IBM IMS Administration Tool for z/OS 1.1

User's Guide and Reference

SC27-9011-30

Note:

Before using this information and the product it supports, read the information in “Notices” on page 391.

31st Edition (September 2024)

This edition applies to Version 1.1 of IBM IMS Administration Tool for z/OS (program number 5655-CAT) and to all subsequent releases and modifications until otherwise indicated in new editions.

This edition replaces SC27-9011-29.

Contents

About this information

IBM IMS Administration Tool for z/OS® (also referred to as IMS Administration Tool) is an IMS Tools product that provides a comprehensive set of functions and features to assist IMS database administrators with managing IMS environments.

These topics provide instructions for installing, configuring, and using IMS Administration Tool.

To use these instructions, you must have already installed IMS Administration Tool by completing the instructions in the *Program Directory for IBM IMS Administration Tool for z/OS (GI13-4331)*, 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 Administration Tool
- Install and operate IMS Administration Tool
- Customize your IMS Administration Tool environment
- Diagnose and recover from IMS Administration Tool problems
- Use IMS Administration Tool 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
- Technical notes from IBM Software Support, referred to as "Tech notes"
- White papers that describe product business scenarios and solutions

Part 1. Overview and Roadmap

IBM IMS Administration Tool for z/OS (also referred to as IMS Administration Tool) is an IMS Tools product that provides a comprehensive set of functions and features to assist IMS database administrators with managing IMS environments.

The topics in this section provide you with overview information for IMS Administration Tool.

Topics:

Chapter 1. Quick start roadmap

The following checklist for IMS Administration Tool can help you understand how supporting information is organized and where it is located.

Background information:

- Product overview

  Refer to Chapter 2, “IMS Administration Tool overview,” on page 5.
- Architecture and process flow diagrams

  Refer to “IMS Administration Tool architecture and process flow” on page 20.

Product installation:

- Installation procedures

  IMS Administration Tool is installed by using SMP/E and standard RECEIVE, APPLY, and ACCEPT processing.

  Complete information about installation requirements, prerequisites, and procedures for IMS Administration Tool is located in the *Program Directory for IBM IMS Administration Tool for z/OS, GI13-4331*.

Product configuration:

- Configuration prerequisites and checklist

  Refer to Chapter 3, “Configuration prerequisites and checklist,” on page 27.
- Initial product customization using IMS Tools Setup

  Refer to Chapter 4, “Initial product customization using IMS Tools Setup,” on page 29.
- Additional and optional product configuration

  Refer to Chapter 5, “Additional and optional product configuration,” on page 31.

Setup and Administration:

- Update product registry

  Refer to Chapter 6, “Updating the product registry,” on page 49.
- Register IMS systems

  Refer to Chapter 7, “Registering IMS systems,” on page 59.
- Manage IMS groups

  Refer to Chapter 8, “Managing IMS groups,” on page 65.
- Manage data sets and data set groups

  Refer to Chapter 9, “Managing data sets and data set groups,” on page 69
- View audit log

  Refer to Chapter 10, “Managing and viewing the audit log,” on page 73.
- Configuring message disposition

  Refer to Chapter 11, “Configuring message disposition,” on page 79.

Using IMS Administration Tool:

- Database and Application Administration

  Refer to Part 4, “Database and application administration,” on page 83.
- IMS Catalog and ACB Library Management

  Refer to Part 5, “IMS catalog and ACB library management,” on page 121.
- Run IMS Utilities

  Refer to Part 6, “Run IMS utilities (JCL generation),” on page 169.
- IMS SPUFI

  Refer to Part 7, “IMS SPUFI (IMS SQL processing using file input),” on page 201.
- IMS Command Processor

  Refer to Part 8, “IMS command processing,” on page 211.

Troubleshooting:

- Return codes of IMS Administration Tool batch processor ATY@OBJU

  Refer to “Return codes” on page 271.
- ATY0 - ATY9 messages

  Refer to “Messages (ATY0 - ATY9)” on page 272.
- IMS SPUFI messages (ATYE, ATYJ, ATYT) and product configuration messages (ATYZ)

  Refer to “Messages (ATYA - ATYZ)” on page 372.
- Abend codes

  Refer to “Abend codes” on page 386.

Chapter 2. IMS Administration Tool overview

IBM IMS Administration Tool for z/OS (also referred to as IMS Administration Tool) is an IMS Tools product that provides a comprehensive set of functions and features to assist IMS database administrators with managing IMS environments.

Topics:

What's new in IMS Administration Tool

This topic summarizes the technical changes for this edition.

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.

Revision markers follow these general conventions:

- Only technical changes are marked; style and grammatical changes are not marked.
- If part of an element, such as a paragraph, syntax diagram, list item, task step, or figure is changed, the entire element is marked with revision markers, even though only part of the element might have changed.
- If a topic is changed by more than 50%, the entire topic is marked with revision markers (so it might seem to be a new topic, even though it is not).

Revision markers do not necessarily indicate all the changes made to the information because deleted text and graphics cannot be marked with revision markers.

SC27-9011-30 (September 2024)

Description	Related APARs
IMS catalog and ACB library management function enhancement. To improve the performance in displaying analysis reports, changes were made to the function and ISPF panels. The following topics are updated: • Chapter 19, "IMS catalog space and DBD/PSB analysis," on page 123 • "Return codes" on page 271	PH62891
Removed information about the web interface, which was available through IBM Management Console for IMS and Db2® for z/OS.	N/A

SC27-9011-29 (June 2024)

Description	Related APARs
A restriction is added to the following topics: • "DBD and PSB resource change" on page 91 • Chapter 19, "IMS catalog space and DBD/PSB analysis," on page 123 • Chapter 27, "IMS SPUFI overview," on page 203	PH61724
Documentation updates. The following topics are updated: • Chapter 19, "IMS catalog space and DBD/PSB analysis," on page 123 • "IMS maintenance tasks" on page 187 • "Required template modifications for IMS-managed ACBs environment" on page 192	N/A

SC27-9011-28 (May 2024)

Description	Related APARs
ISPF client enhancement. When IMS Tools Base Distributed Access Infrastructure (DAI) TAS (Tools Access Server) is running on each of multiple LPARs, requests from the ISPF client are routed to the same DAI TAS as the LPAR on which the IMS system is running. The following topics are updated: • "What does IMS Administration Tool do?" on page 18 • "IMS Administration Tool architecture and process flow" on page 20 • "DBD and PSB resource change" on page 91 • New message ATYZ045E	PH60740
The following messages are updated: • ATY3101E • ATYZ001E	PH60043 and PH61300

SC27-9011-27 (April 2024)

Description	Related APARs
Change to the export objects function of the IMS catalog and ACB library management function: The export objects function provides an option to export logical DBDs and GSAM information from DBD and PSB libraries. This enhancement is for the ISPF interface only. To enable this option, apply the PTF for APAR PH60138 to IMS Library Integrity Utilities. The following topic is updated: "Export objects reference" on page 147.	PH60147
Documentation update for Run IMS utilities (JCL generation). Added description of required modifications to run product function JCL in IMS-managed ACBs environment. See "IMS maintenance tasks" on page 187 and "Required template modifications for IMS-managed ACBs environment" on page 192.	N/A

SC27-9011-26 (February 2024)

Description	Related APARs
Message changes accompanying code changes for fixing retry behavior when certain return and reason codes are received from the IXGWRITE macro. The following messages are updated: ATY8406I, ATY8407I, ATY8408I, ATY8409I	PH59741

