the Fast Sysgen request is canceled.

IOH272E	TRANSTAT= KEYWORD INVALID PRIOR TO IMS V10
----------------	---

Explanation

IMS sysgen source for an IMS system prior to IMS 10 includes an APPLCTN macro with the TRANSTAT keyword. This keyword is not supported prior to IMS 10.

System action

Processing continues.

User response

Ensure that you are trying to generate an IMS system for the proper release of IMS, which is determined by which IMS RESLIB that you are using. If the intended IMS system is earlier than IMS 10, remove any TRANSTAT= keywords from the IMS sysgen source.

Severity

8

IOH281S	INVALID PARM PASSED TO IOHRDIR
----------------	---

Explanation

An internal error occurred due to an invalid parameter being passed to module IOHRDIR.

System action

The Fast Sysgen process ends.

User response

Contact IBM Software Support for assistance.

Severity

A batch job receives a U4021abend. In an online environment, the Fast Sysgen request is canceled.

IOH282E	IMODULE GETMAIN FAILED FOR IOHDSNDI RC=nn
----------------	--

Explanation

An IMS IMODULE GETMAIN failed.

System action

The request fails.

User response

Ensure that the IMS control region has sufficient virtual storage to obtain 2 KB of storage above the 16 MB line. Contact IBM Software Support for assistance.

Severity

N/A

IOH291S	INVALID PARM PASSED TO IOHSDIR
----------------	---

Explanation

An internal error occurred due to an invalid parameter being passed to module IOHSDIR.

System action

The Fast Sysgen process ends.

User response

Contact IBM Software Support for assistance.

Severity

A batch job receives a U4021abend. In an online environment, the Fast Sysgen request is canceled.

IOH301E	ERROR BUILDING DFSAGT00 MATRIX
----------------	---

Explanation

An internal error occurred building the AGN matrix tables.

System action

The Fast Sysgen process ends.

User response

Contact IBM Software Support for assistance.

Severity

A batch job receives a U4021 abend. In an online environment, the Fast Sysgen request is canceled.

IOH311E	INVALID LABEL IN COLUMN 1 - STMT IGNORED
----------------	---

Explanation

The only valid characters that can appear starting in column 1 are a blank or a close parenthesis followed by an open parenthesis followed by a blank.

System action

Syntax checking continues, but the Fast Sysgen process will not produce any updated control block modules.

User response

Reduce the number of AGN names in the security gen source.

Severity

16

IOH312E	LOGIC ERROR IN IOHSECB
----------------	-------------------------------

Explanation

An internal error occurred processing the security control statements.

System action

The Fast Sysgen process ends.

User response

Contact IBM Software Support for assistance.

Severity

A batch job receives a U4021 abend. In an online environment, the Fast Sysgen request is canceled.

IOH313E	OPCODE ERROR (INVALID OR OUT OF SEQUENCE - STMT IGNORED)
----------------	---

Explanation

The operation code on the preceding statement is not currently valid (either the operation code is spelled wrong or is out of sequence).

System action

The statement is ignored. Syntax checking continues, but the Fast Sysgen process will not produce any updated control block modules.

User response

Review the security gen source, and correct the error.

Severity

16

IOH314E	MISSING REQUIRED OPERAND - STMT IGNORED
----------------	--

Explanation

A required operand for the preceding statement was not specified.

System action

The statement is ignored. Syntax checking continues, but the Fast Sysgen process will not produce any updated control block modules.

User response

Review the security gen source, and correct the error.

Severity

16

IOH315E	NO DATA RECORDS FOR PRECEDING CONTROL RECORD
----------------	---

Explanation

A control record - one with a ")(" label - had no data records associated with it.

System action

Syntax checking continues, but the Fast Sysgen process will not produce any updated control block modules.

User response

Review the security gen source, and correct the error.

Severity

16

IOH316E	DATA RECORD SPECIFIED WITHOUT PRECEDING CONTROL RECORD
----------------	---

Explanation

A data record - one without a ")"(" label - was encountered before a control record.

System action

The statement is ignored. Syntax checking continues, but the Fast Sysgen process will not produce any updated control block modules.

User response

Review the security gen source, and correct the error.

Severity

16

IOH317E	SPECIFIED OPERAND NOT DEFINED IN THIS SYSTEM
----------------	---

Explanation

The resource specified on the preceding statement was not defined in this system.

System action

The statement is ignored. Syntax checking continues, but the Fast Sysgen process will not produce any updated control block modules.

User response

Review the security gen source, and correct the error.

Severity

16

IOH318E	TRANSACT SPECIFIED IS FAST PATH EXCLUSIVE (NOT VALID)
----------------	--

Explanation

A transaction name specified on a security gen statement is a Fast Path transaction, and therefore is not valid.

System action

The statement is ignored. Syntax checking continues, but the Fast Sysgen process will not produce any updated control block modules.

User response

Review the security gen source, and correct the error.

Severity

16

IOH319E	SPECIFIED COMMAND NOT VALID FOR TCOMMAND
----------------	---

Explanation

The command specified is not eligible for AOI command processing, and therefore the TCOMMAND statement.

System action

The statement is ignored. Syntax checking continues, but the Fast Sysgen process will not produce any updated control block modules.

User response

Review the security gen source, and correct the error.

Severity

16

IOH320E	STORAGE MANAGEMENT ERROR
----------------	---------------------------------

Explanation

An internal storage management error occurred processing the security control statements.

System action

The Fast Sysgen process ends.

User response

Contact IBM Software Support for assistance.

Severity

A batch job receives a U4021 abend. In an online environment, the Fast Sysgen request is canceled.

IOH321E	SPECIFIED PTERM NUMBER ID INVALID
----------------	--

Explanation

The specified PTERM number is invalid.

System action

The statement is ignored. Syntax checking continues, but the Fast Sysgen process will not produce any updated control block modules.

User response

Review the security gen source, and correct the error.

Severity

16

IOH322E	REDUNDANT SIGN / STERM COMMAND
----------------	---

Explanation

An STERM ALL statement was encountered along with an STERM *name* statement.

System action

The statement is ignored. Syntax checking continues, but the Fast Sysgen process will not produce any updated control block modules.

User response

Remove either the STERM ALL statement or all other STERM statements.

Severity

16

IOH323E	OPERAND EXCEEDS MAXIMUM VALID LENGTH
----------------	---

Explanation

A resource name specified in the previous security statement exceeds the maximum allowable length for that type of resource. This is typically 8 characters, or 11 for an IMS command name.

System action

The statement is ignored. Syntax checking continues, but the Fast Sysgen process will not produce any updated control block modules.

User response

Review the security gen source, and correct the error.

Severity

16

IOH324E	OPERAND CONTAINS INVALID CHARACTERS
----------------	--

Explanation

The specified operand contained invalid special characters.

System action

The statement is ignored. Syntax checking continues, but the Fast Sysgen process will not produce any updated control block modules.

User response

Review the security gen source, and correct the error.

Severity

16

IOH325E	TCOMMAND * NOT PERMITTED ON CONTROL STMT
----------------	---

Explanation

A) (TCOMMAND * statement was encountered. To use TCOMMAND *, the CTRAN statement must be the control statement (the one with the backwards parenthesis).

System action

The statement is ignored. Syntax checking continues, but the Fast Sysgen process will not produce any updated control block modules.

User response

Review the security gen source, and correct the error.

Severity

16

IOH326E	INVALID IPAGE ADDRESS
----------------	------------------------------

Explanation

An internal storage management error occurred processing the security control statements.

System action

The Fast Sysgen process ends.

User response

Contact IBM Software Support for assistance.

Severity

A batch job receives a U4021abend. In an online environment, the Fast Sysgen request is canceled.

**IOH327E INVALID ROW OFFSET
CALCULATED**

Explanation

An internal error occurred processing the security control statements.

System action

The Fast Sysgen process ends.

User response

Contact IBM Software Support for assistance.

Severity

A batch job receives a U4021abend. In an online environment, the Fast Sysgen request is canceled.

IOH328E DUPLICATE AGN NAME SPECIFIED

Explanation

An AGNAME control statement was encountered that specified an AGN name already in use.

System action

The statement is ignored. Syntax checking continues, but the Fast Sysgen process will not produce any updated control block modules.

User response

Review the security gen source, and correct the error.

Severity

16

**IOH329E IMBEDED PSB, TRAN OR LTERM
NAME=ALL**

Explanation

An AGNAME control statement was followed by both specific resource names and an ALL resource name. If a resource of ALL is specified, no other resources of that type might be specified for that AGN.

System action

The statement is ignored. Syntax checking continues, but the Fast Sysgen process will not produce any updated control block modules.

User response

Review the security gen source, and correct the error.

Severity

16

IOH341E ROW REDUCTION IPAGE ERROR

Explanation

An internal error occurred performing matrix row reduction.

System action

The Fast Sysgen process ends.

User response

Contact IBM Software Support for assistance.

Severity

A batch job receives a U4021abend. In an online environment, the Fast Sysgen request is canceled.

IOH342E TCOMMAND IPAGE ERROR

Explanation

An internal error occurred creating the TCOMMAND matrix tables.

System action

The Fast Sysgen process ends.

User response

Contact IBM Software Support for assistance.

Severity

A batch job receives a U4021 abend. In an online environment, the Fast Sysgen request is canceled.

IOH351I	MORE THAN 65535 LTERMS DEFINED. TERMINAL, PASSWORD AND SIGNON MATRICES WILL NOT BE USABLE.
----------------	---

Explanation

This message is issued as a warning that the number of defined LTERMS makes generation of matrix tables for the identified matrices impossible.

System action

None.

User response

None. This message is informational.

Severity

0

IOH352I	MORE THAN 65535 DATABASES DEFINED. PASSWORD MATRIX WILL NOT BE USABLE.
----------------	---

Explanation

This message is issued as a warning that the number of defined databases makes generation of matrix tables for the identified matrices impossible.

System action

None.

User response

None. This message is informational.

Severity

0

IOH353I	MORE THAN 65535 PROGRAM SPECIFICATION BLOCKS DEFINED. PASSWORD MATRIX WILL NOT BE USABLE.
----------------	--

Explanation

This message is issued as a warning that the number of defined programs makes generation of matrix tables for the identified matrices impossible.

System action

None.

User response

None. This message is informational.

Severity

0

IOH354I	MORE THAN 65535 TRANSACTION NAMES DEFINED. TERMINAL, PASSWORD AND TRANCMD MATRICES WILL NOT BE USABLE.
----------------	---

Explanation

This message is issued as a warning that the number of defined transactions makes generation of matrix tables for the identified matrices impossible.

System action

None.

User response

None. This message is informational.

Severity

0

IOH361S	INVALID PARM PASSED TO IOHSTMG
----------------	---

Explanation

An internal error occurred due to an invalid parameter being passed to IOHSTMG.

System action

The Fast Sysgen process ends.

User response

Contact IBM Software Support for assistance.

Severity

A batch job receives a U4021 abend. In an online environment, the Fast Sysgen request is canceled.

IOH362S	GETMAIN FAILED FOR aaaaaaaaaa RC=nn
----------------	--

Explanation

A GETMAIN failed for the identified module name. The return code from the GETMAIN macro is shown.

System action

The Fast Sysgen process ends.

User response

Almost all Fast Sysgen storage is obtained above the 16M line, with the exception of some DCB and other I/O related control blocks. Verify that the amount of storage above the 16M line (extended private) is reasonable for the number of resources being generated. Message IEF374I in the JES messages for the job indicates the amount of private area (VIRT) and extended private area (EXT) used by the job. Increasing the region size to 32M or more might resolve the problem.

Severity

A batch job receives a U4021 abend. In an online environment, the Fast Sysgen request is canceled.

IOH363W	FREEMAIN FAILED FOR aaaaaaaaaa RC=nn
----------------	---

Explanation

An error occurred freeing storage for the named module. The FREEMAIN macro return code is also indicated.

System action

The Fast Sysgen process ends.

User response

Contact IBM Software Support for assistance.

Severity

A batch job receives a U4021 abend. In an online environment, the Fast Sysgen request is canceled.

IOH364S	IMODULE GETMAIN FAILED FOR aaaaaaaaaa RC=nn
----------------	--

Explanation

An IMS IMODULE GETMAIN function for the named module failed with the indicated return code.

System action

The Fast Sysgen process ends.

User response

Almost all Fast Sysgen storage is obtained above the 16M line, with the exception of some DCB and other I/O related control blocks. Verify that the amount of storage above the 16M line (extended private) is reasonable for the number of resources being generated. Message IEF374I in the JES messages for the job indicates the amount of private area (VIRT) and extended private area (EXT) used by the job. Increasing the region size to 32M or more might resolve the problem.

Severity

In an online environment, the Fast Sysgen request is canceled.

IOH365W	IMODULE FREEMAIN FAILED FOR aaaaaaaaaa RC=nn
----------------	---

Explanation

An IMS IMODULE FREEMAIN failed for the named module with the indicated return code.

System action

The Fast Sysgen process ends.

User response

Contact IBM Software Support for assistance.

Severity

In an online environment, the Fast Sysgen request is canceled.

IOH366S	LOAD FAILED FOR aaaaaaaaaa RC=nn
----------------	---

Explanation

A LOAD for the named module failed with the indicated return code.

System action

The Fast Sysgen process ends.

User response

Verify that the named module exists in the job's STEPLIB concatenation.

Severity

A batch job receives a U4021 abend. In an online environment, the Fast Sysgen request is canceled.

IOH367S	IMODULE LOAD FAILED FOR aaaaaaaa RC=nn
----------------	---

Explanation

An IMS IMODULE LOAD for the named module failed with the indicated return code.

System action

The Fast Sysgen process ends.

User response

Verify that the named module exists in the job's STEPLIB concatenation.

Severity

In an online environment, the Fast Sysgen request is canceled.

IOH368W	DELETE FAILED FOR aaaaaaaaa RC=nn
----------------	--

Explanation

A DELETE macro failed for the named module with the indicated return code.

System action

The Fast Sysgen process ends.

User response

Contact IBM Software Support for assistance.

Severity

A batch job receives a U4021 abend. In an online environment, the Fast Sysgen request is canceled.

IOH369W	IMODULE DELETE FAILED FOR aaaaaaaa RC=nn
----------------	---

Explanation

An IMS IMODULE DELETE failed for the named module with the indicated return code.

System action

The Fast Sysgen process ends.

User response

Contact IBM Software Support for assistance.

Severity

In an online environment, the Fast Sysgen request is canceled.

IOH370S	MAXIMUM IPAGES EXCEEDED FOR MODULE aaaaaaaaa
----------------	---

Explanation

The maximum number of IPAGEs of storage was used for the named module. The maximum number of IPAGEs is 999.

System action

The Fast Sysgen process ends.

User response

Verify that the named module exists in the job's STEPLIB concatenation.

Severity

A batch job receives a U4021 abend. In an online environment, the Fast Sysgen request is canceled.

IOH371S	IPAGE MODULE NAME ERROR - aaaaaaaa
----------------	---

Explanation

An internal error occurred while creating an IPAGE module.

System action

The Fast Sysgen process ends.

User response

Contact IBM Software Support for assistance.

Severity

A batch job receives a U4021 abend. In an online environment, the Fast Sysgen request is canceled.

IOH381E	LOAD FAILED FOR xxxxxxxx RC=rrrr ABCODE=aaaa
----------------	---

Explanation

A LOAD for the named module failed with the indicated return code and abend code.

System action

The Fast Sysgen process ends.

User response

Verify that the named module exists in the job's STEPLIB concatenation.

Severity

A batch job receives a U4021abend. In an online environment, the Fast Sysgen request is canceled.

IOH382E FIND SCD FAILED IN IOHPPUE0

Explanation

The partner product initialization exit was unable to locate the SCD for this IMS subsystem.

System action

The IMS control region abends with a U4021abend.

User response

Contact IBM Software Support for assistance. To circumvent the error, remove the IMS HP Sysgen Tools library from the IMS control region STEPLIB. Or, at least remove module IOHPPUE0 and its alias DFSPPEU0.

Severity

A batch job receives a U4021abend. In an online environment, the Fast Sysgen request is canceled.

**IOH383E INVALID KEYWORD IN DFSPPEU0
STATEMENT – xxxxxxxx**

Explanation

An unidentified keyword xxxxxxxx was found in a DFSPPEU0 statement in the IOHPimid member of PROCLIB.

System action

The keyword parameters are skipped.

User response

Review the DFSPPEU0 statements in the IOHP parameter member of PROCLIB. The only valid keyword allowed on this statement is NAME=.

**IOH384E CONTROL CARD SYNTAX ERROR –
UNMATCHED PARENS**

Explanation

A DFSPPEU0 statement in the IOHP parameter member of PROCLIB contains an unmatched open or close parenthesis.

System action

The remainder of the statement is ignored.

User response

Review the DFSPPEU0 statements in the IOHP parameter member of PROCLIB. Ensure that each statement has the proper parenthesis in the proper order.

**IOH385E MODULE NAME EXCEEDS 8
CHARACTERS**

Explanation

A DFSPPEU0 statement in the IOHP parameter member of PROCLIB included a module name that was longer than 8 characters.

System action

The module name is ignored.

User response

Ensure that the module names included in the DFSPPEU0 NAME= specification are properly specified.

**IOH386I INVOKING USER SPECIFIED
DFSPPEU0 EXIT ROUTINE
XXXXXXXX**

Explanation

IMS HP Sysgen initialization is invoking the specified DFSPPEU0 exit routine as requested on a DFSPPEU0 statement in the IOHP parameter member of PROCLIB.

System action

None.

User response

None. This message is informational.

**IOH387E LOAD FOR USER SPECIFIED
DFSPPEU0 EXIT ROUTINE
MMMMMMMM FAILED RC=RR
ABEND=AAAA**

Explanation

The named module, as specified on a DFSPUE0 statement, failed to load.

System action

The named module is not invoked during IMS initialization.

User response

Ensure the proper name was specified on the DFSPUE0 statement and that the module is available to the IMS control region.

IOH388E	IMS CTL RGN ABEND U4021 DUE TO INITIALIZATION ERROR IN IOHPPUE0
----------------	--

Explanation

IMS High Performance System Generation Tools initialization failed.

System action

The IMS control region abends.

User response

Investigate prior IOH messages to determine the cause of the initialization failure.

IOH389W	IOHPPUE0 INVOKED MORE THAN ONCE - BYPASSING INITIALIZATION
----------------	---

Explanation

The Fastgen partner product initialization exit was called twice during IMS restart.

System action

The second call to initialize is ignored because Fastgen was already initialized.

User response

This message causes no problems, but indicates that another user of the IMS partner product initialization exit called IOHPPUE0. The message goes away when another PPUE0 exit is updated to not call Fastgen's exit a second time.

IOH390E	CSVQUERY FAILED RC=XX
----------------	------------------------------

Explanation

A CSVQUERY request from the partner product initialization exit received an unexpected return code.

System action

Fastgen initialization continues. Problems might occur if the PPUE0 exit is called more than once during IMS restart processing.

User response

Contact IBM Software Support to report the incident.

IOH391S	IMODULE LOCATE FOR IOHMWX FAILED RC=rrrr
----------------	---

Explanation

IOHICLV0 attempted to find module IOHMWX. An IMODULE LOCATE failed to locate the module.

System action

The IMS control region abends.

User response

Contact IBM Software Support for assistance.

Severity

Abend code U4021.

IOH392S	VERIFICATION FAILED FOR MODULE IOHMWX
----------------	--

Explanation

Validation of control block IOHMWX failed. IMS control region execution is unable to continue.

System action

The IMS control region abends.

User response

Contact IBM Software Support for assistance.

Severity

Abend code U4021.

IOH393E	PARSE OF COMMAND FAILED - / MODIFY COMMAND ABORTED
----------------	---

Explanation

The IMS Sysgen Tool attempted to parse a **/MODIFY** command to determine if the FASTGEN keyword was specified. The parsing process failed.

System action

The **/MODIFY** command is rejected.

User response

Contact IBM Software Support for assistance.

Severity

None.

IOH394E	FASTGEN PROCESS TERMINATED DUE TO IMS SYSGEN ERROR(S)
----------------	--

Explanation

An online request for a Fast Sysgen failed due to errors encountered in the IMS stage 1 processing.

System action

The **/MODIFY** command is canceled.

User response

Run the same process in batch mode to identify the source of the errors and correct them.

Severity

None.

IOH395E	FASTGEN PROCESS TERMINATED DUE TO MODULE LINK ERROR(S)
----------------	---

Explanation

An online request for a Fast Sysgen failed due to errors encountered in control block module link edit processing.

System action

The **/MODIFY** command is canceled.

User response

Some errors are written to the JES log of the IMS control region address space. Check if any error messages indicate the reason for the failure. If not, run the same process in batch mode to identify the source of the errors and correct them.

Severity

None.

IOH396W	STORAGE CLEANUP EXPERIENCED AN ERROR FREEING STORAGE
----------------	---

Explanation

Cleanup processing following Fast Sysgen processing experienced an error.

System action

None.

User response

Contact IBM Software Support for assistance.

Severity

None.

IOH397E	FASTGEN PROCESS TERMINATED DUE TO SECURITY GEN ERROR(S)
----------------	--

Explanation

An online request for a Fast Sysgen failed due to errors encountered in IMS security gen processing.

System action

The **/MODIFY** command is canceled.

User response

Some errors are written to the JES log of the IMS control region address space. Check if any error messages indicate the reason for the failure. If not, run the same process in batch mode to identify the source of the errors and correct them.

Severity

None.

IOH398E	GETMAIN FAILED FOR IOHSAVEA
----------------	------------------------------------

Explanation

A GETMAIN request for subpool 0 storage above the 16M line in the IMS control region address space failed.

System action

The **/MODIFY** command is canceled.

User response

Ensure there is sufficient storage for 576 bytes of storage in the IMS address space. Contact IBM Software Support for assistance.

Severity

None.

IOH399W FREEMAIN FAILED FOR IOHSAVEA

Explanation

A FREEMAIN for storage used by IMODULE IOHSAVEA failed.

System action

The **/MODIFY** command is canceled.

User response

Contact IBM Software Support for assistance.

Severity

None.

**IOH401I FASTGEN ONLINE
 INITIALIZATION COMPLETE**

Explanation

The Fast Sysgen utility completed initialization during IMS control region startup.

System action

None.

User response

None. This message is informational.

Severity

None.

**IOH402E UNABLE TO LOCATE CVB ENTRY
 FOR COMMAND INTERCEPT**

Explanation

The command intercept set failed because the required CVB entry was not found.

System action

The IMS control region abends.

User response

Contact IBM Software Support for assistance.

Severity

U4021

**IOH403E IMS COMMAND PROCESSOR
 ADDRESS WAS NOT AVAILABLE**

Explanation

The command processor address in the CVB was not available.

System action

The IMS control region abends.

User response

Contact IBM Software Support for assistance.

Severity

U4021

**IOH410W IMS HP SYSGEN DETECTED
 GENERIC EXITS-BYPASSING EXIT
 XXXXXXXX**

Explanation

IMS HP Sysgen Tools detected that IMS Generic Exits for the Partner Product exit routine is active.

System action

The parameter information for IMS HP Sysgen Tools in PROCLIB member requested that another Partner Product exit routine be called by HP Sysgen. This request was bypassed because Generic Exits is active.

User response

Remove PPUEO= specifications from the IMS HP Sysgen Tools PROCLIB member if you convert to using IBM IMS Tools Generic Exits.

Severity

N/A

**IOH421E INVALID PARM PASSED TO
 IOHDCB**

Explanation

An internal error occurred because an invalid parameter was passed to module IOHDCB.

System action

The job step abends.

User response

Contact IBM Software Support for assistance.

Severity

U4021

IOH422E	CLOSE FAILED FOR DDNAME XXXXXXXX
----------------	---

Explanation

Cleanup processing failed to close the specified DDNAME.

System action

The job step completes normally. In an online environment, additional Fast Sysgen requests could experience unpredictable results.

User response

Contact IBM Software Support for assistance.

Severity

None.

IOH423E	OPEN FAILED FOR <i>type</i> DDNAME ddname ABEND S aaa RC=nn
----------------	--

Explanation

An attempt to open a file failed. The message describes the DD type and DD name, as well as the return code (if there was not an abend condition) or the abend code and return code if an abend condition caused the OPEN failure.

System action

The functions fails.

User response

Review the DD *type* and/or DDNAME in the message text, as well as the abend code and/or return code. Also, review the MVS SYSLOG for relat4ed messages,

such as IEC130I DD STATEMENT MISSING, or security error messages.

Severity

8

IOH424E	AN ERROR OCCURRED PARSING THE OLCSTAT DATA SET
----------------	---

Explanation

IMS HP Sysgen Tools attempted to read the OLCSTAT data set to determine the active MODBLKS data set but encountered an unexpected error while parsing the OLCSTAT data set contents.

System action

The request fails.

User response

Ensure that the OLCSTAT data set name specified is correct in the JCL (if the failing request was in a batch job) or in the IMSID options module, and that the OLCSTAT data set is not corrupted.

Severity

8

IOH441E	UNABLE TO LOCATE FASTGEN MWX CB
----------------	--

Explanation

An IMODULE LOCATE call to find the IOHMWX module in IMS control region storage failed.

System action

The **/DIS MODIFY** command fails.

User response

Check for prior Fast Sysgen error messages to see if the cause of the problem occurred during initialization. Contact IBM Software Support for assistance.

Severity

None.

IOH442E	INVALID MWX ADDRESS RECEIVED
----------------	---

Explanation

Verification of the Fast Sysgen MWX control block failed.

System action

The **/DIS MODIFY** command fails.

User response

Check for prior Fast Sysgen error messages to see if the cause of the problem occurred during initialization. Contact IBM Software Support for assistance.

Severity

None.

IOH443E	ERROR UPDATING /DIS MODIFY STATUS INFORMATION
----------------	--

Explanation

Parsing and attempted update of **/DIS MODIFY** command output failed.

System action

The **/DIS MODIFY** command fails.

User response

Check for prior Fast Sysgen error messages to see if the cause of the problem occurred during initialization. Contact IBM Software Support for assistance.

Severity

None.

IOH461E	TCOMMAND UPDATE FOR TRAN name FAILED - SMB NOT FOUND
----------------	---

Explanation

While installing a TCOMMAND update, IMS HP Sysgen Tools was unable to locate the SMB for the transaction identified in the message text.

System action

The installation of the resource update list fails.

User response

This condition should not occur. Contact IBM Software Support for assistance.

Severity

N/A

IOH462E	TCOMMAND MATRIX DFSISTC x NOT FOUND
----------------	--

Explanation

While installing a TCOMMAND update, IMS HP Sysgen Tools found that the TCOMMAND MATRIX (module DFSISTC x was not initialized.

System action

The installation of the resource update list fails.

User response

This condition should not occur. Contact IBM Software Support for assistance.

Severity

N/A

IOH463E	TERMSEC UPDATE FAILED-type name NOT FOUND
----------------	--

Explanation

While installing a TERMSEC update, IMS HP Sysgen Tools was unable to locate a resource (COMMAND, LTERM, or TRANSACT as shown in the message) with the indicated name.

System action

The installation of the resource update list fails.

User response

This condition should not occur. Contact IBM Software Support for assistance.

Severity

N/A

IOH464E	TERMSEC UPDATE FAILED- INVALID RESOURCE ID FOUND FOR LTERM name
----------------	--

Explanation

While installing a TERMSEC update, an invalid row number was found for the indicated IMS LTERM name. The row number in the CVB or SMB exceeded the number of rows in the MATRIX table.

System action

The installation of the resource update list fails.

User response

This condition should not occur. Contact IBM Software Support for assistance.

Severity

N/A

IOH465E	TERMSEC UPDATE FAILED-LTERM name ACCESS TO resource ALREADY status
----------------	---

Explanation

While installing a TERMSEC update, an error occurred trying to allow or disallow (as indicated in the message text) access. If the request was to allow access, the named LTERM already had access to the resource. If the request was to disallow access, the named LTERM did not have access to the resource.

System action

The installation of the resource update list fails.

User response

This condition should not occur. Contact IBM Software Support for assistance.

Severity

N/A

IOH466E	TERMSEC UPDATE FAILED- RESOURCE name IS NOT PROTECTED
----------------	--

Explanation

While installing a TERMSEC update, an error occurred trying to disallow access because the resource was not protected.

System action

The installation of the requested resource update list fails.

User response

This condition should not occur. Contact IBM Software Support for assistance.

Severity

N/A

IOH467E	TERMSEC UPDATE FAILED-# CVBS IN MATRIX INCONSISTENT WITH SCD
----------------	---

Explanation

While installing a TERMSEC update, an error occurred verifying the command verb block (CVB) control blocks.

System action

The installation of the requested resource update list fails.

User response

This condition should not occur. Contact IBM Software Support for assistance.

Severity

N/A

IOH468E	AGN NAME agnname NOT FOUND IN OLD MATRIX(s)
----------------	--

Explanation

While attempting to locate the existing AGN named in the message, the AGN was not found.

System action

The installation of the requested resource update list fails.

User response

This condition should not occur. Contact IBM Software Support for assistance.

Severity

N/A

IOH469E	ERROR DELETING typename FROM AGN agnname CODE x
----------------	--

Explanation

While attempting to remove the named resource from the named AGN, an error occurred.

System action

The installation of the requested resource update list fails.

User response

This condition should not occur. Contact IBM Software Support for assistance.

Severity

N/A

IOH470E	LOAD FAILED FOR <i>modname</i> RC=<i>rc</i> ABCODE= <i>code</i>
----------------	--

Explanation

A LOAD for the specified module name failed. Had the condition not been intercepted, the result would have been an abend with abend code *code*, reason code *rc*.

System action

The requested function fails.

User response

Verify that the RESLIB DSN and IMS suffix in the IMSID options are correct.

Severity

N/A

IOH471E	TCOMMAND MATRIX ROW LENGTH INVALID-<i>code</i>
----------------	---

Explanation

The length of an IMS command row in a MATRIX module exceeded twenty bytes. This condition should not occur.

System action

The requested function fails.

User response

Contact IBM Software Support for assistance.

Severity

N/A

IOH501E	MODULE <i>xxxxxxx</i> LOADED FROM <i>ddddddd</i> IS NOT A VALID IMS CONTROL BLOCKS MODULE
----------------	--

Explanation

The compare process loaded the identified control block module from the identified DDNAME. It was determined not to be a valid IMS control block module.

System action

The job step abends.

User response

Verify that the MODBLKS data set was created with the same release of IMS that is contained in the RESLIB data set in the job STEPLIB concatenation.

Severity

U4021

IOH511S	PARM FIELD REQUIRED FOR KEYWORD SUFFIX=
----------------	--

Explanation

Execution of the IMS Sysgen Tool compare utility requires the SUFFIX= parameter in the PARM field of the JCL to identify the module suffix(es).

System action

The job step abends.

User response

Add or correct the PARM field.

Severity

U4021

IOH512S	INVALID KEYWORD IN PARM FIELD
----------------	--

Explanation

The value specified in the PARM field of the EXEC JCL statement included an undefined keyword. The PARM field for IOHCOMP must be of the form PARM='SUFFIX=n'.

System action

The job step abends.

User response

Correct the PARM field in the EXEC statement.

Severity

U4021

IOH513S	INVALID VALUE IN PARM FIELD FOR KEYWORD <i>keyword</i>
----------------	---

Explanation

The keyword that is named in the message had a invalid value specified.

System action

The job fails.

User response

Review the PARM= field in the JCL to verify that the named keyword has a valid value associated with it.

Severity

N/A

IOH514S	PARM FIELD DID NOT SPECIFY ANY SUFFIX
----------------	--

Explanation

There was no SUFFIX value specified in the PARM field.

System action

The job fails.

User response

Ensure that the PARM field includes the SUFFIX= keyword with at least one value.

Severity

N/A

IOH515S	UNABLE TO LOCATE TIOT ENTRY FOR DDNAME <i>ddname</i>
----------------	---

Explanation

A required DD statement was not found.

System action

The job fails.

User response

Verify that the specified DD name is included in the job's JCL.

Severity

N/A

IOH516S	SWAREQ FAILED RC=<i>nn</i>
----------------	-----------------------------------

Explanation

An SWAREQ macro failed with the indicated return code.

System action

The job fails.

User response

Contact IBM Software Support for assistance.

Severity

N/A

IOH517S	OPEN FAILED FOR DDNAME <i>ddname</i>
----------------	---

Explanation

An MVS OPEN macro failed for the indicated DD name.

System action

The job fails.

User response

Verify that the DD name that is specified is present in the JCL. Check the job's JESLOG for any other error conditions that might have prevented the DD name from opening.

Severity

N/A

IOH518S	CLOSE FAILED FOR DDNAME <i>ddname</i>
----------------	--

Explanation

An MVS CLOSE macro failed for the indicated DD name.

System action

The job fails.

User response

Check the job's JESLOG for any other error messages that might be associated with the close failure.

Severity

N/A

IOH519S	DFSVC000 LOADED FROM STEPLIB IS INVALID
----------------	--

Explanation

Module DFSVC000 was loaded from the job's STEPLIB, but failed to pass validation. For example, the first four bytes of the module might not have been SSCD.

System action

The job fails.

User response

Verify that module DFSVC000 which is being loaded from the IMS RESLIB data set, is a valid module.

Severity

N/A

IOH521E	LOAD FAILED FOR <i>mmmmmmmmmm</i> RC=<i>rrrr</i> ABCODE=<i>aaaaaa</i>
----------------	--

Explanation

A LOAD for a required module failed. The abend code and reason code are described in the message.

System action

The job step abends.

User response

Verify that the STEPLIB concatenation for the compare utility is correct.

Severity

See message.

IOH522E	UNSUPPORTED IMS RELEASE FOUND IN DFSVC000
----------------	--

Explanation

The IMS release indicated in the DFSVC000 module found in STEPLIB is not supported in this release of the IMS Sysgen Tool.

System action

The job step abends.

User response

Apply the required maintenance or upgrade the IMS Sysgen Tool.

Severity

U4021

IOH523E	EXCESSIVE NUMBER OF SUFFIX PARAMETERS SPECIFIED
----------------	--

Explanation

More than 40 suffix parameters were specified in the PARM field of a compare utility execution. 40 is the maximum number of suffixes permitted.

System action

The job step abends.

User response

Reduce the number of SUFFIX= parameters specified in the PARM field.

Severity

U4021

IOH524E	BLDL MACRO FAILED RC=<i>rrrr</i>
----------------	---

Explanation

A BLDL macro failed with the indicated return code.

System action

The job step abends.

User response

Contact IBM Software Support for assistance.

Severity

U4021

**IOH525S IOHPUNCH DD BLKSIZE IS NOT A
MULTIPLE OF 80****Explanation**

The block size of the data set specified for the IOHPUNCH DD did not have a block size that was a multiple of 80.

System action

The job step abends.

User response

Review the DD statement or data set specified for the IOHPUNCH DD. Ensure that the data set includes DCB attributes of RECFM=FB and LRECL=80.

Severity

U4021

**IOH531S BOTH MODSTAT AND OLCSTAT
DDNAMES PRESENT****Explanation**

Both MODSTAT and OLCSTAT data sets were found in the job step's JCL.

System action

The JCLIN generation function fails.

User response

Identify the correct data set included in the JCLIN Generator's JCL, and change the data set name to NULLFILE. Or, remove the invalid DD from the JCL.

Severity

8

**IOH532S REQUIRED DDNAMES NOT
PRESENT FOR MODBLKS DATA
SETS****Explanation**

One or more MODBLKS data sets required to run the JCLIN function were not present in the job step's JCL.

System action

The JCLIN generation function fails.

User response

If you specified a MODSTAT or OLCSTAT data set, you are required to include both MODBLKSA and MODBLKSB DD statements with the appropriate data sets. If you did not specify either MODSTAT or OLCSTAT data sets in the JCL, then a MODBLKS DD statement is required with the staging MODBLKS data set.

Severity

8

**IOH541E INVALID PARM PASSED TO
IOHTIME****Explanation**

An internal error occurred because an invalid parameter was passed to module IOHTIME.

System action

The job step abends in batch mode or an online Fast Sysgen request is canceled.

User response

Contact IBM Software Support for assistance.

Severity

U4021

IOH542E TIME MACRO RETURNED RC=xx**Explanation**

A TIME request to MVS returned a non-zero return code. Return codes from a TIME call are documented in the *z/OS MVS Programming: Assembler Services Reference* for your release of MVS or OS/390®.

System action

The job step abends in batch mode or an online Fast Sysgen request is canceled.

User response

Contact IBM Software Support for assistance.

Severity

U4021

**IOH543E MVS DATE CONVERSION ROUTINE
macro RETURNED RC=rc**

Explanation

The named macro, either STCKCONV or CONVTIME, returned an unexpected return code.

System action

The function fails.

User response

Review the macro named in the message and the return code issued by that macro. Contact IBM Software Support for further assistance.

Severity

N/A

IOH561E	PRINT WAS ATTEMPTED BEFORE OPEN
----------------	--

Explanation

A call to print a message was made before print functionality was available.

System action

The job step abends in batch mode or an online Fast Sysgen request is canceled.

User response

Contact IBM Software Support for assistance.

Severity

U4021

IOH562E	INVALID DD INDICATOR PASSED TO PRINT ROUTINE
----------------	---

Explanation

A call to print a line included an invalid indicator specifying the DDNAME for the print output.

System action

The job step abends in batch mode or an online Fast Sysgen request is canceled.

User response

Contact IBM Software Support for assistance.

Severity

U4021

IOH563E	PRINT TO CURRENT DDNAME REQUESTED BUT NO GEN PROCESS WAS ACTIVE
----------------	--

Explanation

A request to print an input line failed because the indicator for the type of input in progress was not set properly.

System action

The job step abends in batch mode or an online Fast Sysgen request is canceled.

User response

Contact IBM Software Support for assistance.

Severity

U4021

IOH564E	MESSAGE EXCEEDS 132 BYTES
----------------	----------------------------------

Explanation

A message or header to be printed by IOHPRNT exceeded the maximum size (132 bytes).

System action

The job step abends in batch mode or an online Fast Sysgen request is canceled.

User response

Contact IBM Software Support for assistance.

Severity

U4021

IOH565E	MACRO EXCEEDED 50 LINE LIMIT - ONLY FIRST 50 LINES WILL BE PRINTED
----------------	---

Explanation

An IMS SYSGEN macro encountered in the IMS sysgen input exceeded 50 lines, and an error occurred associated with the macro. If a separate print DD is associated with IMS SYSGEN output (based on the IMSGEN specification in the Fast Sysgen parameters), then only the first 50 lines of the macro will be printed in the error summary.

System action

The job step abends in batch mode or an online Fast Sysgen request is canceled.

User response

Review the macro that experienced the error. Reduce the number of continuation lines used to specify the macro.

Severity

U4021

IOH566E	INVALID PRINT FUNCTION REQUEST BYTE
----------------	--

Explanation

A request to IOHPRNT specified an invalid function indicator.

System action

The job step abends in batch mode or an online Fast Sysgen request is canceled.

User response

Contact IBM Software Support for assistance.

Severity

U4021

IOH567E	GETMAIN FAILED FOR MSG BUFF IN IOHPRNT
----------------	---

Explanation

A GETMAIN for message buffers failed. Processing cannot continue.

System action

The job step abends in batch mode or an online Fast Sysgen request is canceled.

User response

Contact IBM Software Support for assistance.

Severity

U4021

IOH568E	OPEN FAILED FOR PRINT DDNAME XXXXXXXX
----------------	--

Explanation

Open failed for the specified DDNAME. This DDNAME was specified in the Fast Sysgen parameters as a PRINT= value.

System action

The job step abends.

User response

Ensure that all print output DDNAMEs specified in the Fast Sysgen parameter specifications are included in the batch job's JCL. If output is directed to a data set instead of SYSOUT, ensure that the DCB attributes are RECFM=FBA,LRECL=133.

Severity

U4021

IOH569E	CLOSE FAILED FOR PRINT DDNAME dddddddd
----------------	---

Explanation

An MVS CLOSE macro returned with RC=04, leaving the specified print DD name open.

System action

The job step abends.

User response

Review the MVS SYSLOG for any additional error messages related to this DD name. Contact IBM Software Support for assistance.

Severity

U4021

IOH570E	REQUESTED MESSAGE LENGTH EXCEEDS MAX LENGTH
----------------	--

Explanation

A message or header to be printed by IOHPRNT exceeded the maximum size (132 bytes).

System action

In batch mode, the job step abends. For online Fast Sysgen requests, the command is canceled.

User response

Contact IBM Software Support for assistance.

Severity

U4021

IOH1500E	IOHIMSID DD STATEMENT MISSING
-----------------	--

Explanation

The DD statement for the IOH input data set, IOHIMSID, is not present in the JCL. This is a required data set.

System action

The job step ends with a return code 12.

User response

Correct the JCL and rerun the job.

Severity

12

IOH1501E	- UNABLE TO OPEN DD NAME IOHIMSID
-----------------	--

Explanation

An error occurred when attempting to open the data set IOHIMSID.

System action

The job step ends with a return code 12.

User response

Correct the JCL, and rerun the job.

Severity

12

IOH1520E	- IMSID MUST START IN COLUMN 1
-----------------	---

Explanation

An invalid record was read from the IOHIMSID input. Column 1 must contain either the first character of the IMSID or an asterisk (*).

System action

The job step ends with a return code 12.

User response

Correct the IOHIMSID input, and rerun the job.

Severity

12

IOH1521E	- INVALID IMSID, MUST BE BLANK AFTER IMSID
-----------------	---

Explanation

An invalid record was read from the IOHIMSID input. The IMSID must start in column 1 and occupy the first 4 bytes. Column 5 must be a blank and the parameter must start at or after byte 6.

System action

The job step ends with a return code 12.

User response

Correct the IOHIMSID input, and rerun the job.

Severity

12

IOH1522E	- IMSID MORE THAN FOUR BYTES LONG
-----------------	--

Explanation

An invalid record was read from the IOHIMSID input. The IMSID must start in column 1 and occupy the first 4 bytes. Column 5 must be a blank and the parameters must start at or after byte 6.

System action

The job step ends with a return code 12.

User response

Correct the IOHIMSID input, and rerun the job.

Severity

12

IOH1523E	- MORE IMSID ENTRIES THAN SUPPORTED
-----------------	--

Explanation

The Merge Clone tool supports merging up to 64 IMS systems. The IOHIMSID input contained more than 64 different IMS ID records.

System action

The job step ends with a return code 12.

User response

Correct the IOHIMSID input, and rerun the job.

Severity

12

IOH1524E	- PARAMETER REQUIRED BUT NONE SUPPLIED
-----------------	---

Explanation

The previous IOHIMSID input record contained what was believed to be a valid IMSID, but the record was missing all parameter information.

IOHIMSID input parameters must end by byte 72.

System action

The job step ends with a return code 12.

User response

Correct the IOHIMSID input, and rerun the job.

Severity

12

IOH1525E	- INVALID PARAMETER ENCOUNTERED
-----------------	--

Explanation

The previous IOHIMSID input record contained what was believed to be a valid IMSID, but it also contained an invalid parameter name.

IOHIMSID input parameters must end by byte 72.

System action

The job step ends with a return code 12.

User response

Correct the IOHIMSID input, and rerun the job.

Severity

12

IOH1526E	- NOT ENOUGH BYTES IN RECORD FOR VALID SUFFIX
-----------------	--

Explanation

The previous IOHIMSID input record reached an end of record condition before a valid parameter was found.

IOHIMSID input parameters must end by byte 72.

System action

The job step ends with a return code 12.

User response

Correct the IOHIMSID input, and rerun the job.

Severity

12

IOH1527E	- NO VALUE SUPPLIED FOR SUFFIX PARAMETER
-----------------	---

Explanation

The previous IOHIMSID input record did not contain a valid suffix value. The Merge Clone tool needs to know the IMS gen suffix to determine which MODBLKS data set members to load.

IOHIMSID input parameters must end by byte 72.

System action

The job step ends with a return code 12.

User response

Correct the IOHIMSID input, and rerun the job.

Severity

12

IOH1528E	- NOT ENOUGH BYTES IN RECORD FOR VALID VERSION
-----------------	---

Explanation

The previous IOHIMSID input record reached an end of record condition before a valid parameter was found.

IOHIMSID input parameters must end by byte 72.

System action

The job step ends with a return code 12.

User response

Correct the IOHIMSID input, and rerun the job.

Severity

12

IOH1529E	- NO VALUE SUPPLIED FOR VERSION KEYWORD
-----------------	--

Explanation

The previous IOHIMSID input record did not contain a valid IMS version. The Merge Clone tool needs to know the IMS version so it knows which IOH module to use to read the MODBLKS data set.

IOHIMSID input parameters must end by byte 72.

System action

The job step ends with a return code 12.

User response

Correct the IOHIMSID input, and rerun the job.

Severity

12

IOH1530E	- UNSUPPORTED IMS VERSION SPECIFIED
-----------------	--

Explanation

The previous IOHIMSID input record contains either an invalid version number or a version of IMS that is not supported by this release of the Merge Clone tool.

System action

The job step ends with a return code 12.

User response

Correct the IOHIMSID input, and rerun the job.

Severity

12

IOH1531E	- REQUIRED PARAMETERS OMITTED
-----------------	--

Explanation

The previous IOHIMSID input record did not contain a valid parameter.

IOHIMSID input parameters must end by byte 72.

System action

The job step ends with a return code 12.

User response

Correct the IOHIMSID input, and rerun the job.

Severity

12

IOH1532E	- SYNTAX ERROR, OPENING PAREN NOT PRESENT
-----------------	--

Explanation

The previous IOHIMSID input record contained invalid syntax. The syntax for the SYSID parameter is "SYSID=(*a*,*b*)", where *a* is the remote SYSID and *b* is the local SYSID. Both *a* and *b* must be numeric values.

System action

The job step ends with a return code 12.

User response

Correct the IOHIMSID input, and rerun the job.

Severity

12

IOH1533E	- SYNTAX ERROR, NON-NUMERIC CHARACTER ENCOUNTERED
-----------------	--

Explanation

The previous IOHIMSID input record encountered a non-numeric value in the SYSID. The syntax for the SYSID parameter is "SYSID=(*a*,*b*)", where *a* is the remote SYSID and *b* is the local SYSID. Both *a* and *b* must be numeric values.

System action

The job step ends with a return code 12.

User response

Correct the IOHIMSID input, and rerun the job.

Severity

12

**IOH1534E - END OF RECORD REACHED
BEFORE VALID SYSID FOUND**

Explanation

The previous IOHIMSID input record did not contain a valid SYSID parameter. The syntax for the SYSID parameter is "SYSID=(*a*,*b*)", where *a* is the remote SYSID and *b* is the local SYSID.

IOHIMSID input parameters must end by byte 72.

System action

The job step ends with a return code 12.

User response

Correct the IOHIMSID input, and rerun the job.

Severity

12

**IOH1535E - SYNTAX ERROR, VALID SYSID
NOT FOUND**

Explanation

The previous IOHIMSID input record did not contain a valid SYSID parameter. The syntax for the SYSID parameter is "SYSID=(*a*,*b*)", where *a* is the remote SYSID and *b* is the local SYSID.

System action

The job step ends with a return code 12.

User response

Correct the IOHIMSID input, and rerun the job.