SC27-9011-25 (January 2024)

Description	Related APARs
Enhancement to the manage IMS groups function. In IMS data sharing groups, you can specify whether to obtain DBD, PSB, and ACB libraries information from the RECON ID or not. This enhancement is for the ISPF interface only. The following topics are updated or added: • “Create/Update/View IMS Data Sharing Group reference” on page 66 • “Create/Update/View IMS Command Group reference” on page 67 • “DBD and PSB resource change” on page 91 • “Import objects reference” on page 149	PH58182

SC27-9011-24 (November 2023)

Description	Related APARs
Changes to the IMS catalog and ACB library management function: The export objects function and the import objects function support initialization of the following data sets, which are used for storing DBD and PSB source statements: • Export objects function: Export data sets • Import objects function: Backup data sets If initialization is requested, all existing members in the data sets are deleted before export or import. If initialization is not requested, existing members in the data sets are not deleted; new members are added and any member with the same name is overwritten. To enable this option, apply the PTF for APAR PH57421 to IMS Library Integrity Utilities. The following topics are updated: • “Export objects reference” on page 147 • “Import objects reference” on page 149 • Message ATY3955I	PH57394

SC27-9011-23 (September 2023)

Description	Related APARs
Ability to classify users into two types, super administrators and regular users, by using Security Authorization Facility (SAF). Classifying users is optional. If users are classified, the following changes are made to the IMS Administration Tool environment: • Only super administrators can define and change scope designations of products and systems. • Only super administrators can configure settings from the **Setup and Administration** menu. In the ISPF interface, some functions that are available from the **Setup and Administration** menu are also made available from the **Settings** menu of each function so that regular users can also configure some settings. • Relaxes the permission required to change the options for the record DBD/PSB statements function from UPDATE to READ, allowing super administrators to change the options. Users with UPDATE authority do not need to be changed to READ authority. The following topics are updated or added: • "Securing the IMS Administration Tool functions" on page 35 • "Classifying super administrators and regular users " on page 35 • Chapter 18, "View audit log," on page 119 • "View Audit Log Filters reference" on page 119 • "Process summary for product registration" on page 171 • Chapter 23, "Run IMS Utilities Settings overview and reference," on page 175 • "Settings – Specifying IMS command global options" on page 219 • "Settings – Specifying IMS command job options" on page 223 • Abend codes "1066" on page 386 and "1067" on page 386	PH55647

Description	Related APARs
Ability to define DBD libraries, PSB libraries, and ACB libraries for IMS data sharing groups of IMS Administration Tool. • DBD, PSB, and ACB libraries can be defined only through the ISPF interface. • When DBD, PSB, and ACB libraries are defined, information about defined libraries is stored to IMS Tools Knowledge Base as RECON ID. Information in RECON ID is also shared with IMS Tools Base and IMS Administration Foundation. PTFs of the following APARs must be applied: – APAR PH55736 to IMS Tools Base 1.7. – If you are using IMS Administration Foundation, APAR PH56865 to IBM Unified Management Server. • Data set information that is stored in RECON ID is used during the DBDGEN, PSBGEN, ACBGEN, and catalog populate processes of the IMS resource change function and the import objects function. – Before this APAR/PTF is applied, IMS Administration Tool used DBD, PSB, and ACB library data sets that it discovers from the IMS control region JCL and PROCLIB. After this APAR/PTF is applied, IMS Administration Tool uses DBD libraries, PSB libraries, and ACB libraries that are defined for the IMS data sharing group. – If no DBD, PSB, and ACB libraries are defined for the IMS data sharing group, IMS Administration Tool uses the data sets discovered from the IMS control region JCL and PROCLIB. • The libraries that are defined for IMS data sharing group are also referred to by IMS Management Console when IMS Administration Tool functions are used through IMS Management Console. The following topics are updated or added: • “Register IMS Systems management reference” on page 60 • “Manage IMS Groups reference” on page 65 • “Create/Update/View IMS Command Group reference” on page 67 • “IMS Tools Base RECON Information – IMS Data Sets reference” on page 68	PH55647
Documentation updates: • Topics under Chapter 5, “Additional and optional product configuration,” on page 31 • “Configuring VSAM options data set” on page 32 • “Configuring z/OS system logger for audit log and IMS command log” on page 32 • “Defining a log stream” on page 34 • “Restricting access to IMS Administration Tool ISPF interface” on page 35 • “Restricting IMS command group or IMS ID for issuing commands” on page 37 • “Verifying that the setup completed successfully on IMS system” on page 40 • “Commands, fields, and sample for viewing audit log” on page 76 • “IMS command log overview” on page 217	N/A

SC27-9011-22 (April 2023)

Description	Related APARs
Changes to the import objects function of the IMS catalog and ACB library management function: • (ISPF interface only) An option to migrate non-IMS-managed ACBs to IMS-managed ACBs is added to the Import Objects panel. • Import objects jobs can run whether the IMS system is active or inactive. However, when it processes IMS-managed ACBs and if initialization of IMS catalog is requested, the IMS system must be inactive. The following topics are updated: • “DBD and PSB resource change” on page 91 • Part 5, “IMS catalog and ACB library management,” on page 121 • Chapter 20, “Export objects and import objects,” on page 145 • “Import objects reference” on page 149 • “Migration scenarios using the export objects and import objects functions ” on page 156 • “ATY@OBJU JCL statements” on page 259	PH53764

SC27-9011-21 (February 2023)

Description	Related APARs
Changes to the IMS catalog and ACB library management function: • An option to generate batch JCL for deleting obsolete instances is added to DBD Detail Report and PSB Detail Report panels. • (ISPF interface only) Estimated average sizes of DBD/PSB instances are no longer displayed in IMS catalog space analysis and summary reports. The following topics are updated: • Chapter 19, “IMS catalog space and DBD/PSB analysis,” on page 123 • “Return codes” on page 271 • New messages: ATY3616E, ATY3960E	PH52162

SC27-9011-20 (December 2022)

Description	Related APARs
DBD and PSB statement recording option for IMS resource change and import objects functions. • Records DBD and PSB statements (before and after change) to the audit log (z/OS System Logger) or data sets. • Recorded DBD and PSB statements can be viewed from the View Audit Log panel. • If the recording destination is data sets, data set names are also written to audit log records. You can view recorded DBD and PSB statements from the View Audit Log panel by clicking the data set name in the audit log (ISPF interface only). • Security Authorization Facility (SAF) facility class ATYADMIN.SETUP controls who can change audit log settings. The following topics are updated: • "Securing the IMS Administration Tool functions" on page 35 • Part 3, "Setup and Administration," on page 47 • Chapter 10, "Managing and viewing the audit log," on page 73 • "Manage Audit Log reference" on page 74 • "Commands, fields, and sample for viewing audit log" on page 76 • Chapter 16, "Record DBD/PSB statements before and after change," on page 105 • Message: ATY3959E	PH50782

SC27-9011-19 (November 2022 second update)

Description	Related APARs
IMS command processing. Documentation changes related to system abend B37 that occurs with SYSPRINT DD when using IMS command processor (batch processing). The following topics are updated: • "IMS Command batch processing DD statements" on page 232 • Messages: ATY0501E, ATY0502E, ATY6034W	PH50788

SC27-9011-18 (November 2022)

Description	Related APARs
Command and Audit Log Archive (ATYARCH0) utility enhancement. The utility can archive log records that are generated by IMS Command Control Facility. The following topics are added, updated, or removed: • Chapter 37, "Reference: Log data archiving: Configure the Command and Audit Log Archive (ATYARCH0) utility," on page 263 • "Compatibility between IMS Administration Tool and IMS Command Control Facility" on page 42 • "Migrating IMS Command Control Facility resources" on page 43 • "Return codes" on page 271 • New messages: ATY8272E, ATY8273E • Removed message: ATY8271E	PH50044

SC27-9011-17 (September 2022)

Description	Related APARs
Documentation update: A message that appears while setting up a Java environment for IMS SPUFI JBP can be ignored. Description is added to “Setting up a Java environment for IMS SPUFI JBP” on page 41.	N/A

SC27-9011-16 (August 2022)

Description	Related APARs
IMS catalog and ACB library management enhancement. DBD/PSB Detail report is enhanced as follows: • For each DBD/PSB instance, shows relevant DBD and PSB members found in IMS directory or ACB libraries. • More detailed status indicators. • C column that indicates mismatch between DBD/PSB members and active/pending instances. • Supports the capability to delete instances. For more information, see Chapter 19, “IMS catalog space and DBD/PSB analysis,” on page 123.	PH47747
Documentation changes to support IBM IMS Tools Base for z/OS 1.7.	N/A

SC27-9011-15 (June 2022)

Description	Related APARs
Changes in IMS directory/BSDS backup and restore. The ISPF panels and the behavior of the IMS directory/BSDS backup and restore function have changed as follows in an environment where an IMS directory is shared by multiple IMS systems (ACBSHR=Y parameter is set): • The Search Backups in All IMS IDs field in the Restore from Latest panel is obsolete. IMS Administration Tool identifies the latest backup taken with any sharing IMS systems. • The List Backups of the Same IMS Directory in All IMS IDs option in the Backup List panel is obsolete. All backups from all sharing IMS systems are displayed in a list from which you can select the backup to use for restore. • Prior to this APAR, settings parameters must be defined for each IMS system. After this APAR, if you define settings parameters for one of the sharing IMS systems, these setting parameter values are applied to all other sharing IMS systems. These changes are for the ISPF interface only. The following topics are added or updated: • “Overview of IMS directory/BSDS backup and restore” on page 161 • “IMS directory/BSDS backup and restore settings reference” on page 163 • “Restore IMS directory and BSDS reference” on page 165 • “IMS directory/BSDS backup list reference” on page 168	PH46468

Description	Related APARs
Documentation changes related to the database and application administration function. Modified some descriptions to accommodate terminology changes made to the ISPF panels. The following topics are updated: • "DBD/PSB compare reference—between IMS directory and ACB library" on page 108 • "DBD/PSB compare reference—IMS directories" on page 110 • "DBD/PSB compare reference—IMS directory and IMS catalog" on page 113	PH46865
Documentation changes related to the IMS SPUFI function. IMS SPUFI JBP issues a SYNC(commit) DL/I call on ISPUFI execution regardless of whether all SQL statements are successfully processed or not. The function has been modified so that a SYNC(commit) DL/I call is issued only when all of the SQL statements are successfully processed. The following topic is updated: Chapter 27, "IMS SPUFI overview," on page 203	PH46335, PH46774

SC27-9011-14 (May 2022)

Description	Related APARs
Changes made to an ISPF panel for IMS SPUFI (IMS SQL processing using file input). The following topic is updated: Chapter 28, "Set IMS SPUFI options reference," on page 207	PH46335

SC27-9011-13 (April 2022)

Description	Related APARs
Documentation updates: • Restriction added to "Scope designations for products" on page 52 • Updates made to Chapter 36, "Reference: DBD and PSB update (ATY@OBJU) JCL," on page 259 • New topic "Return codes" on page 271	N/A

SC27-9011-12 (March 2022)

Description	Related APARs
IMS directory/BSDS backup and restore enhancement. Before restoring the IMS directory, the compare function can compare the backup of IMS directory with the IMS catalog database. This enhancement is for the ISPF interface only. The following topics are updated: • Chapter 17, "DBD/PSB compare," on page 107 • New or changed messages: ATY3609W, ATY3609E, ATY3958E	PH43372

Description	Related APARs
Compare function enhancements. These enhancements are for the ISPF interface only: • Before this APAR, the DBD/PSB compare panel can be accessed from the IMS Catalog and ACBLIB Management menu. After this APAR, the panel can be accessed from the Database and Application Administration menu. • Ability to compare DBD and PSB resources in IMS directory data sets (either original data sets or backup data sets) with those in the IMS catalog database. The following topics are updated: • “Restore IMS directory and BSDS reference” on page 165 • Chapter 17, “DBD/PSB compare,” on page 107 • “DBD/PSB compare reference—IMS directory and IMS catalog” on page 113	PH41813
Topic "Wildcard support" is removed.	N/A

SC27-9011-11 (December 2021)

Description	Related APARs
IMS directory/BSDS backup and restore enhancement - SMS class support. You can specify the SMS class for backup and restore data sets. IMS Administration Tool uses the SMS class specifications as follows: • Backup: Creates backup data sets using the high-level qualifier (HLQ) and the SMS class specifications. • Restore: If the discovery of restore data sets fails and IMS Administration Tool cannot find restore data sets, creates IMS data sets using the SMS class specifications. This enhancement is for the ISPF interface only. The following topics are updated: • “IMS directory/BSDS backup and restore settings reference” on page 163 • “Restore IMS directory and BSDS reference” on page 165	PH41941

SC27-9011-10 (November 2021)

Description	Related APARs
Enhancement to the Register an IMS Subsystem interface. When you register an IMS subsystem to IMS Administration Tool, you can supply region parameters for DLISAS, IRLM, DBRC, and JBP regions (in addition to IMS control region parameters). This enhancement is for the ISPF interface only. The following topic is updated: “Register an IMS Subsystem reference” on page 62	PH42082

SC27-9011-09 (October 2021)

Description	Related APARs
New format for printing decoded DBDGEN and PSBGEN macro statements. The object explorer function (database and application administration) and the export objects function (IMS catalog and ACB library management) support FORMAT_COL10 format for printing decoded DBDGEN and PSBGEN macro statements. This format is available only through the ISPF interface. The following topics are updated: • "Object explorer reference" on page 87 • "Export objects reference" on page 147	PH41095
Option to delete DBD and PSB instances from the IMS catalog database (IMS catalog and ACB library management). Obsolete DBD and PSB instances can be deleted from DBD Detail Report and PSB Detail Report panels. This option is available only through the ISPF interface. The following topics are updated: • Chapter 19, "IMS catalog space and DBD/PSB analysis," on page 123 • New or changed messages: ATY3610E, ATY3957W, ATY3957E	PH40909

SC27-9011-08 (September 2021 second update)

Description	Related APARs
Documentation changes related to IMS directory/BSDS backup enhancement. The following topics are updated: • Chapter 21, "IMS directory/BSDS backup and restore," on page 161 • "Restore IMS directory and BSDS reference" on page 165	PH38517

SC27-9011-07 (September 2021)

Description	Related APARs
IMS directory/BSDS backup enhancement. Automatic backup (Auto Backup) is supported. By enabling automatic backup, a backup of the IMS directory is taken after a successful completion of the IMPORT DEFN command. New and changed topics are as follows: • "Setting up IMS Administration Tool in an IMS system" on page 37 • Topics in Chapter 21, "IMS directory/BSDS backup and restore," on page 161 • New messages added to "Messages (ATY0 - ATY9)" on page 272 Also, the naming rules for the backup data set are changed as follows: • IMS ID is added to the data set name. • The maximum number of characters for the high-level qualifier (HLQ) is changed from 32 to 27. For the naming rules, see "IMS directory/BSDS backup and restore settings reference" on page 163.	PH38517