Severity

12

**IOH1536E - SYNTAX ERROR, TOO MANY
DIGITS IN SYSID**

Explanation

The previous IOHIMSID input record contained an invalid SYSID value. Both the remote and local SYSID values might contain up to 4 digits. Valid values for the SYSIDs are from 1 to 2055.

System action

The job step ends with a return code 12.

User response

Correct the IOHIMSID input, and rerun the job.

Severity

12

**IOH1537E - SYSID GREATER THAN
MAXIMUM VALUE (2055)**

Explanation

The previous IOHIMSID input record contained an invalid SYSID. The maximum value allowed for a SYSID is 2055.

System action

The job step ends with a return code 12.

User response

Correct the IOHIMSID input, and rerun the job.

Severity

12

**IOH1538E - INVALID SYSID, MUST BE
GREATER THAN 0**

Explanation

The previous IOHIMSID input record contained an invalid SYSID value. The minimum value allowed for a SYSID is 1.

System action

The job step ends with a return code 12.

User response

Correct the IOHIMSID input, and rerun the job.

Severity

12

**IOH1539E - SYNTAX ERROR, PADDING BYTE
NOT BLANK**

Explanation

The previous IOHIMSID input record was invalid. The byte after the closing parenthesis must be a blank.

System action

The job step ends with a return code 12.

User response

Correct the JCL, and rerun the job.

Severity

12

IOH1540E MORE THAN 512 SYSID PAIRS DEFINED

Explanation

A table overflow condition has been encountered. A single IMS can have a maximum of 512 SYSID pairs.

System action

The job step ends with a return code 12.

User response

Ensure all of the SYSID pairs coded for each IMS are necessary. Remove any unnecessary SYSID pairs and rerun the job.

If all SYSID pairs are required, contact IBM Software Support for assistance.

Severity

12

IOH1550E - NO VALID IMS SECTIONS FOUND

Explanation

After all records have been read from IOHIMSID, there are no valid IMS system records.

System action

The job step ends with a return code 12.

User response

Correct the IOHIMSID, and rerun the job.

Severity

12

IOH1551E - SYSID nnnn DEFINED AS LOCAL IN MULTIPLE SYSTEMS

Explanation

Each IMS being merged must have unique local SYSID's. SYSID *nnnn* was defined as local to multiple systems.

System action

The job step ends with a return code 12.

User response

Correct the IOHIMSID input, and rerun the job.

Severity

12

IOH1552E - VERSION REQUIRED BUT NOT SPECIFIED FOR: *imsid*

Explanation

The IMS version must be supplied for each IMS being merged. IMS *imsid* did not have a valid version supplied.

The Merge Clone tool needs to know the IMS version in order to call the proper routine to read the IMS MODBLKS data set.

System action

The job step ends with a return code 12.

User response

Supply a valid version for each IMS, and rerun the job.

Severity

12

IOH1553E - SUFFIX REQUIRED BUT NOT SPECIFIED FOR: *imsid*

Explanation

An IMS gen suffix must be supplied for each IMS being merged. IMS *imsid* did not have a valid version supplied.

The Merge Clone tool needs to know the IMS Gen suffix in order to load the proper members from the IMS MODBLKS data set.

System action

The job step ends with a return code 12.

User response

Supply a valid suffix for each IMS, and rerun the job.

Severity

12

**IOH1554E - AT LEAST ONE SYSID PAIR
REQUIRED BUT NONE SPECIFIED
FOR: *imsid***

Explanation

A valid SYSID pair must be supplied for each IMS being merged. IMS *imsid* did not have a valid SYSID pair. The Merge Clone tool needs a SYSID pair so it can build the SYSID parameters on the transaction definitions.

System action

The job step ends with a return code 12.

User response

Provide all valid SYSID pairs for each IMS being merged.

Severity

12

IOH1555E - MORE THAN ONE IMS REQUIRED

Explanation

In order to perform a merge of IMS systems, there must be more than one IMS.

System action

The job step ends with a return code 12.

User response

Correct the IOHIMSID input, and rerun the job.

Severity

12

**IOH1556E - ERROR ENCOUNTERED IN
REMOTE SYSID TABLE**

Explanation

An error has been detected in the IMS MSC cross reference checking. Check for prior error messages in the IOHLIST output.

System action

The job step ends with a return code 12.

User response

Correct the IOHIMSID input, and rerun the job.

Severity

12

**IOH1557E - *imsid1* DOES NOT HAVE ANY
LINKS TO *imsid2***

Explanation

In order to build the correct SYSID definitions on the IMS transactions, each IMS must have a SYSID pair that points to each IMS system being merged. In this case, *imsid1* did not have any SYSID pairs that pointed to *imsid2*.

System action

The job step ends with a return code 12.

User response

Correct the IOHIMSID input, and rerun the job.

Severity

12

**IOH1600W - ** TRANSACTION *tran* ON IMS
imsid HAD PROGRAM CHANGED
FROM *pgm1* TO *pgm2***

Explanation

A definition conflict existed for transaction *tran*. The definition for *tran* was changed on IMS *imsid*. The program to which *tran* was assigned was changed from *pgm1* to *pgm2*.

See “Conflict resolution” on page 205 for a description of how conflicts are resolved.

System action

Processing continues and a return code of 4 is set. If a more severe error is encountered, the return code for that error will be used.

User response

Review the IMS gen and, if desired, update the definition before running the IMS gen.

Severity

4

IOH1601W - ** TRANSACTION *tran* ON IMS *imsid* WAS CHANGED FROM REMOTE OUTSIDE THE PLEX TO LOCAL

Explanation

A definition conflict existed for transaction *tran*. Transaction *tran* was defined local on a least one system in the IMSplex and remote on *imsid*. Since it was local on one system, it is changed to local in all systems.

See “Conflict resolution” on page 205 for a description of how conflicts are resolved.

System action

Processing continues and a return code of 4 is set. If a more severe error is encountered, the return code for that error will be used.

User response

Review the IMS gen and, if desired, update the definition before running the IMS gen.

Severity

4

IOH1602I - TRANSACTION *tran* ON IMS *imsid* CHANGED TO MULTSEG

Explanation

A definition conflict existed for transaction *tran*. Transaction *tran* was defined MULTSEG on at least one system in the IMSplex, so it was changed to MULTSEG on all systems.

See “Conflict resolution” on page 205 for a description of how conflicts are resolved.

System action

Processing continues.

User response

Review the IMS gen and, if desired, update the definition before running the IMS gen.

Severity

0

IOH1603I - TRANSACTION *tran* ON IMS *imsid* CHANGED TO NONRESPONSE

Explanation

A definition conflict existed for transaction *tran*. The definition for *tran* was changed on IMS *imsid*. The conflict was resolved using the default transaction definition selected by the Merge Clone utility.

See “Conflict resolution” on page 205 for a description of how conflicts are resolved.

System action

Processing continues.

User response

Review the IMS gen and, if desired, update the definition before running the IMS gen.

Severity

0

IOH1604I - TRANSACTION *tran* ON IMS *imsid* CHANGED TO RESPONSE

Explanation

A definition conflict existed for transaction *tran*. The definition for *tran* was changed on IMS *imsid*. The conflict was resolved using the default transaction definition selected by the Merge Clone utility.

See “Conflict resolution” on page 205 for a description of how conflicts are resolved.

System action

Processing continues.

User response

Review the IMS gen and, if desired, update the definition before running the IMS gen.

Severity

0

**IOH1605I - TRANSACTION *tran* ON IMS *imsid*
CHANGED TO CONVERSATIONAL**

Explanation

A definition conflict existed for transaction *tran*. The definition for *tran* was changed on IMS *imsid*. The transaction was defined as conversational on at least one system, so it was defined changed to conversational on *imsid*.

See “[Conflict resolution](#)” on page 205 for a description of how conflicts are resolved.

System action

Processing continues and a return code of 4 is set. If a more severe error is encountered, the return code for that error will be used.

User response

Review the IMS gen and, if desired, update the definition before running the IMS gen.

Severity

4

**IOH1606I - TRANSACTION *tran* ON IMS *imsid*
CHANGED TO EDIT=ULC**

Explanation

A definition conflict existed for transaction *tran*. The definition for *tran* was changed on IMS *imsid*. The conflict was resolved using the default transaction definition selected by the Merge Clone utility.

See “[Conflict resolution](#)” on page 205 for a description of how conflicts are resolved.

System action

Processing continues.

User response

Review the IMS gen and, if desired, update the definition before running the IMS gen.

Severity

0

**IOH1607I - TRANSACTION *tran* ON IMS *imsid*
CHANGED TO EDIT=UC**

Explanation

A definition conflict existed for transaction *tran*. The definition for *tran* was changed on IMS *imsid*. The conflict was resolved using the default transaction definition selected by the Merge Clone utility.

See “[Conflict resolution](#)” on page 205 for a description of how conflicts are resolved.

System action

Processing continues.

User response

Review the IMS gen and, if desired, update the definition before running the IMS gen.

Severity

0

**IOH1608I - TRANSACTION *tran* ON IMS *imsid*
CHANGED TO MODE=MULT**

Explanation

A definition conflict existed for transaction *tran*. The definition for *tran* was changed on IMS *imsid*. The conflict was resolved using the default transaction definition selected by the Merge Clone utility.

See “[Conflict resolution](#)” on page 205 for a description of how conflicts are resolved.

System action

Processing continues.

User response

Review the IMS gen and, if desired, update the definition before running the IMS gen.

Severity

0

**IOH1609I - TRANSACTION *tran* ON IMS *imsid*
CHANGED TO MODE=SNGL**

Explanation

A definition conflict existed for transaction *tran*. The definition for *tran* was changed on IMS *imsid*. The conflict was resolved using the default transaction definition selected by the Merge Clone utility.

See “[Conflict resolution](#)” on page 205 for a description of how conflicts are resolved.

System action

Processing continues.

User response

Review the IMS gen and, if desired, update the definition before running the IMS gen.

Severity

0

**IOH1610I - TRANSACTION *tran* ON IMS *imsid*
CHANGED TO DCLWA=NO**

Explanation

A definition conflict existed for transaction *tran*. The definition for *tran* was changed on IMS *imsid*. The conflict was resolved using the default transaction definition selected by the Merge Clone utility.

See “Conflict resolution” on [page 205](#) for a description of how conflicts are resolved.

System action

Processing continues.

User response

Review the IMS gen and, if desired, update the definition before running the IMS gen.

Severity

0

**IOH1611I - TRANSACTION *tran* ON IMS *imsid*
CHANGED TO DCLWA=YES**

Explanation

A definition conflict existed for transaction *tran*. The definition for *tran* was changed on IMS *imsid*. The conflict was resolved using the default transaction definition selected by the Merge Clone utility.

See “Conflict resolution” on [page 205](#) for a description of how conflicts are resolved.

System action

Processing continues.

User response

Review the IMS gen and, if desired, update the definition before running the IMS gen.

Severity

0

**IOH1612I - TRANSACTION *tran* ON IMS *imsid*
CHANGED TO ROUTING=NO**

Explanation

A definition conflict existed for transaction *tran*. The definition for *tran* was changed on IMS *imsid*. The conflict was resolved using the default transaction definition selected by the Merge Clone utility.

See “Conflict resolution” on [page 205](#) for a description of how conflicts are resolved.

System action

Processing continues.

User response

Review the IMS gen and, if desired, update the definition before running the IMS gen.

Severity

0

**IOH1613I - TRANSACTION *tran* ON IMS *imsid*
CHANGED TO ROUTING=YES**

Explanation

A definition conflict existed for transaction *tran*. The definition for *tran* was changed on IMS *imsid*. The conflict was resolved using the default transaction definition selected by the Merge Clone utility.

See “Conflict resolution” on [page 205](#) for a description of how conflicts are resolved.

System action

Processing continues.

User response

Review the IMS gen and, if desired, update the definition before running the IMS gen.

Severity

0

**IOH1614I - TRANSACTION *tran* ON IMS *imsid*
CHANGED TO NOT A WFI**

Explanation

A definition conflict existed for transaction *tran*. The definition for *tran* was changed on IMS *imsid*. The conflict was resolved using the default transaction definition selected by the Merge Clone utility.

See “Conflict resolution” on page 205 for a description of how conflicts are resolved.

System action

Processing continues.

User response

Review the IMS gen and, if desired, update the definition before running the IMS gen.

Severity

0

IOH1615I - TRANSACTION *tran* ON IMS *imsid* CHANGED TO WFI

Explanation

A definition conflict existed for transaction *tran*. The definition for *tran* was changed on IMS *imsid*. The conflict was resolved using the default transaction definition selected by the Merge Clone utility.

See “Conflict resolution” on page 205 for a description of how conflicts are resolved.

System action

Processing continues.

User response

Review the IMS gen and, if desired, update the definition before running the IMS gen.

Severity

0

IOH1616I - TRANSACTION *tran* ON IMS *imsid* CHANGED TO SCHD=*n*

Explanation

A definition conflict existed for transaction *tran*. The definition for *tran* was changed on IMS *imsid*. The conflict was resolved using the default transaction definition selected by the Merge Clone utility.

See “Conflict resolution” on page 205 for a description of how conflicts are resolved.

System action

Processing continues.

User response

Review the IMS gen and, if desired, update the definition before running the IMS gen.

Severity

0

IOH1617I - TRANSACTION *tran* ON IMS *imsid* CHANGED TO INQ=NO

System action

Processing continues.

User response

Review the IMS gen and, if desired, update the definition before running the IMS gen.

A definition conflict existed for transaction *tran*. The definition for *tran* was changed on IMS *imsid*. The conflict was resolved using the default transaction definition selected by the Merge Clone utility.

See “Conflict resolution” on page 205 for a description of how conflicts are resolved.

Severity

0

IOH1618I - TRANSACTION *tran* ON IMS *imsid* CHANGED TO RECOVER

Explanation

A definition conflict existed for transaction *tran*. The definition for *tran* was changed on IMS *imsid*. The conflict was resolved using the default transaction definition selected by the Merge Clone utility.

See “Conflict resolution” on page 205 for a description of how conflicts are resolved.

System action

Processing continues.

User response

Review the IMS gen and, if desired, update the definition before running the IMS gen.

Severity

0

**IOH1619I - TRANSACTION *tran* ON IMS *imsid*
CHANGED TO SERIAL=NO**

Explanation

A definition conflict existed for transaction *tran*. The definition for *tran* was changed on IMS *imsid*. The conflict was resolved using the default transaction definition selected by the Merge Clone utility.

See “Conflict resolution” on page 205 for a description of how conflicts are resolved.

System action

Processing continues.

User response

Review the IMS gen and, if desired, update the definition before running the IMS gen.

Severity

0

**IOH1620I - TRANSACTION *tran* ON IMS *imsid*
CHANGED TO SERIAL=YES**

Explanation

A definition conflict existed for transaction *tran*. The definition for *tran* was changed on IMS *imsid*. The conflict was resolved using the default transaction definition selected by the Merge Clone utility.

See “Conflict resolution” on page 205 for a description of how conflicts are resolved.

System action

Processing continues.

User response

Review the IMS gen and, if desired, update the definition before running the IMS gen.

Severity

0

**IOH1621I - TRANSACTION *tran* ON IMS *imsid*
CHANGED FROM FPATH
(POTENTIAL/EXCLUSIVE) TO
FPATH=NO**

Explanation

A definition conflict existed for transaction *tran*. The definition for *tran* was changed on IMS *imsid*. The conflict was resolved using the default transaction definition selected by the Merge Clone utility.

See “Conflict resolution” on page 205 for a description of how conflicts are resolved.

System action

Processing continues.

User response

Review the IMS gen and, if desired, update the definition before running the IMS gen.

Severity

0

**IOH1622I - TRANSACTION *tran* ON IMS *imsid*
CHANGED TO FPATH=YES
(POTENTIAL)**

Explanation

A definition conflict existed for transaction *tran*. The definition for *tran* was changed on IMS *imsid*. The conflict was resolved using the default transaction definition selected by the Merge Clone utility.

See “Conflict resolution” on page 205 for a description of how conflicts are resolved.

System action

Processing continues.

User response

Review the IMS gen and, if desired, update the definition before running the IMS gen.

Severity

0

**IOH1623I - TRANSACTION *tran* ON IMS *imsid*
CHANGED TO FPATH=YES
(EXCLUSIVE)**

Explanation

A definition conflict existed for transaction *tran*. The definition for *tran* was changed on IMS *imsid*. The conflict was resolved using the default transaction definition selected by the Merge Clone utility.

See [“Conflict resolution” on page 205](#) for a description of how conflicts are resolved.

System action

Processing continues.

User response

Review the IMS gen and, if desired, update the definition before running the IMS gen.

Severity

0

IOH1624W - ** TRANSACTION *tran* ON IMS *imsid* DEFINED WITH TRANSACTION EDIT ROUTINE

Explanation

A definition conflict existed for transaction *tran*. The definition for *tran* was changed on IMS *imsid*. Transaction *tran* was defined on at least one IMS as using a Transaction Edit Routine, so all systems will now use the Transaction Edit Routine.

See [“Conflict resolution” on page 205](#) for a description of how conflicts are resolved.

System action

Processing continues and a return code of 8 is set. If a more severe error is encountered, then a higher return code might be set at termination.

User response

When receiving this message you are required to edit your stage 1 source. The Merge Clone tool cannot determine the name of the Edit Routine you had on your Transaction so it fills in the stage 1 TRANSACT macro with 8 plus signs ("+++++++"). You will need to replace all the plus signs with the valid Transaction Edit Routine name.

If adding new Transaction Edit Routines or changing the sequence of the Edit Routine in the gen, you will need to run a minimum of a CTLBLKS gen.

Severity

8

IOH1625I - ** TRANSACTION *tran* ON IMS *imsid* CHANGED TO CLASS *n*

Explanation

A definition conflict existed for transaction *tran*. The definition for *tran* was changed on IMS *imsid*. The conflict was resolved using the default transaction definition selected by the Merge Clone utility.

See [“Conflict resolution” on page 205](#) for a description of how conflicts are resolved.

System action

Processing continues.

User response

Review the IMS gen and, if desired, update the definition before running the IMS gen.

Severity

0

IOH1626I - ** TRANSACTION *tran* ON IMS *imsid* CHANGED TO SPA *xxxxxx*

Explanation

A definition conflict existed for transaction *tran*. The definition for *tran* was changed on IMS *imsid*. The conflict was resolved using the default transaction definition selected by the Merge Clone utility.

Valid values for *xxxxxx* are STRUNC or RTRUNC.

See [“Conflict resolution” on page 205](#) for a description of how conflicts are resolved.

System action

Processing continues.

User response

Review the IMS gen and, if desired, update the definition before running the IMS gen.

Severity

0

IOH1627I TRANSACTION *tran* ON IMS *imsid* CHANGED TO AOI=*value*

Explanation

A definition conflict existed for the named transaction. The definition for *tran* was changed on IMS *imsid*. The conflict was resolved by using the default transaction definition that was selected by the Merge Clone utility.

Refer to [“Conflict resolution” on page 205](#) for a description of how conflicts are resolved.

System action

Processing continues.

User response

Review the IMS gen and, if needed, update the definition before you run the IMS gen.

Severity

N/A

IOH1628I	TRANSACTION xxxxxxxx ON IMS yyyy CHANGED TO TRANSTAT=z
-----------------	---

Explanation

Definition conflict existed for the named transaction. The definition for *tran* was changed on IMSID *yyyy*. The conflict was resolved by using the default transaction definition that was selected by the Merge Clone utility. Refer to [“Conflict resolution” on page 205](#) for a description of how conflicts are resolved.

System action

Processing continues.

User response

Review the IMS GEN and, if needed, update the definition before you run the IMS GEN.

Severity

N/A

IOH1630I	- APPLCTN <i>psb</i> ON IMS <i>imsid</i> CHANGED TO RESIDENT
-----------------	---

Explanation

A definition conflict existed for APPLCTN *psb*. The definition for *psb* was changed on IMS *imsid*. If the APPLCTN macro was defined as Resident on any IMS system, it is defined that way in all IMS systems.

See [“Conflict resolution” on page 205](#) for a description of how conflicts are resolved.

System action

Processing continues.

User response

Review the IMS gen and, if desired, update the definition before running the IMS gen.

Severity

0

IOH1631I	- APPLCTN <i>psb</i> ON IMS <i>imsid</i> CHANGED TO DOPT
-----------------	---

Explanation

A definition conflict existed for APPLCTN *psb*. The definition for *psb* was changed on IMS *imsid*. If the APPLCTN macro was defined as DOPT on any IMS system, it is defined that way in all IMS systems. (If the APPLCTN macro was previously found to be Resident, then all DOPT checking is bypassed.)

See [“Conflict resolution” on page 205](#) for a description of how conflicts are resolved.

System action

Processing continues.

User response

Review the IMS gen and, if desired, update the definition before running the IMS gen.

Severity

0

IOH1632I	- APPLCTN <i>psb</i> ON IMS <i>imsid</i> CHANGED TO PARALLEL
-----------------	---

Explanation

A definition conflict existed for APPLCTN *psb*. The definition for *psb* was changed on IMS *imsid*. If the APPLCTN was defined as PARALLEL on any IMS system, it is defined that way in all IMS systems.

See [“Conflict resolution” on page 205](#) for a description of how conflicts are resolved.

System action

Processing continues.

User response

Review the IMS gen and, if desired, update the definition before running the IMS gen.

Severity

0

IOH1633I - APPLCTN *psb* ON IMS *imsid* HAD GPSB REMOVED

Explanation

A definition conflict existed for APPLCTN *psb*. The definition for *psb* was changed on IMS *imsid*. The APPLCTN was defined on at least one system as non-GPSB and the PSBLIB contained a member with the same name as *psb*.

See “Conflict resolution” on page 205 for a description of how conflicts are resolved.

System action

Processing continues.

User response

Review the IMS gen and, if desired, update the definition before running the IMS gen.

Severity

0

IOH1634I - APPLCTN *psb* ON IMS *imsid* HAD GPSB REMOVED

Explanation

A definition conflict existed for APPLCTN *psb*. The definition for *psb* was changed on IMS *imsid*. At least one IMS system in the IMSplex had the same named PSB defined as a non-GPSB and PSBLIB contained a member with the same name as *psb*.

See “Conflict resolution” on page 205 for a description of how conflicts are resolved.

System action

Processing continues.

User response

Review the IMS gen and, if desired, update the definition before running the IMS gen.

Severity

0

IOH1635W - APPLCTN *psb* ON IMS *imsid* IS NOW GENNED AS FPATH=NO

Explanation

A definition conflict existed for APPLCTN *psb*. The definition for *psb* was changed on IMS *imsid*. The conflict was resolved using the default transaction definition selected using the Merge Clone utility.

See “Conflict resolution” on page 205 for a description of how conflicts are resolved.

System action

Processing continues with a return code 4 set. If a more severe error is encountered, that return code will be used at program termination.

User response

Review the IMS gen and, if desired, update the definition before running the IMS gen.

Severity

4

IOH1636W - APPLCTN *psb* ON IMS *imsid* IS NOW GENNED AS FPATH=nnn

Explanation

A definition conflict existed for APPLCTN *psb*. The definition for *psb* was changed on IMS *imsid*. The conflict was resolved using the default transaction definition selected using the Merge Clone utility.

See “Conflict resolution” on page 205 for a description of how conflicts are resolved.

System action

Processing continues with a return code 4 set. If a more severe error is encountered, that return code will be used at program termination.

User response

Review the IMS gen and, if desired, update the definition before running the IMS gen.

Severity

4

IOH1637I - APPLCTN *psb* ON IMS *imsid* CHANGED TO PGMTYPE=TP

Explanation

A definition conflict existed for APPLCTN *psb*. The definition for *psb* was changed on IMS *imsid*. If the

APPLCTN macro was defined as TP in any IMS system, it will be defined that way in all IMS systems.

See [“Conflict resolution” on page 205](#) for a description of how conflicts are resolved.

System action

Processing continues.

User response

Review the IMS gen and, if desired, update the definition before running the IMS gen.

Severity

0

IOH1640I - DATABASE *dbd* ON IMS *imsid* IS NOW GENNED AS RESIDENT

Explanation

A definition conflict existed for database *dbd*. The definition for *dbd* was changed on IMS *imsid*. If a database is defined as Resident on any IMS system, it will be defined as Resident in all IMS systems.

See [“Conflict resolution” on page 205](#) for a description of how conflicts are resolved.

System action

Processing continues.

User response

Review the IMS gen and, if desired, update the definition before running the IMS gen.

Severity

0

IOH1641I - DATABASE *dbd* ON IMS *imsid* CHANGED TO ACCESS=RO

Explanation

A definition conflict existed for database *dbd*. The definition for *dbd* was changed on IMS *imsid*. Another IMS system has database *dbd* defined with ACCESS=EX. When this occurs, all other IMS systems will have *dbd* reset to ACCESS=RO.

See [“Conflict resolution” on page 205](#) for a description of how conflicts are resolved.

System action

Processing continues.

User response

Review the IMS gen and, if desired, update the definition before running the IMS gen.

Severity

0

IOH1642I - DATABASE *dbd* ON IMS *imsid* CHANGED TO ACCESS=UP

Explanation

A definition conflict existed for database *dbd*. The definition for *dbd* was changed on IMS *imsid*. Database *dbd* was defined as ACCESS=UP on more than one IMS system, or it was specified as a database name in the IOHSHLVL input, so it was made UP on all IMS systems.

See [“Conflict resolution” on page 205](#) for a description of how conflicts are resolved.

System action

Processing continues.

User response

Review the IMS gen and, if desired, update the definition before running the IMS gen.

Severity

0

IOH1643I - DATABASE *dbd* ON IMS *imsid* DEFINED WITH ACCESS=xx

Explanation

Database *dbd* was added to IMS *imsid* and defined with ACCESS=xx.

System action

Processing continues.

User response

Review the IMS gen and, if desired, update the definition before running the IMS gen.

Severity

0

IOH1699I - NO EXCEPTIONS ENCOUNTERED

Explanation

IOH editing completed without encountering a definition conflict.

System action

Processing continues.

User response

Review the IMS gen and, if desired, update the definition before running IMS gen.

IOH1700E - IOHLIST DD STATEMENT MISSING

Explanation

IOHLIST is a required DD statement but is not present.

System action

Processing ends with a return code 12.

User response

Correct the JCL, and rerun the job.

Severity

12

IOH1701E - UNABLE TO OPEN DD IOHLIST

Explanation

An error was encountered attempting to open data set IOHLIST.

System action

Processing ends with a return code 12.

User response

Check the job log for additional information, correct the JCL and rerun the job.

IOH1702E - IOHPUNCH DD STATEMENT MISSING

Explanation

IOHPUNCH is a required DD statement but is not present.

System action

Processing ends with a return code 12.

User response

Correct the JCL, and rerun the job.

Severity

12

IOH1703E - UNABLE TO OPEN DD IOHPUNCH

Explanation

An error was encountered attempting to open DD IOHPUNCH.

System action

Processing ends with a return code 12.

User response

Check the job log for additional information, correct the JCL and rerun the job.

Severity

12

IOH1704E - IMS DD STATEMENT MISSING

Explanation

IMS is a required DD statement but is not present.

System action

Processing ends with a return code 12.

User response

Correct the JCL, and rerun the job.

IOH1705E - UNABLE TO OPEN DD IMS

Explanation

An error was encountered attempting to open DD IMS.

System action

Processing ends with a return code 12.

User response

Check the job log for additional information, correct the JCL and rerun the job.

Severity

12

IOH1706E - IOHEXCPT DD STATEMENT MISSING

Explanation

IOHEXCPT is a required DD statement but is not present.

System action

Processing ends with a return code 12.

User response

Correct the JCL, and rerun the job.

Severity

12

IOH1707E - UNABLE TO OPEN DD IOHEXCPT

Explanation

An error was encountered attempting to open DD IOHEXCPT.

System action

Processing ends with a return code 12.

User response

Check the job log for additional information, correct the JCL and rerun the job.

Severity

12

IOH1708I - AFFINITY PROCESSING BYPASSED, IOHAFFIN DD STATEMENT MISSING

Explanation

IOHAFFIN input is used to force transaction routing to certain systems. When this DD statement is not supplied, all transaction routing is determined using database ACCESS and PSB PROCOPT values.

System action

Processing continues.

User response

None. This message is informational.

Severity

0

IOH1709E - UNABLE TO OPEN DD IOHAFFIN

Explanation

An error was encountered attempting to open DD IOHAFFIN.

System action

Processing ends with a return code 12.

User response

Check the job log for additional information, correct the JCL, and rerun the job.

Severity

12

IOH1710E - SHARELVL PROCESSING BYPASSED, IOHSHLVL DD STATEMENT MISSING

Explanation

IOHSHLVL input is used to force Sharelvl(3) on certain databases. When this is done, these databases are defined with ACCESS=UP in all systems regardless of how they were previously defined.

When this DD statement is not supplied, the Merge Clone tool determines database access as described in [“Conflict resolution”](#) on page 205.

System action

Processing continues.

User response

None. This is an informational message.

Severity

0

IOH1711E - UNABLE TO OPEN DD IOHSHLVL

Explanation

An error was encountered attempting to open DD IOHSHLVL.

System action

Processing ends with a return code 12.

User response

Check the job log for additional information, correct the JCL and rerun the job.

Severity

12

IOH1712E	- IOHPUNCH DATA SET MUST BE LRECL 80
-----------------	---

Explanation

The data set defined by DD IOHPUNCH must be defined as LRECL 80.

System action

Processing ends with a return code 12.

User response

Correct the JCL/data set allocation, and rerun the job.

Severity

12

IOH1719E	- ERROR LOADING MODULE <i>mod</i> FOR IMS: <i>imsid</i>
-----------------	--

Explanation

An error was encountered attempting to load module *mod*. This module is the Merge Clone tool's MODBLKS extraction routine and is shipped as part of the base product.

System action

Processing ends with a return code 12.

User response

Ensure the product has been installed correctly and that this module is available to be loaded. Check the job log for additional information, correct the problem and rerun the job.

Severity

12

IOH1720E	- REQUIRED DDNAME <i>ddn</i> NOT PRESENT IN JCL
-----------------	--

Explanation

Each IMS system defined through IOHIMSID input must have an associated MODBLKS data set defined in the JCL. The DD name is created by appending the IMSID to the character string 'MBLK'. For example, IMS1 would require a DD name of MBLKIMS1 pointing to IMS1's MODBLKS data set.

System action

Processing ends with a return code 12.

User response

Correct the JCL, and rerun the job.

Severity

12

IOH1721E	- ERROR OPENING DATA SET, DD NAME=<i>ddn</i>
-----------------	---

Explanation

An error was encountered attempting to open data set *ddn*.

System action

Processing ends with a return code 12.

User response

Check the job log for additional information, correct the JCL and rerun the job.

Severity

12

IOH1730E	- SPECIFIED IMS NOT FOUND: <i>imsid</i>
-----------------	--

Explanation

An input record in the IOHAFFIN data set contained an invalid IMS.

System action

Processing ends with a return code 12.

User response

Correct the job input, and rerun the job.

Severity

12

**IOH1731E - SYNTAX ERROR, COLUMN 5
MUST BE BLANK**

Explanation

The previous IOHAFFIN input record did not follow correct record syntax. The IMSID must start in column 1, column 5 must contain a blank and the transaction name must start in column 6.

System action

Processing ends with a return code 12.

User response

Correct IOHAFFIN input data, and rerun the job.

Severity

12

**IOH1732E - TRANSACTION NAME MORE
THAN EIGHT CHARACTERS**

Explanation

The previous record contains an invalid transaction name. The name is greater than eight characters.

System action

Processing ends with a return code 12.

User response

Correct the IOHAFFIN input data, and rerun the job.

Severity

12

**IOH1733E - SYNTAX ERROR, TRAN NAME
NOT PRESENT OR NOT STARTING
IN COLUMN 6**

Explanation

Either the transaction name is not supplied or it does not start in column 6. The IMSID must start in column 1, column 5 must contain a blank and the transaction name must start in column 6.

System action

Processing ends with a return code 12.

User response

Correct the IOHAFFIN input data, and rerun the job.

Severity

12

**IOH1734E - TRAN: *tran* NOT DEFINED IN ANY
SYSTEM**

Explanation

Transaction *tran* was specified in an IOHAFFIN input record, but is not present in any IMS system. In order to define the transaction with the requested routing, the transaction must first be present in an existing IMS.

System action

Processing ends with a return code 12.

User response

Either remove the transaction from the IOHAFFIN input data, or add the desired transaction to one (or more) of the IMS regions being merged.

Severity

12

**IOH1741E - DATA BASE NAME MORE THAN
EIGHT CHARACTERS**

Explanation

The previous record read from IOHSHLVL contained an invalid database name. It is more than eight characters long.

System action

Processing ends with a return code 12.

User response

Correct the IOHSHLVL input, and rerun the job.

Severity

12

**IOH1742E - DATA BASE NAME MISSING OR
NOT STARTING IN COLUMN 1**

Explanation

The previous record read from IOHSHLVL was incorrect. Either the database name was not provided or does not start in column 1.

System action

Processing ends with a return code 12.

User response

Correct the IOHSHLVL input and rerun the job.

Severity

12

IOH1743E	- DATA BASE: <i>dbd</i> NOT DEFINED TO ANY IMS
-----------------	---

Explanation

The specified database is not defined in any of the IMS regions defined in the IOHIMSID input. In order to set the database access using the IOHSHLVL input, the database must first be defined to one of the IMS regions being merged.

System action

Processing ends with a return code 12.

User response

Either remove the database from the IOHSHLVL input data or add it to one (or more) of the IMS systems being merged.

Severity

12

IOH1751E	- JOB TERMINATING, UNABLE TO LOAD MODULE IOHCNTLO
-----------------	--

Explanation

This module is part of the Merge Clone tool product. The module must be available for this job to process successfully.

System action

Processing ends with a return code 12.

User response

Check job log for additional information, correct the problem and rerun the job.

Severity

12

IOH1752E	- JOB TERMINATING, UNABLE TO LOAD MODULE IOHEDITO
-----------------	--

Explanation

This module is part of the Merge Clone tool product. The module must be available for this job to process successfully.

System action

Processing ends with a return code 12.

User response

Check job log for additional information, correct the problem and rerun the job.

Severity

12

IOH1753E	- JOB TERMINATING, UNABLE TO LOAD MODULE IOHPSBSO
-----------------	--

Explanation

This module is part of the Merge Clone tool product. The module must be available for this job to process successfully.

System action

Processing ended with a return code 12.

User response

Check job log for additional information, correct the problem and rerun the job.

Severity

12

IOH1754I	- NO RECORDS IN TRANSACTION AFFINITY LIST
-----------------	--

Explanation

There were no user-specified transaction routing requirements. Transaction routing will be determined

by the Merge Clone tool, based upon the database access and the PSB PROCOPT values.

System action

Processing continues.

User response

None. This message is informational.

Severity

0

**IOH1755I - NO RECORDS IN DATA BASE
SHAREVLV LIST**

Explanation

There were no input records supplied in the IOHSHLV data set. The Merge Clone tool will determine database access as described in [“Conflict resolution”](#) on page 205.

System action

Processing continues.

User response

None. This message is informational.

Severity

0

**IOH1756E - JOB TERMINATING, UNABLE TO
LOAD MODULE IOHPRPTO**

Explanation

This module is part of the Merge Clone tool product. The module must be available for this job to process successfully.

System action

Processing ends with a return code 12.

User response

Check the job log for additional information, correct the problem and rerun the job.

Severity

12

**IOH1800E - ERROR LOADING MODULE *mod*
FROM DD *ddn***

Explanation

An error was encountered attempting to load a module from an IMS MODBLKS data set. The last four characters of the DD name are the IMS that is being processed. The last character of the module name is obtained from the SUFFIX parameter as supplied in the IOHIMSID input data.

System action

Processing ends with a return code 12.

User response

Verify that the correct IMS MODBLKS data set names are used and that the correct IMS gen suffix was specified in the IOHIMSID input data. Correct the problem, and rerun the job.

Severity

12

**IOH1801E BLDL FAILED FOR DDNAME
xxxxxxx RC=*nn* REASON=*rr***

Explanation

An MVS BLDL macro was used to get module lengths for the IMS MODBLKS modules. the BLDL macro failed with the indicated return code and reason code.

System action

The function fails.

User response

Check the BLDL return code and reason code and verify that the named MODBLKS data set contains valid load modules.

Severity

12

**IOH1802E ERROR PROCESSING MODULE
mmmmmmmm FROM DDNAME
*dddddddd***

Explanation

The length of the named MODBLKS module was invalid for the version of IMS.

System action

The function fails.

User response

Verify that the named MODBLKS DDNAME contains valid IMS MODBLKS modules. Also verify that the IMS version specified in IOHISMID input stream is specified correctly.

Severity

12

IOH1900I - STAGE1 GENERATION STARTED

Explanation

The Merge Clone tool has started generating the IMS stage 1 source.

System action

Processing continues.

User response

None. This message is informational.

Severity

0

IOH1901W - ** TRANSACTION *tran* REQUIRES EDITING BEFORE RUNNING IMS GEN

Explanation

Transaction *tran* was defined on at least one IMS as using a Transaction Edit Routine so all systems will now use the Transaction Edit Routine.

See “Conflict resolution” on page 205 for a description of how conflicts are resolved.

System action

Processing continues and a return code of 8 is set. If a more severe error is encountered, then a higher return code might be set at when processing ends.

User response

When receiving this message you are required to edit your stage 1 source. The Merge Clone tool cannot determine the name of the Edit Routine you had on your Transaction so it fills in the stage 1 TRANSACT macro with 8 plus signs ("+++++++"). You will need

to replace all the plus signs with name valid Transaction Edit Routine name.

If adding new Transaction Edit Routines or changing the sequence of the Edit Routine in the gen, you will need to run a minimum of a CTLBLKS gen.

Severity

8

IOH1902I - STAGE1 GENERATION COMPLETED

Explanation

The Merge Clone tool has completed generating the IMS stage 1 source.

System action

Processing continues.

User response

None. This message is informational.

Severity

0

IOH1903E - ERROR ENCOUNTERED DURING STOW FOR *member* RETURN CODE *nnnnnnnn*

Explanation

An error was encountered attempting to STOW the PDS member *member*. The return code from the STOW is indicated in *nnnnnnnn*.

System action

Processing ends with a return code 12.

User response

Check the job log for additional messages, ensure that the IOHPUNCH is allocated as a PDS, correct the problem, and rerun the job.

Severity

12

IOH1904I - MEMBER *member* HAS BEEN SAVED

Explanation

The Merge Clone tool has completed building the stage 1 for member *member* and written it to the IOHPUNCH.

System action

Processing continues.

User response

None. This message is informational.

Severity

0

IOH2010W - ** DBD *dbd* IN PSB *psb* NOT FOUND, ALL RELATED TRANSACTIONS DEFINED LOCAL

Explanation

While performing routing analysis on PSB *psb*, the Merge Clone tool attempted to load DBD *dbd*. It was unable to load this DBD, so it could not complete its analysis. It therefore chose to make all transactions that use this PSB local in all IMS regions.

System action

Processing continues and return code 4 is set. If a more severe error is encountered, this job will end with a higher return code.

User response

If possible, make the DBD available to the IMS DD data set and rerun the job. Otherwise, review the IMS stage 1 and verify that the transactions using this PSB are routed properly.

Severity

4

IOH2011W - ** PSB *psb* NOT FOUND, ALL RELATED TRANSACTIONS DEFINED LOCAL

Explanation

Unable to load PSB *psb* and could not perform routing analysis. Therefore, the Merge Clone process defaulted to make all transactions assigned to this PSB local in all IMS regions.

System action

Processing continues and return code 4 is set. If a more severe error is encountered, this job will end with a higher return code.

User response

If possible, make the PSB available to the IMS DD data set and rerun the job. Otherwise, review the IMS stage 1 and verify that the transactions using this PSB are routed properly.

Severity

4

IOH2012W - ** DBD *dbd* REFERENCED BY PSB *psb* BUT NOT DEFINED IN ANY SYSTEM

Explanation

Database *dbd* was referenced by PSB *psb*, but it was not defined in any IMS region. The PSB is assumed to be NOTINIT and all transactions are made local in all IMS systems.

System action

Processing continues and return code 4 is set. If a more severe error is encountered, this job will end with a higher return code.

User response

Ensure the correct PSB is being used. Review the IMS stage 1 and verify the transactions are routed to the correct systems.

Severity

4

IOH2013W - ** NO SYSTEM MET PROCOPT REQUIREMENTS FOR: *psb* - MADE LOCAL EVERYWHERE

Explanation

Merge Clone PROCOPT analysis could not find an IMS where the database access for all databases met the PROCOPT requirements of PSB *psb*. Therefore, the PSB is defined as local everywhere.

System action

Processing continues and return code is set to 4. If a more severe error is encountered the job might end with a higher return code.

User response

Review the routing for all transactions associated with the PSB.

Severity

4

IOH2014I - APPLCTN *psb* ADDED AS A REMOTE PDIR

Explanation

A transaction was found that was defined to use PDIR *psb*, but *psb* was not defined as an APPLCTN on any IMS in the IMSplex. It is therefore assumed that the APPLCTN was defined as a remote APPLCTN and the Merge Clone tool will build a remote APPLCTN.

System action

Processing continues.

User response

None. This message is informational.

Severity

0

IOH2015I - ** APPPLCTN *psb* ADDED. MAY HAVE PREVIOUSLY BEEN DEFINED AS A REMOTE PDIR.

Explanation

PSB *psb* was referenced in a transaction, but was not in the PDIR table. It will be added and treated as a local APPLCTN.

System action

Processing continues.

User response

Review the IMS stage 1 input and verify that the transactions for PSB *psb* are defined with proper routing information.

Severity

0

IOH2016W - ** PSB ANALYSIS ERROR, POSSIBLY NOT A PSB, NAME=*psb* - ALL TRANSACTIONS MADE LOCAL

Explanation

An error was encountered while attempting to analyze PSB *psb*. An address outside the range of the PSB was detected. This is typically the case when the module *psb* that was loaded from the IMS DD is a program rather than a PSB.

System action

Processing continues and return code is set to 4. If a more severe error is encountered the job might end with a higher return code.

User response

Ensure the member name *psb* that was loaded from the IMS DD data set is a valid PSB. If not, correct the PSB and rerun the job. If the member is a valid PSB, contact IBM Software Support for assistance.

Severity

4

IOH2201E LOAD FAILED FOR module RC=*rc* ABCODE=*code*

Explanation

An MVS LOAD for the named module failed. The LOAD return code and the abend code are shown in the message.

System action

The utility ends with return code 12.

User response

Verify that the load module named in the message is present in the STEPLIB of the batch utility job.

Severity

12

IOH2202E IOHOPT BLKSIZE TOO SMALL

Explanation

The block size of the IOHOPT data set was less than the required size. The IOHOPT data set should have a block size of at least 4096.

System action

The utility ends with return code 12.

User response

Reallocate the IOHOPT data set with RECFM=U and a block size of at least 4096.

Severity

12

IOH2203E	UNKNOWN KEYWORD SPECIFIED IN PARM FIELD
-----------------	--

Explanation

An unknown keyword or syntax error was found processing the PARM field passed to the utility on the EXEC card.

System action

The utility ends with return code 12.

User response

Review the PARM= field specified on the JCL EXEC card. The PARM field may contain only IMSID=xxxx and the keyword LIST or UPDATE, separated by a comma.

Severity

12

IOH2204E	KEYWORD VALUE FOR <i>keyword</i> condition
-----------------	---

Explanation

An error occurred parsing the PARM field specified on the JCL EXEC card. The keyword and the reason for the error are shown in the message text. The possible keywords are IMSID, LIST, or UPDATE. The conditions that may occur are MISSING, INVALID, or NOT ALLOWED.

System action

The utility ends with return code 8.

User response

Review the PARM= field specified on the JCL EXEC card. The PARM field may contain only IMSID=xxxx and the keyword LIST or UPDATE, separated by a comma. Only the IMSID keyword can have an equal sign following the keyword.

Severity

8

IOH2205E	<i>keyword</i> NOT INCLUDED IN PARM FIELD
-----------------	--

Explanation

Either the IMSID or the function (LIST or UPDATE) was not specified in the PARM field. The message indicates which type of keyword was not present.

System action

The utility ends with return code 12.

User response

Review the PARM= field specified on the JCL EXEC card. The PARM field must contain the IMSID=xxxx keyword and either the LIST or UPDATE keywords.

Severity

12

IOH2206E	MVS NOTE FAILED STORING MEMBER <i>member</i> R15=<i>rc</i> R0=<i>reason</i>
-----------------	--

Explanation

An MVS NOTE macro failed with an unexpected return code.

System action

The utility ends with return code 12.

User response

Review the JESLOG for the batch utility for other messages related to this problem. The return code and reason code returned during the NOTE macro are shown in the message text.

Severity

12

**IOH2207E IMSID OPTIONS NOT FOUND FOR
 IMS *imsid*****Explanation**

IMSID options member for the named IMSID was not found in the IOHOPT data set during a LIST request.

System action

The utility ends with return code 12.

User response

Ensure that the proper IMSID was specified in the PARM field of the batch utility, and that the appropriate IOHOPT data set name was specified.

Severity

12

**IOH2208E UNABLE TO SAVE *imsid* OPTIONS-
 IOHOPT OUT OF DIRECTORY
 SPACE****Explanation**

The IOHOPT data set was out of directory space when the utility attempted to save the updated IMSID options member in the IOHOPT data set.

System action

The utility ends with return code 12.

User response

Reallocate the IOHOPT data set with more directory blocks.

Severity

12

**IOH2209E STOW FAILED FOR *imsid* OPTIONS
 R15=*rc* R0=*reason*****Explanation**

An MVS STOW macro failed with an unexpected return code.

System action

The utility ends with return code 12.

User response

Review the JESLOG for the batch utility for other messages related to this problem. The return code and reason code returned during the STOW macro are shown in the message text.

Severity

12

**IOH2210E ABEND OCCURRED WRITING
 imsid OPTIONS - ABEND *code*****Explanation**

An abend was intercepted while writing the updated IMSID options member to the IOHOPT data set.

System action

The utility ends with return code 12.

User response

Review the JESLOG for the batch utility for other messages related to this problem. The abend code that would have occurred is shown in the message text.

Severity

12

**IOH2241E SYNTAX ERROR IN PRIOR
 STATEMENT - MISSING =****Explanation**

A syntax error occurred processing the SYSIN statements. A statement was found that did not include the equal sign (=).

System action

The utility ends with return code 8.

User response

Review the statement preceding this error message and ensure that an equal sign was placed after the keyword.

Severity

8

**IOH2242E OPEN FAILED FOR DDNAME
 ddname RC=*rc***

Explanation

An MVS OPEN for the ddname shown in the message failed. The open return code is shown in the message text.

System action

The utility ends with return code 8.

User response

Review the JESLOG for the batch utility for other messages related to this problem. The OPEN macro return code and the DDNAME being opened are shown in the message text.

Severity

8

IOH2243E	CLOSE FAILED FOR DDNAME <i>ddname RC=rc</i>
-----------------	---

Explanation

An MVS CLOSE for the ddname shown in the message failed. The close return code is shown in the message text.