SC27-9011-06 (July 2021)

Description	Related APARs
The backup list, which is available in the DBD/PSB compare function for IMS directory data sets, is enhanced. In the DBD/PSB Compare IMS Directory Data Sets panel, new fields are introduced. You can select data sets from the backup list when selecting the source IMS directory and the target IMS directory. See “DBD/PSB compare reference—IMS directories” on page 110.	PH38430

SC27-9011-05 (June 2021)

Description	Related APARs
Enhancements related to IMS directory support. These enhancements are available only for the ISPF interface. • Before this enhancement, the DBD/PSB compare function could only compare DBD and PSB resources that are stored in one IMS directory (between active data sets and staging data set). This enhancement enables the DBD/PSB compare function to compare DBD and PSB resources that are stored in two IMS directories (one of the IMS directories to compare does not have to be defined to IMS). The function can also compare the IMS directory against a backup of the IMS directory. New and changed topics are as follows: – “What does IMS Administration Tool do?” on page 18 – Chapter 17, “DBD/PSB compare,” on page 107 – “DBD/PSB compare reference—between IMS directory and ACB library” on page 108 – “DBD/PSB compare reference—IMS directories” on page 110 • Supports a new feature, IMS directory/BSDS backup and restore. You can use the backup function to back up the data sets of the IMS directory, and the restore function to restore the data sets of the IMS directory from a backup. New topics are added to Chapter 21, “IMS directory/BSDS backup and restore,” on page 161.	PH36741
IMS Administration Tool can decode DBD and PSB instances stored in the IMS catalog database. Changes are made to the following topics: • “What does IMS Administration Tool do?” on page 18 • Chapter 13, “Object explorer,” on page 87 • “Object explorer reference” on page 87 • Chapter 19, “IMS catalog space and DBD/PSB analysis,” on page 123	PH31048
The Run IMS utilities (JCL generation) function supports a new JCL template for registering databases to DBRC. See “IMS maintenance tasks” on page 187 for a list of JCL templates available with the Run IMS utilities function.	PH29930

SC27-9011-04 (November 2020)

Description	Related APARs
Enhancements for the IMS Administration Tool ISPF interface. The ISPF interface has been enhanced to support the following capabilities: • Predefine data sets and use them in database and application administration functions and in IMS catalog and ACB library management functions. See the following topics: – Chapter 9, "Managing data sets and data set groups," on page 69 – Chapter 12, "Database and application administration settings," on page 85 – "Import objects settings" on page 146 • Select which resource change tasks to perform. See Chapter 14, "IMS resource change," on page 91. • Merge multiple DBD libraries, PSB libraries, or ACB libraries into a single data set. See "Merge libraries" on page 94. These new capabilities are available only with the ISPF interface. The web interface does not support these new capabilities. Step-by-step instructions to use these enhancements are provided in Technote: How to change DBDs and PSBs by using IBM IMS Administration Tool for z/OS.	PH28185

SC27-9011-03 (March 2020)

Description	Related APARs
• Compatibility with batch processing functions of IMS Command Control Facility. See "Migration from IBM IMS Command Control Facility for z/OS" on page 41. • A function to specify command job options for IMS command processor batch jobs. See Part 8, "IMS command processing," on page 211.	PH15400
IMS SPUFI (ISPUFI) function enhancement to support processing of SQL statements with an IMS Java application. See "Setting up a Java environment for IMS SPUFI JBP" on page 41 and Chapter 27, "IMS SPUFI overview," on page 203.	PH19835
Messages added to "Messages (ATY0 - ATY9)" on page 272 and "Messages (ATYA - ATYZ)" on page 372.	N/A

SC27-9011-02 (November 2019)

Description	Related APARs
PL/I copybook import support and compare functionality enhancement (IMS directory active and staging data sets). See the following topics: • Chapter 15, "Copybook import," on page 97 • Chapter 17, "DBD/PSB compare," on page 107	PI99608
New option, ASMAOPT, for changing assembler options used for DBDGEN and PSBGEN. See the following topics: • Chapter 13, "Object explorer," on page 87 • Chapter 14, "IMS resource change," on page 91 • "Import objects reference" on page 149	PH08089

Description	Related APARs
Command and Audit Log Archive (ATYARCH0) utility enhancement. See Chapter 37, “Reference: Log data archiving: Configure the Command and Audit Log Archive (ATYARCH0) utility,” on page 263.	PH12977
Support concatenation of load module library data sets. Before this APAR, IMS Administration Tool could refer to only one load module library data set. This APAR enhances the tool to support concatenation of data sets so that user customized load module library can be referred to in addition to the IMS Administration Tool product load module library. See the following topics: • “Configuring VSAM options data set” on page 32 • “Configuring command store/forward” on page 253	PH11257
Copybook import and other enhancements. See the following topics: • Chapter 13, “Object explorer,” on page 87 • Chapter 14, “IMS resource change,” on page 91 • Chapter 15, “Copybook import,” on page 97 • Chapter 36, “Reference: DBD and PSB update (ATY@OBJU) JCL,” on page 259 • Chapter 20, “Export objects and import objects,” on page 145	PH15100

SC27-9011-01 (May 2018)

Description	Related APARs
• "Job card" changed to "Job statement" throughout. • Remove "Job Options" references. • COBOL and PL/I (added) copybooks. • SPUFI: "MAX CHAR Field Width" option correction. • Catalog and non-catalog IMS environments summary. • IMS catalog management business scenarios. • Scenarios for "Overwrite existing objects". • Example database maintenance tasks for JCL generation. • New updated IMS catalog/directory overview. • New topic: The role of dynamic discovery	N/A
In database and application administration and IMS catalog management, use "IMS directory active and staging data set" terminology.	PI88592 (ATY ISPF), PI90728 (ATY MC) , PI90085 (ATY Discover)
Support for refreshable user exits for IMS AOI (IMS 14 or later required).	PI94129
New field designations and descriptions for Register an IMS Subsystem.	PI95345

What does IMS Administration Tool do?

IMS Administration Tool provides a comprehensive set of functions and features that can help you with the day-to-day tasks associated with managing IMS environments efficiently and effectively.

IMS Administration Tool is designed to operate as a centralized task management control center. The single user interface provides access to functions that can simplify complex tasks associated with

managing IMS databases, applications, and IMS systems. The tool can increase the efficiency of data center resources and reduce the negative impact that data changes can have on your databases.

Core functions include:

- Assist in the administration of IMS databases and applications.
- Help manage the IMS catalog.
- Generate JCL to run IMS utilities.
- Query data interactively.
- Issue IMS commands and view responses.

IMS Administration Tool integrates with and enhances the entire IMS Tools family of products.

IMS Administration Tool provides a common look and feel using standard ISPF specifications.

Database and application administration (Object management)

The database and application administration function provides a method for IMS DBAs to view, create, and change IMS databases (DBDs) and application views (PSBs). Capabilities include:

- View property, online status, and recovery status of IMS DBD and PSB objects.
- Create, alter, view, and model IMS DBD and PSB objects.
- Decode DBDs and PSBs in the IMS catalog database, IMS directory, DBD libraries, PSB libraries, and ACB libraries to DBD and PSB macro source codes.
- Import COBOL and PL/I copybook changes into DBD macro source.
- Run the DBDGEN, PSBGEN, ACBGEN, and IMS catalog populate utilities immediately, or generate JCL that can be run at a later time.

IMS catalog and ACB library management

IMS Administration Tool provides access to the IMS catalog and promotes the use of the IMS catalog by adding significant functionality beyond what is currently available with this IMS feature. Capabilities include:

- Copy objects between the IMS ACB library or IMS directory on one IMS system to the IMS ACB library or IMS directory on another IMS system.
- Compare versions of DBD and PSB resources in the IMS directory with those in the IMS ACB library, between the IMS directory active data sets and the IMS directory staging data set, or between two IMS directories.
- Generate reports to help analyze the databases (DBDs) and applications (PSBs) defined in the IMS catalog.
- Perform space utilization analysis and view the number of objects and instances in the IMS catalog.
- Include and update individual (or bulk) IMS database definitions (DBD) with schema from COBOL and PL/I copybooks during the import process to the IMS catalog.

  Adding or updating schema to individual databases or in bulk can be accomplished either interactively or schedule through a batch process.
- Create backups of the data sets used for the IMS directory, which include IMS directory active data sets, a staging data set, and a bootstrap data set, and restore these data sets from backups.

Run IMS utilities (JCL generation)

IMS Administration Tool can help IMS DBAs automate the process of generating the JCL required to run a sequence of IMS Tools utilities for specific resources in your IMS environment.

The Run IMS utilities feature helps automate the JCL generation process and enables you to set up recurring utility jobs for conditional and routine IMS maintenance tasks. Capabilities include:

- Use the ISPF or batch interfaces for generating utility JCL
- Register products and utilities so that these are available to assemble in a JCL job
- Use and modify JCL skeletons and variables to customize jobs

IMS SQL processing using file input (IMS SPUFI)

IMS SQL Processing Using File Input (SPUFI) function is a feature to query and update IMS data by SQL statements. This feature helps IMS DBAs develop interactive SQL commands, run the SQL commands, and review the resulting output from the SQL command. Capabilities include:

- Develop and issue interactive SQL statements through the ISPF interface
- Run as a batch job
- Maintain persistence of complicated IMS SQL command sets from session to session (rather than being lost when you exit the program)
- Review the resulting output from the IMS SQL command

IMS command processing

IMS Administration Tool provides IMS DBAs the capability to issue IMS commands and review command responses. Capabilities include:

- Issue IMS type-1 and type-2 commands and view responses
- Distribute IMS commands to multiple IMS subsystems

IMS Administration Tool architecture and process flow

IMS Administration Tool features can function on a single IMS system and on multiple IMS systems of an IMSplex across multiple LPARs.

Technical notes for architecture and process flow diagrams

The following general notes apply to both functional and data-sharing diagrams in this section.

- IMS Administration Tool provides an ISPF-based interface and capabilities to perform IMS administration tasks.
- The following IMS Tools Base components and servers assist IMS administration tasks:
  - IMS Tools Knowledge Base
  - Distributed Access Infrastructure (DAI)
  - Tools Access Server (TAS) of DAI
  - Subordinate Tools Access Servers (SOT) of TAS
- The subsystem interface (SSI) allows ISPF client requests to communicate with the DAI Tools Access Server (TAS).
- Subordinate Tools Access Servers (SOT) are separate address spaces that provide an environment for hosting and running IMS Administration Tool functions as subtasks requested by ISPF clients.
- A single instance of SOT can support an environment of multiple IMS systems.

  Alternatively, multiple instances of SOT allow scalability and performance improvement while also eliminating a single point of failure.
- IMS Operations Manager (OM) controls the operations of an IMSplex and provides an application programming interface through which commands can be issued to IMS and responses received from IMS.

Component descriptions for architecture and process flow diagrams

IMS Administration Tool environment consists of the following components:

IMS databases
Primary data storage for your organization.

IMS catalog
A system database that, when enabled, stores the definitions of your databases and program specification blocks (PSBs), as well as other metadata about your databases and application programs.

Allows IMS to participate in solutions that require the exchange of metadata, such as business impact analysis.

IMS control blocks: PSBs, DBDs, ACBs
Data sets containing:

- Program specification blocks (PSB)

  Application program description and use of logical terminals and logical data structures
- Database description block (DBD)

  Defines database characteristics and required for access to any IMS database
- Application control blocks (ACB)

  PSB and DBD combined and expanded before an application can be scheduled and run

IMS Tools Knowledge Base repositories
IMS Tools Knowledge Base (a component of IBM IMS Tools Base) provides a common information management service that allows the sharing of data generated and used by multiple tool products within a sysplex.

The IMS Tools Knowledge Base information management environment, operating within a sysplex, allows the storing, managing, and accessing of resources (such as reports, sensor data, policies, and rules) that are generated or used by any tool product that has been enabled and registered to participate in this environment.

Resources are handled and stored in central repositories by the IMS Tools Knowledge Base server.

Functional architecture and process flow in a single LPAR

The following diagram illustrates the IMS Administration Tool functional architecture and overall process flow in a single LPAR.

One instance of IMS Administration Tool can support one or more IMS systems and both non-data sharing environment and data sharing environment.

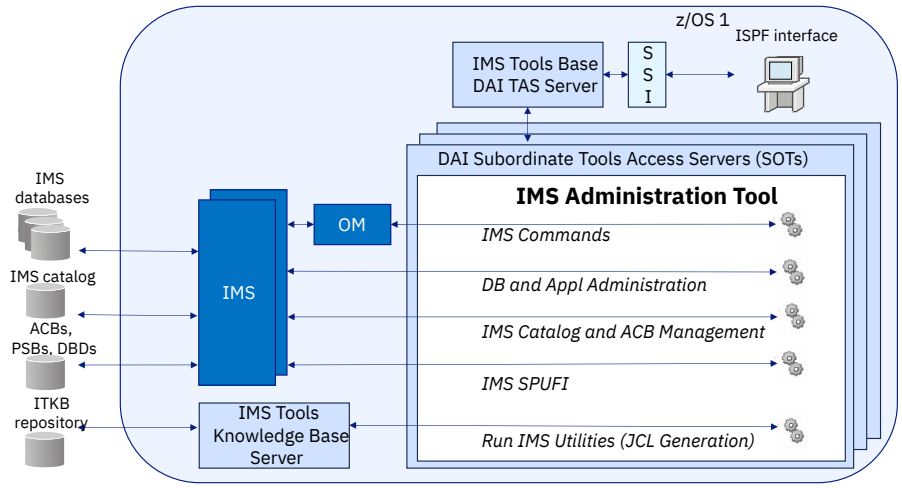

Figure 1. IMS Administration Tool functional architecture in a single LPAR

What this diagram shows:

- Local ISPF client access.
- ISPF client requests handled through subsystem interface (SSI) and Distributed Access Infrastructure (DAI).
- DAI Subordinate Tools Access Servers (SOT) handle client requests for specific IMS Administration Tool functions.
- Operations Manager (OM) is required for routing IMS commands.
- The configuration shows multiple instances of IMS.

Functional architecture and process flow in multiple LPARs

The following diagram illustrates IMS Administration Tool architecture and overall process flow for multiple IMS systems in an IMSplex across multiple LPARs.