System action

The utility ends with return code 8.

User response

Review the JESLOG for the batch utility for other messages related to this problem. The CLOSE macro return code and the DDNAME being closed are shown in the message text.

Severity

8

IOH2244E	PRIOR STATEMENT HAS AN INVALID KEYWORD
-----------------	---

Explanation

The keyword specified on the prior statement is unknown.

System action

The utility ends with return code 8.

User response

Review the statement preceding this error message and ensure that the keyword specified is specified correctly.

Severity

8

IOH2245E	VALUE SPECIFIED IN PRIOR STATEMENT EXCEEDS MAXIMUM LENGTH FOR THE KEYWORD
-----------------	--

Explanation

The length of the value specified in the prior statement is longer than the maximum length allowed for this keyword.

System action

The utility ends with return code 8.

User response

Review the statement preceding this error message to ensure that the value specified for the keyword is correct.

Severity

8

IOH2246E	PRIOR STATEMENT INCLUDES A COMMA BUT IS NOT ELIGIBLE FOR CONTINUATION
-----------------	--

Explanation

A comma was encountered following the value specified for a keyword, but continuation statements are not permitted for this keyword.

System action

The utility ends with return code 8.

User response

Review the statement preceding this error message. Ensure that both the keyword and value are specified on the same line. Also ensure that the first non-blank character following the value is not a comma.

Severity

8

**IOH2247E ERROR REPOSITIONING FOR
NEXT KEYWORD VALUE**

Explanation

An unexpected error occurred parsing a continued statement.

System action

The utility abends with abend code U4081.

User response

Contact IBM Software Support for assistance.

Severity

8

**IOH2248E TOO MANY SOURCE DATA SETS
WERE SPECIFIED**

Explanation

The number of source data set names specified on the preceding statement exceeds the maximum allowed for this keyword.

System action

The utility ends with return code 8.

User response

Review the statement preceding this error message. Ensure that no more than 30 IMS sysgen source data set names or 10 security source data set names were specified.

Severity

8

**IOH2249E INVALID VALUE SPECIFIED FOR
OLC - MUST BE LOCAL OR GLOBAL**

Explanation

An invalid value was specified on the OLC= statement.

System action

The utility ends with return code 8.

User response

Review the statement preceding this error message. Ensure that the value specified for the OLC = keyword is either LOICAL or GLOBAL.

Severity

8

**IOH2250E INVALID VALUE SPECIFIED FOR
DRD - MUST BE ENABLED OR
DISABLED**

Explanation

An invalid value was specified for the option DRD.

System action

The statement is ignored.

User response

Correct the value specified for DRD. The only valid values are ENABLED and DISABLED.

Severity

12

**IOH2251E INVALID VALUE SPECIFIED FOR
REPOSITORY - MUST BE ENABLED
OR DISABLED**

Explanation

An invalid value was specified for the option REPOSITORY.

System action

The statement is ignored.

User response

Correct the value specified for REPOSITORY. The only valid values are ENABLED and DISABLED.

Severity

12

**IOH2300E ERROR PROCESSING TRAN EDIT
ROUTINES - reason**

Explanation

An error occurred while attempting to find or process the IMS transaction edit routine table during the

transaction edit routine. The *reason* text in the message assists IBM Software Support in identifying the source of the error.

System action

The requested action fails.

User response

Contact IBM Software Support for assistance.

IOH3001I *message_text*

Explanation

This message contains an APPC error message retrieved from the APPC error extract service. IMS HP Sysgen Tools uses this APPC message to show the information retrieved from APPC.

An APPC call returned an unexpected return code and provided the text in this error message for documentation of the problem.

System action

None.

User response

Use the APPC error information in this message in conjunction with the information in message IOH3002E to determine the reason for the APPC call failure.

Severity

N/A

IOH3002E **APPC CALL TO *module* FAILED
RC=*rc***

Explanation

The call for APPC services to the named module failed. The module name might be ATBALC2 (for Allocate), ATBSEND (for Send), ATBRCVW (for Receive), or ATBEES3 (for Error Extract).

System action

The requested function fails.

User response

Determine whether the failure was caused by an environmental problem, such as an APPC or VTAM problem, or by an abend in HP Sysgen code running in

the APPC address space by reviewing the MVS SYSLOG on the systems where both the TSO user was logged on and the system where IMS runs. For other problems, contact IBM Software Support for assistance.

Severity

N/A

IOH3045E **UNKNOWN ISPF MESSAGE
RECEIVED FROM APPC - *msgid***

Explanation

An ISPF message identifier was received from IMS HP Sysgen Tools while it was running in an APPC initiator, but the message ID was not a known message.

System action

The requested function fails.

User response

Contact IBM Software Support for assistance.

Severity

N/A

IOH3052E **ERROR RETRIEVING IMS *imsid*
OPTIONS *reason***

Explanation

An error occurred attempting to read and interpret IMSID options for the named IMSID. The *reason* text describes the reason for the failure.

System action

The requested function fails.

User response

Ensure that the named IMSID has an options module present on the MVS system where the TSO user is logged on, and that the options module is valid. This error could also occur if a group is defined with a name that begins with IOH@.

Severity

N/A

IOH3053E **ERROR RETRIEVING IMS
OPTIONS FOR PLEX MEMBER
*imsid-reason***

Explanation

While attempting to install a resource update list, the IMSIDs of all IMS subsystems in the IMSplex are retrieved from the OLCSTAT data set. While attempting to read and interpret the IMSID options for this IMS system, an error occurred.

System action

The requested function fails.

User response

Ensure that the named IMSID is defined to IMS HP Sysgen Tools on the MVS system where the TSO user is logged on, and that the options module for that IMS subsystem is valid. This error may occur for an IMSID that was not the target of the install request, but was required because it is in the same IMSplex as the target of the install.

Severity

N/A

IOH3054E	EXPECTED CONFIG DATA NOT RECEIVED FOR GLOBAL ONLINE CHANGE TARGET
-----------------	--

Explanation

An attempt to obtain a list of the IMSIDs defined in the OLCSTAT data set for a Global Online Change enabled target IMS subsystem did not return the expected information from the IMS HP Sysgen Tools APPC transaction program.

System action

The requested function fails.

User response

Contact IBM Software Support for assistance.

Severity

N/A

IOH3055E	UNEXPECTED CONFIG DATA NOT RECEIVED FOR LOCAL ONLINE CHANGE TARGET
-----------------	---

Explanation

Global online change configuration information was received for an IMS subsystem that was identified as a local online change enabled target IMS subsystem.

System action

The requested function fails.

User response

Contact IBM Software Support for assistance.

Severity

N/A

IOH3056E	INSTALL SYNC POINT DATA NOT RECEIVED - code
-----------------	--

Explanation

During an install request, expected sync point confirmation was not received.

System action

The requested function fails.

User response

Review the MVS SYSLOG where the target IMS subsystem(s) run to determine whether there are any IMS HP Sysgen Tools messages related to an APPC processing error. Such messages would begin with IOH.

Severity

N/A

IOH3061E	INVALID MESSAGE DATA RECEIVED FROM APPC ADDRESS SPACE
-----------------	--

Explanation

An IMS HP Sysgen Tools APPC transaction program returned a message to the TSO user, but the message length was invalid.

System action

The requested function fails.

User response

Review the MVS SYSLOG where the target IMS subsystem(s) run to determine whether any IMS HP Sysgen Tools messages were issued at the time of the failure. Such messages would begin with IOH. Contact IBM Software Support for assistance.

Severity

N/A

IOH3135E	FASTGEN PROCESS TERMINATED DUE TO IMS SYSGEN ERROR(S)
-----------------	--

Explanation

The HP Sysgen Fastgen process failed.

System action

None.

User response

Determine the reason for the failure by reviewing the sysgen output listings for other IOH prefixed messages.

Severity

N/A

IOH3136E	FASTGEN PROCESS TERMINATED DUE TO MODULE LINK ERROR(S)
-----------------	---

Explanation

The HP Sysgen Fastgen process failed.

System action

None.

User response

Determine the reason for the failure by reviewing the sysgen output listings for other IOH prefixed messages.

Severity

N/A

IOH3138E	FASTGEN PROCESS TERMINATED DUE TO IMS SECURITY ERROR(S)
-----------------	--

Explanation

The HP Sysgen Fastgen process failed.

System action

None.

User response

Determine the reason for the failure by reviewing the sysgen output listings for other IOH prefixed messages.

Severity

N/A

IOH3201E	LOAD FAILED FOR <i>modname</i> RC=<i>rc</i> ABCODE=<i>code</i>
-----------------	---

Explanation

An MVS LOAD macro failed with the indicated return code and abend code for the named load module.

System action

The job fails.

User response

Review the abend code and module name to determine the cause of the load failure. Contact IBM Software Support for assistance.

Severity

8

IOH3202E	<i>keyword</i> WAS ALREADY SPECIFIED ON A PRIOR STATEMENT
-----------------	--

Explanation

The indicated keyword statement was specified more than once in the SYSIN data stream. This keyword can only be specified one time in the SYSIN data.

System action

The job fails.

User response

Remove the additional occurrences of the named keyword.

Severity

8

IOH3203E	UNKNOWN KEYWORD SPECIFIED
-----------------	----------------------------------

Explanation

The keyword value specified on the prior statement was not a valid keyword.

System action

The job fails.

User response

Review the SYSIN statement prior to this error message for an error. Ensure that the keyword value is spelled correctly.

Severity

8

IOH3204E	KEYWORD VALUE FOR <i>keyword</i> condition
-----------------	---

Explanation

The value specified for the named keyword was either missing or invalid.

System action

The job fails.

User response

If the value was missing, be sure to specify a value for the keyword. If the value was invalid, ensure that the value was one of the allowable values for the keyword or that the value does not exceed four characters for an IMSID or eight characters for a resource update list name.

Severity

8

IOH3205E	NUMBER OF SELMBR NAMES EXCEEDS MAXIMUM (512)
-----------------	---

Explanation

The number of SELMBR values specified in the job exceeded the maximum of 512 names.

System action

The job fails.

User response

Reduce the number of SELMBR values specified so that the number is less than 512. You can break the members into multiple jobs, or use generic member names to reduce the number of names specified in the job.

Severity

8

IOH3206E	MISSING REQUIRED STATEMENT (LIST= IMSID= SOURCE= or CTLBLKS=)
-----------------	--

Explanation

The IOHCLIST control cards did not include one of the required keyword statements.

System action

The job fails.

User response

Ensure that the keyword statements include all the required statements, and that valid values were specified for these keywords.

Severity

8

IOH3207E	UNBALANCED OR INVALID PARENTHESIS SPECIFIED
-----------------	--

Explanation

Parentheses were used improperly in the prior statement. Either there was a close parenthesis before an open parenthesis, or there were multiple open parentheses.

System action

The job fails.

User response

Review the prior control card to ensure that parentheses were used properly.

Severity

8

IOH3208E	UNSUPPORTED IMS RELEASE
-----------------	--------------------------------

Explanation

The release of IMS currently running for the IMS subsystem identified by the IMSID= statement is not supported by this level of IMS HP Sysgen Tools.

System action

The job fails.

User response

Contact IBM Software Support for assistance.

Severity

8

IOH3209E	IOHCLNS REPORTED A CLEANUP ERROR
-----------------	---

Explanation

The IMS HP Sysgen Tools cleanup processor encountered an error while closing files and freeing storage.

System action

The job fails.

User response

Review the MVS SYSLOG for additional IOH error messages that define the error condition. Contact IBM Software Support for assistance.

Severity

8

IOH3210E	MISSING KEYWORD VALUE FOR SRCHLST
-----------------	--

Explanation

No value was specified for keyword SRCHLST.

System action

Processing stops.

User response

Specify one or multiple valid value for the SRCHLST keyword.

Severity

8

IOH3211E	TOO MANY KEYWORD VALUES SPECIFIED FOR SRCHLST - xxxxxxxx AND SUCCEEDING VALUES IGNORED
-----------------	---

Explanation

The maximum number of values for keyword SRCHLST was exceeded. xxxxxxxx indicates the value for keyword SRCHLST at the time when the maximum number was exceeded.

The maximum number of values allowed for keyword SRCHLST is 2560.

System action

Processing continues for keyword values up to 2560 values.

Keyword values 2561 and greater are ignored and not processed.

User response

Ensure that the number of values specified for keyword SRCHLST is 2560 values or less.

Run additional jobs to accommodate 2561 or greater values.

Severity

4

IOH3212E	MISSING KEYWORD IMSID= OR CTLBLKS= OR SRCHLST= IN SYSIN
-----------------	--

Explanation

Either IMSID=, CTLBLKS=, or SRCHLST= keyword was not specified, or was specified incorrectly, in the IOHBRVRS PARM field.

System action

The job step ends.

User response

Review the IOHBRVRS PARM field to ensure that all of the IMSID=, CTLBLKS=, and SRCHLST= keywords are included. Check for any error messages that may have occurred while parsing the PARM field.

Severity

8

IOH3214E	NO MEMBERS WERE SELECTED BY THE SELMBR VALUE(S) SPECIFIED
-----------------	--

Explanation

There were no members of the IOHGEN data set selected for the SELMBR name(s) specified in the IOHCLIST control cards.

System action

The job fails.

User response

Correct the SELMBR specifications specified in the job. Also, ensure that the members that you intended to select are present in the first and only data set in the IOHGEN DD. Concatenated PDSs are not supported.

Severity

8

IOH3215E	UPDATE LIST MEMBER <i>name</i> ALREADY EXISTS BUT REPLACE NOT SPECIFIED
-----------------	--

Explanation

The specified resource update list name already exists in the IOHPDS data set. REPLACE was not specified.

System action

The job fails.

User response

Either change the LIST= keyword to specify a different resource update list member name, or include the REPLACE keyword on the LIST= statement.

Severity

8

IOH3216E	INVALID ERROR MESSAGE RETURNED FROM APPC PROCESSING
-----------------	--

Explanation

The length of an error message returned from IMS HP Sysgen Tools APPC processing was not valid.

System action

The job fails.

User response

Contact IBM Software Support for assistance.

Severity

8

IOH3225E	AN INTERNAL ERROR OCCURRED WRITING IZTPUNCH
-----------------	--

Explanation

An internal error occurred determining the current output block for the IZTPUNCH data set.

System action

The job step ends.

User response

Contact IBM Software Support for assistance.

Severity

8

IOH3226E	MISSING PARM KEYWORD (IMSID= OR CTLBLKS=)
-----------------	--

Explanation

Either IMSID= or CTLBLKS= was not specified, or was specified incorrectly, in the IOHBRVRS PARM field.

System action

The job step ends.

User response

Review the IOHBRVRS PARM field to ensure that both the IMSID= and CTLBLKS= keywords are included. Check for any error messages that may have occurred while parsing the PARM field.

Severity

8

IOH3227E	IOHPUNCH DD HAS AN INVALID BLKSIZE (NOT A MULTIPLE OF 80)
-----------------	--

Explanation

The DCB attributes for the IOHPUNCH DD are invalid.

System action

The job step ends.

User response

Verify that the IOHPUNCH DD is allocated properly. It must have LRECL=80, BLKSIZE which is a multiple of 80, and RECFM=FB.

Severity

8

IOH3241I **OPTIONS IN USE** *option*

Explanation

This message describes the options selected for this execution of the IOHCLIST utility. The options in use are based on the control cards read from the SYSIN DD.

System action

None.

User response

None. This message is informational.

Severity

N/A

IOH3243I **NUMBER OF DEFINED** *resources*
number

Explanation

This message describes the IMS version and number of each resource type defined in the target subsystem.

System action

None.

User response

None. This message is informational.

Severity

N/A

IOH3244I **IOHGEN MEMBERS SELECTED:**

Explanation

This message describes the IMS sysgen source members of the IOHGEN DD which were selected for processing based on control card input provided by the user.

System action

None.

User response

None. This message is informational.

Severity

N/A

IOH3301E **INVALID ENTRY VECTOR**
DETECTED IN IOHCLST2

Explanation

The entry vector used to determine the function to be performed by module IOHCLST2 was not valid.

System action

The job fails.

User response

Contact IBM Software Support for assistance.

Severity

8

IOH3302E **MVS BLDL DDNAME IOHPDS**
FAILED RC=rc REASON CODE
reason

Explanation

An MVS BLDL macro returned an unexpected return code and reason code, as indicated in the message text.

System action

The job fails.

User response

Review the MVS SYSLOG for any additional error messages that may be related to this problem. Contact IBM Software Support for assistance.

Severity

8

IOH3303E	MVS STOW DDNAME IOHPDS FAILED RC=<i>rc</i> REASON CODE <i>reason</i>
-----------------	---

Explanation

An MVS STOW macro returned an unexpected return code and reason code, as indicated in the message text.

System action

The job fails.

User response

Review the MVS SYSLOG for any additional error messages that may be related to this problem. Contact IBM Software Support for assistance.

Severity

8

IOH3304E	IOHPDS DIRECTORY FULL - UNABLE TO SAVE UPDATE LIST
-----------------	---

Explanation

There was not sufficient space in the PDS directory to store the resource update list.

System action

The job fails.

User response

Delete unneeded members from the IOHPDS data set, or reallocate the data set with additional directory blocks.

Severity

8

IOH3307W	NO UPDATE LIST ENTRIES ARE REQUIRED
-----------------	--

Explanation

The comparison of sysgen source and IMS system control blocks resulted in no required changes to IMS control blocks.

System action

The job completes, but no updates are made to the IOHPDS data set.

User response

None.

Severity

4

IOH3308E	MVS ENQUEUE FOR IOHPDS FAILED RC=<i>rc</i>
-----------------	---

Explanation

An MVS ENQ macro returned with an unexpected return code, as indicated in the message. The QNAME used in the ENQ was IOHPDS01, and the RNAME was the data set name of the IOHPDS data set.

System action

The job fails.

User response

Review the MVS SYSLOG for additional messages that may be related to this problem. Contact IBM Software Support for assistance.

Severity

8

IOH3309E	IOHPDS DATA SET IN USE
-----------------	-------------------------------

Explanation

The IOHPDS data set was being read or written when the job attempted to write the resource update list.

System action

The job fails.

User response

Retry the job when the IOHPDS data set is no longer being written.

Severity

8

IOH3310E	NUMBER OF UPDATE LIST ENTRIES EXCEEDS MAX OF 32767
-----------------	---

Explanation

The maximum number of entries allowed for a single resource update list has been exceeded.

System action

The job fails.

User response

Reduce the number of entries that are created by the job. If this is not a practical solution, contact IBM Software Support for assistance.

Severity

8

IOH3311E	ERROR IN ACB RELOAD/AGN ENTRY
-----------------	--------------------------------------

Explanation

An internal error occurred processing \$IOHGEN macro requests.

System action

The job fails.

User response

Retain the dump that accompanies this error, and contact IBM Software Support for assistance.

Severity

8

IOH3316E	ERROR CONDITION <i>x</i> OCCURRED WRITING UPDATE LIST MEMBER <i>name</i>
-----------------	---

Explanation

An internal error occurred while writing the resource update list to the IOHPDS data set.

System action

The job fails.

User response

Contact IBM Software Support for assistance.

Severity

8

IOH3317E	AN MVS NOTE FAILED FOR MEMBER <i>name</i> RC=<i>rc</i>
-----------------	---

Explanation

An MVS NOTE macro returned an unexpected return code and reason code, as indicated in the message text, while processing the resource update list member of the IOHPDS data set.

System action

The job fails.

User response

Review the MVS SYSLOG for any additional error messages that may be related to this problem. Contact IBM Software Support for assistance.

Severity

8

IOH3341I	UPDATE LIST ENTRY CREATED TO CHANGE <i>type name</i> FOR THE FOLLOWING PARAMETERS:
-----------------	---

Explanation

This message shows the resource type and name that were identified as inconsistent in definition attributes between IMS sysgen source macros and control blocks in the MODBLKS data set or the control blocks in use by the target IMS subsystem.

System action

An entry in the generated resource update list is created.

User response

None. This message is informational.

Severity

N/A

IOH3342I	UPDATE LIST ENTRY CREATED TO ADD <i>type name</i>
-----------------	--

Explanation

This message shows the resource type and name that were identified as inconsistent between IMS sysgen

source macros and control blocks in the MODBLKS data set or the control blocks in use by the target IMS subsystem. The named resource was present in the sysgen source, but not in the control blocks.

System action

An entry in the generated resource update list is created.

User response

None. This message is informational.

Severity

N/A

IOH3343I	UPDATE LIST ENTRY CREATED TO DELETE <i>type name</i>
-----------------	---

Explanation

This message shows the resource type and name that were identified as inconsistent between IMS sysgen source macros and control blocks in the MODBLKS data set or the control blocks in use by the target IMS subsystem. The named resource was present in the control blocks, but not in the sysgen source.

System action

An entry in the generated resource update list is created.

User response

None. This message is informational.

Severity

N/A

IOH3344I	UPDATE LIST ENTRY CREATED TO RELOAD <i>type name</i>
-----------------	---

Explanation

This message shows the resource type (PSB or DBD) and name that were requested for an ACB reload through a \$IOHGEN statement included in the IMS sysgen source.

System action

An entry in the generated resource update list is created.

User response

None. This message is informational.

Severity

N/A

IOH3345I	UPDATE LIST ENTRY CREATED TO UPDATE AGN <i>agn-name</i> TO action <i>type-name</i>
-----------------	---

Explanation

This message shows information about an AGN update that was requested through a \$IOHGEN statement included in the IMS sysgen source. The value specified in the message text includes the AGN name to be updated, the action (CONNECT or DISCONNECT) to be performed, the resource type (PSB, TRAN, or LTERM), and the resource name.

System action

An entry in the generated resource update list is created.

User response

None. This message is informational.

Severity

N/A

IOH4000I	<i>message_text</i>
-----------------	----------------------------

Explanation

This message contains an APPC error message retrieved from the APPC error extract service. IMS HP Sysgen Tools uses this APPC message to show the information retrieved from APPC.

An APPC call returned an unexpected return code

System action

None.

User response

Use the APPC error information in this message in conjunction with the information in message IOH4024E to determine the reason for the APPC call failure.

Severity

N/A

**IOH4020E GETMAIN FAILED IN IOH APPC
PROGRAM IOHZRCB**

Explanation

A GETMAIN request failed.

System action

The function fails.

User response

For errors related to the failure in an APPC/MVS initiator, review the MVS SYSLOG on the system where IMS is running. Review the amount of storage above the 16 megabyte line that is available to the APPC task.

Severity

N/A

**IOH4021E APPC request-1 REQUEST
SEQUENCE ERROR-LAST REQUEST
request-2**

Explanation

There was an unexpected request from an IMS HP Sysgen Tools module for an APPC/MVS action. The requested action was inconsistent with the state of the APPC/MVS conversation.

System action

The function fails.

User response

For errors related to an APPC error in an APPC/MVS initiator, review the MVS SYSLOG on the system where IMS is running. There may be messages preceding this message that indicate a reason for the sequence error.

Severity

N/A

**IOH4022E IOHZAPPC RECEIVED AN INVALID
APPC REQUEST TYPE**

Explanation

There was an unknown requests type received from an IMS HP Sysgen Tools module for an APPC/MVS action.

System action

The function fails.

User response

Review the MVS SYSLOG on the system where IMS is running for errors related to an APPC error in an APPC/MVS initiator. Ensure that the SVC dump that was produced following this error is retained, and contact IBM Software Support for additional assistance.

Severity

N/A

**IOH4023E LOAD FAILED FOR MODULE *module*
ABEND=aaa RC=nn**

Explanation

A message bound for an APPC transaction program exceeded the maximum expected length (100K).

System action

The request fails. An abend dump is produced for the APPC transaction program.

User response

An MVS LOAD for the stated APPC module failed. Ensure that APPC callable service modules are available through the MVS link list, or add the APPC callable services library to the STEPLIB concatenation of the IOHTPADD JCL (after EXEC PGM=IOHZMAIN). Contact IBM Software Support for assistance. Retain the APPC transaction program dump written to the dump data set specified in the IOHTPADD job in the SIOHSAMP data set.

Severity

U4001 abend occurs in the address space of the APPC transaction program.

**IOH4024E APPC CALL TO *module* FAILED
RC=nn**

Explanation

The call for APPC services to the named module failed. The module name might be ATBALC2 (for Allocate), ATBSEND (for Send), ATBRCVW (for Receive), or ATBEES3 (for Error Extract).

System action

The requested function fails.

User response

Review the MVS SYSLOG on the systems where IMS runs to determine whether the failure was caused by an environmental problem, such as an APPC or VTAM problem, or by a problem with HP Sysgen code running in the APPC transaction program address space. Contact IBM Software Support for assistance.

Severity

U4001 abend occurs in the address space of the APPC transaction program.

IOH4025E	APPC <i>request</i> RECEIVE RETURNED AN UNEXPECTED DATA_RECEIVED VALUE <i>nn</i>
-----------------	---

Explanation

An unexpected value was returned by APPC for the value of the DATA_RECEIVED parameter. The APPC function requested is shown in the message text.

System action

The requested function fails.

User response

Contact IBM Software Support for assistance.

Severity

N/A

IOH4100E	AN ERROR OCCURRED CHECKING AN UPDATE LIST-AN UNKNOWN RESOURCE TYPE WAS ENCOUNTERED - <i>type</i>
-----------------	---

Explanation

The header of a resource update list element did not contain a valid resource type indicator.

System action

The requested function fails.

User response

Retain a copy of the resource update list being processed for problem determination. Contact IBM Software Support for assistance.

Severity

8

IOH4101E	AN ERROR OCCURRED CHECKING AN UPDATE LIST-AN UNKNOWN FUNCTION WAS ENCOUNTERED - <i>type</i>
-----------------	--

Explanation

The header of a resource update list element did not contain a valid function indicator.

System action

The requested function fails.

User response

Retain a copy of the resource update list being processed for problem determination. Contact IBM Software Support for assistance.

Severity

8

IOH4102E	TRAN <i>trancode</i> REQUESTS EDIT ROUTINE NAME <i>editname</i> BUT THAT NAME IS NOT DEFINED
-----------------	---

Explanation

The edit routine name specified for this transaction was not already present in this IMS subsystem. Transaction edit routines cannot be dynamically added; they must already exist in the target IMS subsystem.

System action

The requested function fails. Resource checking is stopped following this error condition.

User response

If the transaction definition in the resource update list specifies a transaction edit routine not defined in this IMS control region, change the edit routine name to a name already present in this IMS system. Otherwise, contact IBM Software Support for assistance.

Severity

8

IOH4103E	MULTIPLE RESOURCE UPDATES FOR <i>type name</i> PRESENT IN THIS UPDATE LIST
-----------------	---

Explanation

There was more than one resource update list entry for a single resource. There can be only one resource update list entry for a specific resource.

System action

The requested function fails. Resource checking is stopped following this error condition.

User response

Remove all but one occurrence of the entries that duplicate add, delete, or update the resource type and name indicated in the message.

Severity

N/A

IOH4104E	ADD FOR <i>type name</i> FAILED BECAUSE IT IS ALREADY DEFINED
-----------------	--

Explanation

A resource update list entry requested that a resource that was already defined be added.

System action

The resource list check continues.

User response

Change the resource update list entry so that it does not attempt to add a resource that is already defined.

Severity

N/A

IOH4105E	DELETE FOR <i>type name</i> FAILED BECAUSE IT IS NOT DEFINED
-----------------	---

Explanation

A resource update list entry requested that a resource that does not exist be deleted.

System action

The resource list check continues.

User response

Change the resource update list entry so that it does not attempt to delete an undefined resource.

Severity

N/A

IOH4106E	UPDATE FOR <i>type name</i> FAILED BECAUSE IT IS NOT DEFINED
-----------------	---

Explanation

A resource update list entry requested that a resource that does not exist be deleted.

System action

The resource list check continues.

User response

Change the resource update list entry so that it does not attempt to update an undefined resource.

Severity

N/A

IOH4107E	<i>type NAME name</i> IS INVALID. FIRST CHAR MUST BE ALPHA, OTHERS ALPHANUMERIC.
-----------------	---

Explanation

A resource update list entry requested that a resource be added, but the specified name is invalid.

System action

The resource list check continues.

User response

Change the resource update list entry to have a valid name for the resource being added.

Severity

N/A

IOH4108E	<i>type NAME name</i> IS INVALID. NAME IS RESERVED.
-----------------	--

Explanation

A resource update list entry requested that a resource be added, but the specified name is a reserved name.

System action

The resource list check continues.

User response

Change the resource update list entry to have a valid name for the resource.

Severity

N/A

IOH4109E	<i>type</i> NAME <i>name</i> HAS AN INVALID PSB NAME <i>psbname</i>
-----------------	--

Explanation

A resource update list entry specified an undefined or invalid PSB name to be associated with the transaction or route code.

System action

The resource list check continues.

User response

Change the resource update list entry to have a valid PSB name for the resource or route code.

Severity

N/A

IOH4110E	<i>action</i> FOR PROGRAM <i>name</i> FAILED-MUST ALSO DELETE <i>type value</i>
-----------------	--

Explanation

A resource update list entry requesting a delete or rename of program *name* did not also delete or change all transactions and route codes that were associated with the program. Transactions and route codes defined to IMS must be associated with a defined PSB name.

Where:

- *action* is RENAME or DELETE.
- *name* is the PSB name.
- *type* is TRANSACT or RTCODE.
- *value* is the transaction or return code.

System action

The resource list check continues.

User response

When deleting a program definition, all transactions and route codes must also be deleted or changed to be associated with some other PSB.

Severity

N/A

IOH4111E	RTCODE <i>name</i> REQUIRES THAT PSB <i>psbname</i> HAVE FAST PATH=YES
-----------------	---

Explanation

The named route code was associated with a PSB that did not have FPATH=YES specified.

System action

The verify or install request fails.

User response

Ensure that route codes are always associated with PSB names that have FPATH=YES specified.

Severity

N/A

IOH4112E	<i>type name</i> OPTION <i>opt1</i> CONFLICTS WITH OPTION <i>opt2</i>
-----------------	--

Explanation

Incompatible options were requested. Note that one of the specified options could be a PSB option (such as a schedule type SERIAL), and the other option could be a transaction option (such as MAXRGN).

System action

The resource list check continues.

User response

Review the options specified for the named resource. The two options specified in the message are incompatible. Make changes as required for a valid definition.

Severity

N/A

IOH4113E	<i>type name</i> OPTION <i>opt1</i> IS REQUIRED FOR OPTION <i>opt2</i>
-----------------	---

Explanation

Incompatible options were requested. Note that one of the specified options could be a PSB option (such as a schedule type SERIAL), and the other option could be a transaction option (such as MAXRGN).

System action

The resource list check continues.

User response

Review the options specified for the named resource. Ensure that the first option is specified properly, or change the second option to make it compatible with the first.

Severity

N/A

IOH4114E	<i>type name</i> REQUIRES FPATH WHICH IS NOT ACTIVE IN THE TARGET IMS
-----------------	--

Explanation

A resource option specified requires that Fast Path be present in the IMS control region. Fast Path is not present in the target IMS environment.

System action

The resource list check continues.

User response

Remove the requirement for Fast Path from the named resource definition.

Severity

N/A

IOH4115E	<i>type name</i> CONTAINS AN INVALID VALUE FOR <i>option</i>
-----------------	---

Explanation

The resource update list entry contained an invalid value for the option specified.

System action

The resource list check continues.

User response

Review the resource update list entry for the named resource, and correct the value of the named option.

Severity

N/A

IOH4116E	<i>type name</i> OPTION <i>option</i> VALUE <i>value</i> IS NOT SUPPORTED IN THE TARGET IMS
-----------------	--

Explanation

The resource update list entry contained an invalid value for the option specified.

System action

The resource list check continues.

User response

Review the resource update list entry for the named resource, and change the value of the named option to a value that is supported in the appropriate IMS environment (and release).

Severity

N/A

IOH4117E	TRANSACT <i>name</i> CONTAINS SYSID VALUE(S) BUT MSC IS NOT SUPPORTED IN THE TARGET IMS
-----------------	--

Explanation

The resource update list entry contained values for the remote and/or local SYSID attributes. The target IMS environment does not contain support for MSC.

System action

The resource list check continues.

User response

Review the resource update list entry for the named resource, and remove the SYSID values from the resource options.

Severity

N/A

IOH4118E	TRANSACT <i>name</i> EXCEEDS THE MAXIMUM ALLOWED SYSID VALUE FOR THIS IMS
-----------------	--

Explanation

The resource update list entry contained values for the remote and/or local SYSID attributes that were invalid.

System action

The resource list check continues.

User response

Review the resource update list entry for the named resource, and change the SYSID values to values that are compatible with the target IMS environment.

Severity

N/A

IOH4119E	TRANSACT <i>name option</i> IS NOT DEFINED AS AN APPROPRIATE LOCAL OR REMOTE SYSID
-----------------	---

Explanation

The resource update list entry contained values for the remote and/or local SYSID attributes that were invalid.

System action

The resource list check continues.

User response

Review the resource update list entry for the named resource, and change the SYSID values to values that are compatible with the target IMS environment.

Severity

N/A

IOH4120E	TRANSACT <i>name</i> CLASS EXCEEDS THE MAXIMUM CLASS FOR THIS IMS
-----------------	--

Explanation

The resource update list entry contained an invalid value for the CLASS option. The class number must not exceed the maximum number of classes supported by this IMS subsystem.

System action

The resource list check continues.

User response

Review the resource update list entry for the named resource, and change the CLASS values to values that are compatible with the target IMS environment.

Severity

N/A

IOH4121E	TRANSACT <i>name</i> REQUIRES CONVERSATIONAL PROCESSING BUT THIS IMS WAS NOT GENNED FOR CONVERSATIONAL TRANS
-----------------	---

Explanation

The resource update list entry contained an invalid value for the SPA size option. The target IMS does not contain support for conversational transactions.

System action

The resource list check continues.

User response

Review the resource update list entry for the named resource, and change the SPA value to blank. Conversational transactions are not supported in the target IMS environment.

Severity

N/A

IOH4122E	TRANSACT NAME <i>trancode</i> DUPLICATES AN EXISTING LTERM OR LINK NAME
-----------------	--

Explanation

A transaction name to be added already exists in the target IMS subsystem as an LTERM name.

System action

The verify or install request fails.

User response

Ensure that transaction names to be added to the IMS system definition do not duplicate LTERM names that are included in the IMS sysgen or that are created dynamically by ETO when a user logs on.

Severity

N/A

IOH4123E ***resource-type name* CANNOT BE DELETED BECAUSE IT IS ACTIVE**

Explanation

An attempt was made to delete a resource, but the resource was active.

System action

The verify or install request fails.

User response

Ensure that resources that are being deleted are not active.

Severity

N/A

IOH4124E **DATABASE *dbdname* CANNOT BE DELETED BECAUSE IT HAS NOT BEEN /DBR'D**

Explanation

IMS HP Sysgen Tools will not delete a database unless the database has already been taken offline by using a **/DBR** command.

System action

The verify or install request fails.

User response

When you delete a database definition, ensure that the DB has been the object of an IMS **/DBR** command before installing the resource update list.

Severity

N/A

IOH4125E **TRANSACT *trancode* CANNOT BE DELETED BECAUSE IT HAS MESSAGES QUEUED**

Explanation

A resource update list that is being verified or installed included a transaction delete, but the transaction has messages queued and waiting to process. HP Sysgen cannot delete a transaction that has messages queued.

System action

The verify or install request fails.

User response

Ensure that no messages are queued for transaction codes that are to be deleted in a resource update list.

Severity

N/A

IOH4126E **FPATH EXCLUSIVE TRAN *trancode* DOES NOT HAVE A MATCHING ROUTE CODE DEFINED**

Explanation

A fast path exclusive transaction code is required to have a matching route code definition. The named fast path exclusive transaction does not have a matching route code defined.

System action

The verify or install request fails.

User response

Ensure that the named transaction code has a fast path route code with the same name defined, or change the named transaction so that it is not a fast path exclusive transaction.

Severity

N/A

IOH4127E **FASTPATH EXCLUSIVE PROGRAM *name* HAS NON-FASTPATH TRANSACTION *trancode***

Explanation

A fast path exclusive application program cannot have a non-fast path transaction associated with it.

System action

The verify or install request fails.

User response

Verify that the named program should be a fast path exclusive program, or that the named transaction code should be non-fast path.

Severity

N/A

IOH4128E	INVALID COMMAND ENCOUNTERED-MUST BEGIN WITH A SLASH
-----------------	--

Explanation

The first character of the IMS command specified in an update list entry did not begin with a slash (/).

System action

The verification or installation of the resource update list fails.

User response

Correct the IMS command specified in the resource update list to ensure that it is a type one command and that it begins with a slash (/).

Severity

N/A

IOH4129E	IMS TRAN COMMAND SECURITY IS NOT ACTIVE-TCOMMAND CHANGES INVALID
-----------------	---

Explanation

The target IMS subsystem does not have transaction command security active. TCOMMAND changes cannot be made when transaction command security is not active.

System action

The verification or installation of the resource update list fails.

User response

TCOMMAND changes are not valid for the specified IMS subsystem. Remove the TCOMMAND update list entries or change the IMS subsystem to a subsystem name that supports the TCOMMAND function.

Severity

N/A

IOH4130E	RELOAD FOR <i>type name</i> FAILED <i>reason</i>
-----------------	---

Explanation

The PSB or DBD name that was requested for a reload was not successfully reloaded. The reason in the message text indicates why the reload attempt failed: Either the PSB or DBD is not defined in the target IMS system, or the **PSB's** option specification is not supported for the **Process** option or release of IMS.

System action

The verification or installation of the resource update list fails.

User response

If the PSB or DBD is not defined, verify that the correct resource name and type were specified. If the option of the PSB is not supported, review the **Process** and **PSB's** option specifications, and the release of the target IMS system, and correct the error.

Severity

N/A

IOH4131E	RELOAD ENTRY CONTAINS INVALID RESOURCE TYPE - <i>type</i>
-----------------	--

Explanation

An invalid value was found for the resource type, as shown in the message text. Only PSB and DBD are permitted.

System action

The verification or installation of the resource update list fails.

User response

Change the resource type in the resource update list entry to be either PSB or DBD.

Severity

N/A

IOH4132E	COMMAND ENTRY CONTAINS INVALID SEQUENCE - <i>sequence</i>
-----------------	--

Explanation

The sequence field for the IMS command contains an invalid value. The only valid values are BEFORE and AFTER.

System action

The verification or installation of the resource update list fails.

User response

Change the sequence field specified on the command entry to either BEFORE or AFTER. The value specified is not a valid value.

Severity

N/A

IOH4133E ALESERV function FAILED RC=nn

Explanation

An MVS ALESERV macro failed for function ADD or DELETE, as identified in the message text, for addressability to the IMS control region address space.

System action

The request is stopped.

User response

Contact IBM Software Support for assistance.

Severity

N/A

**IOH4134E TERMSEC ENTRY CONTAINS AN
INVALID STATIC LTERM NAME -
name**

Explanation

The LTERM name specified in a TERMSEC update list entry (as shown in the message text) is not a valid static LTERM name for the target IMS subsystem.

System action

The verification or installation of the resource update list fails.

User response

The TERMSEC request contains an invalid LTERM name. Change the LTERM name to a valid static LTERM name for the target IMS subsystem.

Severity

N/A

**IOH4135E TERMSEC ENTRY CONTAINS AN
INVALID type NAME - name**

Explanation

A TERMSEC entry in the resource update list contains a COMMAND or TRANSACT, as shown by the *type* in the message text that is not defined in the target IMS subsystem.

System action

The verification or installation of the resource update list fails.

User response

Change the resource name (either command name or transaction code) to a name that is valid in the target IMS subsystem.

Severity

N/A

**IOH4136E type SECURITY IS NOT ACTIVE.
CANNOT PROCESS type ENTRIES**

Explanation

The named security type (AGN or TERMINAL) is not active in the target IMS subsystem. AGN or TERMSEC update list entries are not valid when the associated security feature is not active.

System action

The verification or installation of the resource update list fails.

User response

Resource update list entries for AGN or TERMSEC updates, as shown in the message text, cannot be processed for the target IMS subsystem. Either change the target IMS subsystem to a subsystem that has the required security feature active, or delete the AGN or TERMSEC entries from the resource update list.

Severity

N/A

**IOH4137E AGN name action FOR type
BECAUSE IT IS reason DEFINED**

Explanation

The requested action cannot be performed. If the request was to add a resource to an AGN, it cannot be performed because it is already defined to the AGN. If the request was to delete a resource from an AGN, it cannot be performed because a resource type with the name specified is not defined for AGN.

System action

The verification or installation of the resource update list fails.

User response

Change the AGN update request to a valid resource name, type, and action. Be sure that the resource *type/name* is not already included for an ADD request, or that the resource *type/name* is included in the AGN definition for a DELETE request.

Severity

N/A

IOH4138E	TERMSEC UPDATED FAILED - <i>name</i> IS NOT PROTECTED
-----------------	--

Explanation

IMS HP Sysgen Tools does not support adding security for a resource that is not currently protected.

System action

The verification or installation of the resource update list fails.

User response

To add security for a currently unprotected command or transaction, perform an IMS security gen, and use online change to implement the new security gen definitions.

Severity

N/A

IOH4139E	TERMSEC UPDATED FAILED - LTERM <i>name</i> ACCESS TO resource ALREADY <i>status</i>
-----------------	--

Explanation

The access requested in the update list TERMSEC entry is already defined.

System action

The verification or installation of the resource update list fails.

User response

The terminal security request is already defined. Remove the TERMSEC entry from the resource update list.

Severity

N/A

IOH4140E	TERMSEC UPDATED FAILED - INVALID RESOURCE ID FOUND FOR LTERM <i>name</i>
-----------------	---

Explanation

While installing a TERMSEC update, an invalid row number was found for the indicated IMS LTERM name. The row number in the CVB or SMB exceeded the number of rows in the matrix table.

System action

The verification or installation of the resource update list fails.

User response

This condition should not occur. Contact IBM Software Support for assistance.

Severity

N/A

IOH4141E	UNABLE TO UPDATE <i>type</i> ENTRIES FOR AGN <i>name</i> BECAUSE IT WAS GENNED FOR <i>type</i> ALL
-----------------	---

Explanation

When an AGN definition specifies ALL for a resource type (PROGRAM, TRANSACT, or LTERM), individual entries cannot be added or deleted from the AGN definition.

System action

The verification or installation of the resource update list fails.

User response

Remove any AGN requests for the indicated AGN name and resource type. It was generated for all of the indicated resource types, therefore, individual resource names cannot be added or deleted.

Severity

N/A

IOH4142E	RELOAD of <i>type name</i> FAILED - <i>reason</i>
-----------------	--

Explanation

An ACBLIB reload request failed. The type (PSB or DBD) and ACBLIB member names are shown in the message, along with the reason for the failure. The reason for the failure is of the following.

NOT STOPPED

The named program or database named in the message was not stopped. IMS HP Sysgen Tools should automatically stop the resource when the reload request is processed. Contact IBM Software Support for assistance.

PSB SCHEDULED

The program named in the message was active at the time that the reload was in progress. Ensure that the application program is not active at the time that a reload request is installed.

DBD OPEN

The database named in the message was still open when the reload request was attempted. Ensure that a database whose DBD is to be reloaded is not open when a reload is attempted.

DBD IS A HALDB PART

The database named in the message is a HALDB partition. Only the master HALDB name has a DBD, so only the master can be reloaded. Change the name of the database to the HALDB master name.

DB NOT /DBR'ED

The database to be reloaded must have been the object of an IMS **/DBR** command in order to reload the DBD. Ensure that the database has been processed by the **/DBR** command before reloading the DBD.

DBD HAS ERROR BLOCKS

The named database has EEQE elements that should be resolved before the DBD is reloaded. Recover the database (using the old DBD) before attempting to reload the DBD.

DBD IS ACTIVE

The database named in the message is currently in use. Before reloading the database, ensure that no applications are using the database.

DB IS AN MSDB

IMS HP Sysgen Tools does not support reloading the DBD of an MSDB type database.

FP NOT PRESENT

An attempt was made to reload the DBD of a DEDB type database, but the IMS Fast Path feature is not available in the target IMS subsystem.

NO OTHREADS PRESENT

An attempt was made to reload the DBD of a DEDB type database, but there are no OTHREADS available in the target IMS subsystem.

DBR IN PROGRESS

A **/DBR** command was in progress for the named database at the time that the reload was attempted. Wait for the **/DBR** to complete, and retry the reload.

RECOVERY IN PROGRESS

Recovery is in progress for the named database. Wait for the recovery to complete before attempting to reload the DBD.

DEDB NOT SUPPORTED

DEDB type databases are not supported by the level of IMS HP Sysgen Tools that is currently installed. Contact IBM Software Support to identify maintenance that could resolve this problem.

ACBLIB NOT ENABLED

ACBLIB is not enabled on the target IMS system. You cannot select option **1** (HP Sysgen ACB Reload) or option **2** (IMS Member level Global Online Change) for the **Process** field if ACBLIB is not enabled.

NOT GBL ONL CHANGE

Global Online Change is not enabled on the target IMS system. You cannot select option **2** (IMS Member level Global Online Change) for the **Process** field if Global Online Change is not enabled.

IMS MANAGED ACBS NOT ENABLED

IMS management of ACBs is not enabled on the target IMS system. You cannot select option **3** (IMS Managed ACBs Activate) for the **Process** field if IMS management of ACBs is not enabled.

ACBSHR=Y NOT SUPPORTED

The IMS system that is specified in the target group was configured as ACBSHR=Y. You cannot select option 3 (IMS Managed ACBs Activate) for the Process field if an IMS system that is configured as ACBSHR=Y is included in the target group.

SCI NOT ACTIVE

No SCI address space is available for the target IMS system. An SCI address space must be available before issuing the IMS INITIATE OLC command. When the IMS member level global

online change method is used, the IMS INITIATE OLC command reloads a PSB or DBD.

OM NOT ACTIVE

No OM address space is available for the target IMS system. The OM address space must be available before issuing the IMS INITIATE OLC command. When the IMS member level global online change method is used, the IMS INITIATE OLC command reloads a PSB or DBD.

System action

The reload of the indicated ACBLIB member fails, but any other changes are implemented in the resource update lists being installed.

User response

Review the reason for the ACBLIB member reload failure, and take the appropriate action.

Severity

N/A

IOH4143E	UNABLE TO VERIFY EDIT ROUTINE NAME <i>editrtn</i> FOR TRAN <i>trancode</i> DUE TO PRIOR ERROR
-----------------	--

Explanation

IMS HP Sysgen Tools was unable to verify the named edit routine because of a prior error.

System action

The install request fails.

User response

Review error messages preceding this message to determine the reason for the failure of IMS HP Sysgen Tools to identify the transaction edit routine names present in the target IMS subsystem.

Severity

N/A

IOH4144E	VERIFY FUNCTION REQUESTED FOR AN UPDATE LIST WITH NO ENTRIES
-----------------	---

Explanation

An attempt was made to verify or install a resource update list that contained no entries.

System action

The requested action fails.

User response

Ensure that resource update lists that you specify for the verify or install functions are not empty.