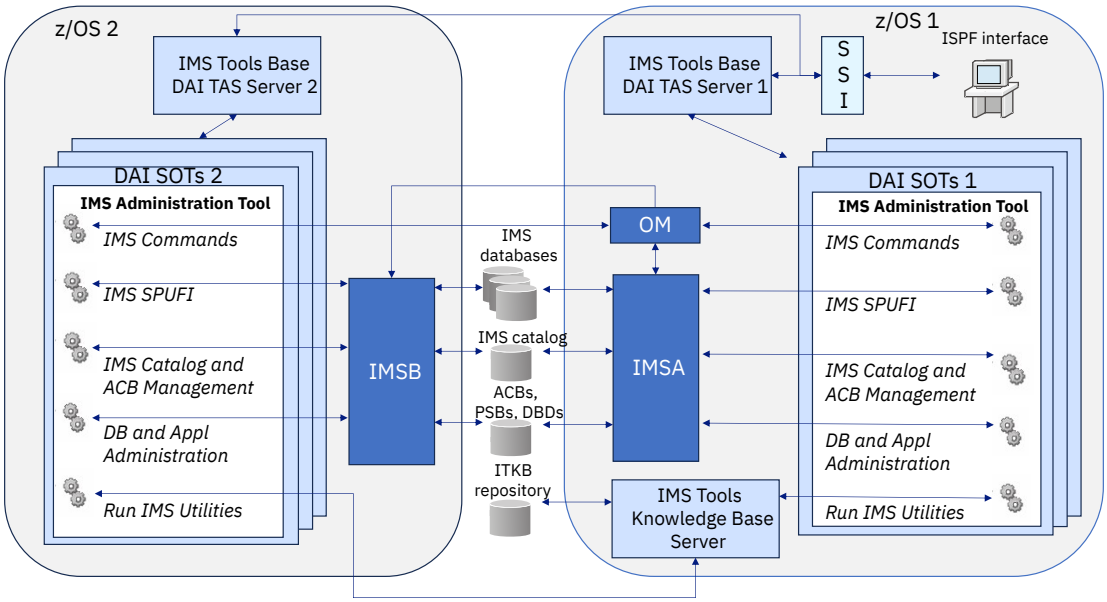

Figure 2. IMS Administration Tool functional architecture in multiple LPARs

What this diagram shows:

- IMS Tools Knowledge Base server is active only in one of the LPARs.
- Multiple DAI TAS servers:

  - DAI TAS servers communicate with the IMS Tools Knowledge Base Server.
  - Both servers belong to the same TAS XCF group.
  - One DAI TAS server for each LPAR.
- IMSA and IMSB belong to the same IMSplex and share the same resources.
- Operations Manager (OM) routes IMS commands. At least one OM is required in an IMSplex.
- Local ISPF client access from one of the LPARs.
- ISPF client requests handled through subsystem interface (SSI) of DAI TAS and routed to a DAI TAS where the target IMS runs.
- DAI Subordinate Tools Access Servers (SOT) processes IMS Administration Tool functions based on client requests.
- IMS Tools Knowledge Base (ITKB) server accesses ITKB repository to process some IMS Administration Tool functions.

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 Administration Tool 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
- 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.

To register with the My Notifications service:

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

How to send your comments

Your feedback is important in helping us provide the most accurate and highest quality information. If you have any comments about this or any other IMS Tools information, see How to provide feedback in IBM Documentation.

When you provide feedback, include as much information as you can about the content you are commenting on, where we can find it, and what your suggestions for improvement might be.

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. Product configuration

IBM IMS Administration Tool for z/OS (also referred to as IMS Administration Tool) is an IMS Tools product that provides a comprehensive set of functions and features to assist IMS database administrators with managing IMS environments.

The topics in this section provide you with guidelines for the configuration of IMS Administration Tool.

Topics:

Chapter 3. Configuration prerequisites and checklist

The information in this topic provides guidelines for the initial installation and configuration of IMS Administration Tool.

IMS Administration Tool requires enhanced product registration information in order to support all IMS Tools products that participate in the IMS Administration Tool environment.

The following checklists provide guidelines for the initial installation and configuration of IMS Administration Tool with either:

- New installations of IMS Tools products, or
- Pre-existing installations of IMS Tools products

Conditions and prerequisites for product configuration

The installation, configuration, and operation of IMS Administration Tool has the following conditions:

- Installation and configuration of IBM IMS Tools Base with the latest maintenance updates (PTFs) is required
- Installation and configuration of IMS Library Integrity Utilities with the latest maintenance updates (PTFs) is required to enable the following functions of IMS Administration Tool:
  - View IMS databases (DBDs) and program views (PSBs) for database and application administration
  - IMS catalog management
  - Program view for IMS SPUFI
- Installation and configuration of other IMS Tools solution pack products is optional.

Configure a new installation of IMS Administration Tool and any IMS Tools solution packs

The following steps assume that you are performing configuration for an initial installation of IMS Administration Tool with new installations of other IMS Tools solution packs and/or stand-alone IMS Tools products.

Table 1. Configuration checklist for new product installations

Step	Task	Description
1	Install IBM IMS Tools Base	Install IBM IMS Tools Base 1.7 or later (SMP/E). Refer to the IMS Tools Base Program Directory for installation requirements and procedures.
2	Apply updates	Apply the latest maintenance updates (PTFs) for IBM IMS Tools Base.
3	Install IMS Administration Tool	Install IMS Administration Tool (SMP/E). Refer to the IMS Administration Tool Program Directory for installation requirements and procedures.
4	Apply updates	Apply the latest maintenance updates (PTFs) for IMS Administration Tool.
5	Install IMS Tools solution packs	(Optional) Install any IMS Tools solution packs (SMP/E). Refer to the appropriate product Program Directories.

Table 1. Configuration checklist for new product installations (continued)

Step	Task	Description
6	Apply updates	Apply the latest maintenance updates (PTFs) for the installed IMS Tools solution packs.
7	Run IMS Tools Setup	Run IMS Tools Setup to provide initial configuration for the installed IMS Administration Tool and the installed IMS Tools solution packs. From the initial IMS Tools Setup panels, be sure to select all products that you have installed.

Configure a new installation of IMS Administration Tool with any pre-existing IMS Tools solution packs

The following steps assume that you are performing configuration for an initial installation of IMS Administration Tool with pre-existing installations of other IMS Tools solution packs and/or stand-alone IMS Tools products.

The following steps assume that you have pre-existing installation and configuration of IBM IMS Tools Base and any IMS Tools solution packs or stand-alone IMS Tools products.

Note: IMS Tools Base components must be installed and configured before IMS Administration Tool and IMS Tools solution pack configuration. When you run IMS Tools Setup to configure the new installation of IMS Administration Tool, IMS Tools Setup also makes any additional required modifications to the existing IMS Tools Base configuration.

Table 2. Configuration checklist for pre-existing product installations

Step	Task	Description
1	Apply updates for IBM IMS Tools Base	Apply the latest maintenance updates (PTFs) for IBM IMS Tools Base.
2	Apply updates for IMS Tools solution packs	Apply the latest maintenance updates (PTFs) for the installed IMS Tools solution packs.
3	Install IMS Administration Tool	Install IMS Administration Tool (SMP/E). Refer to the IMS Administration Tool Program Directory for installation requirements and procedures.
4	Apply updates for IMS Administration Tool	Apply the latest maintenance updates (PTFs) for IMS Administration Tool.
5	Run IMS Tools Setup	Run IMS Tools Setup to provide initial configuration for the newly installed IMS Administration Tool and the pre-existing IMS Tools solution packs. From the initial IMS Tools Setup panels, be sure to select only IMS Administration Tool to configure. IMS Tools Setup only configures IMS Administration Tool. IMS Tools Setup maintains the configuration of pre-existing IMS Tools products.