Severity

N/A

IOH4145E	IMS DYNAMIC RESOURCE DEFINITION (DRD) ENABLED
-----------------	--

Explanation

The maintenance level of IMS HP Sysgen Tools does not support IMS Dynamic Resource Definition (DRD).

System action

The request fails.

User response

This maintenance level of IMS HP Sysgen Tools does not support an IMS system with DRD activated. HP sysgen maintenance may be available to resolve this problem. Contact IBM Software Support for assistance.

Severity

N/A

IOH4146E	IMS IS BEING SHUT DOWN
-----------------	-------------------------------

Explanation

Resource update lists cannot be installed while IMS is being stopped.

System action

The request fails.

User response

Retry the request when IMS is not being shut down.

Severity

N/A

IOH4147E	DBD <i>dbdname</i> AREA <i>areaname</i> DBR NOT POSSIBLE-<i>reason</i>
-----------------	---

Explanation

A randomizer reload was requested that required that the named database be processed by the **/DBR** command. An area in the database is currently being preloaded, or has a long-running region that is accessing the area. A **/DBR** is not possible at this time.

System action

The randomizer reload request fails.

User response

Retry the request when IMS in the long-running region or area preload has completed.

Severity

N/A

IOH4148E	DEDB RANDOMIZER RELOAD FAILED-FP NOT ACTIVE
-----------------	--

Explanation

A randomizer reload was included in the resource update list being verified or installed, but Fast Path is not included in the target IMS system. IMS HP Sysgen Tools can only reload randomizers for DEDB databases. Because Fast Path is not included in the target IMS system, there cannot be any DEDB databases defined.

System action

The request fails.

User response

Remove any requests for DEDB randomizer reloads from the resource update list, and retry the operation.

Severity

N/A

IOH4149E	DEDB RANDOMIZER RELOAD FAILED-NO DEDBS FOUND
-----------------	---

Explanation

A randomizer reload was included in the resource update list being verified or installed, but there were no DEDB databases defined in the target IMS system.

System action

The request fails.

User response

Ensure that the proper target IMS system was used to verify or install the resource update list. Remove the DEDB randomizer reload entry from the resource update list for target IMS systems that have no DEDBs defined.

Severity

N/A

IOH4150E	DEDB RANDOMIZER RELOAD FAILED-NO DEDBS FOUND USING RANDOMIZER
-----------------	--

Explanation

A randomizer reload was included in the resource update list being verified or installed, but the randomizer was not found in any active DEDB databases.

System action

The request fails.

User response

Review the randomizer name(s) specified for DEDB randomizer reload to ensure that the randomizer name is currently in use. Use the IMS HP Sysgen Tools View option to verify that the randomizer name is currently loaded. Note that if a DEDB has been processed by the **/DBR** command, the randomizer would not currently be loaded.

Severity

N/A

IOH4151E	DEDB RANDOMIZER RELOAD FAILED-DEDB CONFIG CHANGED DURING RELOAD
-----------------	--

Explanation

The number of databases using the requested randomizer changed during the process of reloading the randomizer module.

System action

The request fails.

User response

Ensure that the databases using the randomizer being reloaded were not started during the randomizer reload process.

Severity

N/A

IOH4152E **LOAD FAILED FOR *module* RC=*rc* ABCODE=*abend***

Explanation

An MVS load failed for the module named in the message. The message shows the load macro return code and the abend code that would have occurred.

System action

The request fails.

User response

Review the MVS syslog on the LPAR where the target IMS subsystem is running for other error messages that may be associated with the load failure. Contact IBM Software Support for assistance.

Severity

N/A

IOH4153E ***resource-type* CHANGES NOT PERMITTED IN A *subsystem-type* ENVIRONMENT**

Explanation

A resource update list contained a request for a resource type that is not supported in the target IMS subsystem. The message identifies the type of resource (DATABASE, TRAN, or RTCODE) and the target IMS subsystem type (DBCTL or DCCTL).

System action

The request fails.

User response

Remove resource update list entries that are not appropriate for the type of target IMS subsystem.

Severity

N/A

IOH4201E **INVALID COMMAND REQUESTED - CODE *x***

Explanation

The command entered was not found in the IMS HP Sysgen Tools list of valid commands.

System action

The command is not issued.

User response

Verify that the command entered on the panel begins with a slash (/) and that it contains a valid three character command immediately following the slash.

Severity

N/A

IOH4202E **AN ERROR OCCURRED LOADING MODULE *modname* ABEND *abcde* REASON CODE *rc***

Explanation

An MVS LOAD macro returned an unexpected return code.

System action

The command is not issued.

User response

Review the abend code and return code to determine the cause of the MVS LOAD macro failure. Review the MVS SYSLOG on the MVS system where the requested IMS subsystem runs to determine whether there are any associated MVS error messages.

Severity

N/A

IOH4203E **MODULE *modulename* RECEIVED AN APPC MESSAGE WITH AN UNKNOWN REQUEST TYPE - *reqtype***

Explanation

An unknown function was supplied in the APPC message received by module IOHZCMA or IOHZRCB.

System action

The command is not issued.

User response

Contact IBM Software Support for assistance.

Severity

N/A

IOH4204E	APPC/IMS CALL TO <i>modname</i> FAILED RC=<i>rc</i>
-----------------	--

Explanation

An unknown function was supplied in the APPC message received by module IOHZCMA.

System action

The command is not issued.

User response

Review the MVS SYSLOG on the system for any messages related to the APPC/IMS session failure. Also, determine whether APPC returned any message text that would be documented in message IOH4205I, which follows this message.

Severity

N/A

IOH4205I	<i>message_text</i>
-----------------	----------------------------

Explanation

This message contains an APPC error message retrieved from the APPC error extract service. IMS HP Sysgen Tools uses this APPC message to show the information retrieved from APPC.

A call to an APPC module to service an APPC/IMS session returned with an unexpected return code. The error text returned by the error extract APPC service is documented in this message.

System action

The command is not issued.

User response

Review this message and the IOH4204E message that precedes it. For assistance with resolving the problem, contact IBM Software Support.

Severity

N/A

IOH4206E	NAME/TOKEN SERVICE IEANTCR FAILED WITH RETURN CODE <i>rc</i>
-----------------	---

Explanation

An unexpected return code was received from the MVS Name/Token service, and is documented in the message text.

System action

The command is not issued.

User response

The return code present in message is not documented in *z/OS MVS Programming: Assembler Services Reference*. For assistance with resolving the problem, contact IBM Software Support.

Severity

N/A

IOH4208E	AN INTERNALLY GENERATED COMMAND HAD AN UNEXPECTED RESPONSE, AS FOLLOWS:
-----------------	--

Explanation

An internally generated IMS command, such as START or STOP, returned an unexpected response.

System action

The requested action fails.

User response

Review the command and the unexpected response. Contact IBM Software Support for assistance.

Severity

N/A

IOH4209E	AN EMPTY RESOURCE UPDATE LIST WAS PRESENTED FOR INSTALL
-----------------	--

Explanation

An attempt was made to verify or install a resource update list that contained no entries.

System action

The requested action fails.

User response

Ensure that resource update lists that you specify for the verify or install functions are not empty.

Severity

N/A

IOH4210E **IMS SHUTDOWN DETECTED
(code)-INSTALL REQUEST FAILS**

Explanation

IMS HP Sysgen Tools determined that IMS was in the process of shutting down at the time the requested function was being processed.

System action

The request fails.

User response

Ensure that IMS is not being shut down when the function was requested. Many IMS HP Sysgen Tools functions, including verifying or installing a resource update list or issuing an IMS command.

Severity

N/A

IOH4211E **MVS STIMERM REQUEST FAILED
RC=rc**

Explanation

An MVS STIMERM macro returned with an unexpected return code.

System action

The request fails.

User response

Review the STIMERM return code, and contact IBM Software Support for further assistance.

Severity

N/A

IOH4302E **AN ERROR OCCURRED LOADING
MODULE *modname* ABEND *abcde*
REASON CODE *rc***

Explanation

An MVS LOAD macro returned an unexpected return code.

System action

The command is not issued.

User response

Review the abend code and return code to determine the cause of the MVS LOAD macro failure. Review the MVS SYSLOG on the system where the requested IMS subsystem runs to determine whether there are any associated MVS error messages.

Severity

N/A

IOH4303E **MODULE IOHZCMB RECEIVED AN
APPC MESSAGE WITH AN
UNKNOWN REQUEST TYPE -
*reqtype***

Explanation

An unknown function was supplied in the APPC message received by module IOHZCMB.

System action

The command is not issued.

User response

Contact IBM Software Support for assistance.

Severity

N/A

IOH4304E **UNEXPECTED RETURN CODE
FROM IMS AIB CALL RETURN
CODE *rc* REASON *reason***

Explanation

An IMS call using the AIB interface completed with an unexpected return code.

System action

The request fails.

User response

Look up the return code and reason code in the *IMS Messages and Codes* to determine the reason for the AIB call failure.

Severity

N/A

IOH4306E **NAME/TOKEN SERVICE IEANTCR
FAILED WITH RETURN CODE *rc***

Explanation

An unexpected return code was received from the MVS Name/Token service and is documented in the message text.

System action

The command is not issued.

User response

The return code present in the message is documented in the *z/OS MVS Programming: Assembler Services Reference*. Contact IBM Software Support for assistance.

Severity

N/A

IOH4307I **RELOAD SUCCESSFUL FOR *type*
*name***

Explanation

As requested, the ACBLIB member whose type and name are indicated in the message was reloaded.

type

Indicates the type of resource to be reloaded (PSB or DBD).

name

Indicates the name of resource to be reloaded.

System action

None.

User response

None. This message is informational.

Severity

N/A

IOH4401E **AN ERROR OCCURRED CHECKING
AN UPDATE LIST-AN UNKNOWN
RESOURCE TYPE WAS
ENCOUNTERED-*type***

Explanation

The resource update list sent to the APPC transaction program contained an unknown function in the APPC message.

System action

The installation is stopped.

User response

Contact IBM Software Support for assistance.

Severity

N/A

IOH4402E **AN ERROR OCCURRED CHECKING
AN UPDATE LIST-AN UNKNOWN
FUNCTION WAS ENCOUNTERED-
*function***

Explanation

The resource update list sent to the APPC transaction program contained an unknown function code in the APPC message.

System action

The installation is stopped.

User response

Contact IBM Software Support for assistance.

Severity

N/A

IOH4403E ***type name function* ERROR-
RESOURCE *reason***

Explanation

The resource update list being installed contained an element for the resource type and name specified in the message. The function identified in the message was the action requested in the resource update list. The reason identifies the error condition encountered attempting to perform the requested function.

System action

The installation is stopped.

User response

Check the status of the resource type and name specified in the message.

Severity

N/A

IOH4404E	<i>type name</i> CONTAINS AN INVALID VALUE FOR <i>option</i>
-----------------	---

Explanation

An error occurred while installing the named resource type and name specified in the message. The value for the specified option is not a valid value.

System action

The installation is stopped.

User response

Check the value specified for the option attribute for the named resource type and name. Use the VERIFY function to validate the content of the field. Contact IBM Software Support for assistance.

Severity

N/A

IOH4405E	AN ERROR OCCURRED PROCESSING DBD <i>dbdname</i> FOR THE VALUE OF THE <i>option</i> PARM
-----------------	--

Explanation

While processing a resource update list entry for the named database, an error occurred while interpreting the value of the named option.

System action

The installation is stopped.

User response

Check the value specified for the option attribute for the named database. Use the VERIFY function to validate the content of the field. Contact IBM Software Support for assistance.

Severity

N/A

IOH4406E	AN ERROR OCCURRED PROCESSING PSB <i>psbname</i> FOR THE VALUE OF THE <i>option</i> PARM
-----------------	--

Explanation

While processing a resource update list entry for the named program, an error occurred while interpreting the value of the named option.

System action

The installation is stopped.

User response

Check the value specified for the option attribute for the named program. Use the VERIFY function to validate the content of the field. Contact IBM Software Support for assistance.

Severity

N/A

IOH4407E	TRAN <i>transcode</i> INDICATES EDIT ROUTINE NUMBER <i>n1</i> BUT ONLY <i>n2</i> EXISTS
-----------------	--

Explanation

The value of the transaction edit routine number created by IMS HP Sysgen Tools (*n1*) exceeds the maximum number of transaction edit routines *n2*.

System action

The installation is stopped.

User response

Verify that a valid transaction edit routine name was included in the resource update list. Contact IBM Software Support for assistance.

Severity

N/A

IOH4409E	AN EMPTY RESOURCE UPDATE LIST WAS PRESENTED FOR INSTALL
-----------------	--

Explanation

An attempt was made to verify or install a resource update list that contained no entries.

System action

The requested action fails.

User response

Ensure that resource update lists that you specify for the verify or install functions are not empty.

Severity

N/A

IOH4410E	ERROR UPDATING RESOURCE EXTENSION-<i>reason</i>
-----------------	--

Explanation

An error occurred while a resource extension IMS control block was being updated. The reason code indicates the problem that was encountered when IMS HP Sysgen Tools attempted to change the time stamp associated with a resource update.

System action

The request fails.

User response

Contact IBM Software Support.

Severity

8

IOH4411E	ALESERV <i>function</i> FAILED RC=<i>rc</i>
-----------------	--

Explanation

An MVS ALESERV macro failed for function ADD or DELETE for addressability to the IMS control region address space.

System action

The request fails.

User response

Contact IBM Software Support.

Severity

8

IOH4421E	MODULE IOHZRCB ENCOUNTERED AN ERROR PARSING <i>type</i> CONTROL BLOCKS
-----------------	---

Explanation

Module IOHZRCB encountered an error while it was parsing the named type of IMS control block.

System action

The request fails.

User response

Contact IBM Software Support for assistance.

Severity

N/A

IOH4422E	CONTROL BLOCK DATA EXCEEDS MAXIMUM SIZE
-----------------	--

Explanation

The amount of data that was gathered in response to a request exceeds the buffer size allowed by .

System action

The request fails.

User response

Contact IBM Software Support for assistance.

Severity

N/A

IOH4501E	AN ERROR OCCURRED CHECKING AN UPDATE LIST-AN UNKNOWN RESOURCE TYPE WAS ENCOUNTERED-<i>type</i>
-----------------	---

Explanation

The resource update list sent to the APPC transaction program contained an unknown resource type in the APPC message.

System action

The installation is stopped.

User response

Contact IBM Software Support for assistance.

Severity

N/A

IOH4502E	AN ERROR OCCURRED CHECKING AN UPDATE LIST-AN UNKNOWN RESOURCE TYPE WAS ENCOUNTERED-<i>function</i>
-----------------	---

Explanation

The resource update list sent to the APPC transaction program contained an unknown function code in the APPC message.

System action

The installation is stopped.

User response

Contact IBM Software Support for assistance.

Severity

N/A

IOH4503E	<i>type name function</i> ERROR- RESOURCE <i>reason</i>
-----------------	--

Explanation

The resource update list being installed contained an element for the resource type and name specified in the message. The function identified in the message was the action requested in the resource update list. The reason identifies the error condition encountered while attempting to perform the requested function.

System action

The installation is stopped.

User response

Check the status of the resource type and name specified in the message.

Severity

N/A

IOH4504E	<i>type name</i> CONTAINS AN INVALID VALUE FOR <i>option</i>
-----------------	---

Explanation

An error occurred while installing the named resource type and name specified in the message. The value for the specified option is not a valid value.

System action

The installation is stopped.

User response

Check the value specified for the option attribute for the named resource type and name. Use the VERIFY function to validate the content of the field. Contact IBM Software Support for assistance.

Severity

N/A

IOH4505E	AN ERROR OCCURRED PROCESSING DBD <i>dbdname</i> FOR THE VALUE OF THE <i>option</i> PARM
-----------------	--

Explanation

While processing a resource update list entry for the named database, an error occurred while interpreting the value of the named option.

System action

The installation is stopped.

User response

Check the value specified for the option attribute for the named database. Use the VERIFY function to validate the content of the field. Contact IBM Software Support for assistance.

Severity

N/A

IOH4506E	AN ERROR OCCURRED PROCESSING PSB <i>psbname</i> FOR THE VALUE OF THE <i>option</i> PARM
-----------------	--

Explanation

While processing a resource update list entry for the named program, an error occurred while interpreting the value of the named option.

System action

The installation is stopped.

User response

Check the value specified for the option attribute for the named program. Use the VERIFY function to validate the content of the field. Contact IBM Software Support for assistance.

Severity

N/A

IOH4507E	TRANS <i>trancode</i> INDICATES EDIT ROUTINE NUMBER <i>n1</i> BUT ONLY <i>n2</i> EXISTS
-----------------	--

Explanation

The value of the transaction edit routine number created by IMS HP Sysgen Tools *n1* exceeds the maximum number of transaction edit routines *n2*.

System action

The installation is stopped.

User response

Verify that a valid transaction edit routine name was included in the resource update list. Contact IBM Software Support for assistance.

Severity

N/A

IOH4701E	ERROR INTERPRETING IMS CTRAN TCOMMAND MATRIX (1)
-----------------	---

Explanation

An error occurred retrieving information from the IMS transaction command matrix. The length of a row in the matrix was an unexpected value (not 8 for IMS 8 and earlier or 9 for IMS 9 and later).

System action

The request fails.

User response

Contact IBM Software Support for assistance.

Severity

N/A

IOH4702E	MODULE IOHZGET RECEIVED AN INVALID RESOURCE TYPE- <i>resource</i>
-----------------	--

Explanation

IMS HP Sysgen Tools initiated a request through APPC to extract the attributes of a resource. The APPC message contained an invalid value for the type of resource to be obtained.

System action

The operation is stopped.

User response

Contact IBM Software Support for assistance.

Severity

N/A

IOH4703E	MODULE IOHZGET RECEIVED AN APPC MESSAGE WITH AN UNKNOWN REQUEST TYPE-<i>type</i>
-----------------	---

Explanation

IMS HP Sysgen Tools initiated a request through APPC to extract the attributes of a resource. The APPC message contained an invalid value for the function to be performed.

System action

The operation is stopped.

User response

Contact IBM Software Support for assistance.

Severity

N/A

IOH4704E	AN ERROR OCCURRED PROCESSING DBD <i>dbdname</i> FOR THE VALUE OF THE <i>option</i> PARM
-----------------	--

Explanation

While processing a resource update list entry for the named database, an error occurred interpreting the value of the named option.

System action

The installation is stopped.

User response

Check the value specified for the option attribute for the named database. Use the VERIFY function to validate the content of the field. Contact IBM Software Support for assistance.

Severity

N/A

IOH4705E	AN ERROR OCCURRED PROCESSING PSB <i>psbname</i> FOR THE VALUE OF THE <i>option</i> PARM
-----------------	--

Explanation

While processing a resource update list entry for the named program, an error occurred interpreting the value of the named option.

System action

The installation is stopped.

User response

Check the value specified for the option attribute for the named program. Use the VERIFY function to validate the content of the field. Contact IBM Software Support for assistance.

Severity

N/A

IOH4706E	TRAN <i>trancode</i> INDICATES EDIT ROUTINE NUMBER <i>n1</i> BUT ONLY <i>n2</i> EXISTS
-----------------	---

Explanation

The value of the transaction edit routine number created by IMS HP Sysgen Tools (*n1*) exceeds the maximum number of transaction edit routines (*n2*)

System action

The installation is stopped.

User response

Verify that a valid transaction edit routine name was included in the resource update list. Contact IBM Software Support for assistance.

Severity

N/A

IOH4713E	DRD ENVIRONMENT IS NOT SUPPORTED
-----------------	---

Explanation

IMS HP Sysgen Tools determined that DRD is active on the target IMS system. IMS HP Sysgen Tools does not support DRD.

System action

The request fails.

User response

If DRD is not active, re-create the IMSID setup parameters to ensure that IMS HP Sysgen Tools obtains the current DRD status.

Severity

8

IOH4714E	LOAD FAILED FOR <i>modname</i> RC=<i>rc</i> ABCODE= <i>code</i>
-----------------	--

Explanation

A LOAD for the specified module name failed. Had the condition not been intercepted, the result would have been an abend with abend code *code*, reason code *rc*.

System action

The requested function fails.

User response

Verify that the RESLIB DSN and IMS suffix in the IMSID options are correct.

Severity

N/A

IOH4715E	DRD RESOURCES REQUESTED BUT DRD DISABLED - <i>x</i>
-----------------	--

Explanation

A request for DRD information was received, but DRD is not active in the target IMS subsystem. The code at the end of the message indicates the reason for the error.

System action

The request fails.

User response

Ensure that the IMSID options are set properly in the HP Sysgen setup options.

Severity

8

IOH4716E	ERROR LOCATING IMS RDDS DATA SET NAMES - x
-----------------	---

Explanation

An error occurred while trying to find the data set names for the RDDSs that are used by an IMS subsystem. The code at the end of the message indicates the reason for the error.

System action

The request fails.

User response

Contact IBM Software Support.

Severity

8

IOH4720E	DRD PROCESSING REQUESTED IN NON-DRD ENVIRONMENT
-----------------	--

Explanation

A request was received for information about IMS DRD resources, but DRD is not enabled in the IMS subsystem.

System action

The request fails.

User response

Change your request so that non-DRD resources are requested in an IMS subsystem that has DRD disabled.

Severity

8

IOH4721E	ERROR PARSING xxxxxxxx COMMAND OUTPUT - CODE yy
-----------------	--

Explanation

IMS HP Sysgen Tools experienced an unexpected condition while parsing the XML output of an IMS type

2 command. The IMS command and internal IMS HP Sysgen Tools reason code are shown in the message text.

System action

The request fails.

User response

Contact IBM Software Support.

Severity

8

IOH4722E	IMS SCI xxxxxxxxxxxx CALL FAILED RC=yy REASON CODE=zz
-----------------	--

Explanation

An SCI call failed. The call type is indicated in the message by the xxxxxxxx value. The SCI return code and reason codes are also shown in the message text.

System action

The request fails.

User response

Ensure that IMS and the required SCI and OM address spaces are available for the target IMS system.

Severity

8

IOH4723E	CTL RC=xx REASON CODE=yy
-----------------	---------------------------------

Explanation

An error message was received in response to an IMS type 2 command. The CTL return and reason codes are shown in the message text.

System action

The request fails.

User response

Investigate the reason for the IMS type 2 command failure.

Severity

8

IOH4725E **CMDERR RC=xx REASON CODE=yy****Explanation**

An error message was received in response to an IMS type 2 command. The CMDERR return and reason codes are shown in the message text.

System action

The request fails.

User response

Investigate the reason for the IMS type 2 command failure.

Severity

8

IOH4726E **CMDERR text****Explanation**

An error message was received in response to an IMS type 2 command. The CMDERR text is shown in the message text.

System action

The request fails.

User response

Investigate the reason for the IMS type 2 command failure.

Severity

8

IOH4727E **CMDSECERR EXIT RC=ww SAF
RC=xx RACFRC=yy RACFRSN=zz****Explanation**

An error message was received in response to an IMS type 2 command. The command security error return and reason codes are shown in the message text.

System action

The request fails.

User response

Investigate the reason for the IMS type 2 command failure.

Severity

8

IOH4728E **RESPONSE text****Explanation**

An error message was received in response to an IMS type 2 command. The error text response is shown in the message text.

System action

The request fails.

User response

Investigate the reason for the IMS type 2 command failure.

Severity

8

IOH4729E **IMS TYPE-2 COMMAND NOT
SUPPORTED: reason****Explanation**

An IMS type-2 command request failed for the reason specified in the message text. The reason for the failure is either of the following:

SCI NOT ACTIVE

No SCI address space is available for the target IMS system. An SCI address space must be available before issuing an IMS type-2 command.

OM NOT ACTIVE

No OM address space is available for the target IMS system. An OM address space must be available before issuing an IMS type-2 command.

System action

The IMS type-2 command fails.

User response

Correct the environment in the target IMS system to make available all the IMS features that are indicated.

Severity

N/A

IOH4730E **ACBMBR OLC NOT SUPPORTED:
reason**

Explanation

An ACBLIB reload request failed for the reason specified in the message text. Either global online change is not active, or IMS SCI or OM is not active.

System action

The verification or installation of the resource update list fails.

User response

Either change the ACB reload request from an IMS member level global online change to an HP Sysgen ACB reload process, or correct the environment in the target IMS system to make available the one or more IMS features that are indicated.

Severity

N/A

IOH4731E	TOO MANY ACB RELOAD NAMES IN THE RESOURCE UPDATE LIST(S)
-----------------	---

Explanation

There were more than 100 ACB reload entries in the one or more resource update lists that were to be installed. All ACB reload requests in the resource update lists that are being installed are performed in a single IMS command. IMS limits the number of ACB members that can be specified in an INITIATE OLC TYPE(ACBMBR) command to 100 names.

System action

The verification or installation of the resource update list fails.

User response

Change how the resource update lists are installed to limit the number of reload ACB requests to 100 names for each install request. Either install only one resource update list at a time, or break the resource update list into multiple lists, and install each independently.

Severity

N/A

IOH4801E	GETMAIN FAILED FOR SYSID TABLE
-----------------	---

Explanation

A GETMAIN request for above the 16M line storage failed.

System action

The request is stopped.

User response

Verify that sufficient storage is available in the APPC transaction program JCL (see sample library SIOHSAMP member IOHTPADD). Contact IBM Software Support for assistance.

Severity

N/A

IOH4802E	ALESERV function FAILED RC=rc
-----------------	--------------------------------------

Explanation

An ALESERV macro, with function ADD or DELETE, as shown in the message, failed.

System action

The request is stopped.

User response

Contact IBM Software Support for assistance.

Severity

N/A

IOH4803E	FIND FAILED FOR A LOCAL MSC SYSID
-----------------	--

Explanation

While reviewing the MSC SYSID table, a local SYSID value was not found.

System action

The request is stopped.

User response

Contact IBM Software Support for assistance.

Severity

N/A

**IOH4901E UNABLE TO INSTALL UPDATES -
ONLINE CHANGE IS ACTIVE**

Explanation

The IMS subsystem has an online change in progress. IMS HP Sysgen Tools cannot install a resource update list if an online change is already in progress.

System action

The request is stopped.

User response

Determine the reason why an online change is in progress. Use the **/MODIFY ABORT** command to end the active online change, and then retry the operation.

Severity

N/A

**IOH4902E THE HP SYSGEN PSB NAME
DEFINED IN THE SETUP OPTIONS
WAS NOT FOUND**

Explanation

The PSB name that was specified in the IMSID options for this IMS system was not found in the IMS online control blocks.

System action

The request fails.

User response

Verify that the proper PSB name was entered in the IMSID options for this IMS subsystem. If correct, ensure that the PSB name is included in the IMS system definition.

Severity

N/A

**IOH4903E LOAD FAILED FOR MODULE
modname RC=rc**

Explanation

An MVS LOAD failed with the indicated return code.

System action

The request is stopped.

User response

Review the MVS SYSLOG on the system where IMS is active for messages related to the load failure.

Severity

N/A

**IOH4904E LOCAL ONLINE CHANGE
REQUESTED IN GLOBAL ONLINE
CHANGE ENVIRONMENT**

Explanation

A request for local online change process was made for an IMS subsystem with global online change enabled.

System action

The requested action fails.

User response

Contact IBM Software Support for assistance.

Severity

N/A

**IOH4905E GETMAIN FAILED FOR storage
RC=rc**

Explanation

An MVS GETMAIN failed with the indicated return code. The type of storage being obtained is indicated in the message text.

System action

The request is stopped.

User response

Review the MVS SYSLOG on the system where IMS is active for messages related to the load failure. Contact IBM Software Support for assistance.

Severity

N/A

**IOH4908E MVS ATTACH FOR DFSRRC00
FAILED-RC=rc**

Explanation

An MVS ATTACH failed with the indicated return code.

System action

The request is stopped.

User response

Review the MVS SYSLOG on the system where IMS is active for messages related to the attach request failure. The ATTACH return code is indicated in the message text. Contact IBM Software Support for assistance.

Severity

N/A

IOH4909E SUBTASK FAILED-ABEND=*ab-code*

Explanation

An attached task abended with the indicated abend code.

System action

The request is stopped.

User response

Review the MVS SYSLOG on the system where IMS is active for messages related to the subtask failure. There might be additional IMS HP Sysgen Tools messages displayed at the user's terminal, which should also be in the MVS SYSLOG.

Severity

N/A

**IOH4912E IMS *imsid* HAS AN UNKNOWN
APPC STATUS-*status***

Explanation

The indicated IMS subsystem contained an unknown value in LSCD field LSCD_STATUS.

System action

The request is stopped.

User response

Contact IBM Software Support for assistance.

Severity

N/A

IOH4913E

**IMS *imsid* HAS A TRANSITORY
APPC STATUS-*code***

Explanation

The indicated IMS subsystem contained a transitory status in LSCD field LSCD_STATUS.

System action

The request is stopped.

User response

Determine the reason why APPC/IMS status is either being started or being stopped.

Severity

N/A

**IOH4914E INSTALLATION FAILED WITH
UNDETERMINED CAUSE**

Explanation

The install request experienced an error.

System action

Installation fails.

User response

Review the messages in the MVS SYSLOG where the target IMS subsystem runs for additional information about this error.

Severity

N/A

**IOH4924E RETRIEVE FOR OLCSTAT IMSIDS
FAILED**

Explanation

An attempt to retrieve the active IMSIDs from an OLCSTAT data set failed.

System action

The requested action fails.

User response

Contact IBM Software Support for assistance.

Severity

N/A

IOH4925E	COPYMOD REQUEST RECEIVED FOR LOCAL ONLINE CHANGE IMS SYSTEM
-----------------	--

Explanation

A request to perform the COPYMOD function was invalid. The COPYMOD request copies the active MODBLKS information to the inactive MODBLKS data set for an IMSplex member that is not being updated by a resource update list. The target IMS subsystem does not have global online change active.

System action

The requested action fails.

User response

If the IMS system that received this error message was recently converted from global online change to local online change, ensure that this IMSID is removed from the old OLCSTAT data set by performing an online change for the old IMSplex. Otherwise, contact IBM Software Support for assistance.

Severity

N/A

IOH5001E	LOAD FAILED FOR MODULE <i>modname</i> RC=<i>rc</i>
-----------------	---

Explanation

An MVS LOAD macro returned an unexpected return code while loading the indicated module name.

System action

The request is stopped.

User response

Review the MVS SYSLOG on the system where IMS is active for additional messages related to the LOAD failure. Contact IBM Software Support for assistance.

Severity

N/A

IOH5003E	UNKNOWN FUNCTION PASSED TO IOHZMAIN-<i>function</i>
-----------------	--

Explanation

The APPC message received did not contain a valid IMS HP Sysgen Tools function code in the message text.

System action

The request is stopped.

User response

Contact IBM Software Support for assistance.

Severity

N/A

IOH5005E	GETMAIN FAILED FOR <i>storage</i> RC=<i>rc</i>
-----------------	---

Explanation

An MVS GETMAIN failed with the indicated return code. The type of storage being obtained is indicated in the message text.

System action

The request is stopped.

User response

Review the MVS SYSLOG on the system where IMS is active for additional messages related to the storage request failure. Contact IBM Software Support for assistance.

Severity

N/A

IOH5007E	OPEN FAILED FOR TASKLIB (IMS RESLIB)
-----------------	---

Explanation

An MVS OPEN for the IMS RESLIB failed.

System action

The request is stopped.

User response

Review the MVS SYSLOG on the system where IMS is active for additional messages related to the OPEN failure. Contact IBM Software Support for assistance.

Severity

N/A

IOH5008E **MVS ATTACH FOR *modname***
FAILED-RC=*rc*

Explanation

An MVS ATTACH macro for module *modname* failed with return code *rc*.

System action

The request is stopped.

User response

Review the MVS SYSLOG on the system where IMS is active for additional messages related to the ATTACH request failure. Contact IBM Software Support for assistance.

Severity

N/A

IOH5009E **SUBTASK FAILED ABEND=*ab-code***

Explanation

An attached task abended with the indicated abend code.

System action

The request is stopped.

User response

Review the MVS SYSLOG on the system where IMS is active for additional messages related to the subtask failure. There might be additional IMS HP Sysgen Tools messages displayed at the user's terminal, which should also be in the MVS SYSLOG.

Severity

N/A

IOH5010E **IMS NOT ACTIVE ON THIS MVS**
IMAGE-IMS *imsid*

Explanation

The IMS SCD for the named IMSID was not found on the MVS.

System action

The request is stopped.

User response

Ensure that IMS is active. Also, ensure that the APPC symbolic destination supplied in the SETUP options for this IMSID is correct for the MVS system where this IMS runs.

Severity

N/A

IOH5011E **IMS *imsid* IS RUNNING AN**
UNKNOWN VERSION OF IMS
version

Explanation

The version of IMS indicated in the SCD, and shown in the message text, is not supported.

System action

The request is stopped.

User response

Contact IBM Software Support for assistance.

Severity

N/A

IOH5012E **IMS *imsid* HAS AN UNKNOWN**
APPC STATUS-*code*

Explanation

The indicated IMS subsystem contained an unknown value in LSCD field LSCD_STATUS.

System action

The request is stopped.

User response

Contact IBM Software Support for assistance.

Severity

N/A

IOH5013E **IMS *imsid* HAS A TRANSITORY**
APPC STATUS-*code*

Explanation

The indicated IMS subsystem contained a transitory status in LSCD field LSCD_STATUS.

System action

The request is stopped.

User response

Determine the reason why APPC/IMS status is either being started or being stopped.

Severity

N/A

IOH5014E	IMS <i>imsid</i> WAS SHUT DOWN WHILE AN UPDATE LIST WAS BEING IMPLEMENTED
-----------------	--

Explanation

The requested IMS subsystem ended during the resource update list installation process. The process could not be completed.

System action

The request is stopped.

User response

Retry the operation when IMS is restarted.

Severity

N/A

IOH5015E	OPEN FAILED FOR IOHOPT
-----------------	-------------------------------

Explanation

An MVS OPEN request for IOHOPT DD failed.

System action

The function fails.

User response

For errors related to the OPEN failure in an APPC/MVS initiator, review the MVS SYSLOG where IMS is running. This could include security errors or "DD statement missing" types of MVS errors. Contact IBM Software Support for additional assistance.

Severity

N/A

IOH5016E	THE RESPONSE MESSAGE WAS LARGER THAN THE MAXIMUM SIZE PERMITTED
-----------------	--

Explanation

The response to an APPC request was larger than the maximum message size permitted by IMS HP Sysgen Tools.

System action

The request is stopped.

User response

Review the MVS SYSLOG on the system where IMS is running for any error messages. Contact IBM Software Support for assistance.

Severity

N/A

IOH5017E	NAME/TOKEN SERVICE IEANTCR FAILED WITH RETURN CODE=<i>rc</i>
-----------------	---

Explanation

A request to create an MVS name/token returned an unexpected return code.

System action

The request is stopped.

User response

Contact IBM Software Support for assistance.

Severity

N/A

IOH5018E	THE HP SYSGEN PSB NAME DEFINED IN THE SETUP OPTION WAS NOT FOUND
-----------------	---

Explanation

The PSB name that was specified in the IMSID options for this IMS system was not found in the IMS online control blocks.

System action

The request fails.

User response

Verify that the proper PSB name was entered in the IMSID options for this IMS subsystem. If it is correct, ensure that the PSB name is included in the IMS system definition.

Severity

N/A

IOH5020E	<i>function</i> FAILED FOR IMS INSTALL RC=<i>nn</i>
-----------------	--

Explanation

An ENQUEUE or DEQUEUE function, as indicated in the message text, received an unexpected return code.

System action

The requested action fails.

User response

If a resource update list installation was in progress when you attempted to install a second resource update list, this error may occur. Contact IBM Software Support for assistance.

Severity

N/A

IOH5021E	EXTAEX MACRO FAILED RC=<i>nn</i> REASON=<i>nn</i>
-----------------	--

Explanation

An EXTAEX macro received an unexpected return code.

System action

The requested action fails.

User response

Contact IBM Software Support for assistance.

Severity

N/A

IOH5022E	DEVTYPE MACRO FAILED RC=<i>nn</i> REASON=<i>nn</i>
-----------------	---

Explanation

A DEVTYPE macro received an unexpected return code.

System action

The requested action fails.

User response

Contact IBM Software Support for assistance.

Severity

N/A

IOH5023E	DEALLOCATION FAILED DD <i>ddname</i> ERROR CODE=<i>code</i> INFO CODE=<i>code</i>
-----------------	--

Explanation

A dynamic allocation deallocation request received an unexpected return code.

System action

The requested action fails.

User response

Review the dynamic allocation error code, and contact IBM Software Support for assistance, if necessary.

Severity

N/A

IOH5024E	SDUMP FAILED RC=<i>rc</i> REASON=<i>reason code</i>
-----------------	--

Explanation

An MVS SDUMP macro returned with an unexpected return code and/or reason code.

System action

The dump request fails.

User response

Review the MVS SYSLOG where the function failed for additional messages indicating the reason the MVS SVC dump failed.

Severity

N/A

IOH5024I *message text*

Explanation

This IMS HP Sysgen Tools message shows the results of an APPC Error Extract request for the error message text associated with an APPC error.

System action

None.

User response

Review the error message text to determine the cause of the APPC failure described by this error. There are additional IMS HP Sysgen Tools error messages that describe the APPC function being performed and the return code from that function.

Severity

N/A

IOH5025E **DUPLICATE DUMP SUPPRESSED BY DAE**

Explanation

MVS Dump Analysis and Elimination services suppressed an SVC dump, probably because a duplicate SVC dump was already taken.

System action

An SVC dump is not taken.

User response

None.

Severity

N/A

IOH5100I *APPC error message*

Explanation

This message contains an APPC error message that is retrieved from the APPC error extract service. IMS HP Sysgen Tools uses this message to show the information that is retrieved from APPC.

System action

None

User response

Use the APPC error information in this message in conjunction with the information in message IOH5104E to determine the reason for the APPC call failure.

Severity

N/A

IOH5101E **EXPECTED MESSAGE DFS3499I NOT RECEIVED FOR MODIFY type COMMAND**

Explanation

While attempting to install a resource update list, an IMS **/MODIFY** command (either **PREPARE** or **COMMIT** as indicated in the message) did not return a DFS3499I message indicating that the function had completed.

System action

The request is stopped.

User response

Determine the reason for the failed online change command. Contact IBM Software Support for assistance.

Severity

N/A

IOH5102E **AN ERROR OCCURRED LOADING MODULE *modname* ABEND *abcde* REASON CODE *rc***

Explanation

An MVS LOAD macro failed for the indicated module name. The abend code and return code indicate the reason for the LOAD failure.

System action

The request is stopped.

User response

Review the reason for the load failure as indicated in the abend code and return code, as well as any

additional messages that might be present in the MVS SYSLOG on the system where IMS is running.

Severity

N/A

IOH5103E	APPC/IMS SECURITY ERROR ISSUING CMD <i>command</i>
-----------------	---

Explanation

While attempting to issue the IMS command shown in the message text, an APPC/IMS return code indicated that a security error occurred.

System action

The request is stopped.

User response

Ensure that the authorized user ID specified for this IMSID in the SETUP options has authority to issue the command shown in the message.

Severity

N/A

IOH5104E	APPC CALL TO <i>module</i> FAILED RC=<i>rc</i>
-----------------	---

Explanation

An APPC/IMS request issued to the indicated APPC service module failed with the indicated return code.

System action

The request is stopped.

User response

Review the MVS SYSLOG on the system where IMS is running as well as the IMS MTO log for additional indications of the reason for the APPC/IMS session error. When APPC provides additional error text, it is shown in message IOH5111I. Contact IBM Software Support for assistance.

Severity

N/A

IOH5105E	DISPLAY MODIFY FAILED TO SHOW NO WORK PENDING
-----------------	--

Explanation

While performing an online change for MODBLKS, the **/DIS MODIFY ALL** command failed to show that there was no work pending.

System action

The request is stopped.

User response

Contact IBM Software Support for assistance.

Severity

N/A

IOH5106E	NAME/TOKEN SERVICE IEANTRT FAILED WITH RETURN CODE <i>rc</i>
-----------------	---

Explanation

The MVS Name/Token service provided an unexpected return code while retrieving the IMS HP Sysgen Tools token.

System action

The request is stopped.

User response

Contact IBM Software Support for assistance.

Severity

N/A

IOH5107E	/MODIFY PREPARE WAS UNSUCCESSFUL-SEE MVS SYSLOG FOR MESSAGES
-----------------	---

Explanation

IMS HP Sysgen Tools issued a **/MODIFY PREPARE MODBLKS** command, but the command failed.

System action

The request is stopped.

User response

Review the MVS SYSLOG on the system where IMS is running for IMS messages indicating the reason for a failure in the **/MODIFY PREPARE** command that was issued.

Severity

N/A

**IOH5108E /MODIFY COMMIT DID NOT
 COMPLETE**

Explanation

IMS HP Sysgen Tools issued a **/MODIFY COMMIT** command, but the command failed.

System action

The request is stopped.

User response

Review the MVS SYSLOG on the system where IMS is running and the IMS MTO log for IMS messages indicating the reason for a failure in the **/MODIFY COMMIT** command that was issued.

Severity

N/A

**IOH5110E UNEXPECTED RESPONSE TO
 MODIFY type COMMAND**

Explanation

The response to an IMS **/MODIFY PREPARE** or **COMMIT** command was not the expected response. The message that follows is the response received from IMS.

System action

The request fails.

User response

Review the message that follows this message for the response to the **/MODIFY** command. Contact IBM Software Support to review the cause of the unexpected response.

Severity

N/A

**IOH5201E UNEXPECTED RESPONSE TO
 command COMMAND**

Explanation

A response to the indicted command was not expected. The message that follows the IOH5201E message shows the unexpected response segment.

System action

The request is stopped.

User response

Review this and the message that follows it (which is the unexpected response text). Contact IBM Software Support for assistance.

Severity

N/A

**IOH5202E AN ERROR OCCURRED LOADING
 MODULE *modname* ABEND *abcde*
 REASON CODE *rc***

Explanation

An MVS LOAD macro failed for the indicated module name. The abend code and return code indicate the reason for the LOAD failure.

System action

The request is stopped.

User response

Review the reason for the LOAD failure as indicated in the abend code and return code, as well as any additional messages that might be present in the MVS SYSLOG on the system where IMS is running.

Severity

N/A

**IOH5203E UNEXPECTED RETURN CODE
 FROM IMS AIB CALL *type* RETURN
 CODE *retcode* REASON CODE
 *reason***

Explanation

IMS returned an unexpected return code from an IMS AIB call.

System action

The request is stopped.

User response

Review the reason for the IMS call. The call type, return, and reason codes are shown in the message text. These codes are documented in the *IMS*

Severity

N/A

IOH5401E	RACF function ERROR-SAF RC=<i>rc</i> RACF RC=<i>rc</i> RACF REASON=<i>reason</i>
-----------------	---

Explanation

The SAF interface returned an unexpected return code for a security validation request. The function might be VRFYUSER (verify a user ID), AUTH (authorization), DELUSER (delete user ID), or VRFYAUTH (verify authorization).

System action

The request is stopped.

User response

Review the MVS SYSLOG on the system where IMS is running for additional security error messages related to the failure. Contact IBM Software Support for assistance.

Severity

N/A

IOH5403E	UNKNOWN FUNCTION PASSED TO IOHZRACF-<i>function</i>
-----------------	--

Explanation

The APPC message received did not contain a valid IMS HP Sysgen Tools code in the message text.

System action

The request is stopped.

User response

Contact IBM Software Support for assistance.

Severity

N/A

IOH5501E	AN ERROR OCCURRED CHECKING AN UPDATE LIST-AN UNKNOWN RESOURCE TYPE WAS ENCOUNTERED-<i>resource</i>
-----------------	---

Explanation

The resource update list sent to the APPC transaction program contained an unknown resource type in the APPC message.

System action

The installation is stopped.

User response

Contact IBM Software Support for assistance.

Severity

N/A

IOH5502E	AN ERROR OCCURRED CHECKING AN UPDATE LIST-AN UNKNOWN FUNCTION WAS ENCOUNTERED-<i>code</i>
-----------------	--

Explanation

The resource update list sent to the APPC transaction program contained an unknown function code in the APPC message.

System action

The installation is stopped.

User response

Contact IBM Software Support for assistance.

Severity

N/A

IOH5503E	AN MVS <i>function</i> FAILED WITH RETURN CODE <i>rc</i>
-----------------	---

Explanation

An MVS POINT or BLDL macro failed with the indicated return code.

System action

The request is stopped.

User response

Review the MVS SYSLOG on the system where IMS is running for additional error messages related to the failure. Contact IBM Software Support for assistance.

Severity

N/A

IOH5504E	MODBLKS MODULE <i>modname</i> IS INCONSISTENT WITH MATRIX TABLE <i>id</i>
-----------------	--

Explanation

The active MODBLKS and MATRIX libraries have an inconsistency in the number of resources defined in the named module name and the MATRIX table id specified in the message text.

System action

The request is stopped.

User response

Ensure that the proper IMS libraries were specified in the SETUP for this IMSID and that the MATRIX libraries have only members that were created in the last IMS security gen process.

Severity

N/A

IOH5505E	RESOURCE TYPE <i>resource</i> REQUESTED BUT MODBLKS MEMBER <i>modname</i> WAS NOT FOUND
-----------------	--

Explanation

A request for the stated resource type was received, but the MODBLKS module that identifies resources of that type was not present in the MODBLKS data set.

System action

The request is stopped.

User response

Contact IBM Software Support for assistance.

Severity

N/A

IOH5506E	RESOURCE TYPE <i>resource</i> REQUESTED BUT MODBLKS MEMBER <i>modname</i> HAS AN INVALID LENGTH
-----------------	--

Explanation

A request for the stated resource type was received, but the MODBLKS module that identifies resources of that type appears to be invalid.

System action

The request is stopped.

User response

Verify that the stated MODBLKS module is valid.

Severity

N/A

IOH5507E	IMS ONLINE AND MODBLKS HAVE A DIFFERENT NUMBER OF <i>resource</i>
-----------------	--

Explanation

The number of resources of the type identified in the message text defined in the active MODBLKS data set and the number present in the IMS online environment are not the same.

System action

The request is stopped.

User response

Verify that the stated MODBLKS module for the stated resource type is valid.

Severity

N/A

IOH5508E	VALIDATION FAILED FOR MATRIX TABLE <i>id</i>
-----------------	---

Explanation

The MATRIX table loaded from the active MATRIX library did not contain valid header information.

System action

The request is stopped.

User response

Verify that the stated MATRIX module containing the stated table ID is a valid MATRIX table.

Severity

N/A

IOH5509E	MATRIX MEMBER <i>modname</i> WAS NOT FOUND IN THE ACTIVE MATRIX DATASET
-----------------	--

Explanation

The stated module name was not found in the active MATRIX library, although definitions appear to have been loaded from the member when IMS was started.

System action

The request is stopped.

User response

Verify that the stated MATRIX module containing the stated table ID is a valid MATRIX table.

Severity

N/A

IOH5510E	A CMD ENTRY IN THE RESOURCE UPDATE LIST HAS AN INVALID SEQUENCE - <i>value</i>
-----------------	---

Explanation

The value found in an IMS command entry of a resource update list was not a valid value. Only values of BEFORE or AFTER are permitted.

System action

Processing stops.