Chapter 4. Initial product customization using IMS Tools Setup

IMS Tools Setup is a function that helps you quickly and efficiently perform the required post-SMP/E-installation customization process for IMS Tools solution pack products. IMS Tools Setup is provided by IBM IMS Tools Base.

What does IMS Tools Setup do?

After the selected IMS Tools solution pack products have been installed into SMP/E data sets, IMS Tools Setup provides a process to simplify the initial configuration that is required to begin using the products. IMS Tools Setup generates JCL members that you then submit as jobs, or perform as tasks, to complete the customization process.

IBM IMS Tools Base components are also configured and customized during the IMS Tools Setup process. IBM IMS Tools Base provides important supporting components and infrastructure that are required for the operation of many IMS Tools functions, such as storage repositories, autonomics, and interaction with IMS.

The goal of IMS Tools Setup is to greatly ease the time and effort it takes to have IMS Tools products up and running in your environment.

IMS Tools Setup is intended only for initial product installations, first-time users, and product evaluations. IMS Tools Setup is not intended for maintenance purposes.

IMS Tools products that can use IMS Tools Setup

The following IMS Tools products and solution packs can use IMS Tools Setup for initial configuration:

- IBM IMS Tools Base for z/OS
- IBM IMS Database Solution Pack for z/OS
- IBM IMS Fast Path Solution Pack for z/OS
- IBM IMS Recovery Solution Pack for z/OS
- IBM IMS Database Utility Solution for z/OS
- IBM IMS Administration Tool for z/OS
- IBM IMS Cloning Tool for z/OS
- IBM IMS Program Restart Facility for z/OS

Starting IMS Tools Setup

The IMS Tools Setup function (HKTQSETU) can be found in IBM IMS Tools Base. You can start the function by running the following REXX EXEC:

```
EXEC 'smpehlq.SHKTCEXE(HKTQSETU)' 'HLQ(smpehlq)'
```

Note: *smpehlq* is the high-level qualifier for the IMS Tools Base SMP/E data sets.

The IMS Tools Setup ISPF panels provide an organized and logical approach to the customization tasks. The panels explain the operation and sequence of each member that is generated in the CUSTJCL data set. The correct JCL job and task operation order is very important.

Each panel contains embedded panel-context and individual field-context Help information. All information about using IMS Tools Setup is contained in the embedded Help. There is no separate user guide.

While using the IMS Tools Setup function to install IMS Tools products or to migrate your products from an earlier release to a later release, you need to specify the names of the libraries, or data sets, that are required for each IMS Tools product. Use the worksheets in the topic "Data set names for IMS Tools Setup" in the *IMS Tools Base Configuration Guide* to make a summary of the data set names that will be used in your environment.

Completing IMS Tools Setup

After you run the HKTQSETU REXX EXEC, you can refer to the $$READ member in the generated *hlq*.CUSTJCL data set to view summary information about the JCL members that were generated. Additionally, all individual *hlq*.CUSTJCL members contain detailed descriptions of the functions for each job.

Each of the generated JCL members begin with the number sign (#) and are named in the logical sequence of operation. Any members ending with the at sign (@) require manual steps. You must begin with the first *#xxxxx* member and submit the JCL job or perform the task. After that job or task completes, you continue on to the next member and submit that JCL job or perform that task, and so forth.

The first few members are all SYSPROG related (APF, LPA, SSN, MVSPPT), followed by security related members, TCP/IP administration, DBA related members, and others.

You must process all members in the correct order to complete the full customization task properly.

Each JCL member has its own descriptive comment section that explains what the member does and which group it might belong to.

Starting IMS Administration Tool ISPF dialog

Follow the instructions in member #D9ISPF@ or #T9ISPF@ in the *hlq*..CUSTJCL data set to start the IMS Administration Tool ISPF dialog.

Chapter 5. Additional and optional product configuration

The topics in this section provide information to perform additional and optional product customization for IMS Administration Tool.

After the selected IMS Tools solution pack products have been installed into SMP/E data sets, IMS Tools Setup provides an automated process to perform the initial configuration that is required to begin using the products. The configuration process provides each product with the necessary registration information required to successfully interact with other IMS Tools products. IMS Tools Setup generates JCL members that you then submit as jobs, or perform as tasks, to complete the customization process.

IMS Tools Setup is intended only for initial product installations, first-time users, and product evaluations. IMS Tools Setup is not intended for maintenance purposes.

The following topics include additional and optional configuration procedures that are not provided by IMS Tools Setup, but that might be required for your environment.

Topics:

Setting up IMS Library Integrity Utilities for IMS Administration Tool

The IMS Tools Setup process includes the configuration of IMS Library Integrity Utilities. However, if you do not configure IMS Library Integrity Utilities at initial installation of IMS Administration Tool and you need to configure IMS Library Integrity Utilities separately at a later time, complete the following steps.

About this task

If you have IMS Library Integrity Utilities installed, register IMS Library Integrity Utilities to the IMS Tools Knowledge Base server. Registering IMS Library Integrity Utilities enables the following IMS administrative functions in IMS Administration Tool:

- View IMS databases (DBDs) and program views (PSBs) for database and application administration
- IMS catalog management
- Program view for IMS SPUFI

Procedure

1. Apply the latest maintenance updates (PTFs) to IMS Library Integrity Utilities.
2. Browse the started task procedure JCL for the Distributed Access Infrastructure Subordinate Tools Access Server (SOT).
   a) Ensure that the IBM IMS Tools Base SGLXLOAD data set is in the //STEPLIB DD concatenation.
   b) Ensure that all the IMS Tools Base data sets that are concatenated to the //STEPLIB DD are APF authorized.

3. Register IMS Library Integrity Utilities to IMS Tools Knowledge Base by running the latest IMS Tools Knowledge Base registration job for IMS Library Integrity Utilities. For more information about the registration job and the procedure, refer to the *IMS Tools Base Configuration Guide*.
4. APF authorize the data set that is specified on the //SHPSLMD0 DD statement of the registration job.

Configuring VSAM options data set

The VSAM options data set is a required data set for IMS Administration Tool. It contains information about system environment, such as information about IMS systems, IMS groups, and IMS Tools Base resources.

About this task

The following procedure explains step-by-step tasks to configure the VSAM options data set.

These tasks can be accomplished with JCL members in the CUSTJCL data set, which are generated by IMS Tools Setup. If you have executed CUSTJCL jobs, you do not need to go through the following steps.

Procedure

1. Allocate and initialize the VSAM options data set (ATYODINI).

   Customize and run the JCL located in member ATYODINI of the IMS Administration Tool sample library (SATYSAMP) to allocate and initialize the VSAM options data set.

   ```
   hlq.SATYSAMP(ATYODINI)
   ```

   The JCL contains descriptive comments to help you customize the job correctly.
2. Build the ATY#OPTS load module.

   Customize and run the JCL located in member ATYASMOP of the IMS Administration Tool sample library (SATYSAMP) to build the ATY#OPTS load module that is used by IMS Administration Tool for dynamic allocation of the options data set.

   ```
   hlq.SATYSAMP(ATYASMOP)
   ```

   This module must reside in a STEPLIB library for all jobs that run IMS Administration Tool programs.

   The JCL contains descriptive comments to help you customize the job correctly.
3. Register the load library data set to DDNAME variable SYSLOAD.

   Register the load library data set that contains the module to DDNAME variable SYSLOAD with scope=SYSTEM.

   To register a DDNAME variable, use the ISPF interface: **Setup and Administration** > **Update Product Registry** > **Variable Management**.
4. Specify the load library to IMS.