User response

Verify that IMS command entries in the resource update lists contain valid values for the command sequence field. The value must be either BEFORE or AFTER. The value found is shown in the message text.

Severity

N/A

IOH5511E	RESOURCE COUNT MISMATCH FOR <i>resource</i> IN <i>matrix</i> MATRIX
-----------------	--

Explanation

The number of resources defined in the MATRIX table type identified in the message text does not agree with

the number of resources defined in the MODBLKS data set.

System action

The request is stopped.

User response

Contact IBM Software Support for assistance.

Severity

N/A

IOH5512E	AN EMPTY RESOURCE UPDATE LIST WAS PRESENTED FOR INSTALL
-----------------	--

Explanation

An attempt was made to install a resource update list that contained no entries.

System action

The requested action fails.

User response

Ensure that any resource update list that you specify for the install function is not an empty list.

Severity

N/A

IOH5601E	UNKNOWN DDNAME FOUND IN DDNAME LIST
-----------------	--

Explanation

A call to retrieve DDNAME information from the IMS control region contained an unexpected value for one of the DD names specified.

System action

The request is stopped.

User response

Contact IBM Software Support for assistance.

Severity

N/A

IOH5603E	SETLOCK <i>type</i> FAILED RC=<i>rc</i>
-----------------	--

Explanation

An MVS SETLOCK macro request received an unexpected return code. The function (OBTAIN or RELEASE) is also specified in the message text.

System action

The request is stopped.

User response

Contact IBM Software Support for assistance.

Severity

N/A

IOH5604E *function FOR ECSA FAILED RC=rc*

Explanation

An MVS GETMAIN or FREEMAIN macro request received an unexpected return code. The request was for ECSA storage.

System action

The request is stopped.

User response

Review the documentation, including any messages that might be in the MVS SYSLOG on the system where the IMS control region runs. Contact IBM Software Support for assistance.

Severity

N/A

IOH5605E **SRB ERROR IEAMSCHD RC=10
COMP=synchcomp CODE=abend-
code REASON=rc (STATUS xxxx)**

Explanation

An SRB scheduled to gather information from the IMS control region address space failed due to the abend code and reason code stated in the message text. The status information displayed indicates the activity type that was being processed at the time of the failure.

System action

The request is stopped.

User response

Review the documentation, including any messages that might be in the MVS SYSLOG on the system where the IMS control region runs. Contact IBM Software Support for assistance.

Severity

N/A

IOH5606E **IEAMSCHD FAILED RC=XX**

Explanation

An MVS IEAMSCHD (schedule) macro completed with an unexpected return code.

System action

The request is stopped.

User response

Review the documentation, including any messages that might be in the MVS SYSLOG on the system where the IMS control region runs. Contact IBM Software Support for assistance.

Severity

N/A

IOH5607E **IOHSRB00 FAILED - SEE SYSLOG
MESSAGE(S) (STATUS=XXXX)**

Explanation

Module IOHSRB00 failed to gather the documentation requested. The status information identifies the activity in progress at the time of the failure.

System action

The request is stopped.

User response

Review the documentation, including any messages that might be in the MVS SYSLOG on the system where the IMS control region runs. Contact IBM Software Support for assistance.

Severity

N/A

IOH5609E **BLDL FAILED RC=rc
REASON=reason**

Explanation

While attempting to verify the presence of modules DFSVNUC *n*, DFSISDC *n*, and DFSVC000 in the IMS control region STEPLIB data sets, an error occurred during the BLDL process. The return code and severity code associated with the BLDL macro are shown.

System action

The request fails.

User response

Contact IBM Software Support for assistance.

Severity

N/A

IOH5610E	MODULE <i>modname</i> NOT FOUND IN IMS CONTROL REGION STEPLIB
-----------------	--

Explanation

While attempting to verify the presence of modules DFSVNUC *n*, DFSISDC *n*, and DFSVC000 in the IMS control region STEPLIB data sets, the listed module was not found.

System action

The request fails.

User response

Contact IBM Software Support for assistance.

Severity

N/A

IOH5611E	MODULE <i>modname</i> NOT FOUND IN SAME LIBRARY AS MODULE <i>modname</i>
-----------------	---

Explanation

While attempting to verify the presence of modules DFSVNUC *n*, DFSISDC *n*, and DFSVC000 in the IMS control region STEPLIB data sets, the modules were found, but not all in the same library.

System action

The request fails.

User response

Contact IBM Software Support for assistance.

Severity

N/A

IOH5711E	DDNAME SEARCH FAILED - <i>type</i> ADDRESS WAS 0
-----------------	---

Explanation

Module IOHSRB00 failed to gather the documentation requested. A search for a requested DD name returned a 0 address for control block KSCB, DSABQ, or DSAB1, as identified in the message text.

System action

The request is stopped.

User response

Review the documentation, including any messages that might be in the MVS SYSLOG on the system where the IMS control region runs. Contact IBM Software Support for assistance.

Severity

N/A

IOH5712E	SWAREQ FAILED FOR <i>type</i> RC=<i>rc</i>
-----------------	---

Explanation

An MVS SWAREQ macro returned with an unexpected return code while trying to retrieve either the SIOT or a JFCB, as identified in the message text.

System action

The request is stopped.

User response

Review the documentation, including any messages that might be in the MVS SYSLOG on the system where the IMS control region runs. Contact IBM Software Support for assistance.

Severity

N/A

IOH5801E	GETMAIN FAILED FOR SYSID TABLE
-----------------	---

Explanation

An MVS GETMAIN macro failed for storage above the 16M line.

System action

The request fails.

User response

Verify that sufficient virtual storage is available to the APPC application programs. The REGION= keyword used in the IOHTPADD job executed at product installation time might be related to this problem.

Severity

N/A

IOH5802E ALESERV function FAILED RC=rc

Explanation

An MVS ALESERV macro failed for function ADD or DELETE, as identified in the message text, for addressability to the IMS control region address space.

System action

The request is stopped.

User response

Contact IBM Software Support for assistance.

Severity

N/A

IOH5901E ONLINE SYSTEM UPDATES WERE NOT BACKED OUT

Explanation

Removal of a partially installed resource update list was unsuccessful.

System action

A partial resource update list installation might be left in place.

User response

Review the MVS SYSLOG on the system where the IMS control region runs for messages with associated IMS HP Sysgen Tools. Contact IBM Software Support for assistance.

Severity

N/A

**IOH5903E LOAD FAILED FOR MODULE
modname RC=rc**

Explanation

Removal of a partially installed resource update list was unsuccessful.

System action

A partial resource update list installation might be left in place.

User response

Review the MVS SYSLOG on the system where the IMS control region runs for messages with associated IMS HP Sysgen Tools. Contact IBM Software Support for assistance.

Severity

N/A

**IOH6001E AN ERROR OCCURRED CHECKING
AN UPDATE LIST-AN UNKNOWN
RESOURCE TYPE WAS
ENCOUNTERED-type**

Explanation

The resource update list sent to the APPC transaction program contained an unknown resource type in the APPC message.

System action

The installation is stopped.

User response

Contact IBM Software Support for assistance.

Severity

N/A

**IOH6002E AN ERROR OCCURRED CHECKING
AN UPDATE LIST-AN UNKNOWN
RESOURCE TYPE WAS
ENCOUNTERED-function**

Explanation

The resource update list sent to the APPC transaction program contained an unknown function code in the APPC message.

System action

The installation is stopped.

User response

Contact IBM Software Support for assistance.

Severity

N/A

IOH6003E	<i>resource name function ERROR-RESOURCE condition</i>
-----------------	---

Explanation

While attempting to install the named resource definition, an inconsistency was found. The condition that caused the error is identified in the message text.

System action

The installation is stopped.

User response

Contact IBM Software Support for assistance.

Severity

N/A

IOH6004E	<i>resource name CONTAINS AN INVALID VALUE FOR option</i>
-----------------	--

Explanation

While attempting to install the named resource definition, an inconsistency was found. An invalid value for the option identified in the message text was encountered.

System action

The installation is stopped.

User response

Contact IBM Software Support for assistance.

Severity

N/A

IOH6005E	<i>ERROR INSERTING ENTRY IN modname</i>
-----------------	--

Explanation

An error occurred while inserting a resource definition entry in the named MODBLKS module.

System action

The installation is stopped.

User response

Contact IBM Software Support for assistance.

Severity

N/A

IOH6006E	<i>AN EMPTY RESOURCE UPDATE LIST WAS PRESENTED FOR INSTALL</i>
-----------------	---

Explanation

An attempt was made to install a resource update list that contained no entries.

System action

The requested action fails.

User response

Ensure that the resource update lists that you specify for the install function are not empty.

Severity

N/A

IOH6101E	<i>INVALID LOG RECORD LENGTH-reason</i>
-----------------	--

Explanation

A request to log an IMS update contained an error in the record, which is indicated in the reason code in the message text.

System action

The request is stopped.

User response

Contact IBM Software Support for assistance.

Severity

N/A

IOH6102E TIME MACRO FAILED RC=*rc*

Explanation

The MVS TIME macro returned an unexpected return code.

System action

The request is stopped.

User response

Review the return code returned by the MVS TIME macro. Contact IBM Software Support for assistance.

Severity

N/A

**IOH6103E INVALID RESOURCE TYPE IN LOG
RECORD-*type***

Explanation

A request to log an IMS update contained an invalid control block type in the record.

System action

The request is stopped.

User response

Contact IBM Software Support for assistance.

Severity

N/A

**IOH6104E AN EMPTY RESOURCE UPDATE
LIST WAS PRESENTED FOR
INSTALL**

Explanation

An attempt was made to install a resource update list that contained no entries.

System action

The requested action fails.

User response

Ensure that any resource update list that you specify for the install function is not empty.

Severity

N/A

IOH6201E OPEN FAILED FOR IOHOPT

Explanation

An attempt to open the IOHOPT data set failed.

System action

The request is stopped.

User response

Review the MVS SYSLOG on the system where IMS is running for additional error messages related to the OPEN failure. Contact IBM Software Support for assistance.

Severity

N/A

IOH6202E CLOSE FAILED FOR IOHOPT

Explanation

An attempt to close the IOHOPT data set failed.

System action

The request is stopped.

User response

Review the MVS SYSLOG on the system where IMS is running for additional error messages related to the OPEN failure. Contact IBM Software Support for assistance.

Severity

N/A

**IOH6204E IOH OPTIONS MODULE *modname*
IS INVALID**

Explanation

The IMS HP Sysgen Tools options module named in the message text is invalid.

System action

The request is stopped.

User response

Contact IBM Software Support for assistance.

Severity

N/A

IOH6205E	IOH OPTIONS MODULE <i>modname</i> NOT FOUND
-----------------	--

Explanation

The IMS HP Sysgen Tools options module named in the message text was not found.

System action

The request is stopped.

User response

Verify that the named options module is present in the IOHOPT data set on the system where IMS is running. Contact IBM Software Support for assistance.

Severity

N/A

IOH6206E	IOH GROUP DEFINITION MODULE <i>modname</i> IS INVALID code
-----------------	---

Explanation

Validation of an IMS HP Sysgen Tools group definition module failed.

System action

The requested action fails.

User response

Ensure that the requested IMS HP Sysgen Tools group module, located in the IOHOPT data set, is a valid group definition module. Contact IBM Software Support for assistance.

Severity

N/A

IOH6207E	IOH GROUP DEFINITION MODULE <i>modname</i> NOT FOUND
-----------------	---

Explanation

The requested IMS HP Sysgen Tools group was not found in the IOHOPT data set.

System action

The requested action fails.

User response

Ensure that the requested IMS HP Sysgen Tools group is a valid group. Check the Group Setup option to verify that the group name is defined.

Severity

N/A

IOH6208E	SUPPLIED TARGET NAME <i>name</i> IS NOT A DEFINED IMSID OR GROUP NAME
-----------------	--

Explanation

The requested target name was not found in the IOHOPT data set.

System action

The requested action fails.

User response

Ensure that the requested target is a valid IMSID or group. Check the Setup option to verify that the group name or IMSID is defined.

Severity

N/A

IOH6209E	AN MVS DELETE FOR OPTIONS MODULE <i>modname</i> FAILED RC=<i>nn</i>
-----------------	--

Explanation

An MVS DELETE macro for the named options module returned an unexpected return code.

System action

The requested action fails.

User response

Contact IBM Software Support for assistance.

Severity

N/A

IOH6210E **LOAD FAILED FOR OPTIONS**
 MODULE *name* RC=*nn* ABEND
 CODE=*code*

Explanation

An MVS LOAD macro for the named options module returned an unexpected return code. The return code and abend code are shown in the message text.

System action

The requested action fails.

User response

Review the abend code and return code to help determine the cause of the MVS LOAD failure. Ensure that the options module named is a valid options module. Contact IBM Software Support for assistance, if necessary.

Severity

N/A

IOH6301E **INTERNAL ERROR WRITING**
 OUTPUT - INVALID BUFFER
 INDICATOR

Explanation

An unexpected condition occurred while writing the JCLIN file.

System action

The job step abends.

User response

Contact IBM Software Support for assistance.

Severity

U4021

IOH6302E **INVALID MODULE LENGTH**
 DETECTED FOR MODBLKS
 MEMBER *xxxxxxx*

Explanation

The length of the MODBLKS module specified in the message was not valid for the release of IMS found in the RESLIB data set.

System action

The job step abends.

User response

Ensure that a valid MODBLKS data set was supplied as input to the IOHJCLIN process and that the RESLIB data set is the same release as the MODBLKS data set. Contact IBM Software Support for assistance.

Severity

U4021

IOH6303E **AN ERROR OCCURRED**
 PROCESSING DBD *aaaaaaaa* FOR
 THE VALUE OF THE *pppppppp*
 PARAMETER

Explanation

While trying to interpret the value of the specified parameter for DBD *aaaaaaaa*, an unexpected value was encountered.

System action

The job step abends.

User response

Ensure that a valid MODBLKS data set was supplied as input to the IOHJCLIN process and that the RESLIB data set is the same release as the MODBLKS data set. Contact IBM Software Support for assistance.

Severity

U4021

IOH6304E **AN ERROR OCCURRED**
 PROCESSING PSB *aaaaaaaa* FOR
 THE VALUE OF THE *pppppppp*
 PARAMETER

Explanation

While trying to interpret the value of the specified parameter for PSB *aaaaaaaa*, an unexpected value was encountered.

System action

The job step abends.

User response

Ensure that a valid MODBLKS data set was supplied as input to the IOHJCLIN process and that the RESLIB data set is the same release as the MODBLKS data set. Contact IBM Software Support for assistance.

Severity

U4021

IOH6305E	AN ERROR OCCURRED PROCESSING THE TRANSACTION EDIT ROUTINE FOR TRAN <i>ttttttt</i>
-----------------	--

Explanation

The transaction edit routine number found in the SMB definition for the transaction specified was not valid. The transaction edit routine number exceeded the number of transaction edit routines included in the IMS nucleus.

System action

The job step abends.

User response

Ensure that a valid MODBLKS data set was supplied as input to the IOHJCLIN process and that the RESLIB data set is the same release as the MODBLKS data set. Contact IBM Software Support for assistance.

Severity

U4021

IOH6401E	IOH BMP PSB ADDRESS <i>condition</i>
-----------------	---

Explanation

There was an error locating the IMS HP Sysgen Tools BMP PSB. The address was missing or invalid.

System action

Processing stops.

User response

Contact IBM Software Support for assistance.

Severity

U4021

IOH6501E	ERROR PARSING INITIATE OLC COMMAND - CODE=<i>nn</i>
-----------------	--

Explanation

IMS HP Sysgen Tools failed to successfully parse the output of the initiate OLC command output.

System action

The requested action fails.

User response

Contact IBM Software Support for assistance.

Severity

N/A

IOH6502E	IMS SCI <i>function</i> CALL FAILED RC=<i>rc</i> REASON CODE=<i>reason</i>
-----------------	---

Explanation

An IMS SCI call received an unexpected return code or reason code.

System action

The requested action fails.

User response

Review the requested SCI function and return/reason codes or contact IBM Software Support for assistance.

Severity

N/A

IOH6503E	UNEXPECTED IMSID <i>imsid</i> FOUND IN RESPONSE TO GLOBAL /DIS MODIFY ALL
-----------------	--

Explanation

IMS HP Sysgen Tools encountered an unexpected IMSID in the output of a global **DIS MODIFY ALL** command.

System action

The requested action fails.

User response

Contact IBM Software Support for assistance.

Severity

N/A

IOH6504E	GLOBAL ONLINE CHANGE REQUESTED IN LOCAL ONLINE CHANGE ENVIRONMENT
-----------------	--

Explanation

IMS HP Sysgen Tools attempted to perform a global online change for an IMS subsystem with local online change enabled.

System action

The requested action fails.

User response

Contact IBM Software Support for assistance.

Severity

N/A

IOH6521E	GLOBAL OLC PREPARE FAILED FOR IMS <i>imsid</i> WITH CONDITION CODE <i>rc</i>
-----------------	---

Explanation

IMS HP Sysgen Tools issued a global online change **INIT OLC PHASE(PREPARE) TYPE(MODBLKS)** command, but received an unexpected return code, as shown in the message text.

System action

The requested action fails.

User response

Review the return code received, or contact IBM Software Support for assistance.

Severity

N/A

IOH6522E	GLOBAL OLC COMMIT FAILED FOR IMS <i>imsid</i> WITH CONDITION CODE <i>rc</i>
-----------------	--

Explanation

IMS HP Sysgen Tools issued a global online change **INIT OLC PHASE(COMMIT)** command, but received an unexpected return code, as shown in the message text.

System action

The requested action fails.

User response

Review the return code received, or contact IBM Software Support for assistance.

Severity

N/A

IOH6523E	GLOBAL OLC TERM FAILED FOR IMS <i>imsid</i> WITH CONDITION CODE <i>rc</i>
-----------------	--

Explanation

IMS HP Sysgen Tools issued a global online change **TERM OLC** command, but received an unexpected return code, as shown in the message text.

System action

The requested action fails.

User response

Review the return code received, or contact IBM Software Support for assistance.

Severity

N/A

IOH6524E	GLOBAL OLC PREPARE HAS WORK PENDING FOR IMS <i>imsid</i>
-----------------	---

Explanation

IMS HP Sysgen Tools encountered an unexpected work pending condition in a **DIS MODIFY ALL** command.

System action

The requested action fails.

User response

Review the work pending for the named IMSID, and contact IBM Software Support for assistance, if necessary.

Severity

N/A

IOH7001E **MATRIX MODULE *modname* TABLE ID SHOWS *num type* RESOURCES *library* MODULE *modname* SHOWS *num type* RESOURCES DUMMY RESOURCE NAMES WILL BE GENERATED IN CONTROL CARDS**

Explanation

An inconsistent number of resources were defined in the MATRIX and either the MODBLKS or RESLIB data set.

System action

Dummy resource names (one alphabetic character and a 7-digit number) are generated for names of the resource type that is shown in the message.

User response

Verify that the MATRIX, MODBLKS, and RESLIB data sets in use by this reverse MATRIX process have consistent definitions. The MATRIX library must have been created by using the supplied MODBLKS and RESLIB data sets.

Severity

N/A

IOH7004E **MATRIX MODULE *modname* TABLE ID HAS *aaa-bbb type* ENTRIES *library* MODULE *modname* SHOWS *num type* RESOURCES DUMMY RESOURCE NAMES WILL BE GENERATED IN CONTROL CARDS**

Explanation

An inconsistent number of resources were defined in the MATRIX and either the MODBLKS or RESLIB data set.

System action

Dummy resource names (one alphabetic character and a 7-digit number) are generated for names of the resource type that is shown in the message.

User response

Verify that the MATRIX, MODBLKS, and RESLIB data sets in use by this reverse MATRIX process have consistent definitions. The MATRIX library must have been created by using the supplied MODBLKS and RESLIB data sets.

Severity

N/A

IOH7101E **LOAD FAILED FOR *module* RC=*nn* ABCODE=*code***

Explanation

An MVS LOAD macro failed due to the indicated return code and abend code.

System action

The job fails.

User response

Review the reason for the load failure. Ensure that the requested module is present in the STEPLIB data set for the job. Increase the region size that was specified if the job might have run out of private storage.

Severity

N/A

IOH7102E **OPEN FAILED FOR DDNAME *ddname* RC=*nn***

Explanation

An MVS OPEN macro failed with the indicated return code.

System action

The job fails.

User response

Verify that an appropriate DD statement was specified for the indicated DD name. Review the job's JESLOG for any indications of a security or other error that might have prevented the data set from opening.

Severity

N/A

IOH7103E **CLOSE FAILED FOR DDNAME RC=*nn***

Explanation

An MVS CLOSE macro failed for the indicated DD name and return code.

System action

The job fails.

User response

Review the job's JESLOG for any indications of a security or other error that might have prevented the data set from closing.

Severity

N/A

IOH7104E INVALID STATEMENT TYPE - *type*

Explanation

An invalid statement was encountered in the SYSIN statements.

System action

The statement is ignored.

User response

Review the statement in error. The statement must begin with an asterisk in column 1 (for a comment), or the first word on the line must be VERIFY or INSTALL. If the indicated statement was to be continued from a prior statement, ensure that a comma was specified at the end of the preceding line.

Severity

N/A

IOH7105E INVALID KEYWORD - *keyword*

Explanation

An unknown keyword was specified on a SYSIN statement.

System action

The statement is ignored.

User response

Review the statement to ensure that the keyword (either NAME= or IMSID=) was specified correctly.

Severity

N/A

**IOH7106E INVALID VALUE SPECIFIED FOR
KEYWORD *keyword value***

Explanation

An invalid value was found in a SYSIN statement for the indicated keyword.

System action

The statement is ignored.

User response

Review the value that was coded for the specified keyword and correct the error.

Severity

N/A

**IOH7107E DUPLICATE SPECIFICATION OF
KEYWORD *keyword***

Explanation

A statement in the SYSIN stream included a duplicate specification of the indicated keyword.

System action

The statement is ignored.

User response

Review the statement and remove the redundant specifications of the indicated keyword.

Severity

N/A

**IOH7108E ERROR PARSING ABOVE
STATEMENT**

Explanation

A statement that was read from the SYSIN stream was invalid.

System action

The statement is ignored.

User response

Review the statement to determine the cause of the syntax error.

Severity

N/A

IOH7109E REQUIRED KEYWORD (IMSID OR NAME) NOT SPECIFIED

Explanation

A statement that was read from the SYSIN stream did not specify both the IMSID= and NAME= keywords.

System action

The statement is ignored.

User response

Review the statement, and supply both the IMSID= and NAME= keywords.

Severity

N/A

IOH7110E SECOND OPEN PAREN WITHOUT A CLOSE PAREN

Explanation

A second open parenthesis was encountered without the first open parentheses being closed. Nested parentheses are not permitted.

System action

The statement is ignored.

User response

Verify that the parentheses that are specified on the statement are balanced. Note that nested parentheses are not permitted.

Severity

N/A

IOH7111E CLOSE PAREN WITHOUT AN OPEN PAREN

Explanation

A closing parenthesis was found before an open parenthesis was encountered.

System action

The statement is ignored.

User response

Verify that the parentheses that are specified on the statement are balanced.

Severity

N/A

IOH7112E CONTINUATION CARD EXPECTED-BLANK CARD FOUND

Explanation

A blank line was encountered following a statement that indicated that it was continued.

System action

The statement is ignored.

User response

Remove the blank line that is embedded within a continued statement.

Severity

N/A

IOH7113E EXPECTED CONTINUATION CARD-NEW STATEMENT FOUND

Explanation

A new statement was encountered when a continuation was expected.

System action

The prior statement is ignored.

User response

Ensure that the prior statement was complete. Complete the statement or remove any commas at the end of the line, and ensure that all open parentheses were closed.

Severity

N/A

IOH7114E UNEXPECTED OPEN PAREN ENCOUNTERED

Explanation

An open parenthesis was encountered when it was not expected.

System action

The statement is ignored.

User response

Remove the extraneous open parenthesis.

Severity

N/A

IOH7115E	MULTIPLE IMSID PARAMETERS NOT ALLOWED
-----------------	--

Explanation

More than one IMSID was specified on a statement.
Only one IMSID can be specified.

System action

The statement is ignored.

User response

Ensure that the statement includes only a single IMSID
specification in the IMSID= keyword value.

Severity

N/A

IOH7116E	IMSID EXCEEDS 4 CHARACTERS
-----------------	-----------------------------------

Explanation

The IMSID value that was specified is not valid. IMSID
lengths are limited to four bytes.

System action

The statement is ignored.

User response

Correct the specification of the IMSID= value.

Severity

N/A

IOH7117E	MORE THAN 256 UPDATE LIST NAMES WERE REQUESTED
-----------------	---

Explanation

More than the maximum number of resource update
list names were specified in a single statement.

System action

The statement is ignored.

User response

Reduce the number of resource update list names that
are specified in the NAME= specification so that less
than 256 names are included.

Severity

N/A

IOH7118E	ERROR IN STATEMENT TYPE FLAG
-----------------	-------------------------------------

Explanation

An error occurred while determining the statement
type (verify or install) when the prior statement was
being processed.

System action

The job abends.

User response

Contact IBM Software Support for assistance.

Severity

N/A

IOH7119E	STATEMENT SKIPPED DUE TO PRIOR ERROR
-----------------	---

Explanation

An error occurred when the prior statement was being
processed. The statement was ignored because of the
error.

System action

The prior statement was ignored.

User response

Review other error messages describing the reason
the statement was skipped.

Severity

N/A

IOH7120E	BOTH IMSID AND TARGET WERE SPECIFIED-USE ONLY ONE OF THESE KEYWORDS
-----------------	--

Explanation

Both IMSID= and TARGET= keywords were found in an IOHBLIST job PARM field. These are mutually exclusive parameters.

System action

The job step ends.

User response

Update the PARM= field of the batch resource update list verify/install job step. Ensure that either IMSID= or TARGET= was specified, but not both.

Severity

N/A

IOH7121E WAIT PARAMETER NOT ALLOWED FOR VERIFY STATEMENT

Explanation

The WAIT parameter was specified for a VERIFY statement. The WAIT parameter can be specified only for an INSTALL statement.

System action

The statement is ignored.

User response

Remove the WAIT parameter from the VERIFY statement.

Severity

N/A

IOH7122E WAIT VALUE EXCEEDS 5 CHARACTERS

Explanation

The WAIT value that was specified is not valid. The WAIT value must be a number between 1 - 99999.

System action

The statement is ignored.

User response

Correct the specification of the WAIT= value.

Severity

N/A

IOH7141E BDL FOR MEMBER *member* IN DDNAME IOHPDS FAILED WITH RETURN CODE *nn*

Explanation

An MVS BDL macro returned an unexpected return code for the indicated member name.

System action

The request fails.

User response

Review the return code to determine the reason for the failure. Contact IBM Software Support for assistance.

Severity

N/A

IOH7142E REQUESTED IOHPDS MEMBER *member* WAS NOT FOUND

Explanation

The indicated member name was not found in the IOHPDS data sets.

System action

The request fails.

User response

Ensure that the member name that was specified exists in the IOHPDS data sets that are specified in the job's JCL.

Severity

N/A

IOH7143E STOW FOR MEMBER *member* IN DDNAME IOHPDS FAILED WITH RETURN CODE *nn*

Explanation

An MV STOW macro returned an unexpected return code.

System action

The member will not be updated with new status as a result of the statement that is being processed.

User response

Check the job's JESLOG and the return code from the MVS STOW macro to determine the cause of the failure.

Severity

N/A

IOH7144E	REQUESTED RESOURCE UPDATE LIST(S) HAVE NO UPDATE ENTRIES
-----------------	---

Explanation

The resource update lists that were requested in a VERIFY or INSTALL statement had no entries.

System action

The request is ignored.

User response

Ensure that a resource update list that contains at least one entry is specified on the statement.

Severity

N/A

IOH7146E	GETMAIN FAILED RC=nn
-----------------	-----------------------------

Explanation

An MVS GETMAIN macro returned an unexpected return code, as indicated in the message text.

System action

The request fails.

User response

Ensure that sufficient region is available in the batch job. Contact IBM Software Support for assistance.

Severity

N/A

IOH7147E	FREEMAIN FAILED RC=nn
-----------------	------------------------------

Explanation

An MVS FREEMAIN macro returned an unexpected return code, as indicated in the message text.

System action

The request fails.

User response

Contact IBM Software Support for assistance.

Severity

N/A

IOH7148E	ENQUEUE FOR IOHPDS DATA SET FAILED RC= nn
-----------------	--

Explanation

AN MVS ENQUEUE for major name IOHPDS01 and minor name of the IOHPDS data set returned an unexpected return code.

System action

The member will not be updated with new status as a result of the statement being processed.

User response

Contact IBM Software Support for assistance.

Severity

N/A

IOH7149W	IOHPDS DATA SET IN USE - UNABLE TO UPDATE MEMBER STATUS
-----------------	--

Explanation

AN MVS ENQUEUE for major name IOHPDS01 and minor name of the IOHPDS data set indicated that the data set was in use.

System action

The member will not be updated with new status as a result of the statement being processed.

User response

Ensure that the IOHPDS data set is not in use when running a batch update list job.

Severity

N/A

IOH7150E *command* **COMMAND FAILED**

Explanation

A VERIFY or INSTALL command failed.

System action

The request failed.

User response

Review the preceding error messages to determine the cause of the failure.

Severity

N/A

IOH7151I *command* **COMMAND COMPLETED SUCCESSFULLY**

Explanation

The indicated request has completed successfully.

System action

Processing continues.

User response

None. This message is informational.

Severity

N/A

IOH7152I **ERROR IN STATEMENT TYPE FLAG**

Explanation

An error occurred while determining the statement type (verify or install) when the prior statement was being processed.

System action

The job abends.

User response

Contact IBM Software Support for assistance.

Severity

N/A

IOH7153I **RESOURCE UPDATE LIST ENTRIES:**

Explanation

The lines that follow this message show the resource update list entries that will be processed by the statement.

System action

None.

User response

None. This message is informational.

Severity

N/A

IOH7154E **FIND FOR MEMBER *member* IN DDNAME IOHPDS FAILED WITH RETURN CODE *nn***

Explanation

An MVS FIND macro failed with the indicated return code.

System action

The request fails.

User response

Verify that the indicated member name exists in the data sets that were specified for the IOHPDS DD statement.

Severity

N/A

IOH7155E **AN ERROR OCCURRED READING MEMBER *member* -ERROR CODE *code***

Explanation

An error occurred while reading the indicated member of the IOHPDS data set.

System action

The request fails.

User response

Contact IBM Software Support for assistance

Severity

N/A

IOH7201E	AN ERROR OCCURRED CHECKING AN UPDATE LIST- AN UNKNOWN RESOURCE TYPE WAS ENCOUNTERED - xxxx
-----------------	---

Explanation

An inconsistency was found while validating the resource update list contents in the APPC address space.

System action

The request fails.

User response

Ensure that the resource update lists in progress are valid. Contact IBM Software Support for assistance.

Severity

N/A

IOH7202E	AN ERROR OCCURRED CHECKING AN UPDATE LIST- AN UNKNOWN FUNCTION WAS ENCOUNTERED - x
-----------------	---

Explanation

An inconsistency was found while validating the resource update list contents in the APPC address space.

System action

The request fails.

User response

Ensure that the resource update lists in progress are valid. Contact IBM Software Support for assistance.

Severity

N/A

IOH7203E	FIND FAILED FOR <i>type name</i> FOLLOWING INSTALLATION OF UPDATE LIST
-----------------	---

Explanation

An error occurred finding the indicated resource while reviewing the results of the installation of a resource update list.

System action

Processing continues.

User response

Contact IBM Software Support for assistance.

Severity

N/A

IOH7204W	ACBLIB MEMBER FOR NEW/ UPDATED <i>type name</i> WAS NOT FOUND
-----------------	--

Explanation

A resource that was updated or added in the resource update list did not have a valid ACBLIB member.

System action

Processing continues.

User response

The indicated resource did not have a valid ACBLIB member, and the resource is currently NOTINIT. Perform the appropriate ACBGEN and activate the updated ACBLIB members with an online change for ACBLIB.

Severity

N/A

IOH7205E	AN EMPTY RESOURCE UPDATE LIST WAS PRESENTED FOR INSTALL
-----------------	--

Explanation

A resource that was updated or added in the resource update list did not have a valid ACBLIB member.

System action

The requested action fails.

User response

The indicated resource did not have a valid ACBLIB member, and the resource is currently NOTINIT. Perform the appropriate ACBGEN and activate the updated ACBLIB members with an online change for ACBLIB.

Severity

N/A

IOH7400I	IMS /CHANGE COMMAND INTERCEPT PLANTED FOR ACBLIB RELOAD FUNCTION
-----------------	---

Explanation

This is an informational message that appears the first time a reload request is encountered after an IMS control region restart.

System action

None.

User response

None. This message is informational.

Severity

N/A

IOH7401E	LOAD FAILED FOR MODULE <i>name</i> RC=<i>rc</i>
-----------------	--

Explanation

An MVS load for the indicated module name failed with the indicated return code.

System action

The installation of the resource update list fails.

User response

This condition should not occur. Contact IBM Software Support for assistance.

Severity

N/A

IOH7402E	LOCATE FOR CVB /CHANGE FAILED
-----------------	--

Explanation

IMS HP Sysgen Tools failed to locate the CVB control block associated with the **/CHANGE** command.

System action

The installation of the resource update list fails.

User response

This condition should not occur. Contact IBM Software Support for assistance.

Severity

N/A

IOH7403E	LOCATE FOR CDE OF MODULE <i>name</i> FAILED
-----------------	--

Explanation

After loading module IOHICL6 x, IMS HP Sysgen Tools must locate the CDE associated with the module. The locate process for the CDE failed.

System action

The installation of the resource update list fails.

User response

This condition should not occur. Contact IBM Software Support for assistance.

Severity

N/A

IOH7501E	UNABLE TO SET /MODIFY BARRIER - IN USE
-----------------	---

Explanation

An online change or display modify command was in progress when an ACBLIB reload was requested. The reload process used by IMS HP Sysgen Tools requires that no online change activity be in progress.

System action

The reload ACBLIB request fails.

User response

Ensure that an IMS online change is not in progress by using the **/DIS MODIFY ALL** or **/MODIFY ABORT** command. Retry installing the ACBLIB reload when an

online change or display modify command is not in progress.

Severity

N/A

IOH7502E UNABLE TO LOCATE IMS NUCLEUS

Explanation

In order to process an IMS ACBLIB reload request, IMS HP Sysgen Tools must locate the IMS nucleus that is loaded in the IMS control region address space. The CDE entry for the IMS nucleus was not found while scanning the CDE chain in the IMS address space.

System action

The reload ACBLIB request fails.

User response

This condition should not occur. Contact IBM Software Support for assistance.

Severity

N/A

**IOH7503E UNABLE TO LOCATE DFSICVD0 OR
DFSRMS00**

Explanation

IMS HP Sysgen Tools was unable to locate module DFSICVD0 or DFSRMS00 in the IMS nucleus loaded in the IMS control region address space.

System action

The reload ACBLIB request fails.

User response

This condition should not occur. Contact IBM Software Support for assistance.

Severity

N/A

IOH7506E BLDL FAILED FOR ACTIVE ACBLIB

Explanation

A DFSSTS macro requesting a BLDL for the IMS ACBLIB for an ACBLIB reload request returned an unexpected return code of 8 or higher.

System action

The reload ACBLIB request fails.

User response

This condition should not occur. Contact IBM Software Support for assistance.

Severity

N/A

**IOH7508E RELOAD FOR ACBLIB MEMBER
xxxxxxxxx FAILED-MEMBER NOT
FOUND IN ACTIVE ACBLIB**

Explanation

The indicated ACBLIB member was not found in the active ACBLIB data set.

System action

The reload ACBLIB request fails.

User response

Ensure that the member name to be reloaded, as shown in the message text, is present in the active ACBLIB data set concatenation before attempting to reload the ACBLIB member.

Severity

N/A

**IOH7509E RELOAD OF *type name* FAILED -
ACBLIB MEMBER *reason*.**

Explanation

The reload process determined that the named ACBLIB member was not valid for the PSB or DBD being reloaded. The value for *reason* can be one of the following text:

ACBLIB MEMBER NOT A PSB
ACBLIB MEMBER IS NOTCP
ACBLIB MEMBER NOT A DBD

System action

The reload ACBLIB request fails.

User response

Ensure that a valid ACBLIB member has been placed in the active ACBLIB data set before attempting to

reload the ACBLIB member. The reason in the message indicates the inconsistency found with the member. It may be NOT A PSB or NOT A DBD, indicating that the member is not a valid ACBLIB member for a PSB or DBD. Or, it may be IS NOTCP, meaning that the ACBLIB member is not compatible with this release of IMS. For NOTCP, ensure that the ACBGEN that created the ACBLIB member was processed using the same SDFSRESL data set that the IMS control region is using.

Severity

N/A

IOH7510E	RELOAD OF <i>type name</i> FAILED - <i>reason</i>.
-----------------	---

Explanation

In the message text, *reason* can be one of the following text:

NOT STOPPED
 PSB SCHEDULED
 DBD OPEN
 DBD IS A HALDB PART
 DB NOT /DBR'ED
 DBD HAS ERROR BLOCKS
 DBD IS ACTIVE
 DB IS AN MSDB
 FP NOT PRESENT
 NO OTHREADS PRESENT
 DBR IN PROGRESS
 RECOVERY IN PROGRESS
 DEDB NOT SUPPORTED

IMS HP Sysgen Tools requires that a database to be reloaded be processed by the **/DBR** command, and that a program to be reloaded not be active when the installation of the reload request is attempted. Other conditions that can cause this message include: attempting to reload a HALDB partition (you can only reload the HALDB DBD), attempting to reload a DBD that has error blocks or EEQEs present, attempting to load a DEDB DBD when the IMS subsystem has not been genned for Fast Path or when no OTHREADS are defined. Also, if the DEDB NOT SUPPORTED reason is received, ensure that you have the latest maintenance for IMS HP Sysgen Tools installed.

System action

The reload ACBLIB request fails.

User response

Ensure that a DBD to be reloaded has been processed by the **/DBR** command or that a program to be reloaded has been stopped and is not scheduled. See explanation text for other error conditions.

Severity

N/A

IOH7512E	DFSCBTS FIND FOR <i>type</i> FAILED-RC= <i>RC</i>
-----------------	--

Explanation

The IMS DFSCBTS macro was unable to locate the PSB or DBD that was requested to be reloaded. The macro returned with the indicated return code.

System action

The reload ACBLIB request fails.

User response

This condition should not occur. Contact IBM Software Support for assistance.

Severity

N/A

IOH7513E	ONLINE CHANGE IN PROGRESS
-----------------	----------------------------------

Explanation

An IMS online change was in progress when the ACBLIB RELOAD request was attempted during the installation of a resource update list.

System action

The reload ACBLIB request fails.

User response

Ensure that an IMS online change is not in progress, and run the ACBLIB RELOAD request again.

Severity

N/A

IOH7601I	STORE/FORWARD PROCESSING STARTED DATE-TIME=<i>yyyy.ddd-hh:mm:ss.thmiju</i> DSN=<i>stfwd</i>
-----------------	--

Explanation

The REDO job started processing commands from the installation store/forward VSAM data set whose name is *stfwd*.

yyyy.ddd-hh:mm:ss.thmiju

The date and time when the processing began.

yyyy

Is the year (0000 to 9999)

ddd

Is the day (000 to 366)

hh

Is the hour (0 to 23)

mm

Is the minute (0 to 59)

ss

Is the second (0 to 59)

thmiju

Is the millionth of a second (000000 - 999999)

stfwd

The name of the store/forward data set.

System action

Processing continues.

User response

None. This message is informational.

IOH7602I	STORE/FORWARD PROCESSING COMPLETED DATE- TIME=yyyy.ddd-hh:mm:ss
-----------------	--

Explanation

The REDO job completed processing all relevant records from the store/forward data set. This message is issued when the highest return code from IOHBLIST is 0.

yyyy.ddd-hh:mm:ss

The date and time when the REDO processing was completed.

yyyy

Is the year (0000 to 9999)

ddd

Is the day (000 to 366)

hh

Is the hour (0 to 23)

mm

Is the minute (0 to 59)

ss

Is the second (0 to 59)

System action

Processing continues.

User response

None. This message is informational.

IOH7603I	RECORD: IMSID=<i>imsid</i> TIME=yyyy.ddd-hh:mm:ss.thmiju CMD=I IOHPDS=<i>iohpds</i> GROUP=<i>group</i>
-----------------	---

Explanation

The REDO job read a record whose key started with *imsid* from the store/forward data set. Each field of a store/forward record key is as follows:

imsid

The IMSID of the IMS to which the record applies.

yyyy.ddd-hh:mm:ss.thmiju

The date and time when the processing began. For details, see [“IOH7601I” on page 354](#).

iohpds

The data set name of IOHPDS.

group

The name of the group.

For information about the record format of the store/forward data set, see [Table 7 on page 41](#).

System action

Processing continues.

User response

None. This message is informational.

IOH7604I	IOHBLIST COMPLETED TIME=yyyy.ddd-hh:mm:ss.thmiju RC=<i>rc</i>
-----------------	--

Explanation

The REDO process completed for the job indicated in the previous IOH7603I message.

yyyy.ddd-hh:mm:ss.thmiju

Indicates the date and time when IOHBLIST was completed. For details, see [“IOH7601I” on page 354](#).

rc

The return code from the IOHBLIST call.

System action

Processing continues.

User response

If the return code is not zero, check the results of IOHBLIST. If the return code is blank, check the results of IOHBLIST and the MVS system log (SYSLOG) because it indicates that there was an error in IOHBLIST. In these cases, you might want to delete this entry manually from the store/forward data set by using the TSO ISPF editing function because the entry is not deleted automatically. For more information about how to delete an entry, see [“Step 2: Installing the resource update list by running the REDO job” on page 40.](#)

IOH7605I	NO RECORDS FOUND ON STORE/ FORWARD TO BE PROCESSED
-----------------	---

Explanation

The REDO job found no records in the store/forward data set for the IMS for which the job was about to process records.

System action

Processing continues.

User response

None. This message is informational.

IOH7606E	IOHREDO CONTROL STATEMENT ERROR
-----------------	--

Explanation

There are one or more errors in the control statement for the REDO job.

System action

The REDO job terminates with a return code of 12.

User response

Correct the control statement and run the job again.

IOH7608E	IMSID NOT FOUND ON IOHOPT IMSID=<i>imsid</i>
-----------------	---

Explanation

The REDO process was about to start for the job indicated in the previous IOH7603I message, but the IMSID *imsid* was not registered with IOHOPT.

System action

The REDO job terminates with a return code of 12.

User response

Correct the error, and run the job again.

IOH7609E	STORE/FORWARD DOES NOT SUPPORT IMS OF GLOBAL ONLINE CHANGE IMSID=<i>imsid</i>
-----------------	--

Explanation

The REDO process was about to start for the job indicated in the previous IOH7603I message, but the processing was terminated because the IMS information about *imsid* in IOHOPT indicated that global online change was enabled for the IMS. The store/forward function does not support IMS systems that use global online change.

System action

The REDO job terminates with a return code of 12.

User response

It might be possible that the target IMS system, which had been configured as local online change at the time when the installation information was stored in the store/forward data set, was changed later to the global online change configuration. Investigate the status and run a normal install processing if installation is required.

When the problem is resolved, delete this entry from the store/forward data set by using, for example, the TSO ISPF editing function. For more information about how to delete an entry, see [“Step 2: Installing the resource update list by running the REDO job” on page 40.](#)

IOH7610W	STORE/FORWARD PROCESSING COMPLETED DATE-TIME=<i>yyy.ddd- hh:mm:ss</i> IOHBLIST HIGHEST RC=<i>rc</i>
-----------------	--

Explanation

The REDO job completed processing all relevant records from the store/forward data set.

yyy.ddd-hh:mm:ss

The date and time when the REDO processing was completed. For details, see [“IOH7602I” on page 355.](#)

rc

The highest return code from IOHBLIST. If IOHBLIST was not called, the *rc* value will be "N/A" (not applicable).

System action

Processing continues.

User response

One or more return codes from the IOHBLIST processing were not zero. See “IOH7604I” on page 355 and take an appropriate action.

If *rc* is "N/A", refer to other error messages and take an appropriate action.

IOH7611E *modulename* WAS CALLED WITH INVALID PARAMETERS

Explanation

Module *modulename* was called with invalid parameters.

System action

Processing terminates with abend code U4021.

User response

Contact IBM Software Support for assistance.

IOH7612E DDNAME *ddname* MISSING IN THE JCL

Explanation

DDNAME *ddname* was not specified in the JCL.

System action

The job terminates with a return code of 12.

User response

Add the required DDNAME and rerun the job.

IOH7613E OPEN FAILED DDNAME *ddname* RC=*rc*

Explanation

An MVS OPEN for DDNAME *ddname* failed. The open return code is shown in the message text.

System action

The job terminates with a return code of 12.

User response

Correct the error, and run the job again.

IOH7614E INVALID RECORD FOUND IN STORE/FORWARD DATASET RSN=*reason*

Explanation

The REDO job found an invalid record in the store/forward data set.

reason can be one of the following:

NO IOHPDS MEMBER
MORE THAN 256 IOHPDS MEMBERS

System action

The job terminates with a return code of 12.

User response

Correct the error, and run the job again.

IOH7621E IOHSTFWD DDNAME MISSING

Explanation

The store/forward data set was not specified as DDNAME IOHSTFWD.

System action

The job terminates with a return code of 16.

User response

Add the required DDNAME and rerun the job.

IOH7622E GENCB ACB1 ERROR

Explanation

Store/forward data set initialization failed attempting to build VSAM control blocks. Additional error messages might be displayed on the z/OS Syslog.

System action

The job terminates abnormally.

User response

Correct any errors. If the problem persists, contact IBM Software Support.

IOH7623E GENCB RPL1 ERROR

Explanation

Store/forward data set initialization failed attempting to build VSAM control blocks. Additional error messages might be displayed on the z/OS Syslog.

System action

The job terminates abnormally.

User response

Correct any errors. If the problem persists, contact IBM Software Support.

IOH7624W	INSTALLATION STORE/FORWARD DATA SET ALREADY INITIALIZED
-----------------	--

Explanation

An attempt was made to initialize the store/forward data set, but the data set had already been initialized.

System action

The job terminates with a return code of 4.

User response

No action is required.

IOH7625E	STORE/FORWARD DATA SET INIT ERROR RSN=<i>reason</i>
-----------------	--

Explanation

An error was encountered attempting to initialize the store/forward data set.

reason can be one of the following:

SHOWCB ERR
MODCB ACB
OPEN ERROR
MODCB RPL
PUT ERROR

System action

The job terminates abnormally.

User response

Correct the JCL for initializing the store/forward data set, and rerun the job. If the problem persists, contact IBM Software Support.

IOH7626I	STORE/FORWARD DATA SET INITIALIZATION SUCCESSFUL
-----------------	---

Explanation

The store/forward data has been successfully initialized.

System action

Processing continues.

User response

None. This message is informational.

IOH7640I	RESOURCE UPDATE LIST GENERATION STARTED: DATE- TIME=<i>yyyy.ddd-hhmmss.thmiju</i> USER=<i>usr</i>
-----------------	--

Explanation

The Resource Update list Generator has started processing.

yyyy.ddd-hhmmss.thmiju

Indicates the date and time when the processing began. For details, see [“IOH7601I” on page 354](#).

usr

Indicates the user ID that ran this job.

System action

Processing continues.

User response

None. This message is informational.

IOH7641E	ERROR IN '<i>cmd</i>' COMMAND, <i>reason</i>
-----------------	---

Explanation

There was an error in the *cmd* command. The reason of the error is shown in *reason*, which can be one of the following values:

DUPLICATE KEYWORD - *kwd*

Keyword *kwd* has been specified more than once.

INVALID COMMAND NAME

cmd is not a valid command.

INVALID VALUE - *string1*, ALLOWABLE VALUES: *string2*

An invalid character was used in a keyword parameter. *string1* indicates the specified keyword and parameter in error, and *string2* shows the description of the keyword whose parameter must be corrected.

KEYWORD COMBINATION ERROR, *kwd*s

The combination of multiple keywords that are included in *kwd*s is not valid.

MUTUALLY EXCLUSIVE KEYWORDS - *kwd1* AND *kwd2*

kwd1 and *kwd2* are mutually exclusive keywords.

PRIMARY COMMAND MISSING

Either the **ADDMBR** or the **DELMBR** command is required, but neither of them has been specified.

REQUIRED KEYWORD MISSING - *kwd_choices*

A required keyword is missing. *kwd_choices* contains one or more candidates for the keyword.

SYNTAX ERROR - '*string*'

There is a syntax error in '*string*'.

TOO LONG VALUE FOR *kwd*

The value for *kwd* is too long.

UNBALANCED DOUBLE QUOTES

Double quotation marks are specified incorrectly.

UNBALANCED PARENTHESES

Parentheses are specified incorrectly.

UNSUPPORTED KEYWORD - *kwd*

Keyword *kwd* is not supported.

kwd1* REQUIRES *kwd2***kwd1* REQUIRES *kwd2* and *kwd3***

If you specify *kwd1*, you must also specify *kwd2* (and *kwd3*).

System action

Syntax checking continues, but the resource update list is not generated, and the job ends with a return code of 12.

User response

Correct the control statement, and rerun the job.

IOH7642I	ADDMBR(<i>name</i>) RESULT=ADDED ADDMBR(<i>name</i>) RESULT=REPLACED DELMBR(<i>name</i>) RESULT=DELETED
-----------------	--

Explanation

The resource update list has been processed successfully.

ADDMBR(*name*) RESULT=ADDED

The resource update list has been added.

ADDMBR(*name*) RESULT=REPLACED

The resource update list has been replaced.

DELMBR(*name*) RESULT=DELETED

The resource update list has been deleted.

System action

Processing continues.

User response

None. This message is informational.

IOH7643W	DELMBR(<i>name</i>) RESULT=NOT FOUND
-----------------	---

Explanation

The processing of the resource update list ended with a warning.

DELMBR(*name*) RESULT=NOT FOUND

The resource update list could not be deleted because it was missing.

System action

Processing continues.

User response

If necessary, correct the problem and run the job again.

IOH7644E	ADDMBR(<i>name</i>) RESULT=DUPLICATE ADDMBR(<i>name</i>) RESULT=WRITE ERROR
-----------------	--

Explanation

The processing of the resource update list failed.

ADDMBR(*name*) RESULT=DUPLICATE

The resource update list was not added because a list with the same name already existed. If you want to update an existing resource update list, you need to specify REPLACE(Y).

ADDMBR(*name*) RESULT=WRITE ERROR

The resource update list was not added due to a write error. For details, see the previous message.

System action

Processing continues.

User response

Correct the error, and run the job again.

IOH7645I	RESOURCE UPDATE LIST GENERATION COMPLETED: DATE- TIME=yyyy.ddd-hhmmss.thmju USER=usr RC=rc
-----------------	---

Explanation

The Resource Update List Generator job completed successfully.

yyyy.ddd-hhmmss.thmiju

The date and time when the processing began. For details, see “IOH7601I” on page 354.

usr

The user ID that ran this job.

rc

Return code from the Resource Update List Generator. *rc* can be either 0 or 4.

System action

The job terminates with a return code of 0 or 4.

User response

None. If the return code is 4, retry the job as necessary.

IOH7646E	RESOURCE UPDATE LIST GENERATION FAILED: DATE- TIME=yyyy.ddd-hhmmss.thmiju USER=usr RC=rc
-----------------	---

Explanation

The Resource Update List Generator job ended with errors.

yyyy.ddd-hhmmss.thmiju

The date and time when the processing began. For details, see “IOH7601I” on page 354.

usr

The user ID that ran this job.

rc

Return code from the Resource Update List Generator. *rc* can be either 8 or 12.

System action

The job terminates with a return code of 8 or 12.

User response

An error occurred during resource update list generation. See the error messages that are shown in the report, and take an appropriate action.

IOH7647E	EXECUTION ENVIRONMENT ERROR, PROGRAM IS <i>pgm</i>, REASON IS <i>reason</i>
-----------------	--

Explanation

There was an error in the execution environment of program *pgm*. The reason is shown in *reason*, which can be one of the following values:

INVALID SYSEXEC LIBRARY

The SYSEXEC library is invalid because some members were not found in that library.

I/O ERROR ON SYSIN

An I/O error occurred while trying to read the SYSIN data set.

System action

The job terminates with a return code of 12.

User response

Correct the error, and run the job again.

IOH7648E	RESOURCE UPDATE LIST GENERATOR DETECTED CONTROL STATEMENT ERROR
-----------------	--

Explanation

One or more errors were detected in the control statements of the Resource Update List Generator.

System action

The job terminates with a return code of 12.

User response

Correct the error, and run the job again.

IOH7649E	RESOURCE UPDATE LIST GENERATOR DETECTED INVALID RECORD IN IOHWK1
-----------------	---

Explanation

The Resource Update List Generator detected an invalid record in the IOHWK1 data set.

System action

Processing terminates with abend code U4021.

User response

Contact IBM Software Support for assistance.

IOH7650E	MVS <i>xxxx</i> MACRO FAILED FOR IOHPDS RC=<i>rc</i> REASON=<i>rsn</i> MBR=<i>mbr</i>
-----------------	--

Explanation

An MVS xxxx macro returned an unexpected return code and reason code for IOHPDS member *mbr*, as indicated in the message text.

System action

Processing terminates with a return code of 12.

User response

Review the MVS SYSLOG for any additional error messages that might be related to this problem, correct the error, and run the job again.

Chapter 31. ISPF messages (IOH[A-F])

Messages issued by the IMS HP Sysgen Tools ISPF interface have the format IOH*Ann*x to IOH*Fnn*x, with the exception of IOHAGT004E, which is issued by the IMS sysgen process. Note that not all messages have a severity code.

Message format

IMS HP Sysgen Tools ISPF messages adhere to the following format:

```
IOH[A-F]nnnx
```

Where:

IOH[A-F]

Indicates that the message was issued by IMS HP Sysgen Tools

nnn

Indicates the message identification number

x

Indicates the severity of the message:

A

Indicates that operator intervention is required before processing can continue.

E

Indicates that an error occurred, which might or might not require operator intervention.

I

Indicates that the message is informational only.

W

Indicates that the message is a warning to alert you to a possible error condition.

Each message also includes the following information:

Explanation:

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

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.

IOHA001	INVALID COMMAND	IOHA003	DATA CONVERSION ERROR
Explanation		Explanation	
The command entered is not valid on this panel.		An error occurred converting a sysgen table variable to display format.	
System action		System action	
The request is ignored.		The request is stopped.	
User response			
Review the valid commands listed on the panel and choose a valid command.			

User response

Retain the module name and operation type (read or write) as shown in the long version of this message (obtained by pressing the Help key (usually, **PF1**)). Contact IBM Software Support for assistance.

IOHA004 INVALID SORT COLUMN

Explanation

The SORT command requires a single operand, which must be a column name. The column name specified was missing. You might specify a column name on this panel.

System action

The SORT command is ignored.

User response

Review the SORT column specified in the message, and provide a valid column name.

IOHA005 INVALID LOCATE VALUE

Explanation

The LOCATE command requires a single operand, which must be a value to which the list will be scrolled. The value is based on the current SORT column. The value specified for the LOCATE operand must match the type of the column. For a numeric SORT column, a numeric LOCATE value is required.

System action

The LOCATE command is ignored.

User response

Change the operand of the LOCATE command to a valid value for the current sort column.

IOHA006 INVALID LINE COMMAND

Explanation

The line command entered is not a valid line command on this panel.

System action

The line command is ignored.

User response

Review the list of valid line commands shown on the panel and use one of these values for the line command.

IOHA007 INVALID LINE COMMAND

Explanation

The line command entered is not a valid line command on this panel.

System action

The line command is ignored.

User response

Review the list of valid line commands shown on the panel and use one of these values for the line command.

IOHA008 MISSING CMD VALUE

Explanation

The primary command was entered without an operand. The command specified requires an operand.

System action

The command is ignored.

User response

Review the list of valid line commands shown on the panel and use one of these values for the line command.

IOHA009 OPTIONS NOT SAVED

Explanation

New IMSID options cannot be saved until IMS environment information is shown on screen two of the IMSID options setup screens.

System action

The new IMSID options module is not created.

User response

When you create a new IMSID, you must enter the required information about at least the first two screens.

IOHA010 STOW FAILED

Explanation

An MVS STOW operation failed. The long message (obtained by pressing the Help key (usually, **PF1**)) shows the member name, operation in progress and the return code and subcode.

System action

The operation is stopped.

User response

There could be a problem with the directory of the IOHPDS data set. Review the MVS SYSLOG on the system where the TSO user is logged on for any related messaged. Contact IBM Software Support for assistance.

IOHA011 DIRECTORY SPACE ERROR

Explanation

There is not sufficient directory space to add a new member to the IOHPDS data set.

System action

The operation is stopped.

User response

Allocate a new IOHPDS data set with more directory space or delete unused members of the IOHPDS data set.

IOHA012 MEMBER EXISTS

Explanation

An ADD command was specified with a member name that already exists.

System action

The new member is not created.

User response

When using the ADD command, ensure that the specified member name does not already exist.

IOHA013 ENQ FAILED

Explanation

An ADD command was specified with a member name that already exists.

System action

The operation fails.

User response

Obtain the additional information from the long version of this message by pressing the Help key (usually, **PF1**). Note the QNAME and RNAME and the ENQ return code. Review the MVS SYSLOG on the system where the TSO user is logged on for any related messages. Contact IBM Software Support for assistance.

IOHA014 DATASET IN USE

Explanation

An ENQ macro failed because the resource is in use.

System action

The action is stopped.

User response

Retry the operation. If this does not eliminate this message, determine the holder of the enqueue on the IOHPDS data set (QNAME IOHPDS01), and obtain documentation, such as a dump, for the holder of the enqueue.

IOHA015 INVALID NEW NAME

Explanation

The specified new member name already exists.

System action

The action is stopped.

User response

Change the new member name to a name that does not already exist.

IOHA016 FIND FAILED

Explanation

An MVS FIND failed.

System action

The request is stopped.

User response

Obtain diagnostic information from the long message by pressing the Help key (usually, **PF1**). The member name, return code and reason code are provided. Review the MVS SYSLOG on the system where the TSO user is logged on for any related messages. Contact IBM Software Support for assistance.

IOHA017 ERROR READING LIST

Explanation

An error occurred reading the resource update list from the IOHPDS data set.

System action

The request fails.

User response

Obtain the error code from the long version of this message by pressing the Help key (usually, **PF1**). Contact IBM Software Support for assistance.

IOHA018 ERROR WRITING LIST

Explanation

An error occurred writing the resource update list from the IOHPDS data set.

System action

The request is stopped.

User response

Obtain the error code from the long version of this message by pressing the Help key (usually, **PF1**). Contact IBM Software Support for assistance.

IOHA019 NOTE FAILED

Explanation

An MVS NOTE operation failed.

System action

The request is stopped.

User response

Obtain the NOTE return code and subcode as well as the member being written, from the long version of this message by pressing the Help key (usually, **PF1**). Review the MVS SYSLOG on the system where the TSO

user is logged on for any related messages. Contact IBM Software Support for assistance.

IOHA020 BLDL FAILED

Explanation

An MVS BLDL operation failed.

System action

The request is stopped.

User response

Obtain the BLDL return code and member name from the long version of this message by pressing the Help key (usually, **PF1**). Review the MVS SYSLOG on the system where the TSO user is logged on for any related messages. Contact IBM Software Support for assistance.

IOHA021 DELETE FAILED

Explanation

An MVS DELETE macro failed.

System action

The operation fails.

User response

Obtain the module name and return code from the long version of this message by pressing the Help key (usually, **PF1**). Review the MVS SYSLOG on the system where the TSO user is logged on for any related messages. Contact IBM Software Support for assistance.

IOHA022 IOHPDS DS Invalid

Explanation

The specified IOHPDS data set is not a valid IOHPDS data set. IOHPDS must have DSORG=PO,RECFM=VB,LRECL=256.

System action

The request fails.

User response

Specify the data set name of a valid IOHPDS data set on the IMS HP Sysgen Tools ISPF primary options menu.

IOHA023 RESOURCE NOT FOUND

Explanation

The resource was not found. This might be as a result of a COPY command or as a result of entering an invalid resource name for an UPDATE or DELETE resource list entry.

System action

The request is stopped.

User response

Provide a valid resource name.

IOHA024 MISSING NAME

Explanation

The COPY command was entered without an operand. An operand that is the name of an existing resource, must be supplied following the command.

System action

The request is stopped.

User response

Specify a resource name to copy.

IOHA025 GETMAIN FAILED

Explanation

An MVS GETMAIN failed.

System action

The operation fails.

User response

Obtain the failing module name and return code from the long version of this message by pressing the Help key (usually, **PF1**). Contact IBM Software Support for assistance.

IOHA026 FREEMAIN FAILED

Explanation

An MVS FREEMAIN macro failed.

System action

The operation fails.

User response

Obtain the failing module name and return code from the long version of this message by pressing the Help key (usually, **PF1**). Contact IBM Software Support for assistance.

IOHA027 FUNCTION FAILED

Explanation

The IOHPDS member processing module returned an unexpected return code.

System action

The function fails.

User response

Obtain the return code from the long version of this message by pressing the Help key (usually, **PF1**). Contact IBM Software Support for assistance.

IOHA028 NAME/TOKEN Svc FAILED

Explanation

An MVS name/token service module failed.

System action

The request fails.

User response

Obtain the name/token service name and return code from the long version of this message by pressing the Help key (usually, **PF1**). Review the MVS SYSLOG on the system where the TSO user is logged on for any related messages. Contact IBM Software Support for assistance.

IOHA029 DATA CONVERSION ERROR

Explanation

An MVS date conversion routine failed with an unexpected return code.

System action

The date being converted from internal format to displayable format will display as blank.

User response

Use the Help key (**PF1**) to retrieve the full form of this message in order to find the name of the conversion macro, return code, and member name involved in the

error. Contact IBM Software Support for further assistance.

IOHA030 INTERNAL ERROR

Explanation

Module IOHDCB was invoked with an invalid parameter list.

System action

The operation fails.

User response

Obtain the error code from the long version of this message by pressing the Help key (usually, **PF1**). Contact IBM Software Support for assistance.

IOHA031 INVALID OPTION

Explanation

The MODBLKS and RDDS options are not valid for randomizers. You must select INCORE to view randomizers.

System action

The request is rejected.

User response

Select the INCORE option when requesting a list of DEDB randomizer names.

IOHA032 NO DATA TO DISPLAY

Explanation

There were no IMS HP Sysgen Tools log records that meet the date criteria; therefore, there were no macros to display.

System action

None.

User response

None.

IOHA033 SELECT ONLY 1 DEF TYPE

Explanation

Both MODBLKS and Online definition types were selected. Select only one definition type.

System action

The request is not processed.

User response

Correct the option that was specified on the View selection panel. Select either ONLINE or MODBLKS, but not both.

IOHA034 SELECT A DEFINITION TYPE

Explanation

You must select either INCORE or MODBLKS definitions to display.

System action

The request is not processed.

User response

Correct the option that was specified on the View selection panel. Select either ONLINE or MODBLKS.

IOHA035 SELECT RESOURCE TYPES

Explanation

You must select one or both resource types to include in the reverse process. Enter a non-blank character next to all the resource types that you want to include.

System action

The request is not processed.

User response

Correct the option that was specified on the reverse sysgen panel. Select one or both resource types to reverse (database or program/transaction/route code).

IOHA036 INVALID JULIAN DATE

Explanation

You must supply a valid Julian date for the start and stop dates. Julian dates must be entered in the YYYY.DDD format.

System action

The request is rejected.

User response

Enter a valid Julian date in both the start and stop date fields.

IOHA037 MISSING RECORD TYPES

Explanation

When you use option **1**, you must select at least one history log record type.

System action

Missing Record Types.

User response

The request is rejected.

IOHA038 NO RESOURCES DEFINED

Explanation

No resources of the type requested are defined in the target IMS system.

System action

None.

User response

Select a resource type that is used in the target IMS system.

IOHA040 MESSAGE ERROR

Explanation

The BRIF service requested a message that exceeded the number of error messages.

System action

The action is stopped.

User response

Contact IBM Software Support for assistance.

IOHA041 MESSAGE ERROR

Explanation

A message of invalid length was received in the module name indicated in the long form of the message.

System action

The request is stopped.

User response

Contact IBM Software Support for assistance.

IOHA042 RESPONSE ERROR

Explanation

The response from an APPC transaction did not have a response type specified.

System action

The request is stopped.

User response

Contact IBM Software Support for assistance.

IOHA060 INVALID GROUP MODULE

Explanation

The group definition module on the system where the TSO user or batch job is running is not a valid group module.

System action

The request fails.

User response

Ensure that the group name specified is a valid group name and that the module in the IOHOPT data set is a valid group module.

IOHA061 INVALID GROUP MODULE

Explanation

The group definition module on the system where the IMS subsystem is running is not a valid group module.

System action

The request fails.

User response

Ensure that the group name specified is a valid group name and that the module in the IOHOPT data set is a valid group module.

IOHA062 GROUP MODULE NOT FOUND

Explanation

The group definition module on the system where the TSO user or batch job is running was not found in the IOHOPT data set.

System action

The request fails.

User response

Enter a valid IMS HP Sysgen Tools group name.

IOHA063 GROUP MODULE NOT FOUND

Explanation

The group definition module on the system where IMS is running was not found in the IOHOPT data set.

System action

The request fails.

User response

Enter a valid IMS HP Sysgen Tools group name.

IOHA064 INVALID OPTIONS MODULE

Explanation

Validation of the options module read from the IOHOPT data set failed.

System action

The request is stopped.

User response

Verify that the options member in the IOHOPT data set for the specified IMSID is valid. Contact IBM Software Support for assistance.

IOHA065 INVALID OPTIONS MODULE

Explanation

Validation of the options module read from the IOHOPT data set failed.

System action

The request is stopped.

User response

Verify that the options member in the IOHOPT data set for the specified IMSID is valid. The options member in this request was read from the IOHOPT data set on the MVS system where the IMS control region is running. Contact IBM Software Support for assistance.

IOHA067 IMSID OPTIONS NOT FOUND

Explanation

The IMSID options module on the system where the TSO user or batch job is running was not found in the IOHOPT data set.

System action

The request fails.

User response

Enter an IMSID that is defined to IMS HP Sysgen Tools. You can review which IMSIDs are defined to IMS HP Sysgen Tools by selecting the Setup option on the IMS HP Sysgen Tools Primary Options menu.

IOHA068 IMSID OPTIONS NOT FOUND

Explanation

The IMSID options module on the system where IMS is running was not found in the IOHOPT data set.

System action

The request fails.

User response

Enter an IMSID that is defined to IMS HP Sysgen Tools. You can review which IMSIDs are defined to IMS HP Sysgen Tools by selecting the Setup option on the IMS HP Sysgen Tools Primary Options menu.

IOHA070 IOHTIME PARAMETER ERROR

Explanation

An invalid parameter was passed to module IOHTIME.

System action

The request is rejected.

User response

Contact IBM Software Support for assistance.

IOHA071 TIME macro ERROR

Explanation

The MVS TIME macro returned with an unexpected return code.

System action

The request is rejected.

User response

Use the Help key (**PF1**) to retrieve the full form of this message in order to obtain the return code from the MVS TIME macro. Contact IBM Software Support for further assistance.

IOHA072 DATA CONVERSION ERROR

Explanation

The MVS TIME macro returned with an unexpected return code.

System action

The date being converted from internal format to displayable format will display as blank.

User response

Use the Help key (**PF1**) to retrieve the full form of this message in order to find the name of the conversion macro and return code. Contact IBM Software Support for further assistance.

IOHA080 INVALID RESOURCE FOR REL

Explanation

The resource type selected is invalid for a RELOAD request. Only programs or databases can be reloaded.

System action

None.

User response

Correct the value specified for resource type.

IOHA081 COMMAND ERROR

Explanation

There was an error locating the IMS HP Sysgen Tools BMP PSB. The address found was invalid or missing.

System action

Processing stops.

User response

Contact IBM Software Support for assistance.

IOHA090 SORT Command Required

Explanation

The **LOCATE** command was entered before the **SORT** command.

System action

The **LOCATE** command is ignored.

User response

Issue the **SORT** command before attempting to use the **LOCATE** command.

IOHA091 Unpaired Quotation Marks

Explanation

Either an ending quotation mark is missing or there is an extra quotation mark at the end.

System action

The **FIND** command is ignored.

User response

Correct the quotation marks or enter a new string.

IOHA092 CHARS 'search_string' Found

Explanation

As a result of a **FIND** command, a character string has been found. The table scrolls to the line that includes the specified string.

System action

None.

User response

None. This message is informational.

IOHA093 No CHARS 'search_string' Found

Explanation

The **FIND** command could not find the character string *search_string*.

System action

None.

User response

None. This message is informational.

IOHA094 Bottom of List Reached

Explanation

This is an informational message. The **FIND** command searched the entries for the target string but reached the bottom of the list without finding the target string. Entering the **RFIND** command continues the search, starting from the top of the list.

System action

None.

User response

None. This message is informational.

IOHA095 FIND Command Required

Explanation

A function key defined as **RFIND** was pressed before the **FIND** command.

System action

The **RFIND** command is ignored.

User response

Issue the **FIND** command before attempting to use **RFIND**.

IOHA096 Too Many Parameters

Explanation

Too many parameters were specified for a **FIND** command. If one or more spaces are included in the character string that you want to find, enclose it with quotation marks.

System action

The **FIND** command is ignored.

User response

Enclose the parameters with quotation marks or remove the redundant parameters.

IOHA100 INVALID LENGTH

Explanation

The length specified is invalid. It must be a valid hexadecimal number between 1 and 1M.

System action

The request fails.

User response

Enter a valid hexadecimal number in the length field.

IOHA101 INVALID REGION ID

Explanation

The region ID entered is not valid. Specify one of the listed region IDs.

System action

The request fails.

User response

Enter a valid region ID - either IMS, DLISAS, or DBRC.

IOHA102 MULTIPLE SELECTS

Explanation

More than one field was selected. Select only one field.

System action

The request fails.

User response

Remove entries from all but one selection field.

IOHA103 MODULE ERROR

Explanation

An error occurred processing the selected module. This is a software problem and should be reported to IBM Software Support.

System action

The request fails.

User response

Contact IBM Software Support for assistance.

IOHA104 INVALID SELECT CHARACTER

Explanation

Use a valid line/field selection character.

System action

The request fails.

User response

Enter a valid selection character. On the storage request panel, this is a D or an S. On the storage display panel, this is a percent sign (%) or a question mark (?).

IOHA105 INVALID REQUEST FIELD

Explanation

The request field is missing or contains a syntax error.

System action

The request fails.

User response

Enter a valid value for the address field. See [“Specifying an address” on page 100](#) for details on specifying the address field.

IOHA106 INVALID COMMAND

Explanation

The command entered is not valid.

System action

The request fails.

User response

Correct or remove the entry in the Command field.

IOHA107 ZAP COMPLETE

Explanation

Storage updates have been installed.

System action

The request fails.

User response

None.

IOHA108 INVALID VALUE

Explanation

The updated storage value is not valid. The values must be 0-9 or A-F.

System action

The request fails.

User response

Correct the value entered in the storage area. The value must be a valid hexadecimal number.

IOHA109 TOO MUCH DATA

Explanation

More storage was entered on the ZAP panel than was originally displayed. Excess was deleted.

System action

The request fails.

User response

Ensure that you only enter updated storage information for storage values that were originally displayed on the panel. You cannot add storage by entering additional data at the end of the display.

IOHA110 INVALID REGION ID

Explanation

The region ID encoded in the APPC message was invalid.

System action

The request fails.

User response

Contact IBM Software Support for assistance.

IOHA111 ALESERV FAILURE

Explanation

An ALESERV macro, which ran in the APPC address space, received an unexpected return code.

System action

The request fails.

User response

Retrieve the long form of this message by pressing the Help key (usually, **PF1**) to retrieve the ALESERV function and return code. Contact IBM Software Support for assistance.

IOHA112 INVALID ADDRESS

Explanation

The address space was not valid.

System action

The request fails.

User response

Enter a valid value for the address field. See “Specifying an address” on page 100 for details on specifying the address field.

IOHA113 SYNTAX ERROR IN REQUEST

Explanation

The name included in the request was not valid.

System action

The request fails.

User response

Retrieve the long form of this message by pressing the Help key (usually, **PF1**) to retrieve the invalid name. Enter a valid value for the address field. See “Specifying an address” on page 100 for details on specifying the address field.

IOHA114 NOT FOUND

Explanation

The requested control block was not found.

System action

The request fails.

User response

The name specified for a control block request was not found. Enter a valid control block name or number.

IOHA115 SYNTAX ERROR

Explanation

The requested control block was not found.

System action

The request fails.

User response

Enter a valid value for the address field. See “Specifying an address” on page 100 for details on specifying the address field.

IOHA116 MODULE LIST TOO LARGE

Explanation

The module list exceeded the space available to return in the APPC message.

System action

The request fails.

User response

Contact IBM Software Support for assistance.

IOHA117 REQUEST INVALID

Explanation

The request received in the APPC address space contained a value of 0 for the address length.

System action

The request fails.

User response

Ensure that a valid address and length were specified on the request panel. Contact IBM Software Support for assistance.

IOHA118 STORAGE NOT AVAILABLE

Explanation

The requested storage is not available because it has not been obtained by the GETMAIN macro.

System action

The request fails.

User response

The value specified for the address field was not valid because the address requested was not available. Correct the address field so that it specifies a valid value.

IOHA119 ZAP REQUEST CANCELLED

Explanation

The ZAP process has been canceled.

System action

The request fails.

User response

None.

IOHA120 VSMLIST FAILED

Explanation

A VSMLIST macro received an unexpected return code.

System action

The request fails.

User response

Retrieve the long form of this message by pressing the Help key (usually, **PF1**) to retrieve the VSMLIST function and return code. Contact IBM Software Support for assistance.

IOHA121 ERROR PROCESSING VSMLIST

Explanation

An error occurred during processing of the output of the VSMLIST macro.

System action

The request fails.

User response

Contact IBM Software Support for assistance.

IOHA130 OPTION INVALID

Explanation

The option entered is not a valid option on this panel.

System action

The request is ignored.

User response

Enter a valid option as shown on the panel.

IOHA131 OPTION DATA SET REQUIRED

Explanation

The options data set name entered on the panel is invalid or missing.

System action

The request is ignored.

User response

Enter a valid IMS HP Sysgen Tools IOHOPT data set name.

IOHA132 INVALID COMMAND

Explanation

The command entered was invalid or was missing the operand of the command (such as an IMSID or group name).

System action

The request is ignored.

User response

Enter a valid command, either **S** (Select) or **D** (Delete). Include the IMSID or group name after the command, for example: S IMSA.

IOHA133 GROUP/IMSID MISSING

Explanation

The command entered was invalid or was missing the operand of the command (such as an IMSID or group name).

System action

The request is ignored.

User response

Enter a valid command, either **S** (Select) or **D** (Delete). Include the IMSID or group name after the command, for example: S IMSA.

IOHA134 INVALID IMSID

Explanation

The IMSID specified on the **S** (Select) or **D** (Delete) command was longer than 4 characters. IMSIDs can be a maximum of 4 characters.

System action

The request is ignored.

User response

Enter a valid IMSID.

IOHA135 INVALID LINE COMMAND

Explanation

The line command entered is not valid on this panel. Enter **S** to select the entry, or **D** to delete the entry.

System action

The request is ignored.

User response

Enter a valid line command, either **S** (Select) or **D** (Delete).

IOHA136 ENTRY NOT FOUND

Explanation

The entry name specified on the delete command was not found in the IOHOPT data set.

System action

The request is ignored.

User response

Enter the name of an existing IMSID when entering the delete command.

IOHA137 DSN REQUEST FAILED

Explanation

The attempt to gather data set name information from the IMS control region failed.

System action

The request fails.

User response

An error occurred in the IMS HP Sysgen Tools APPC transaction program. For additional HP Sysgen error messages that indicate the reason for the failure, review the MVS SYSLOG on the system where IMS is running.

IOHA140 IMSID *imsid* ADDED

Explanation

The requested IMSID options module was added to the IOHOPT data set.

System action

None.

User response

None.

IOHA141 IMSID *imsid* DELETED

Explanation

The requested IMSID options module was deleted from the IOHOPT data set.

System action

None.

User response

None.

IOHA142 IMSID *imsid* UPDATED

Explanation

The requested IMSID options module was updated in the IOHOPT data set.

System action

None.

User response

None.

IOHA143 GROUP *name* UPDATED

Explanation

The requested group definition was updated in the IOHOPT data set.

System action

None.

User response

None.

IOHA144 **GROUP name DELETED**

Explanation

The requested group definition was deleted from the IOHOPT data set.

System action

None.

User response

None.

IOHA145 **GROUP name ADDED**

Explanation

The requested group definition was added to the IOHOPT data set.

System action

None.

User response

None.

IOHA146 **Too few IMSIDs selected**

Explanation

A group definition must have two or more IMSIDs. You must select at least two IMSIDs or use the CANCEL command to cancel editing a group.

System action

The IMS group is not saved.

User response

Select at least two IMSIDs from the selection list.

IOHA147 **INVALID COMMAND**

Explanation

The command entered on the command line is not valid on this panel. Only the **CANs** (Cancel) command is valid.

System action

The request is ignored.

User response

Remove the command from the command line, or enter a valid command.

IOHA148 **IMSID Update Canceled**

Explanation

The editing of IMSID options was canceled by user request.

System action

Any changes to IMSID options are not saved.

User response

None.

IOHA149 **Group Name Invalid**

Explanation

The requested group name is not valid. Group names cannot start with IOH.

System action

The request to create an IMS group is ignored.

User response

To create a new IMS group, specify a name that does not begin with the letters IOH.

IOHA150 **ERROR-INSTALL IN PROGRESS**

Explanation

An install is currently in progress for the IMS subsystem.

System action

The request is ignored.

User response

Try the request again. If the condition persists, determine whether there is an IMS online change in progress.

IOHA151 ENQUEUE FAILED

Explanation

An MVS ENQ request failed in module IOHZMAIN.

System action

The request is ignored.

User response

Find the MVS ENQ return code from the long form of the message by pressing the Help key (usually, **PF1**). Contact IBM Software Support for additional assistance.

IOHA160 NO IMS SYSGEN SOURCE

Explanation

IMSID options do not have any sysgen source data sets specified.

System action

The request is ignored.

User response

In order to perform the selected function, the IMS sysgen source data sets must be specified in the IMSID options. Update IMSID options to include the appropriate IMS sysgen source libraries.

IOHA161 NO IMS SECURITY SOURCE

Explanation

IMSID options do not have any IMS security gen source data sets specified.

System action

The request is ignored.

User response

In order to perform a security gen, the IMS security gen source data sets must be specified in the IMSID options. Update the IMSID options to include the appropriate IMS security gen source libraries, or perform only an IMS sysgen instead of a sysgen and a security gen.

IOHA162

TARGET NOT FOUND

Explanation

The requested target name was not found defined in the IOHOPT data set as either an IMSID or a group name .

System action

The request is ignored.

User response

Enter a valid target name. You must specify the name of an IMSID or group that is present in the IOHOPT data set.

IOHA163

TARGET NOT FOUND

Explanation

The IMS HP Sysgen Tools APPC transaction program was unable to locate the required IMSID options module.

System action

The request is ignored.

User response

Ensure that the IMSID options module for the IMS subsystem is present on the MVS system where IMS is running. If the options module is present, review the MVS SYSLOG for possible error messages indicating the reason for the failure.

IOHA164

INTERNAL ERROR

Explanation

An invalid parameter was passed to module IOHXAPPC. A blank or invalid SYMDEST was supplied.

System action

The request is ignored.

User response

Contact IBM Software Support for assistance.

IOHA165

INTERNAL ERROR

Explanation

An invalid parameter was passed to module IOHXAPPC. The request byte did not indicate whether a name or SYMDEST was supplied.

System action

The request is ignored.

User response

Contact IBM Software Support for assistance.

IOHA166 INTERNAL ERROR

Explanation

A request to identify the type of the target name failed. This is an internal error.

System action

The request is ignored.

User response

Contact IBM Software Support for assistance.

IOHA167 INTERNAL ERROR

Explanation

Unable to locate the ECB that was posted. This is an internal error.

System action

The request is ignored.

User response

Contact IBM Software Support for assistance.

IOHA170 IOHOPT BLKSIZE TOO SMALL

Explanation

The block size of the IOHOPT data set is too small. It should be allocated with a block size greater than 4096.

System action

The request is ignored.

User response

Ensure that the block size of the IOHOPT data set is at least 4096 bytes.

IOHA181 DELETE FAILED

Explanation

An MVS DELETE by an IMS HP Sysgen Tools APPC transaction program failed.

System action

The requested action fails.

User response

Review the MVS SYSLOG on the MVS system where the IMS subsystem is running for additional error messages that may indicate the cause of the error. The long form of this message indicates the module name in addition to the return code or the abend code, or both, for which the MVS DELETE macro experienced the error.

IOHA182 LOAD FAILED

Explanation

An MVS LOAD by an IMS HP Sysgen Tools APPC transaction program failed.

System action

The requested action fails.

User response

Review the MVS SYSLOG on the MVS system where the IMS subsystem is running for additional error messages that may indicate the cause of the error. The long form of this message indicates the module name in addition to the return code or the abend code, or both, for which the MVS LOAD macro experienced the error.

IOHA190 OLCSTAT ERROR

Explanation

An error occurred while parsing the contents of the OLCSTAT data set.

System action

The requested action fails.

User response

Ensure that the OLCSTAT data set has not been corrupted. Contact IBM Software Support for additional assistance.

IOHA200 PROFILE *name* ADDED

Explanation

The requested Profile name was added to the IOHOPT data set with the defaults and options you specified.

System action

None.

User response

None.

IOHA201 PROFILE *name* DELETED

Explanation

The requested Profile name was removed from the IOHOPT data set.

System action

None.

User response

None.

IOHA202 IMSID *name* UPDATED

Explanation

The requested Profile name was updated in the IOHOPT data set.

System action

None.

User response

None.

IOHA203 USER *name* UPDATED

Explanation

The requested user definition was updated in the IOHOPT data set.

System action

None.

User response

None.

IOHA204 USER *name* DELETED

Explanation

The requested user definition was deleted from the IOHOPT data set.

System action

None.

User response

None.

IOHA205 USER *name* ADDED

Explanation

The requested user definition was added to the IOHOPT data set.

System action

None.

User response

None.

IOHA207 INVALID OPTIONS MODULE

Explanation

IMS HP Sysgen Tools' validation of an options load module failed.

System action

The request fails.

User response

Press the Help key (usually **PF1**) to obtain the module name from the long version of this message. Ensure that the IOHOPT data set is properly allocated and that no error(s) occurred loading the specified options module.

IOHA208 INVALID PROFILE NAME

Explanation

The profile name you requested to be deleted was not found.

System action

The request fails.

User response

Specify a valid profile name to delete.

IOHA209 INTERNAL ERROR

Explanation

A table row counter did not agree with the number of rows present in the table.

System action

The request fails.

User response

Press the Help key (usually, **PF1**) to see the long version of this message in order to obtain the table name that experienced the problem. Contact IBM Software Support for further assistance.

IOHA210 INVALID USER NAME

Explanation

The user name you requested to be deleted was not found.

System action

The request fails.

User response

Specify a valid user name to delete.

IOHA211 PROFILE IN USE

Explanation

You attempted to delete a profile entry that was still being used by at least one user or user group entry.

System action

The request fails.

User response

Press the Help key (usually, **PF1**) to see the long version of this message in order to obtain the user or user group name that is still using the profile name. Change the user or user group name to use a different profile entry before attempting to delete the profile name.

IOHA212 INVALID PROFILE NAME

Explanation

The profile name you specified was not found.

System action

The request fails.

User response

Specify a valid profile name.

IOHA213 INVALID USER PROFILE

Explanation

The authorization profile associated with your user ID contains an invalid profile name.

System action

The request fails.

User response

Press the Help key (usually, **PF1**), to view the long version of this message in order to obtain the user name and profile name that are in error. Change the user entry to specify a valid profile entry.

IOHA214 PROFILE name SELECTED

Explanation

The default values and the authorization to update resource attributes that are associated with your User ID or the user group to which your User ID belongs was obtained from the named profile.

System action

None.

User response

None.

IOHA215 USER NAME ALREADY DEFINED

Explanation

The user name you are trying to add is already defined in the user entries.

System action

The request fails.

User response

Either change the user entry name or edit the existing user entry that is already defined with the user entry name.

IOHA216 MOVE COMMAND CONFLICT

Explanation

Either more than one line was selected with the M command or more than one line was selected with either the B or A command.

System action

The request fails.

User response

Ensure that you select only one entry to move with the MOVE (M) command and only 1 line with either the BEFORE (B) or AFTER (A) command.

IOHA217 NOT AUTHORIZED

Explanation

You are not authorized to view IMS HP Sysgen Tools authorization profiles (Profiles or Users). You do not have read access to IOH.SETUP in class FACILITY.

System action

The request fails.

User response

Contact your system administrator to gain access to security profile IOH.SETUP in class FACILITY.

IOHA218 AUTHORIZATION ERROR

Explanation

An error occurred while checking your authorization to view profiles and users. An AUTH request for IOH.SETUP in class FACILITY received an unexpected SAF return code.

System action

The request fails.

User response

Press the Help key (usually **PF1**), to obtain the SAF return code from the long version of this message. Contact IBM Software Support for further assistance.

IOHA220 DRD NOT ACTIVE

Explanation

DRD is not active in the target IMS system.

System action

The request fails.

User response

Do not request DRD-specific information from an IMS system that does not have DRD enabled.

IOHA221 THE RRDS HAS AN INCORRECT IMSID IN THE HEADER RECORD - XXXX

Explanation

An error occurred in the requested RDDS (or the current RDDS). The IMSID that is in the header record does not match the current IMSID.

System action

The request fails.

User response

If you specified an RDDS name, ensure that the correct data set name was entered. For other requests, review the system RDDSs to ensure that RDDSs are not being used by more than one IMS system.

IOHA222 THE RRDS HAS AN INVALID STATUS IN THE HEADER RECORD - XXXX

Explanation

IMS HP Sysgen Tools encountered an unexpected status in the RDDS header record.

System action

The request fails.

User response

Review the status in the message text. If this status is valid, contact IBM Software Support.

IOHA223 THE RDDS IS NOT A SYSTEM RDDS

Explanation

IMS HP Sysgen Tools encountered a non-system RDDS. Only system RDDSs are reviewed by IMS HP Sysgen Tools.

System action

The request fails.

User response

If you specified an RDDS name, ensure that the correct data set name was entered. For other requests, review the system RDDSs to ensure that RDDSs are not being used by more than one IMS system.

IOHA224	THE VERSION NUMBER IN THE RDDS HEADER RECORD IS UNKNOWN
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Explanation

The RDDS version number in the header record of the RDDS was not expected.

System action

The request fails.

User response

Contact IBM Software Support.

IOHA225	RDDS DATA SET HAS NO RECORDS
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Explanation

IMS HP Sysgen Tools encountered an invalid resource definition data set (RDDS).

System action

The request fails.

User response

If you specified an RDDS name, ensure that the correct data set name was entered. For other requests, review the system RDDSs to ensure that the RDDSs are valid.

IOHA226	RDDS DOES NOT HAVE A VALID HEADER RECORD
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Explanation

IMS HP Sysgen Tools encountered an invalid resource definition data set (RDDS).

System action

The request fails.

User response

If you specified an RDDS name, ensure that the correct data set name was entered. For other requests, review the system RDDSs to ensure that the RDDSs are valid.

IOHA227	THE RDDS CONTAINED AN UNEXPECTED RECORD TYPE xxxx
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Explanation

IMS HP Sysgen Tools encountered a resource definition data set (RDDS) that contained a record type that was not expected in an RDDS. The record type is included in the message text.

System action

The request fails.

User response

If you specified an RDDS name, ensure that the correct data set name was entered. For other requests, review the system RDDSs to ensure that the RDDSs are valid.

IOHA228	IMS uses over 24 RDDS DSNs
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Explanation

IMS HP Sysgen Tools expects 24 or less IMS system RDDSs per IMS system. The target IMS system has more than 24 system RDDSs defined.

System action

The request fails.

User response

Contact IBM Software Support if you require more than 24 system RDDSs.

IOHA229	No RDDS data sets found
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Explanation

The target IMS system is not running, and the IMSID options for the target IMS system indicates that DRD is not active.

System action

The request fails.

User response

Try the request again when IMS is available.

IOHA230 Too many rows selected

Explanation

IMS HP Sysgen Tools allows you to select only one RDDS at a time.

System action

The request fails.

User response

Select only one RDDS.

IOHA231 No valid RDDS found

Explanation

None of the RDDSs retained in the IMSID setup options are valid. Update the IMSID options when IMS is available.

System action

The request fails.

User response

Update the IMSID setup options when IMS is active or try the request again when IMS is available.

IOHA232 INVALID COPYTRAN COMMAND

Explanation

The **COPYTRAN** command is valid only when inserting a new list entry.

System action

None.

User response

The **COPYTRAN** command was issued against a program that was not newly created. You can use the **COPYTRAN** command only on a program that is being added by the **INS** command.

IOHA233 INVALID COPYTRAN COMMAND

Explanation

An existing PSB name was not specified before the **COPYTRAN** command was issued.

System action

None.

User response

Specify an existing PSB name in the **COPY** command.

IOHA234 INVALID COPYTRAN COMMAND

Explanation

The PSB name is blank or the same as an existing PSB name.

System action

None.

User response

Specify the new PSB name to be created.

IOHA235 PSB HAS NO TRANSACTION

Explanation

The PSB has no associated transaction defined.

System action

None.

User response

Ensure that the name of the existing PSB that you specified is valid.

IOHA236 INVALID LOCATE VALUE

Explanation

The **LOCATE** value must match the data type of the current sort column. The current sort column, **FPATH**, has NO, YES, and numeric values. The **LOCATE** value specified is not NO, YES, or numeric.

System action

The **LOCATE** command is ignored.

User response

Change the operand of the **LOCATE** command to a valid value for the current sort column, **FPATH**.

IOHA237 INVALID LOCATE VALUE

Explanation

The LOCATE value must match the data type of the current sort column. The current sort column, PARLM, has NONE and numeric values. The LOCATE value specified is not NONE or numeric.

System action

The **LOCATE** command is ignored.

User response

Change the operand of the **LOCATE** command to a valid value for the current sort column, PARLM.

IOHA240 **Not a Member**
IMSID - xxxx is not a member of
the group - yyyyyyyy.

Explanation

The value that you entered as IMSID (xxxx) is not a member of group yyyyyyyy.

System action

The request fails.

User response

Enter an IMSID that is a member of group yyyyyyyy.

IOHA241 **Not a Group or a Member**
xxxxxxx is neither a group name
nor an IMSID of the group -
yyyyyyy.

Explanation

xxxxxxx is neither a group name nor an IMSID of group yyyyyyyy.

System action

The request fails.

User response

Enter a group name or an IMSID that is a member of group yyyyyyyy.

IOHA250 **Invalid Wait Value**

Explanation

The wait value is not valid. The value must be 1 - 99999.

System action

None.

User response

Specify a number between 1 and 99999 for the WAIT field.

IOHA260 **USR GRP name UPDATED**

Explanation

The requested user group definition was updated in the IOHOPT data set.

System action

None.

User response

None.

IOHA261 **USR GRP name DELETED**

Explanation

The requested user group definition was deleted from the IOHOPT data set.

System action

None.

User response

None.

IOHA262 **USR GRP name ADDED**

Explanation

The requested user group definition was added to the IOHOPT data set.

System action

None.

User response

None.

IOHA263 **INVALID USER GROUP**

Explanation

The user group that you requested to be deleted was not found.

System action

The request fails.

User response

Specify a valid user group name.

IOHA264 INVALID USR GRP PROFILE

Explanation

The authorization profile associated with the user group to which your user ID belongs contains an invalid profile name.

System action

The request fails.

User response

Press the Help key (usually, **PF1**), to view the long version of this message in order to obtain the user name and profile name that are in error. Change the user group entry to specify a valid profile entry.

IOHA265 GRP NAME ALREADY DEFINED

Explanation

The user group name that you are trying to add is already defined in the user group entries.

System action

The request fails.

User response

Either change the user group entry name or edit the existing user group entry that is already defined.

IOHA400 INVALID VALUE

Explanation

The default value enforce option must be either N or Y.

System action

None.

User response

Specify either N or Y for the **Default Value Enforce option** field.

IOHB000 ISPF VDEFINE FAILED

Explanation

A request to run the ISPF VDEFINE service returned an unexpected return code.

System action

The requested action fails.

User response

Obtain the module name and return code from the long version of this message by pressing the Help key (usually, **PF1**). Contact IBM Software Support for assistance.

IOHB001 ISPF DISPLAY FAILED

Explanation

A request to run the ISPF DISPLAY service returned an unexpected return code.

System action

The requested action fails.

User response

Obtain the module name and return code from the long version of this message by pressing the Help key (usually, **PF1**). Contact IBM Software Support for assistance.

IOHB002 ISPF SETMSG FAILED

Explanation

A request to run the ISPF SETMSG service returned an unexpected return code.

System action

The requested action fails.

User response

Obtain the module name and return code from the long version of this message by pressing the Help key (usually, **PF1**). Contact IBM Software Support for assistance.

IOHB003 ISPF TBEND FAILED

Explanation

A request to run the ISPF TBEND service returned an unexpected return code.

System action

The requested action fails.

User response

Obtain the module name and return code from the long version of this message by pressing the Help key (usually, **PF1**). Contact IBM Software Support for assistance.

IOHB004 **ISPF TBCREATE FAILED**

Explanation

A request to run the ISPF TBCREATE service returned an unexpected return code.

System action

The requested action fails.

User response

Obtain the module name and return code from the long version of this message by pressing the Help key (usually, **PF1**). Contact IBM Software Support for assistance.

IOHB005 **ISPF TBADD FAILED**

Explanation

A request to run the ISPF TBADD service returned an unexpected return code.

System action

The requested action fails.

User response

Obtain the module name and return code from the long version of this message by pressing the Help key (usually, **PF1**). Contact IBM Software Support for assistance.

IOHB006 **ISPF TBTOP FAILED**

Explanation

A request to run the ISPF TBTOP service returned an unexpected return code.

System action

The requested action fails.

User response

Obtain the module name and return code from the long version of this message by pressing the Help key (usually, **PF1**). Contact IBM Software Support for assistance.

IOHB007 **ISPF TBDISPL FAILED**

Explanation

A request to run the ISPF TBDISPL service returned an unexpected return code.

System action

The requested action fails.

User response

Obtain the module name and return code from the long version of this message by pressing the Help key (usually, **PF1**). Contact IBM Software Support for assistance.

IOHB008 **ISPF TBDELETE FAILED**

Explanation

A request to run the ISPF TBDELETE service returned an unexpected return code.

System action

The requested action fails.

User response

Obtain the module name and return code from the long version of this message by pressing the Help key (usually, **PF1**). Contact IBM Software Support for assistance.

IOHB009 **ISPF TBMOD FAILED**

Explanation

A request to run the ISPF TBMOD service returned an unexpected return code.

System action

The requested action fails.

User response

Obtain the module name and return code from the long version of this message by pressing the Help key (usually, **PF1**). Contact IBM Software Support for assistance.

IOHB010 ISPF TBSORT FAILED

Explanation

A request to run the ISPF TBSORT service returned an unexpected return code.

System action

The requested action fails.

User response

Obtain the module name and return code from the long version of this message by pressing the Help key (usually, **PF1**). Contact IBM Software Support for assistance.

IOHB011 ISPF TABLE IN USE

Explanation

A request to run the ISPF TBCREATE service failed because the ISPF table name was already in use.

System action

The requested action fails.

User response

Obtain the module name and return code from the long version of this message by pressing the Help key (usually, **PF1**). Contact IBM Software Support for assistance.

IOHB012 ISPTLIB NOT ALLOC

Explanation

A request to run the ISPF TBCREATE service failed because the ISPF table library was not allocated.

System action

The requested action fails.

User response

Ensure that the IMS HP Sysgen Tools table library (IOHTLIB) is allocated to file IOHTLIB. Obtain the module name and return code from the long version of this message by pressing the Help key (usually, **PF1**). Contact IBM Software Support for assistance.

IOHB013 ISPF TBOPEN FAILED

Explanation

A request to run the ISPF TBOPEN service returned an unexpected return code.

System action

The requested action fails.

User response

Obtain the module name and return code from the long version of this message by pressing the Help key (usually, **PF1**). Contact IBM Software Support for assistance.

IOHB014 ISPF TABLE NOT FOUND

Explanation

A request to run the ISPF TBOPEN service failed because the requested ISPF table was not found in the ISPF table library.

System action

The requested action fails.

User response

Obtain the module name and return code from the long version of this message by pressing the Help key (usually, **PF1**). Contact IBM Software Support for assistance.

IOHB015 ISPF TBCLOSE FAILED

Explanation

A request to run the ISPF TBCLOSE service returned an unexpected return code.

System action

The requested action fails.

User response

Obtain the module name and return code from the long version of this message by pressing the Help key (usually, **PF1**). Contact IBM Software Support for assistance.

IOHB016 ISPF TBGET FAILED

Explanation

A request to run the ISPF TBGET service returned an unexpected return code.

System action

The requested action fails.

User response

Obtain the module name and return code from the long version of this message by pressing the Help key (usually, **PF1**). Contact IBM Software Support for assistance.

IOHB017 **ISPF CONTROL FAILED**

Explanation

A request to run the ISPF CONTROL service returned an unexpected return code.

System action

The requested action fails.

User response

Obtain the module name and return code from the long version of this message by pressing the Help key (usually, **PF1**). Contact IBM Software Support for assistance.

IOHB018 **ISPF TBBOTTOM FAILED**

Explanation

A request to run the ISPF TBBOTTOM service returned an unexpected return code.

System action

The requested action fails.

User response

Obtain the module name and return code from the long version of this message by pressing the Help key (usually, **PF1**). Contact IBM Software Support for assistance.

IOHB019 **ISPF TBSCAN FAILED**

Explanation

A request to run the ISPF TBSCAN service returned an unexpected return code.

System action

The requested action fails.

User response

Obtain the module name and return code from the long version of this message by pressing the Help key (usually, **PF1**). Contact IBM Software Support for assistance.

IOHB020 **ISPF VPUT FAILED**

Explanation

A request to run the ISPF VPUT service returned an unexpected return code.

System action

The requested action fails.

User response

Obtain the module name and return code from the long version of this message by pressing the Help key (usually, **PF1**). Contact IBM Software Support for assistance.

IOHB021 **ISPF TBSKIP FAILED**

Explanation

A request to run the ISPF TBSKIP service returned an unexpected return code.

System action

The requested action fails.

User response

Obtain the module name and return code from the long version of this message by pressing the Help key (usually, **PF1**). Contact IBM Software Support for assistance.

IOHB022 **ISPF VGET FAILED**

Explanation

A request to run the ISPF VGET service returned an unexpected return code.

System action

The requested action fails.

User response

Obtain the module name and return code from the long version of this message by pressing the Help key (usually, **PF1**). Contact IBM Software Support for assistance.

IOHB023 ISPF TBPOT FAILED

Explanation

A request to run the ISPF TBPOT service returned an unexpected return code.

System action

The requested action fails.

User response

Obtain the module name and return code from the long version of this message by pressing the Help key (usually, **PF1**). Contact IBM Software Support for assistance.

IOHB024 ISPF FTOPEN FAILED

Explanation

A request to run the ISPF FTOPEN service returned an unexpected return code.

System action

The requested action fails.

User response

Obtain the module name and return code from the long version of this message by pressing the Help key (usually, **PF1**). Contact IBM Software Support for assistance.

IOHB025 ISPF FTINCL FAILED

Explanation

A request to run the ISPF FTINCL service returned an unexpected return code.

System action

The requested action fails.

User response

Obtain the module name and return code from the long version of this message by pressing the Help key (usually, **PF1**). Contact IBM Software Support for assistance.

IOHB026 ISPF FTCLOSE FAILED

Explanation

A request to run the ISPF FTCLOSE service returned an unexpected return code.

System action

The requested action fails.

User response

Obtain the module name and return code from the long version of this message by pressing the Help key (usually, **PF1**). Contact IBM Software Support for assistance.

IOHB027 ISPF BROWSE FAILED

Explanation

A request to run the ISPF BROWSE service returned an unexpected return code.

System action

The requested action fails.

User response

Obtain the module name and return code from the long version of this message by pressing the Help key (usually, **PF1**). Contact IBM Software Support for assistance.

IOHB028 ISPF TBQUERY FAILED

Explanation

A request to run the ISPF TBQUERY service returned an unexpected return code.

System action

The requested action fails.

User response

Obtain the module name and return code from the long version of this message by pressing the Help key (usually, **PF1**). Contact IBM Software Support for assistance.

IOHB029 ISPF BRIF FAILED

Explanation

A request to run the ISPF Browse Interface (BRIF) service returned an unexpected return code.

System action

The requested action fails.

User response

Obtain the module name and return code from the long version of this message by pressing the Help key (usually, **PF1**). Contact IBM Software Support for assistance.

IOHB030 **ISPF VCPY FAILED**

Explanation

A request to run the ISPF VCPY service returned an unexpected return code.

System action

The requested action fails.

User response

Obtain the module name and return code from the long version of this message by pressing Help. Contact IBM Software Support for assistance.

IOHB031 **ISPF VREPLACE FAILED**

Explanation

A request to run the ISPF VREPLACE service returned an unexpected return code.

System action

The requested action fails.

User response

Obtain the module name and return code from the long version of this message by pressing the Help key (usually, **PF1**). Contact IBM Software Support for assistance.

IOHB032 **ISPF EDIT REQUEST FAILED**

Explanation

A request to run the ISPF EDIT service returned an unexpected return code.

System action

The requested action fails.

User response

Obtain the module name and return code from the long version of this message by pressing the Help key (usually, **PF1**). Contact IBM Software Support for assistance.

IOHB033 **ISPF EDIF REQUEST FAILED**

Explanation

A request to run the ISPF EDIF (edit interface) service returned an unexpected return code.

System action

The requested action fails.

User response

Obtain the module name and return code from the long version of this message by pressing the Help key (usually, **PF1**). Contact IBM Software Support for assistance.

IOHB034 **ISPF ADDPOP Failed**
ISPF ADDPOP service call in
module &XDIRMOD failed with
RC=&XDIRRC.

Explanation

A request to run the ISPF ADDPOP service returned an unexpected return code.

System action

The requested action fails.

User response

Obtain the module name and the return code from the long version of this message by pressing the Help key (**PF1** by default). Contact IBM Software Support for assistance.

IOHB035 **ISPF REMPOP Failed**
ISPF REMPOP service call in
module &XDIRMOD failed with
RC=&XDIRRC.

Explanation

A request to run the ISPF REMPOP service returned an unexpected return code.

System action

The requested action fails.

User response

Obtain the module name and the return code from the long version of this message by pressing the Help key (**PF1** by default). Contact IBM Software Support for assistance.

IOHC000 CLOSE ABENDED

Explanation

An attempt to close a file abended.

System action

The request fails.

User response

Obtain the DD name, data set type, and abend code from the long version of this message by pressing the Help key (usually, **PF1**). Review the MVS SYSLOG on the system where the TSO user is logged on for any related messages. Contact IBM Software Support for assistance.

IOHC001 INTERNAL ERROR

Explanation

An invalid parameter was passed to module IOHMBLK.

System action

The request fails.

User response

Obtain the function type from the long version of this message by pressing the Help key (usually, **PF1**). Contact IBM Software Support for assistance.

IOHC002 OPEN FAILED

Explanation

An attempt to open a file failed.

System action

The request fails.

User response

Obtain the DD name, data set type, and abend code from the long version of this message by pressing the Help key (usually, **PF1**). Review the MVS SYSLOG on the system where the TSO user is logged on for any related messages. Contact IBM Software Support for assistance.

IOHC003 OPEN ABENDED

Explanation

An attempt to open a file abended.

System action

The request fails.

User response

Obtain the DD name, data set type, and abend code from the long version of this message by pressing the Help key (usually, **PF1**). Review the MVS SYSLOG on the system where the TSO user is logged on for any related messages. Contact IBM Software Support for assistance.

IOHC004 CLOSE FAILED

Explanation

IMS HP Sysgen Tools received an unexpected return code when closing a data set. The return code and data set are shown in the long form of the error message obtained by pressing the Help Key (usually, **PF1**).

System action

The request fails.

User response

Review the MVS SYSLOG on the system where the TSO user or batch job is running for other indications of a problem during the close process. Contact IBM Software Support for additional assistance.

IOHC005 ALLOCATION FAILED

Explanation

Allocation of a data set failed.

System action

The request fails.

User response

Obtain the DD name, data set type, and abend code from the long version of this message by pressing the Help key (usually, **PF1**). Review ISPF Appendix A by pressing the Help key on the ISPF Primary Options menu to determine the reason for the error code reported in the long message. Contact IBM Software Support for assistance.

IOHC006 DEALLOCATION FAILED

Explanation

Deallocation of a data set failed.

System action

The request fails.

User response

Obtain the DD name, data set type, and abend code from the long version of this message by pressing the Help key (usually, **PF1**). Contact IBM Software Support for assistance.

IOHC007 UNKNOWN IMS RELEASE

Explanation

An unknown or unsupported release of IMS was encountered.

System action

The request fails.

User response

Obtain the release of IMS found in DFSVC000 from the long version of this message by pressing the Help key (usually, **PF1**). Contact IBM Software Support for assistance.

IOHC008 LOAD FAILED

Explanation

An MVS LOAD macro failed.

System action

The request fails.

User response

Obtain the module name and abend code from the long version of this message by pressing the Help key (usually, **PF1**). Review the MVS SYSLOG on the system where the TSO user is logged on for any related messages. Contact IBM Software Support for assistance.

IOHC009 INVALID MODBLKS MOD

Explanation

The length of a MODBLKS module was not valid for the release of IMS found in the IMS RESLIB.

System action

The request fails.

User response

Obtain the MODBLKS module name and abend code from the long version of this message by pressing the Help key (usually, **PF1**). Verify that the MODBLKS module is valid. Contact IBM Software Support for assistance.

IOHC010 INVALID MODBLKS

Explanation

An error occurred interpreting a DBD definition loaded from the MODBLKS data set.

System action

The request fails.

User response

Obtain the DBD name and the attribute name from the long version of this message by pressing the Help key (usually, **PF1**). Verify that the MODBLKS module is valid for this version of IMS. Contact IBM Software Support for assistance.

IOHC011 INVALID MODBLKS

Explanation

An error occurred interpreting a PSB definition loaded from the MODBLKS data set.

System action

The request fails.

User response

Obtain the PSB name and the attribute name from the long version of this message by pressing the Help key (usually, **PF1**). Verify that the MODBLKS module is valid for this version of IMS. Contact IBM Software Support for assistance.

IOHC012 TRAN EDIT NAME ERROR

Explanation

The transaction edit routine number obtained from the MODBLKS data set was not valid. The edit routine number exceeded the number of edit routines included in the RESLIB data set in the last IMS CTLBLKS or higher sysgen.

System action

The request fails.

User response

Obtain the transaction code and edit routine number from the long version of this message by pressing the Help key (usually, **PF1**). Verify that the proper RESLIB library is being used for this MODBLKS data set. Contact IBM Software Support for assistance.

IOHC013 MACRO FORMAT ERROR

Explanation

An unknown attribute value was encountered while converting a resource definition back to IMS sysgen source.

System action

The request fails.

User response

Obtain the resource type and name and the attribute being formatted from the long version of this message by pressing the Help key (usually, **PF1**). Verify that the proper RESLIB library is being used for this MODBLKS data set. Contact IBM Software Support for assistance.

IOHC014 MACRO FORMAT ERROR

Explanation

An invalid parameter was passed to module IOHFMAC.

System action

The request fails.

User response

Contact IBM Software Support for assistance.

IOHC015 MEMBER NAME REQUIRED

Explanation

A PDS data set was specified for output, but a member name was not specified.

System action

The request is stopped.

User response

When specifying a PDS as the output data set, ensure that a member name is included in the data set name specified.

IOHC016 INVALID BLKSIZE

Explanation

The LRECL of the output data set specified was not 80.

System action

The request is stopped.

User response

Verify that the output data set has an LRECL of 80. Either reallocate the output data set, or select a different data set with a LRECL of 80.

IOHC017 BUFFERING ERROR

Explanation

An internal error occurred while processing buffers for the input file.

System action

The request fails.

User response

Contact IBM Software Support for assistance.

IOHC018 MISSING OPTION

Explanation

The option field was missing.

System action

The request is stopped.

User response

Supply a valid option.

IOHC019 INVALID OPTION

Explanation

The option selected was not a valid option value.

System action

The request is stopped.

User response

Supply a valid option.

IOHC020 INVALID MATRIX

Explanation

MATRIX table verification failed.

System action

The request fails.

User response

Obtain the MATRIX table name from the long version of this message by pressing the Help key (usually, **PF1**). Verify that a valid MATRIX data set was specified. Contact IBM Software Support for assistance.

IOHC021 INVALID MATRIX

Explanation

A member required for reverse matrix processing was not found in the MATRIX data set.

System action

The request fails.

User response

Obtain the member name in error from the long version of this message by pressing the Help key (usually, **PF1**). Review the previous IMS security gen to ensure that it was successful. Contact IBM Software Support for assistance.

IOHC022 INVALID PSWD MATRIX

Explanation

Validation of the password for MATRIX members failed.

System action

The request fails.

User response

Review the previous IMS security gen to ensure that it was successful. Contact IBM Software Support for assistance.

IOHC024 ERROR OBTAINING DSNs

Explanation

In order to process the request, IMS HP Sysgen Tools verifies that the data set names in the IMSID options match the data set names currently in use by the IMS control region. An error occurred while obtaining the data set names currently in use.

System action

The request being processed fails.

User response

Review the MVS SYSLOG on the LPAR where IMS executes for IOH error messages that indicate the nature of the problem. Either populate the data set names on the setup panel yourself, or correct the problem and retry setup.

IOHC025 HP SYSGEN PSB INVALID

Explanation

While attempting to process the request, validation of the PSB name that was specified in the IMSID options failed.

System action

The request fails.

User response

Ensure that the proper PSB name is specified in the IMSID options for the requested IMS system. If the PSB name is correct, ensure that the PSB name is included in the IMS system definition.

IOHC026 GEN SRC UPDATED

Explanation

The GEN SRC flag, which indicates that the IMS sysgen source has been updated to reflect this log entry, was updated as requested.

System action

Processing continues.

User response

None.

IOHC027 INVALID DFSVC000

Explanation

Module DFSVC000 loaded from RESLIB was invalid.

System action

The request fails.

User response

Ensure that a valid RESLIB data set name was specified. Contact IBM Software Support for assistance.

IOHC028 IOHXGEN PARM ERROR

Explanation

IOHXGEN was called without a value set for variable IOHLINK, which should be set by the IOH@PRIM Primary Options menu.

System action

The request is stopped.

User response

Ensure that any modifications to the IOH@PRIM Primary Options menu did not interfere with ISPF variable IOHLINK. Contact IBM Software Support for assistance.

IOHC029 CLEANUP ERROR

Explanation

An error occurred while performing cleanup for open files and freeing storage.

System action

The request is stopped.

User response

Review the sysgen output for any additional messages indicating the reason for the cleanup failure. Contact IBM Software Support for assistance.

IOHC030 SYSGEN ERRORS

Explanation

One or more IMS sysgen errors were found while performing the IMS Fastgen process.

System action

The request is stopped.

User response

Review the output of the Fastgen process to identify the errors. Finding the letters IOH in column 1 of the output will find error messages.

IOHC031 LINKEDIT ERRORS

Explanation

One or more Link edit errors were found while performing the IMS Fastgen process.

System action

The request is stopped.

User response

Review the output of the Fastgen process to identify the errors. Finding the letters IOH in column 1 of the output will find error messages.

IOHC032 SECURITY GEN ERRORS

Explanation

IMS security gen errors were found while performing the IMS Fastgen process.

System action

The request is stopped.

User response

Review the output of the Fastgen process to identify the errors. Finding the letters IOH in column 1 of the output will find error messages.

IOHC033 GETMAIN ERROR

Explanation

An error occurred during an internal storage manager GETMAIN request.

System action

The request fails.

User response

Obtain the pseudo module name for which the GETMAIN was being performed from the long version of this message by pressing the Help key (usually, **PF1**). Review the MVS SYSLOG on the system where the TSO user is logged on for any related messages. Contact IBM Software Support for assistance.

IOHC034 **FREEMAIN ERROR**

Explanation

An error occurred during an internal storage manager FREEMAIN request.

System action

The request fails.

User response

Obtain the pseudo module name for which the FREEMAIN was being performed from the long version of this message by pressing the Help key (usually, **PF1**). Review the MVS SYSLOG on the system where the TSO user is logged on for any related messages. Contact IBM Software Support for assistance.

IOHC035 **INTERNAL ERROR**

Explanation

An error occurred during processing of the MODSTAT data set.

System action

The request fails.

User response

Ensure that a proper MODSTAT data set name was specified in the SETUP option for this IMSID. Contact IBM Software Support for assistance.

IOHC036 **FUNCTION ERROR**

Explanation

An error occurred during processing of an internal storage manager request.

System action

The request fails.

User response

Obtain the pseudo module name in error from the long version of this message by pressing the Help key (usually, **PF1**). Review the MVS SYSLOG on the system where the TSO user is logged on for any related messages. Contact IBM Software Support for assistance.

IOHC037 **FUNCTION ERROR**

Explanation

An ENQ or DEQ operation failed.

System action

The request fails.

User response

Obtain the data set type and return code from the long version of this message by pressing the Help key (usually, **PF1**). Review the MVS SYSLOG on the system where the TSO user is logged on for any related messages. Contact IBM Software Support for assistance.

IOHC038 **DATA SET IN USE**

Explanation

An enqueue failed for major name DFSOC001

System action

The request fails.

User response

Ensure that an IMS online change for MODBLKS is not in progress. Also, ensure that the same MODBLKS or MATRIX data sets are not shared among multiple IMS systems.

IOHC039 **DDNAME NOT FOUND**

Explanation

An attempt to locate the TIOT entry for a DD name failed.

System action

The request fails.

User response

Obtain the DD name from the long version of this message by pressing the Help key (usually, **PF1**). Contact IBM Software Support for assistance.

IOHC040 SWAREQ FAILED

Explanation

An MVS SWAREQ macro failed.

System action

The request fails.

User response

Obtain the return code from the long version of this message by pressing the Help key (usually, **PF1**). Contact IBM Software Support for assistance.

IOHC041 CONCATENATION FAILED

Explanation

A dynamic concatenation request failed.

System action

The request is stopped.

User response

Obtain the data set type and return codes from the long version of this message by pressing the Help key (usually, **PF1**). Review ISPF Appendix A by pressing the Help key on the ISPF Primary Options menu to determine the reason for the error code reported in the long message. Contact IBM Software Support for assistance.

IOHC042 UNSUPPORTED ENVIRONMENT

Explanation

IMS includes Global Online Change. IMS HP Sysgen Tools does not support this environment.

System action

The request is rejected.

User response

Verify that the IMS system that was specified uses Global Online Change. Remove this option if you want to use IMS HP Sysgen Tools.

IOHC043 INCONSISTENT MODBLKS

Explanation

The number of resources defined in MODBLKS module DFSISDB x does not match the number of resources defined in the MODBLKS resource definition module.

System action

The request is stopped.

User response

Obtain the member names in error from the long version of this message by pressing the Help key (usually, **PF1**). Ensure that the MODBLKS data set contains valid modules. Contact IBM Software Support for assistance.

IOHC044 INCONSISTENT MODBLKS

Explanation

The names of resources defined in MODBLKS module DFSISDB x does not match the number of resources defined in the MODBLKS resource definition module.

System action

The request is stopped.

User response

Obtain the member names in error from the long version of this message by pressing the Help key (usually, **PF1**). Ensure that the MODBLKS data set contains valid modules. Contact IBM Software Support for assistance.

IOHC045 MEMBER INVALID

Explanation

The ZAP process has been canceled.

System action

The request fails.

User response

Verify that the proper data set name was specified for the output data set. If the data set is not a PDS, omit the member name from the data set specification.

IOHC046 CONCATENATION INVALID

Explanation

IMS sysgen source or security gen source data sets specified in the IMSID options have inconsistent DSORGs.

System action

The request fails.

User response

Review the IMS sysgen and security gen data set names specified in the IMSID setup options. When multiple data sets are specified, all the data sets must either be sequential data sets or PDS data sets.

IOHC048 OUTPUT DATA SET INVALID

Explanation

The output DSN specified has invalid DCB parameters. DCB information must be LRECL=133 RECFM=FBA with an appropriate BLKSIZE.

System action

The request fails.

User response

Review the DCB information for the output data set specified on the screen. Ensure that the LRECL is 133, the RECFM is FBA, and that the block size is a multiple of 133.

IOHC049 OUTPUT DATA SET INVALID

Explanation

The output DSN specified has invalid DCB parameters. DCB information must be LRECL=133 RECFM=FBA with an appropriate BLKSIZE.

System action

The request fails.

User response

Correct the output data set name that was specified on the screen to specify a data set that is allocated with RECFM=FB, LRECL=80, and a block size that is a multiple of 80.

IOHD001 INCOMPATIBLE OPTIONS

Explanation

Both RESIDENT and DOPT cannot be specified.

System action

None.

User response

Select either RESIDENT or DOPT (or neither), but not both.

IOHD002 INCOMPATIBLE OPTIONS

Explanation

Both DOPT and SCHDTYP=PARALLEL cannot be specified.

System action

None.

User response

Select either DOPT or PARALLEL for SCHDTYP, but not both.

IOHD003 INCOMPATIBLE OPTIONS

Explanation

Both FPATH=YES and SCHDTYP=PARALLEL cannot be specified.

System action

None.

User response

Select either YES for FPATH or PARALLEL for SCHDTYP, but not both.

IOHD004 INCOMPATIBLE OPTIONS

Explanation

Both FPATH=YES and LANG=JAVA cannot be specified.

System action

None.

User response

Select either YES for FPATH or JAVA for LANG, but not both.

IOHD005 INCOMPATIBLE OPTIONS

Explanation

Both FPATH=YES and PGMTYPE=BATCH cannot be specified.

System action

None.

User response

Select either YES for FPATH or BATCH for PGMTYPE, but not both.

IOHD006 INCOMPATIBLE OPTIONS

Explanation

Both GPSB and DOPT or RESIDENT cannot be specified.

System action

None.

User response

Select GPSB NO or BATCH with either RESIDENT or DOPT.

IOHD007 INCOMPATIBLE OPTIONS

Explanation

Both FPATH=YES and PGMTYPE=BATCH cannot be specified.

System action

None.

User response

Select either YES for FPATH or BATCH for PGMTYPE, but not both.

IOHD008 INCOMPATIBLE OPTIONS

Explanation

LANGUAGE must be blank except when GPSB is YES.

System action

None.

User response

Specify a language only when GPSB is specified as YES. Otherwise, LANG must be blank.

IOHD010 INVALID VALUE

Explanation

The RESIDENT field must be either YES or NO.

System action

None.

User response

Specify either YES or NO for the RESIDENT field.

IOHD011 INVALID VALUE

Explanation

The DOPT field must be either YES or NO.

System action

None.

User response

Specify either YES or NO for the DOPT field.

IOHD012 INVALID VALUE

Explanation

The GPSB field must be either YES or NO.

System action

None.

User response

Specify either YES or NO for the GPSB field.

IOHD013 INVALID VALUE

Explanation

The FPATH field must be either YES or NO.

System action

None.

User response

Specify either YES or NO for the FPATH field.

IOHD014 INVALID VALUE

Explanation

The LANGUAGE field must be left blank (when not GPSB) or specified as ASSEM, COBOL, PASCAL, PL/I, or JAVA.

System action

None.

User response

Choose a valid value for the LANGUAGE field, or leave it blank if GPSB=NO.

IOHD015 INVALID VALUE

Explanation

The PGMTYPE field must be specified as either BATCH or TP.

System action

None.

User response

Specify either BATCH or TP for the PGMTYPE field.

IOHD017 INVALID VALUE

Explanation

The SCHDTYP field must be specified as either PARALLEL or SERIAL.

System action

None.

User response

Specify either SERIAL or PARALLEL for the SCHDTYP field.

IOHD018 INVALID VALUE

Explanation

The Security field must be specified as NONE, AGN, PASSWORD, or BOTH.

System action

None.

User response

Specify a valid value for the Security field.

IOHD019 INVALID VALUE

Explanation

The TRANSTAT field must be YES or NO.

System action

None.

User response

Specify either YES or NO for the TRANSTAT field.

IOHD020 *resource* NOT FOUND

Explanation

The specified resource name was not found in this IMS subsystem.

System action

None.

User response

Change the resource name to a valid resource name in the specified IMS subsystem.

IOHD021 *resource* ALREADY DEFINED

Explanation

The specified resource name is already defined in this IMS subsystem.

System action

None.

User response

Change the resource name to a name that is not already defined in the specified IMS subsystem.

IOHD022 *resource* NOT FOUND

Explanation

The resource name specified in the COPY command was not found in this IMS subsystem.

System action

None.

User response

Change the resource name to copy to a resource name defined in the specified IMS subsystem.

IOHD023 ERROR OBTAINING RESOURCE

Explanation

An error occurred retrieving attributes for the specified resource.

System action

None.

User response

Review the MVS SYSLOG on the system where the IMS control region is running for error messages indicating the reason for the failure.

IOHD100 INVALID VALUE

Explanation

The RESIDENT field must be specified as either YES or NO.

System action

None.

User response

Specify either YES or NO for the RESIDENT field.

IOHD101 INVALID VALUE

Explanation

The ACCESS field must be specified as one of the following: RO, RD, UP, or EX.

System action

None.

User response

Specify RO, RD, UP, or EX for the ACCESS field.

IOHD200 INVALID VALUE

Explanation

The INQUIRY field must be specified as either YES or NO.

System action

None.

User response

Specify YES or NO for the INQUIRY field.

IOHD300 INVALID VALUE

Explanation

The DCLWA field must be specified as either YES or NO.

System action

None.

User response

Specify YES or NO for the DCLWA field.

IOHD301 INVALID VALUE

Explanation

The ULC field must be specified as either UC or ULC.

System action

None.

User response

Specify UC or ULC for the ULC field.

IOHD302 INVALID VALUE

Explanation

The FPATH field must be specified as either YES, NO, or as a number between 12 and 30720.

System action

None.

User response

Specify a valid value for the FPATH field.

IOHD303 INVALID VALUE

Explanation

The INQUIRY field must be specified as either YES, NO.

System action

None.

User response

Specify NO or YES for the INQUIRY field.

IOHD304 INVALID VALUE

Explanation

The RECOVERY field must be specified as either RECOVER or NORECOV.

System action

None.

User response

Specify RECOVER or NORECOV for the RECOVERY field.

IOHD305 INVALID VALUE

Explanation

The MAXRGN field must be specified as a number between 0 and 255. Zero is the default and should be used if the MAXRGN parameter has not been specified in the IMS sysgen TRANSACT macro.

System action

None.

User response

Specify a number between 0 and 255 for the MAXRGN field.

IOHD306 INVALID VALUE

Explanation

The MODE field must be specified as either MULT or SNGL.

System action

None.

User response

Specify MULT or SNGL for the MODE field.

IOHD307 INVALID VALUE

Explanation

The MSGTYPE field must be specified as either SNGLSEG or MULTSEG.

System action

None.

User response

Specify SNGLSEG or MULTSEG for the MSGTYPE field.

IOHD308 INVALID VALUE

Explanation

The RESPONSE field must be specified as either YES (for response) or NO (for nonresponse).

System action

None.

User response

Specify YES or NO for the RESPONSE field.

IOHD309 INVALID VALUE

Explanation

The CLASS field must be specified as a number between 1 and 999.

System action

None.

User response

Specify a number between 1 and 999 for the CLASS field.

IOHD310 INVALID VALUE

Explanation

The PARLIM field must be specified as either NONE or as a number between 0 and 32767.

System action

None.

User response

Specify NONE or a number between 0 and 32767 for the PARLIM field.

IOHD311 INVALID VALUE

Explanation

The PROCLIM COUNT field must be specified as a number between 0 and 65535.

System action

None.

User response

Specify a number between 0 and 65535 for the COUNT field.

IOHD312 INVALID VALUE

Explanation

The PROCLIM SECONDS field must be specified as a number between 1 and 65535.

System action

None.

User response

Specify a number between 1 and 65535 for the SECONDS field.

IOHD313 INVALID VALUE

Explanation

The PRIORITY1 field must be specified as a number between 0 and 14.

System action

None.

User response

Specify a number between 0 and 14 for the PRIORITY1 field.

IOHD314 INVALID VALUE

Explanation

The PRIORITY2 field must be specified as a number between 0 and 14.

System action

None.

User response

Specify a number between 0 and 14 for the PRIORITY2 field.

IOHD315 INVALID VALUE

Explanation

The PRIORITY3 field must be specified as a number between 10 and 65535.

System action

None.

User response

Specify a number between 1 and 65535 for the PRIORITY3 field.

IOHD316 INVALID VALUE

Explanation

The ROUTING field must be specified as either YES or NO.

System action

None.

User response

Specify YES or NO for the ROUTING field.

IOHD317 INVALID VALUE

Explanation

The SCHD field must be specified as a number between 1 and 4.

System action

None.

User response

Specify a number between 1 and 4 for the SCHD field.

IOHD318 INVALID VALUE

Explanation

The SEGNO field must be specified as a number between 0 and 65535.

System action

None.

User response

Specify a number between 0 and 65535 for the SEGNO field.

IOHD319 INVALID VALUE

Explanation

The SEGSIZE field must be specified as a number between 0 and 65535.

System action

None.

User response

Specify a number between 0 and 65535 for the SEGSIZE field.

IOHD320 INVALID VALUE

Explanation

The SERIAL field must be specified as either YES or NO.

System action

None.

User response

Specify YES or NO for the SERIAL field.

IOHD321 INVALID VALUE

Explanation

The SPA SIZE field must be left blank (for nonconversational) or specified as a number between 16 and 32767.

System action

None.

User response

Specify a number between 16 and 32767 for the SPA SIZE field.

IOHD322 INVALID VALUE

Explanation

The SPA TYPE field must be specified as RTRUNC or STRUNC, or leave it blank.

System action

None.

User response

Specify RTRUNC or STRUNC for the SPA TYPE field, or leave it blank.

IOHD323 INVALID VALUE

Explanation

The RMT SYSID field must be left blank (for a non-MS transaction), or be specified as a number between 1 and 2036.

System action

None.

User response

Specify a number between 1 and 2036 for the RMT SYSID field, or leave it blank.

IOHD324 INVALID VALUE

Explanation

The LCL SYSID field must be left blank (for a non-MS transaction), or be specified as a number between 1 and 2036.

System action

None.

User response

Specify a number between 1 and 2036 for the LCL SYSID field, or leave it blank.

IOHD325 INVALID VALUE

Explanation

The WFI field must be specified as either YES or NO.

System action

None.

User response

Specify YES or NO for the WFI field.

IOHD326 INVALID VALUE**Explanation**

The AOI field must be specified as either YES, NO, or TRAN.

System action

None.

User response

Specify YES, NO, or TRAN for the AOI field.

IOHD327 INVALID VALUE**Explanation**

The TRANSTAT field must be YES or NO.

System action

None.

User response

Specify either YES or NO for the TRANSTAT field.

IOHD328 INVALID VALUE**Explanation**

The EXPRTIME field must be a number between 0 and 65535.

System action

None.

User response

Specify a number between 0 and 65535 for the EXPRTIME field

IOHD331 INCOMPATIBLE OPTIONS**Explanation**

Conversational transactions (those with an SPA SIZE specified) must specify MODE=SNGL.

System action

None.

User response

Either change the SPA SIZE field to blank or change the MODE field to SNGL.

IOHD332 INCOMPATIBLE OPTIONS**Explanation**

WIFI transactions must specify MODE=SNGL.

System action

None.

User response

Either change the WFI field to NO or change the MODE field to SNGL.

IOHD333 INCOMPATIBLE OPTIONS**Explanation**

INQUIRY=NO and RECOVERY=NORECOV are mutually exclusive.

System action

None.

User response

Either change the INQUIRY field to YES or change the RECOVERY field to RECOVER.

IOHD334 INCOMPATIBLE OPTIONS**Explanation**

RECOVERY=NORECOV (nonrecoverable) cannot be specified for a conversational transaction (SPA SIZE non-blank).

System action

None.

User response

Either change the SPA SIZE field to blank or change the RECOVERY field to RECOVER.

IOHD335 INCOMPATIBLE OPTIONS**Explanation**

RECOVERY=NORECOV (nonrecoverable) cannot be specified for a Fast Path transaction.

System action

None.

User response

Either change the FPATH field to NO or change the RECOVERY field to RECOVER.

IOHD336 INCOMPATIBLE OPTIONS

Explanation

MAXRGN cannot be greater than 0 for a transaction with SERIAL=YES.

System action

None.

User response

Either change the MAXRGN field to 0 or change the SERIAL field to NO.

IOHD337 INCOMPATIBLE OPTIONS

Explanation

When MAXRGN is specified as nonzero, a PARLIM value other than NONE is required.

System action

None.

User response

Either change the MAXRGN field to 0 or change the PARLIM field to NONE.

IOHD338 INCOMPATIBLE OPTIONS

Explanation

SERIAL=YES requires that MAXRGN be specified as 0.

System action

None.

User response

Either change the SERIAL field to NO or change the MAXRGN field to 0.

IOHD339 INCOMPATIBLE OPTIONS

Explanation

SERIAL=YES requires that PARLIM be specified as NONE.

System action

None.

User response

Either change the SERIAL field to NO or change the PARLIM field to NONE.

IOHD340 INCOMPATIBLE OPTIONS

Explanation

Fast Path transactions must specify RESPONSE mode YES.

System action

None.

User response

Either change the FPATH field to NO or change the RESPONSE field to YES.

IOHD341 INCOMPATIBLE OPTIONS

Explanation

Fast Path transactions must specify RESPONSE mode YES.

System action

None.

User response

Either change the FPATH field to NO or change the MSGTYPE field to SNGLSEG.

IOHD342 INCOMPATIBLE OPTIONS

Explanation

Batch oriented transactions (PRIORITY 0) cannot be parallel scheduled. PARLIM must be specified as NONE.

System action

None.

User response

Either change the PRIORITY1 and PRIORITY2 fields to nonzero or change the PARLIM field to NONE.

IOHD343 INCOMPATIBLE OPTIONS

Explanation

PRIORITY1 and PRIORITY2 must both be 0 for a batch oriented transaction; or they must be nonzero for an online transaction.

System action

None.

User response

Change both the PRIORITY1 and PRIORITY2 fields to nonzero, for an online transaction; or to 0 for a batch transaction.

IOHE002 SECURITY CHECK FAILED

Explanation

Resource is not defined to security system or security is not active.

System action

The request is stopped.

User response

Ensure that the appropriate security definitions are in place. Check the MVS SYSLOG on the system where IMS is running for additional security messages related to this problem.

IOHE003 NOT AUTHORIZED

Explanation

Authorization was denied.

System action

The request is stopped.

User response

Ensure that the appropriate users have access to the IMS HP Sysgen Tools security definitions. Check the MVS SYSLOG on the system where IMS is running for additional security messages related to this problem.

IOHE004 LOAD FAILED

Explanation

An MVS LOAD macro failed.

System action

The request fails.

User response

Obtain the module name, abend code, and return code from the long version of this message by pressing the Help key, (usually, **PF1**). Review the MVS SYSLOG on the system where IMS is running for any related messages. Contact IBM Software Support for assistance.

IOHE005 APPC TRANS ERROR

Explanation

A remote APPC process experienced an error but did not provide an error message ID.

System action

The request fails.

User response

Obtain the process name from the long version of this message by pressing the Help key (usually, **PF1**). Review the MVS SYSLOG on the system where IMS is running for any related messages. Contact IBM Software Support for assistance.

IOHE006 APPC CALL ERROR

Explanation

A call to an APPC service module failed.

System action

The request fails.

User response

Obtain the module name and return code from the long version of this message by pressing the Help key (usually, **PF1**). Review the MVS SYSLOG on the system where IMS is running for any related messages. Contact IBM Software Support for assistance.

IOHE007 UNKNOWN FUNCTION IN CALL

Explanation

A call to IOHXAPPC contained an unknown function code.

System action

The request fails.

User response

Contact IBM Software Support for assistance.

IOHE009 SECURITY ERROR

Explanation

An attempt to issue an IMS command by means of APPC/IMS failed due to a security failure. This could be caused by authorization for the command being rejected by either RACF or IMS exit DFSCCMD0.

System action

The request fails.

User response

Review the MVS SYSLOG on the system where IMS is running and the IMS MTO log for any related messages. Contact IBM Software Support for assistance.

IOHE013 APPC ERROR

Explanation

APPC returned an unexpected value for the DATA_RECEIVED variable. The DATA_RECEIVED value returned and the call type are shown in the long form of the message displayed by pressing the Help key (usually, **PF1**)

System action

The request fails.

User response

Ensure that the SYMDEST specified in the IMSID options is correct. If it is correct, contact IBM Software Support for additional assistance.

IOHE015 INVALID RECV LENGTH

Explanation

The APPC header contains a receive length of zero.

System action

The request fails.

User response

Contact IBM Software Support for assistance.

IOHE017 UNEXPECTED APPC DEALLOC

Explanation

An error occurred in an APPC application module. The conversation was deallocated unexpectedly.

System action

The request fails.

User response

Contact IBM Software Support for assistance.

IOHE019 MISSING DEALLOC

Explanation

The APPC response received back from the APPC transaction did not include a deallocate for the conversation.

System action

The request fails.

User response

Review the MVS SYSLOG on the system where IMS is running for any related messages. Contact IBM Software Support for assistance.

IOHE020 INVALID MEMBER

Explanation

The member name specified in the select command was either missing or invalid.

System action

The request is ignored.

User response

Specify an existing member name on the SELECT command.

IOHE021 UPDATE LIST HAS 0 LINES

Explanation

The selected update list is empty and cannot be processed.

System action

The request is ignored.

User response

When selecting a resource update list to verify or install, select a list that has entries.

IOHE022 SECURITY ERROR

Explanation

Unable to validate your user ID on the MVS image where IMS runs. Password expired.

System action

The request fails.

User response

Change your password on the MVS system where IMS is running.

IOHE023 SECURITY ERROR

Explanation

Unable to validate your user ID on the MVS image where IMS runs. User ID is not defined.

System action

The request fails.

User response

The user ID that was used to log on to TSO must also be defined on the MVS system where IMS is running.

IOHE024 SECURITY ERROR

Explanation

Unable to validate the authorized user ID on the MVS system where IMS runs. Password expired.

System action

The request fails.

User response

Change your password on the MVS system where IMS is running.

IOHE025 SECURITY ERROR

Explanation

Unable to validate the authorized user ID on the MVS system where IMS runs. User ID not defined.

System action

The request fails.

User response

The user ID that was used to log on to TSO must also be defined on the MVS system where IMS runs.

IOHE030 ABEND *abend-code*

Explanation

Creation of the options module failed because of the stated abend code.

System action

The request fails.

User response

Review the abend code and check the MVS SYSLOG on the system where the TSO user is logged on for additional messages related to this error.

IOHE031 LOG RECORD ERROR

Explanation

Invalid field values were encountered while formatting the IOHLOG records.

System action

The request is stopped.

User response

Obtain the error code from the long version of this message by pressing the Help key (usually, **PF1**). Contact IBM Software Support for assistance.

IOHE032 COPY FAILED

Explanation

An error occurred while attempting to read the member to be copied, causing the copy operation to fail.

System action

The COPY request failed.

User response

Verify that the member that is being copied is a valid resource update list. Contact IBM Software Support for additional assistance.

IOHE033 COPY COMPLETE

Explanation

The request to copy the contents of another resource update list has completed successfully.

System action

The request has completed.

User response

None.

IOHE034 INVALID MEMBER

Explanation

The member name that was specified in the COPY command was not found in the IOHPDS data set.

System action

The COPY request fails.

User response

Verify that the name to be copied was specified correctly.

IOHE035 COPY ABORTED

Explanation

The COPY command was entered, but no member was selected.

System action

The request is rejected.

User response

Ensure that you select a member to copy.

IOHE036 NO ENTRIES SELECTED

Explanation

No resource update list was created because no entries were selected by using the **U** line command.

System action

The request is stopped.

User response

Ensure that you select one or more entries before pressing Enter to process the selected members.

IOHE037 FUNCTION ABORTED

Explanation

The request to create an Undo entry for a resource update list was stopped.

System action

The UNDO function is stopped.

User response

None. The request was stopped because End was pressed.

IOHE038 LOG RECORD ERROR

Explanation

Invalid field values were encountered formatting the IOHLOG records.

System action

The request fails.

User response

Contact IBM Software Support for assistance with the identification of the invalid records in the IOHLOG data set.

IOHE039 INVALID MEMBER NAME

Explanation

The member name that was specified is invalid or already exists. Specify a member name that does not already exist.

System action

The member name is rejected.

User response

Ensure that the member name that was specified is a valid member name and does not already exist.

IOHF001 UNKNOWN REQUEST TYPE

Explanation

The APPC transaction program received an APPC message with an unknown request type.

System action

The request fails.

User response

Obtain the request type from the long version of this message by pressing the Help key (usually, **PF1**). Contact IBM Software Support for assistance.

IOHF002 LOAD FAILED

Explanation

An MVS LOAD macro failed.

System action

The request fails.

User response

Obtain the abend code and reason code from the long version of this message by pressing the Help key (usually, **PF1**). Review the MVS SYSLOG on the system where IMS is running for other messages related to the LOAD failure. Contact IBM Software Support for assistance.

IOHF003 IMS NOT AVAILABLE

Explanation

The IMS control region was not found.

System action

The request fails.

User response

Check to see if IMS is running. Verify that the SYMDEST specified in the Setup options for this IMSID is correct for routing requests to the MVS system where IMS is running.

IOHF005 GETMAIN FAILED

Explanation

An MVS GETMAIN macro failed.

System action

The request fails.

User response

Obtain the storage type and return code from the long version of this message by pressing the Help key (usually, **PF1**). Contact IBM Software Support for assistance.

IOHF006 DYNAMIC ALLOCATION ERROR

Explanation

A dynamic allocation error occurred.

System action

The request fails.

User response

Obtain the data set type and return codes from the long version of this message by pressing the Help key (usually, **PF1**). Review ISPF Appendix A by pressing the Help key on the ISPF Primary Options menu to determine the reason for the error code reported in the long message. Contact IBM Software Support for assistance.

IOHF007 OPEN FAILED

Explanation

OPEN failed for the IMS RESLIB.

System action

The request fails.

User response

Review the MVS SYSLOG on the system where the IMS control region is running for other messages related to the OPEN failure. Contact IBM Software Support for assistance.

IOHF008 SUBTASK FAILED

Explanation

A subtask running the in APPC initiator failed.

System action

The request fails.

User response

Obtain the abend or return code from the long version of this message by pressing the Help key (usually, **PF1**). Review the MVS SYSLOG on the system where the IMS control region is running for other messages

related to the OPEN failure. Contact IBM Software Support for assistance.

IOHF009 UNSUPPORTED IMS RELEASE

Explanation

The release of IMS requested by the IMS subsystem is not supported.

System action

The request is stopped.

User response

Contact IBM Software Support for assistance.

IOHF010 ATTACH FAILED

Explanation

An MVS ATTACH failed.

System action

The request fails.

User response

Obtain the module name being attached and the return code, from the long version of this message by pressing the Help key (usually, **PF1**). Review the MVS SYSLOG on the system where the IMS control region is running for other messages related to the failure. Contact IBM Software Support for assistance.

IOHF011 VERIFY SUCCESSFUL

Explanation

The Verify request has completed without any errors or warnings.

System action

None.

User response

None.

IOHF012 UNKNOWN APPC STATUS

Explanation

IMS field LSCD_STAT has an unknown status.

System action

The request fails.

User response

Contact IBM Software Support for assistance.

IOHF013 TRANSITORY APPC STATUS

Explanation

IMS field LSCD_STAT has a transitory status (starting or stopping).

System action

The request fails.

User response

Retry the request.

IOHF014 IMS SHUTDOWN

Explanation

The IMS control region was shut down while the update list was being implemented.

System action

The request fails.

User response

Retry the request when IMS is restarted.

IOHF015 VERIFY FAILED

Explanation

One or more errors occurred while verifying the compatibility of the resource update list entries with the named IMS subsystem.

System action

Processing continues.

User response

Review the messages that were displayed to determine the causes of the verification failure. Correct the problems and rerun the Verify request.

IOHF016 COMMAND NOT SUPPORTED

Explanation

The command entered is either invalid or not supported in the APPC/IMS environment.

System action

The request fails.

User response

Ensure that the command entered begins with a slash (/) and that the command was entered correctly.

IOHF017 INSTALL SUCCESSFUL

Explanation

The install request has completed successfully.

System action

None.

User response

None.

IOHF018 INSTALL FAILED

Explanation

An installation request was stopped because one or more error conditions prevented the successful installation of the resource update list.

System action

The installation is stopped.

User response

Review the messages that are shown to determine the causes of the installation failure, and correct the problems before trying again.

IOHF027 APPLICATION ERROR

Explanation

The response message for this request exceeded the maximum allowable size.

System action

The request fails.

User response

Contact IBM Software Support for assistance.

IOHF050 OPEN FAILED

Explanation

OPEN failed for the IOHOPT data set.

System action

The request fails.

User response

Review the MVS SYSLOG on the system where the IMS control region is running for other messages related to the OPEN failure. Contact IBM Software Support for assistance.

IOHF051 CLOSE FAILED

Explanation

CLOSE failed for the IOHOPT data set.

System action

The request is stopped.

User response

Review the MVS SYSLOG on the system where the IMS control region is running for other messages related to the failure. Contact IBM Software Support for assistance.

IOHF052 *function* FAILED

Explanation

A LOAD or DELETE, as specified in the message, failed.

System action

The request is stopped.

User response

Review the MVS SYSLOG on the system where the IMS control region is running for other messages related to the failure. Contact IBM Software Support for assistance.

IOHF061I STORE/FORWARD ACTIVE DSN=*stfwd*

Explanation

Installation store/forward is active for this job. *stfwd* is the name of the installation store/forward VSAM data set.

System action

Processing continues.

User response

None. This message is informational.

IOHF062I	STORE/FORWARD KEY IOHPDS=<i>iohpds</i>
-----------------	---

Explanation

The IOHPDS value, which is part of the key of the records stored in the store/forward data set, is *iohpds*. Because one or more IMS systems were not active, the installation information was stored in the store/forward data set. The installation will be rerun later by the REDO job. A list of the key values for the commands stored in the data set specified by the IOHSTFWD DD statement follows this message.

System action

The failed commands are written to the store/forward data set, and processing continues.

User response

None. This message is informational.

IOHF063I	STORE/FORWARD DATA SET IN USE
-----------------	--

Explanation

Although store/forward is active in the ISPF environment, the store/forward data set is in use by another job or user.

System action

Processing continues.

User response

Try the operation again after the other job or user completes the processing of the store/forward data set.

IOHF064E	STORE/FORWARD DATA SET IN USE
-----------------	--

Explanation

Although installation store/forward is active in the batch installation environment, the store/forward VSAM data set is in use by another job or user.

System action

The job terminates with a return code of 12.

User response

Try the operation again after the other job or user completes the processing of the store/forward data set.

IOHF065E	STORE/FORWARD DOES NOT SUPPORT IMS OF GLOBAL ONLINE CHANGE
-----------------	---

Explanation

The REDO job read the INSTALL statement from the store/forward data set and started IOHBLIST, but the global online change function had been enabled for the target IMS. The store/forward function does not support IMS systems where global online change is enabled.

System action

IOHBLIST terminates with a return code of 12, and the REDO job continues processing.

User response

It might be possible that the target IMS system, which had been configured as local online change at the time when the installation information was stored in the store/forward data set, was changed later to the global online change configuration. Investigate the status and run a normal install processing if installation is required.

When the problem is resolved, delete this entry from the store/forward data set by using, for example, the TSO ISPF editing function. For more information about how to delete an entry, see [“Step 2: Installing the resource update list by running the REDO job” on page 40.](#)

IOHF066E	OPEN FAILED FOR IOHSTFWD, RETURN CODE=<i>rc</i>
-----------------	--

Explanation

IMS HP Sysgen Tools was unable to open the data set associated with DDNAME IOHSTFWD. *rc* indicates the return code from the open processing. Additional messages might be displayed on the z/OS Syslog.

Or, if *rc* is INIT, the data set associated with DDNAME IOHSTFWD was not initialized using the sample JCL that was provided in the IOHSTF member of the AIOHSAMP data set. See [“Activating installation store/forward” on page 41.](#)

System action

The job terminates with a return code of 12.

User response

Correct the error that caused the open failure, and run the job again.

IOHF067E	VSAM ERROR ON STORE/ FORWARD DATA SET, RC=<i>rc</i> RPLFDBK=<i>rplfdbk</i> FUNC=<i>function</i>
-----------------	--

Explanation

IMS HP Sysgen Tools encountered a VSAM error with *function* for the store/forward data set. The VSAM return code and RPLFDBK are represented by *rc* and *rplfdbk*, respectively.

function is the name of a VSAM macro such as GET, PUT, ERASE, or GENCB.

System action

The job terminates with a return code of 12.

User response

Correct the error, and run the job again.

IOHF068W	ONLINE CHANGE OPTION OF IMS IN IOHPDS IS <i>xxx</i> BUT ONE IN TARGET IMS IS <i>yyy</i>
-----------------	--

Explanation

The IMS online change option stored in IOHPDS is *xxx*, but the online change option for the target online IMS is *yyy*.

If the installation store/forward function is enabled, IMS HP Sysgen Tools generally stores information about the failed IMS system in the store/forward data set if the target IMS is inactive at the time of installation. However, if that IMS system's online change option is defined as global online change in the IOHOPT data set, installation information is not stored in the store/forward data set.

Therefore, if you want to use the installation store/forward function, you need to make sure that the IMS online change option stored in the IOHOPT data set is up to date.

System action

Processing continues.

User response

Update the IMS information stored in IOHOPT to reflect the latest system configuration. For information about how to update IOHOPT, see [“Defining IMS HP Sysgen Tools options”](#) on page 30.

IOHF070E	IOHXEXEC <i>prm</i> parameter is invalid
-----------------	---

Explanation

The *prm* parameter for IOHXEXEC is invalid. Either the length of the parameter value is too long, or the parameter contains one or more invalid characters.

System action

IOHXEXEC terminates with a return code of 8.

User response

Correct the error, and run IOHXEXEC again.

IOHF071E	TARGET and IMSID are mutually exclusive parameters
-----------------	---

Explanation

TARGET and IMSID are mutually exclusive parameters. Specify only one of them.

System action

IOHXEXEC terminates with a return code of 8.

User response

Correct the error, and run IOHXEXEC again.

IOHF072E	GRPMBR cannot be specified if TARGET is not specified
-----------------	--

Explanation

You can specify the GRPMBR parameter only if TARGET is specified.

System action

IOHXEXEC terminates with a return code of 8.

User response

Correct the error, and run IOHXEXEC again.

Chapter 32. IMS sysgen messages (IOHG)

IOHGnnnnx messages (and message IOHAGT004E) are issued by the IMS sysgen process, and correspond to IMS message numbers when the IOH prefix is removed.

For example, IOHG942 corresponds to IMS message G942.

Message format

IMS HP Sysgen Tools IMS sysgen messages adhere to the following format:

IOHGnnnnx

Where:

IOHG

Indicates that the message was issued by IMS HP Sysgen Tools

nnn

Indicates the message identification number

x

Indicates the severity of the message:

A

Indicates that operator intervention is required before processing can continue.

E

Indicates that an error occurred, which might or might not require operator intervention.

I

Indicates that the message is informational only.

W

Indicates that the message is a warning to alert you to a possible error condition.

Each message also includes the following information:

Explanation:

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

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.

Severity:

A number between 2 and 16 that indicates the severity of the error. The severity of warning messages is usually 2 or 4, whereas severe errors are usually severity 16.

**IOHAGT004E 5000 AGNS PROCESSED.
 SUBSEQUENT AGNS IGNORED**

Explanation

More than 5000 AGN names were specified in the IMS security gen control statements.

System action

Syntax checking continues, but the Fast Sysgen process will not produce any updated control block modules.

User response

Reduce the number of AGN names in the security gen source.

Severity

16

IOHG000E	IMS CTRL MUST BE FIRST STATEMENT
-----------------	---

Explanation

The IMS sysgen source did not include an IMSCTRL macro prior to any transact macros.

System action

The request fails. Syntax checking continues, although IMS HP Sysgen Tools is unable to verify that transaction classes do not exceed the maximum class as specified in the IMSCTRL macro.

User response

Ensure that the IMSCTRL macro is included in the IMS sysgen source.

Severity

N/A

IOHG002E	FOLLOWING OPERAND(S) OMITTED OR INVALID: aaaaaaaaaa
-----------------	--

Explanation

The list can include one or more of the following: DBRC, ETOFEAT, IRLMNM, IMSID, MAXCLAS, MAXIO, MAXREGN, MSVID, or SYSTEM.

By operand, one of the listed errors was detected.

- DBRC
 - More than one parameter was specified.
 - The parameter was not specified as YES or NO.
- ETOFEAT
 - More than two parameters were specified.
 - The first parameter was not YES, NO, or null.
 - The second parameter was not ALL or ONLY.
 - A second parameter was specified when the first parameter was NO.
- IMSID
 - More than one parameter was specified.
 - The parameter specified contained more than 4 characters.
 - The parameter, as specified, was not alphanumeric.
- IRLMNM

- More than one parameter was specified.
- The parameter was not 1 to 4 characters in length.
- The parameter does not consist of alphanumeric characters.
- MAXCLAS
 - More than one parameter was specified.
 - The parameter was not specified as a decimal value from 1 through 255.
- MAXIO
 - More than two parameters were specified.
 - The first parameter is no longer used. It is kept only for compatibility purposes.
 - The second parameter was specified, but not as a decimal value from 7 through 255.
- MAXREGN
 - More than four parameters were specified.
 - The first parameter was specified, but not as a decimal value from 1 through 255.
 - The second value was specified, but not as a value from 1K through 99999K.
 - The third parameter was specified, but not as an alphanumeric character.
 - The fourth parameter was specified, but not as an alphanumeric character.
- MSVID
 - More than one parameter was specified.
 - The parameter was specified as a decimal number from 1 through 676.
 - The parameter was not specified for an MSVERIFY type of system definition.
- SYSTEM
 - More than four parameters were specified.
 - The first parameter was specified, but not as a decimal value from 1 to 31.
 - The first part of the second parameter was not specified as ALL, CTLBLKS, NUCLEUS, BATCH, ON-LINE, MSVERIFY or MODBLKS.
 - The second part of the second parameter was not specified as DB/DC, DBCTL, DCCTL, or null.
 - The fourth parameter can be specified only as LGEN or null.

System action

Syntax checking continues, but the Fast Sysgen process will not produce any updated control block modules.

User response

Correct the IMSCTRL macro's specification of the indicated keyword.

Severity

16

**IOHG006W DCLWA OPERAND IS INVALID;
DEFAULT ASSUMED**

Explanation

The value specified for the DCLWA= parameter of the IMSCTRL macro was neither YES nor NO.

System action

The value specified is ignored, and the default value of YES is used.

User response

Correct the IMSCTRL macro's specification of keyword DCLWA.

Severity

2

**IOHG102E DBD OPERAND IS OMITTED OR
INVALID. SPECIFIED DBD NAME
WAS nnnnnnnnn**

Explanation

A DATABASE macro was encountered with either an invalid DBD= value, or the DBD= value was missing. For syntax restrictions on the values of DBD=, see *IMS System Definition*.

System action

The sysgen fails. In batch mode, the job ends with the specified condition code. In online mode, the **/MODIFY** request is canceled.

User response

Review the DATABASE macro that caused the problem. In an online request, it might be necessary to reproduce the error in batch mode to identify the macro in error.

Severity

16

**IOHG103E THE FOLLOWING ARE DUPLICATE
DBD NAMES: nnnnnnnnn**

Explanation

The DBD name included in the message was specified more than once in the IMS sysgen input.

System action

The sysgen fails. In batch mode, the job ends with the specified condition code. In online mode, the **/MODIFY** request is canceled.

User response

Eliminate the duplicated database names from the IMS sysgen source.

Severity

16

**IOHG104E ACCESS OPERAND IS OMITTED OR
INVALID.**

Explanation

The ACCESS= keyword of a DATABASE macro did not specify a valid value. Valid specifications are EX, UP, RD, or RO.

System action

The sysgen fails. In batch mode, the job ends with the specified condition code. In online mode, the **/MODIFY** request is canceled.

User response

Review the ACCESS= value specified on the DATABASE macro that caused the error.

Severity

16

**IOHG105E DATABASE STATEMENT TOTAL
SPECIFICATION EXCEEDED**

Explanation

More than 32,700 database names were included in the IMS sysgen source.

System action

The sysgen fails. In batch mode, the job ends with the specified condition code. In online mode, the **/MODIFY** request is canceled.

User response

Reduce the number of DBD= values specified on DATABASE macros to less than 32,700.

Severity

16

IOHG201E	POSITIONAL PARAMETER(S) INVALID.
-----------------	---

Explanation

One of the following has occurred:

- More than one positional parameter was specified.
- A positional parameter other than DOPT or RESIDENT was specified.
- DOPT and SHTYP=PARALLEL, which are mutually exclusive, were specified.

System action

Syntax checking continues, but the Fast Sysgen process will not produce any updated control block modules.

User response

Review the statement in error. Also see message G201 in *IMS Messages and Codes, Volume 2: Non-DFS Messages*.

Severity

16

IOHG202E	PGMTYPE OPERAND IS INVALID.
-----------------	------------------------------------

Explanation

One of the following occurred:

- More than three parameters were specified.
- TP and BATCH were both specified.
- TP, BATCH, or OVLY was specified twice.
- A parameter was not specified as TP, BATCH, or OVLY.
- The class number was not specified as a value from 1 to 255 inclusive.

- The class number was greater than the specified or defaulted value of the MAXCLAS operand of the IMSCTRL statement.

System action

Syntax checking continues, but the Fast Sysgen process will not produce any updated control block modules.

User response

Review the statement in error. Also see message G202 in *IMS Messages and Codes, Volume 2: Non-DFS Messages*.

Severity

16

IOHG203E	SCHDTYP OPERAND IS INVALID.
-----------------	------------------------------------

Explanation

One of the following occurred:

- More than one parameter was specified.
- The parameter was not specified as SERIAL or PARALLEL.

System action

Syntax checking continues, but the Fast Sysgen process will not produce any updated control block modules.

User response

Review the statement in error. Also see message G203 in *IMS Messages and Codes, Volume 2: Non-DFS Messages*.

Severity

16

IOHG204E	IQF OPERAND IS INVALID.
-----------------	--------------------------------

Explanation

The value specified for the IQF keyword was not NO.

System action

Syntax checking continues, but the Fast Sysgen process will not produce any updated control block modules.

User response

Review the statement in error. Also see message G204 in *IMS Messages and Codes, Volume 2: Non-DFS Messages*.

Severity

16

IOHG205E	PSB OPERAND IS OMITTED OR INVALID.
-----------------	---

Explanation

One of the following occurred:

- The PSB keyword operand was not specified.
- More than one parameter was specified.
- The parameter did not begin with an alphabetic character, or it contained more than 8 alphanumeric characters.
- The value began with the string 'DFS' or 'DBCDM', or it contained a reserved word.

System action

Syntax checking continues, but the Fast Sysgen process will not produce any updated control block modules.

User response

Review the statement in error. Also see message G205 in *IMS Messages and Codes, Volume 2: Non-DFS Messages*.

Severity

16

IOHG206E	THE FOLLOWING ARE DUPLICATE PSB NAMES: xxxx
-----------------	--

Explanation

The specified PSB name was previously specified on an APPLCTN macro-instruction statement.

System action

Syntax checking continues, but the Fast Sysgen process will not produce any updated control block modules.

User response

Review the statement in error. Also see message G206 or G975 in *IMS Messages and Codes, Volume 2: Non-DFS Messages*.

Severity

16

IOHG207E	SYSID OPERAND IS INVALID.
-----------------	----------------------------------

Explanation

One of the following occurred:

- The specified SYSID keyword operand did not contain two parameters.
- The specified parameter was not a decimal value from 1 through 2036.
- The same value was specified for both SYSID parameters.

System action

Syntax checking continues, but the Fast Sysgen process will not produce any updated control block modules.

User response

Review the statement in error. Also see message G207 in *IMS Messages and Codes, Volume 2: Non-DFS Messages*.

Severity

16

IOHG208E	FPATH OPERAND IS INVALID.
-----------------	----------------------------------

Explanation

The FPATH= keyword operand is not one of the following valid specifications: FPATH=YES, FPATH=NO, FPATH=, FPATH=0, or FPATH=size.

System action

Syntax checking continues, but the Fast Sysgen process will not produce any updated control block modules.

User response

Review the statement in error. Also see message G208 in *IMS Messages and Codes, Volume 2: Non-DFS Messages*.

Severity

16

IOHG209W	OVLY IS INVALID WHEN FPATH=YES. PGMTYPE OPERAND OVLY PARAMETER IS IGNORED.
-----------------	---

Explanation

This is a warning message. The OVLY parameter of the PGMTYPE= keyword operand is incompatible with FPATH=YES.

System action

The OVLY specification is ignored.

User response

Review the statement in error. Also see message G209 in *IMS Messages and Codes, Volume 2: Non-DFS Messages*.

Severity

16

IOHG210W	CLASS IS INVALID WHEN FPATH=YES. PGMTYPE OPERAND CLASS PARAMETER IS IGNORED.
-----------------	---

Explanation

This is a warning message. Fast Path does not use class specification for program scheduling.

System action

The class specification is ignored.

User response

Remove the class specification from the PGMTYPE keyword. Also see message G210 in *IMS Messages and Codes, Volume 2: Non-DFS Messages*.

Severity

2

IOHG211E	IQF=YES IS INVALID WHEN FPATH=YES.
-----------------	---

Explanation

An invalid value was specified for the IQF parameter.

System action

Syntax checking continues, but the Fast Sysgen process will not produce any updated control block modules.

User response

Review the statement in error. Also see message G211 in *IMS Messages and Codes, Volume 2: Non-DFS Messages*.

Severity

16

IOHG212E	SYSID IS INVALID WHEN FPATH=YES.
-----------------	---

Explanation

The SYSID= keyword operand is incompatible with FPATH=YES.

System action

Syntax checking continues, but the Fast Sysgen process will not produce any updated control block modules.

User response

Review the statement in error. Also see message G212 in *IMS Messages and Codes, Volume 2: Non-DFS Messages*.

Severity

16

IOHG213E	FPATH=YES IS INVALID WITH PGMTYPE=BATCH
-----------------	--

Explanation

Non-message-driven fast path regions are not supported.

System action

Syntax checking continues, but the Fast Sysgen process will not produce any updated control block modules.

User response

Review the statement in error. Also see message G213 in *IMS Messages and Codes, Volume 2: Non-DFS Messages*.

Severity

16

IOHG214E GPSB IS INVALID

Explanation

The GPSB= parameter has been incorrectly specified.

System action

Syntax checking continues, but the Fast Sysgen process will not produce any updated control block modules.

User response

Review the statement in error. Also see message G214 in *IMS Messages and Codes, Volume 2: Non-DFS Messages*.

Severity

16

**IOHG215E RESIDENT AND DOPT ARE
INVALID WITH GPSB**

Explanation

The GPSB= parameter has been specified with either the RESIDENT parameter or the DOPT parameter. The RESIDENT and DOPT parameters are mutually exclusive with the GPSB= parameter. The RESIDENT or DOPT parameter is ignored.

System action

Syntax checking continues, but the Fast Sysgen process will not produce any updated control block modules.

User response

Review the statement in error. Also see message G215 in *IMS Messages and Codes, Volume 2: Non-DFS Messages*.

Severity

16

IOHG216E LANG IS ONLY VALID WITH GPSB

Explanation

The LANG= parameter was specified, but the GPSB= parameter was not specified.

System action

Syntax checking continues, but the Fast Sysgen process will not produce any updated control block modules.

User response

Review the statement in error. Also see message G216 in *IMS Messages and Codes, Volume 2: Non-DFS Messages*.

Severity

16

IOHG217E LANG IS INVALID

Explanation

The LANG= parameter has been incorrectly specified. The value specified must be ASSEMB, COBOL, PL/I, or PASCAL.

System action

Syntax checking continues, but the Fast Sysgen process will not produce any updated control block modules.

User response

Review the statement in error. Also see message G217 in *IMS Messages and Codes, Volume 2: Non-DFS Messages*.

Severity

16

IOHG218E GPSB OPERAND IS INVALID

Explanation

One of the following occurred:

- The GPSB= parameter does not begin with an alphabetic character, or it contains more than eight alphanumeric characters.
- The value begins with the string 'DFS' or 'DBCDM', or it contains a reserved word.

System action

Syntax checking continues, but the Fast Sysgen process will not produce any updated control block modules.

User response

Review the statement in error. Also see message G218 in *IMS Messages and Codes, Volume 2: Non-DFS Messages*.

Severity

16

IOHG219E PSB IS INVALID WITH GPSB

Explanation

Both the PSB= and GPSB= keywords were specified. These keywords are mutually exclusive.

System action

Syntax checking continues, but the Fast Sysgen process will not produce any updated control block modules.

User response

Review the statement in error. Also see message G219 in *IMS Messages and Codes, Volume 2: Non-DFS Messages*.

Severity

16

**IOHG220E LANG=JAVA INVALID WHEN
FPATH=YES**

Explanation

A Fast Path potential or Fast Path exclusive transaction cannot specify LANG=JAVA.

System action

None. The sysgen fails. In batch mode, the job ends with a specified condition code. In online mode, the / **MODIFY** request is canceled.

User response

Remove LANG=JAVA from any Fast Path transactions.

Severity

2

IOHG221E TRANSTAT OPERAND IS INVALID

Explanation

Validation of the TRANSTAT keyword value failed.

System action

Syntax checking continues, but the fast SYSGEN process will not produce any updated control block modules.

User response

Correct the TRANSTAT value specified.

Severity

12

**IOHG300E TRANSACT SPECIFICATION
CANNOT PRECEDE APPLCTN**

Explanation

The TRANSACT statement must be used in conjunction with a preceding APPLCTN statement.

System action

Syntax checking continues, but the Fast Sysgen process will not produce any updated control block modules.

User response

Review the statement in error. Also see message G300 in *IMS Messages and Codes, Volume 2: Non-DFS Messages*.

Severity

16

**IOHG301W LWA OPERAND IS INVALID;
DEFAULT ASSUMED**

Explanation

The LWA parameter was specified with an invalid value (not YES or NO). The default specified on the IMSGEN macro for DCLWA is assumed.

System action

The LWA value is set to the default.

User response

Review the statement in error. Also see message G301 in *IMS Messages and Codes, Volume 2: Non-DFS Messages*.

Severity

16

IOHG303W	PRIORITY VALUES FOR TRANSACTION CODES USED BY BATCH PROGRAMS MUST BE NULL; SPECIFIED PRIORITY VALUES RESET TO ZERO.
-----------------	--

Explanation

This is a warning message.

System action

The priority value for this transaction are reset to 0.

User response

Review the statement in error. Also see message G303 in *IMS Messages and Codes, Volume 2: Non-DFS Messages*.

Severity

16

IOHG304E	INQUIRY AND INQ OPERANDS ARE MUTUALLY EXCLUSIVE; ONLY ONE MAY BE SPECIFIED
-----------------	---

Explanation

The INQUIRY and INQ operands cannot both be specified on any one TRANSACT statement.

System action

Syntax checking continues, but the Fast Sysgen process will not produce any updated control block modules.

User response

Review the statement in error. Also see message G300 in *IMS Messages and Codes, Volume 2: Non-DFS Messages*.

Severity

16

IOHG305W	CONVERSATIONAL OR WFI TRANSACTION MUST BE MODE=SNGL; MODE RESET TO INDICATE SNGL
-----------------	---

Explanation

This is a warning message.

System action

The MODE specification is changed to SNGL.

User response

Review the statement in error. Also see message G305 in *IMS Messages and Codes, Volume 2: Non-DFS Messages*.

Severity

16

IOHG306E	THE FOLLOWING OPERANDS ARE INVALID: aaaaaaaaa
-----------------	--

Explanation

One of the following occurred:

- The value begins with the string DFS or DBCDM, or it contains a reserved word.
 - The list can include one or more of the following: EDIT, INQ/INQUIRY, MODE, MSGTYPE, PARLIM, PROCLIM, PRTY, SCHD, SEGNO, SEGSIZE, SPA, or SYSID.
- By operand, one of the listed errors was detected.
- EDIT
 - More than two parameters were specified.
 - The first parameter was not specified as UC or ULC.
 - The second parameter was not specified as a 1- to 8- character alphanumeric name that begins with an alphabetic character.
 - INQ/INQUIRY
 - More than two parameters were specified.
 - A parameter was not specified as YES, NO, RECOVER or NORECOV.
 - NORECOV and SPA were both specified.
 - Incompatible parameters were specified. For example, INQ=(YES,NO) or INQ=(NO,NORECOV).
 - MODE
 - More than one parameter was specified.
 - A parameter other than SNGL or MULT was specified.
 - MSGTYPE
 - More than three parameters were specified.

- A parameter was not specified as MULTSEG, SNGLSEG, NONRESPONSE, RESPONSE, or not specified as a decimal number from 1 to 999, and less than the specified or default value of the IMSCTRL statement MAXCLAS keyword operand.
- An invalid combination of parameters was specified.
- PARLIM
 - SCHDTYP=PARALLEL was not specified for the preceding APPLCTN macro instruction statement.
 - The parameter was not specified as a decimal number from 1 to 32767.
- PROCLIM
 - More than two parameters were specified.
 - One of the parameters was not specified as a decimal number from 1 to 65535.
- PRTY
 - More than three parameters were specified.
 - The first or the second parameter was not specified as a decimal number from 1 to 14.
 - The third parameter was not specified as a decimal number from 1 to 65535.
- SCHD
 - More than one parameter was specified.
 - The specified parameter was not a decimal number from 1 to 4.
- SEGNO and/or SEGSIZE
 - More than one parameter was specified.
 - The specified parameter was not a decimal number from 1 to 65535.
- SPA
 - More than two subparameters were specified.
 - The first subparameter was not a decimal number from 16 to 32767.
 - The second subparameter was not the character STRUNC or RTRUNC.
- SYSID
 - The operand did not contain two parameters.
 - The specified parameters were not a decimal value from 1 through 2036.
 - The same value was specified for both SYSID parameters.
 - The parameter cannot be specified for a Fast Path exclusive transaction.

System action

Syntax checking continues, but the Fast Sysgen process will not produce any updated control block modules.

User response

Review the statement in error. Also see message G306 in *IMS Messages and Codes, Volume 2: Non-DFS Messages*.

Severity

16

IOHG307E	THE FOLLOWING ARE DUPLICATE TRANSACTION CODES: aaaaaaaaaa
-----------------	--

Explanation

A specified transaction code name was previously specified as a transaction code name.

System action

Syntax checking continues, but the Fast Sysgen process will not produce any updated control block modules.

User response

Review the statement in error. Also see message G307 or G976 in *IMS Messages and Codes, Volume 2: Non-DFS Messages*.

Severity

16

IOHG309E	CODE OPERAND IS OMITTED OR INVALID. SPECIFIED TRANSACTION CODE - aaaaaaaaaa
-----------------	--

Explanation

One of the following occurred:

- The CODE operand was not specified.
- The parameter contained a null subparameter.
- The parameter was not specified as a 1- to 8-character alphanumeric name.

System action

Syntax checking continues, but the Fast Sysgen process will not produce any updated control block modules.

User response

Review the statement in error. Also see message G309 in *IMS Messages and Codes, Volume 2: Non-DFS Messages*.

Severity

16

IOHG310E	TRANSACT MACRO INVALID FOR FAST PATH NON-MESSAGE DRIVEN APPL PROGRAM.
-----------------	--

Explanation

Fast Path non-message-driven application programs are not allowed to issue file calls to retrieve or insert terminal messages. TRANSACT macros following a Fast Path non-message-driven APPLCTN macro are therefore invalid.

System action

Syntax checking continues, but the Fast Sysgen process will not produce any updated control block modules.

User response

Remove all TRANSACT macros following the APPLCTN macros with FPATH=YES and PGMTYPE=BATCH specified.

Severity

16

IOHG311E	SPA OPERAND(S) INVALID FOR FAST PATH APPLICATION PROGRAMS.
-----------------	---

Explanation

Fast Path does not support conversational transactions.

System action

Syntax checking continues, but the Fast Sysgen process will not produce any updated control block modules.

User response

Remove the SPA= keyword operand specification on all Fast Path transactions.

Severity

16

IOHG313E	IMS/VS BMP APPLICATION INCOMPATIBLE WITH FAST PATH POTENTIAL TRANSACTION.
-----------------	--

Explanation

Fast Path does not support Fast Path potential transactions on BMP application programs.

System action

The specified edit routine name is ignored.

User response

Remove the FPATH= keyword operand from the TRANSACT macro or convert the BMP application to an MPP.

Severity

16

IOHG313W	TRANSACTION EDIT TABLE IS FULL. CURRENT REQUEST IS IGNORED
-----------------	---

Explanation

More than 255 transaction edit routine names were specified.

System action

The specified edit routine name is ignored.

User response

Review the edit routine names specified and reduce the number of routine names to less than 255.

Severity

2

IOHG314W	FAST PATH TRANSACTION MUST BE MODE=SNGL. MODE RESET TO SNGL.
-----------------	---

Explanation

This is a warning message. Fast Path only supports transactions that are specified as MODE=SNGL.

System action

The MODE= specification is changed to MODE=SNGL.

User response

Specify MODE=SNGL or remove the MODE keyword operand.

Severity

2

IOHG315W	FAST PATH TX MUST BE MSGTYPE=(SNGLSEG,RESPONSE). MSGTYPE RESET TO (SNGLSEG,RESPONSE).
-----------------	--

Explanation

Fast Path only supports transactions that are specified as MSGTYPE=(SNGLSEG,RESPONSE). This is a warning message only.

System action

The MSGTYPE= specification is changed to MSGTYPE=(SNGLSEG,RESPONSE).

User response

Change the MSGTYPE keyword operand to specify MSGTYPE=(SNGLSEG,RESPONSE) or eliminate the specification.

Severity

2

IOHG317W	MAXRGN OPERAND INVALID, DEFAULT ASSUMED
-----------------	--

Explanation

One of the following occurred:

- More than one value was specified for the MAXRGN= keyword on the TRANSACT macro.
- If the value is not zero, then PARLIM= is not specified.
- The MAXRGN= keyword is not a value from 0 through 255.

System action

The default value of 0 is used.

User response

Review the statement in error. Also see message G317 in *IMS Messages and Codes, Volume 2: Non-DFS Messages*.

Severity

2

IOHG318W	SERIAL OPERAND INVALID, DEFAULT ASSUMED
-----------------	--

Explanation

One of the following occurred:

- More than one value was specified for the SERIAL= keyword on the TRANSACT macro.
- The PARLIM= keyword has a value specified.
- The SERIAL= keyword is not set to YES, NO, or null.

System action

The default value of NO is used.

User response

Review the statement in error. Also see message G318 in *IMS Messages and Codes, Volume 2: Non-DFS Messages*.

Severity

2

IOHG582	SYSID SPECIFICATION OMITTED OR INVALID
----------------	---

Explanation

The SYSID= specification on an MSNAME macro was in error. One of the following occurred:

- The required operand was not specified.
- The operand was not specified as two numeric parameters, both being between the range of 1 and 2036.
- The value of the first parameter is identical to the second.

System action

Syntax checking continues, but the Fast Sysgen process will not produce any updated control block modules.

User response

Review the SYSID specification on the statement in error. Also see message G582 in *IMS Messages and Codes, Volume 2: Non-DFS Messages*.

Severity

8

IOHG583	SYSID SPECIFIED PREVIOUSLY AS A REMOTE OR LOCAL SYSID
----------------	--

Explanation

A parameter specified for the SYSID is a duplicate of one specified as a remote or local SYSID on a previous MSNAME statement.

System action

Syntax checking continues, but the Fast Sysgen process will not produce any updated control block modules.

User response

Review this and preceding MSNAME macro statements for a previous specification of the remote SYSID or a previous specification of the local SYSID as a remote SYSID.

Severity

8

IOHG906W	NO TRANSACTIONS SPECIFIED FOR PRIOR APPLCTN MACRO
-----------------	--

Explanation

This message indicates the presence of an APPLCTN macro with PGNTYPE=TP with no associated TRANSACT macros. This is a warning message. The APPLCTN is still defined, but since there are no associated transactions, the program will never be scheduled.

System action

None. Processing continues.

User response

Review the APPLCTN definition to determine if it should be defined with no associated transactions. Note that this message applies not to the statement immediately preceding the message, but to the APPLCTN statement before the preceding statement.

Severity

2

IOHG922W	SUFFIX OPERAND IS INVALID; DEFAULT ASSUMED
-----------------	---

Explanation

The value specified for the SUFFIX keyword of the IMSGEN macro was invalid.

System action

The sysgen fails. In batch mode, the job ends with the specified condition code. In online mode, the **/MODIFY** request is canceled.

User response

Correct the value specified for the SUFFIX keyword of the IMSGEN macro.

Severity

16

IOHG951E	REMOTE SYSID ssss SPECIFIED FOR TRAN tttttt IS NOT A VALID REMOTE SYSID
-----------------	--

Explanation

A remote system ID, specified in the SYSID= keyword operand of a TRANSACT or APPLCTN statement, was not specified as a remote system ID in any MSNAME statement in the input to this IMS system definition.

System action

Syntax checking continues, but the Fast Sysgen process will not produce any updated control block modules.

User response

Review the SYSID specified and correct the SYSID specification on either the TRANSACT/APPLCTN statement or the MSNAME statement.

Severity

8

IOHG962E	FPCTRL MACRO MUST BE CODED WHEN FP RESOURCES ARE DEFINED
-----------------	---

Explanation

The FPCTRL macro was not coded and Fast Path resources were defined.

System action

The sysgen fails. In batch mode, the job ends with the specified condition code. In online mode, the **/MODIFY** request is canceled.

User response

Code an FPCTRL macro.

Severity

16

IOHG964E	LOCAL SYSID ssss SPECIFIED FOR TRAN ttttttt WAS DEFINED AS A REMOTE SYSID
-----------------	--

Explanation

A local system ID, specified in the SYSID= keyword operand of a TRANSACT or APPLCTN statement, was specified as a remote system ID in an MSNAME statement.

System action

Syntax checking continues, but the Fast Sysgen process will not produce any updated control block modules.

User response

Review the SYSID specified and correct the SYSID specification on either the TRANSACT/APPLCTN statement or the MSNAME statement.

Severity

8

IOHG965W	NO FAST PATH APPLCTN SPECIFICATIONS
-----------------	--

Explanation

This is a warning message. The FPCTRL macro was coded, but no Fast Path application programs were specified.

System action

The FPCTRL macro statement is ignored. Processing continues.

User response

Remove the FPCTRL macro specification, or define at least one Fast Path application program.

Severity

2

IOHG1000E	RTCODE SPECIFICATION CANNOT PRECEDE APPLCTN.
------------------	---

Explanation

The RTCODE statement must be used in conjunction with a preceding APPLCTN statement.

System action

Syntax checking continues, but the Fast Sysgen process will not produce any updated control block modules.

User response

Review the statement in error. Also see message G1000 in *IMS Messages and Codes*.

Severity

16

IOHG1002E	RTCODE MUST FOLLOW FAST PATH MSG-DRIVEN APPLCTN SPEC.
------------------	--

Explanation

The RTCODE specification is only valid for Fast Path message-driven application programs. RTCODE specifications are used to route transactions to the correct application program. Non-message-driven programs cannot retrieve input messages and process them.

System action

Syntax checking continues, but the Fast Sysgen process will not produce any updated control block modules.

User response

Review the statement in error. Also see message G1002 in *IMS Messages and Codes, Volume 2: Non-DFS Messages*.

Severity

16

**IOHG1003E THE FOLLOWING ARE DUPLICATE
ROUTING CODES: aaaaaaaaaa**

Explanation

A specified route code name was previously specified as a route code name.

System action

Syntax checking continues, but the Fast Sysgen process will not produce any updated control block modules.

User response

Review the statement in error. Also see message G1003 or G980 in *IMS Messages and Codes, Volume 2: Non-DFS Messages*.

Severity

16

**IOHG1004E CODE OPERAND IS OMITTED OR
INVALID.**

Explanation

One of the following occurred:

- The CODE operand was not specified.
- The parameter contained a null subparameter.
- The parameter or subparameter was not specified as a 1-8 character alphanumeric name.
- The value begins with the string 'DFS' or 'DBCDM', or it contains a reserved word.

System action

Syntax checking continues, but the Fast Sysgen process will not produce any updated control block modules.

User response

Review the statement in error. Also see message G1004 in *IMS Messages and Codes, Volume 2: Non-DFS Messages*.

Severity

16

**IOHG1005E INQ/INQUIRY OPERAND IS
INVALID.**

Explanation

One of the following occurred:

- More than one parameter was specified.
- The parameter specified was not YES or NO.
- Both INQ and INQUIRY parameters were specified.

System action

Syntax checking continues, but the Fast Sysgen process will not produce any updated control block modules.

User response

Review the statement in error. Also see message G1005 in *IMS Messages and Codes, Volume 2: Non-DFS Messages*.

Severity

16

Chapter 33. Gathering diagnostic information

Before you report a problem with IMS HP Sysgen Tools to IBM Software Support, gather the appropriate diagnostic information.

Procedure

Provide the following information for all IMS HP Sysgen Tools 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 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

For errors related to the installation store/forward data set, provide the following information:

- Print out of the installation store/forward data set (The second step of IOHSTF member of the SIOHSAMP data set can be used for printing.)

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Index

A

- abend codes [217](#)
- ACBLIB member
 - activating [141](#)
 - reloading [138–140](#)
- accessibility
 - overview [13](#)
- APPC services [17](#)
- APPC/MVS
 - activation [20](#)
 - base names [21](#)
 - initiator class [22](#)
 - security requirements [28](#)
 - symbolic destinations [22](#)
 - transaction program profiles [23](#)
- APPLCTN [27](#)
- Application Group Name (AGN)
 - DEDB randomizer [138](#)
 - issuing an IMS command [137](#)
 - updating [134](#)
 - updating IMS terminal [136](#)
 - updating transaction command [135](#)
- assembler language facilities
 - restrictions [183](#)
- attribute value [66](#), [67](#)
- attribute values [66](#), [68](#)
- auditability [11](#)

B

- Batch Reverse Sysgen utility
 - JCL requirements [195](#)
 - PARM field [195](#)
 - return codes [196](#)
- Batch Search utility
 - JCL [197](#)
 - return codes [198](#)
- Batch Update List utility
 - control cards [171](#)
 - JCL requirements [171](#)
 - return codes [172](#)
 - using [171](#)
- Batch utilities
 - Generating JCL [103](#)

C

- cloning [10](#)
- configuration
 - additional security considerations for ISPF [26](#)
- configuration procedures [19](#)
- configuration requirements [18](#)
- configuration suggestions [36](#)
- configuring
 - overview [19](#)
- conflict resolution

- conflict resolution (*continued*)
 - APPLCTN [207](#)
 - database [207](#)
 - TRANSACT [206](#)
- control cards
 - IOHCLIST utility [156](#)
- cookie policy [435](#)

D

- database list [66](#)
- databases
 - special consideration [120](#)
- DD statements
 - STEPLIB [53](#)
- DEDB randomizer [138](#)
- DEDB randomizer list
 - ISPF interface [71](#)
- definition [5](#)
- documentation
 - accessing [12](#)
 - sending feedback [12](#)
- documentation changes [3](#)
- dynamic resource definition (DRD) [8](#)
- Dynamic Resource Definition (DRD)
 - status [95](#)

E

- edit option
 - resource update list [111](#)
- edit session
 - starting [111](#)
- example
 - managing Sysgen source for application independence [37](#)

F

- Fast Sysgen utility
 - batch output [178](#)
 - DD statements [176](#)
 - JCL [175](#)
- fastgen [9](#)
- Fastgen MODBLKS gen [75](#)

G

- global online change [8](#)
- group definitions [47](#)

H

- hardware [11](#)
- history log
 - maintaining [88](#)

- history log (*continued*)
 - reversing changes [90](#)
 - reversing log entries [86](#)
 - reviewing [83](#)
 - viewing [84](#)

I

- IMS commands
 - Issuing [93](#)
- IMS Managed ACBs Activate [54](#), [141](#)
- IMS resource definition (IMSRSC) repository
 - status [95](#)
- IMS Stage 1 sysgen source
 - Validating [73](#)
- IMS sysgen
 - Reversing [77](#)
- IMS sysgen source
 - Synchronizing [83](#)
- IMSGEN report DD [179](#)
- IMSID Options Utility
 - batch [199](#)
 - JCL [202](#)
 - LIST function [203](#)
 - UPDATE function [203](#)
 - values [199](#)
- IMSRPT report DD [180](#)
- IMSRSC repository
 - status [95](#)
- installation store/forward
 - activating [41](#)
 - reports [43](#)
 - scheduling the REDO job [41](#)
- IOHBSRCH [197](#), [198](#)
- IOHCLIST
 - running [153](#), [154](#)
- IOHCLIST utility
 - control cards [156](#)
 - JCL requirements [155](#)
 - output [157](#)
 - processing [153](#)
 - return codes [157](#)
- IOHEXEC [27](#)
- IOHGEN macro
 - using [154](#)
- IOHMERGE [207](#)
- IOHXEXEC [24](#)
- IOHXISPF [24](#)
- ISPF
 - additional security consideration [26](#)
- ISPF interface
 - adding database definitions [117](#)
 - additional commands [114](#)
 - attribute value [66](#), [67](#)
 - attribute values [68](#)
 - database list [66](#)
 - DEDB randomizer list [71](#)
 - deleting database definitions [119](#)
 - edit option [111](#)
 - editing an Entry [117](#)
 - inserting an Entry [115](#)
 - introduction [55](#)
 - ISPF line commands [65](#)
 - Loading panel [65](#)

- ISPF interface (*continued*)
 - options [57](#)
 - program list [67](#)
 - renaming database definitions [119](#)
 - route code list [71](#)
 - specifying Attribute values [116](#)
 - startup options [58](#)
 - transaction list [68](#)
 - updating database definitions [118](#)
 - View option [63](#)
 - View panel [63](#)
 - Viewing resource and attribute values [66](#)
- ISPF line commands [65](#)

J

- JCL generator
 - Setup [103](#)
 - Using [104](#)
- JCLIN Generator
 - creating [189](#)
 - using [189](#)
 - when to run [189](#)
 - when to use [190](#)

L

- legal notices
 - cookie policy [435](#)
 - notices [435](#)
 - product documentation [435](#)
 - programming interface information [435](#)
 - trademarks [435](#)
- libraries [23](#)
- Loading panel
 - ISPF interface [65](#)

M

- macro requirements [184](#)
- macros
 - converting to resource update list entries [153](#)
- maintenance
 - impacts [187](#)
- Managed ACBs Activate [54](#)
- Merge Clone utility
 - conflict resolution [205](#)
 - JCL [207](#)
 - reports [210](#), [211](#)
 - resolving APPLCTN conflicts [207](#)
 - resolving database conflicts [207](#)
 - resolving TRANSACT conflicts [206](#)
 - restrictions [205](#)
 - return codes [211](#)
- merging [10](#)
- messages
 - IMS sysgen [417](#)
 - ISPF [363](#)
- MODBLKS [77](#)

N

- notices [435](#)

O

optional customization [47](#)
organization
 source [37](#)

P

PARM field [191](#)
PARM specifications [175](#)
performance suggestions [36](#)
Performing [75](#)
problem determination [215](#)
processing [185](#)
product documentation terms and conditions [435](#)
profile definitions [49](#)
program entries
 adding [120](#)
 adding, with transactions [121](#)
 deleting [123](#)
 renaming [123](#)
 special considerations [124](#)
 updating [120](#), [122](#)
program list [67](#)

R

REDO job
 JCL requirements [42](#), [45](#)
 reports [43](#)
 scheduling [41](#)
report DD
 IMSGEN [179](#)
 IMSRPT [180](#)
 SECGEN [181](#)
 SECRPT [182](#)
reports
 IOHEXCPT [211](#)
 IOHLIST [210](#)
repository [30](#)
requirements
 macro [184](#)
 macro statements
 application [184](#)
 MSC link [184](#)
 System [184](#)
 Terminal [184](#)
resource definition data set (RDDS) [8](#)
resource definitions
 changes [11](#)
resource types [66](#)
resource update list
 batch [153](#)
 changes [11](#)
 completed installation [150](#)
 completed verification [146](#)
 converting macros to entries in [153](#)
 editing [111](#), [114](#)
 installation methods [147](#)
 installing [147](#)
 selecting [111](#)
 sorting [114](#)
 verification methods [143](#)

resource update list (*continued*)
 verifying [143](#)
Resource Update List Create utility [153](#)
Resource Update List Generator
 control statements [160](#)
 DD statements [159](#)
 JCL requirements [159](#)
 PARM field specifications [159](#)
 reports [166](#)
 return codes [168](#)
restricted facilities
 converting [184](#)
restrictions
 assembler language facilities [183](#)
return codes
 Merge Clone [211](#)
reversing history log entries [86](#)
route code entries
 adding [131](#)
 deleting [133](#)
 renaming [133](#)
 updating [131](#), [132](#)
route code list [71](#)

S

screen readers and magnifiers [13](#)
SECGEN report DD [181](#)
SECRPT report DD [182](#)
security
 additional considerations when configuring for ISPF [26](#)
Security gen [80](#)
security profiles [25](#)
security requirements
 APPC/MVS [28](#)
service information [12](#)
setup options [30](#)
software [11](#)
source organization [37](#)
STEPLIB DD statement [53](#)
Storage functions
 CSA map [98](#)
 Specifying addresses [99](#)
 Storage display panel [100](#)
 Storage request panel [99](#)
 Storage Zap panel [101](#)
 Virtual storage display [99](#)
 Virtual storage map [97](#)
 Zap verify panel [102](#)
store/forward VSAM data set [39](#), [40](#)
suggestions
 configuration [36](#)
 performance [36](#)
summary of changes [3](#)
support information [12](#)
sysgen changes
 implementing [109](#)
Sysgen Compare utility
 DD statements [191](#)
 JCL [191](#)
 report [192](#)
 what it does [191](#)
sysgen process [5](#)
sysgen source environment

- sysgen source environment (*continued*)
 - advantages [38](#)
- Sysgen updates
 - validation [39](#)

T

- target libraries [17](#)
- technotes [12](#)
- trademarks [435](#)
- transaction code entries
 - adding [125](#)
 - deleting [127](#)
 - renaming [129](#)
 - updating [125](#), [126](#)
- transaction list [68](#)
- troubleshooting [17](#), [215](#)

U

- user definitions [51](#)
- user group definitions [52](#)
- user menu [27](#)

V

- verification
 - resource update list [143](#)
- View option
 - ISPF interface [63](#)
- View panel
 - ISPF interface [63](#)
- Viewing resource and attribute values
 - ISPF interface [66](#)

W

- what's new [3](#)



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