   Update the IMS control region JCL and the OM region JCL by adding the SYSLOAD library to the STEPLIB concatenation. Restart the IMS system.

Configuring z/OS system logger for audit log and IMS command log

Activities of IMS Administration Tool functions can be logged by the z/OS system logger.

Subsections:

- “Defining a log stream” on page 34

Log types

Two types of logs are supported; audit log and IMS command log.

Audit log
Logs IMS Administration Tool activities. One log stream is required for the entire IMS Administration Tool environment. The following activities are logged:

- Changes to IMS Administration Tool settings.
- Changes to IMS system information and IMS group information.
- Changes to databases (DBDs) and programs (PSBs).

IMS command log
Logs IMS commands and responses. One log stream is required for each IMS system.

Log streams

The type of log stream for storing log records can be DASD-only log stream or coupling facility log stream.

Use coupling facility log stream if you want to share the log stream across multiple z/OS LPARs; for example, if the IMS system and the IMS Tools Base DAI TAS SOT server that IMS Administration Tool uses are running on different LPARs, or when multiple IMS systems are running on different LPARs.

Recommendations:

- Audit log and IMS command log can use separate log streams. However, consolidating the IMS command log stream into the audit log stream makes it easier to view logs and manage archives.
- Consider using coupling facility log stream instead of DASD-only log stream. Coupling facility log stream is accessible from anywhere within a sysplex.

Coupling facility log stream
A coupling facility is a special logical partition that provides high-speed caching, list processing, and locking functions in a sysplex.

Consider the following information when you define a coupling facility log stream:

- Coupling facility log streams can be shared across an entire sysplex.
- The same coupling facility log streams can be used by multiple IMS systems running on any z/OS image in the sysplex.
- Moving an IMS system from one z/OS image to another in the same sysplex does not require any additional setup.
- To use the ISPF log viewer, you can log on to TSO on any z/OS image in the sysplex.
- IMS Administration Tool archive jobs can run on any z/OS image in the sysplex.

DASD-only log stream
Consider the following information when you define a DASD-only log stream:

- DASD-only log streams are single-system in scope.

  You must consider the implications of moving an IMS system from one z/OS image to another because DASD-only log streams cannot be shared across z/OS images.
- You can define separate command log streams for each IMS system running on a particular z/OS image.
- To use the ISPF log viewer, you must log on to the TSO running on the same z/OS image where the DASD-only log stream is defined.
- IMS Administration Tool archive jobs need to run on the same z/OS image where the log stream is defined.

- If an IMS system is being moved from one z/OS image to another, an IMS Administration Tool archive job might need to be run on the original z/OS image before running an archive on the new image (archive data set naming convention, GDG sequencing).

Log stream security

The security that is required to define and use the log streams can vary from installation to installation.

The following considerations apply to the security of the log:

- The logger and storage management subsystem (SMS) address spaces need RACF® ALTER access to the data sets that are allocated for the log streams that you define.

  Consult with your z/OS system programmer and RACF administrator for details.
- The LOGSTRM class is used to protect log streams.

  Consult with your RACF administrator for details.

Defining a log stream

You can define the log stream by using the z/OS administrative data utility IXCMIAPU.

Before you begin

To use the IMS Administration Tool log feature, you must have storage management subsystem (SMS) active at your installation and the z/OS system logger (LOGR) must be implemented. Most z/OS installations already have the LOGR policy set up.

About this task

You can use the following JCL members, which are provided in the SATYSAMP sample library, as models for defining the log stream:

- ATYLOGR1: For DASD-only log stream
- ATYLOGR2: For coupling facility log stream

Procedure

1. Select a sample JCL member; ATYLOGR1 to define a DASD-only log stream, or ATYLOGR2 to define a coupling facility log stream.
2. Update the JCL statements as follows, and submit the job.
   a) Choose a value for the high-level qualifier based on your installation requirements for SMS data set naming conventions.

      Many environments default to IXGLOGR. Consult with your z/OS system programmer before making this selection.

   b) Choose any valid 1- to 26-character name for the log stream name.

   c) If you will be using the Command and Audit Log Archive (ATYARCH0) utility to delete unneeded log records that are stored in the log stream, specify AUTODELETE(NO) to the SYSIN control statement. Otherwise, the system logger might delete log records before you have had a chance to archive them.

   d) If you are using member ATYLOGR2, specify the following parameters:

      - AVGBUFSIZE(560)
      - MAXBUFSIZE(560)

   Consult *MVS Setting Up a Sysplex* for additional information about using the administrative data utility (IXCMIAPU) for SMS-related parameters and any of the other additional parameters that might be necessary to define log streams at your installation.

3. Specify the log stream name to IMS Administration Tool audit log and command log. See “Setting up IMS Administration Tool in an IMS system” on page 37 for more information.
4. Start the IMS systems. To ensure that the log stream is successfully defined, follow the instructions in “Verifying that the setup completed successfully on IMS system” on page 40.

Securing the IMS Administration Tool functions

IMS Administration Tool supports access control using RACF or a System Authorization Facility (SAF) product that is compatible with RACF.

By setting up the security, you can control the following accesses:

- Manage which users can access the IMS Administration Tool ISPF interface.

  This configuration task is a required task. See “Restricting access to IMS Administration Tool ISPF interface” on page 35.
- Manage which users can change IMS Administration Tool settings.

  Classify users into super administrators and regular users. Only super administrators can change settings from the **Setup and Administration** menu. See “Classifying super administrators and regular users ” on page 35.
- Manage which users are authorized to issue commands to particular IMS systems and IMS command group. See “Restricting IMS command group or IMS ID for issuing commands” on page 37.

Restricting access to IMS Administration Tool ISPF interface

Use FACILITY class ATYADMIN.ACCESS, which is a required class, to manage which users can use the IMS Administration Tool ISPF interface.

Procedure

FACILITY class ATYADMIN.ACCESS is defined and permitted in the member #A5RACF2 in the CUSTJCL data set, which is generated by IMS Tools Setup.

If you have not yet submitted member #A5RACF2, issue RACF commands through TSO by modeling the following sample commands:

```
RDEFINE FACILITY ATYADMIN.ACCESS
PERMIT ATYADMIN.ACCESS CLASS(FACILITY) ID(atyuserid/groupid) ACCESS(READ)
SETROPTS RACLIST(FACILITY) REFRESH
```

Classifying super administrators and regular users

Use FACILITY class ATYADMIN.SETUP, which is an optional class, to classify users into two types and allow only super administrators access the Setup and Administration function.

About this task

Users of IMS Administration Tool can be classified into two types:

Super administrator
: Can access the Setup and Administration function. Can use and manage resources defined with any scope (GLOBAL, SYSTEM, and IMSID).

Regular user
: No access to the Setup and Administration function. Can only use and manage resources defined with the scope of IMSID.

The following table summarizes the functional differences between super administrators and regular users when the users are classified with FACILITY class ATYADMIN.SETUP.

Table 3. Functions available to super administrators and regular users

User type	Setup and Administration function	Database and Application Administration function IMS Catalog and ACB Library Management function (Import Objects)	Run IMS Utilities function	IMS Command Processor function
Super administrator	• Register and configure functions, templates, and variables for the Run IMS Utilities function • Define and manage IMS systems, IMS command groups, and IMS data sharing groups • Define and manage IMS data sets and groups (DBD/PSB/ACB libraries and others) • Enable logging and manage logs • Define and manage message disposition tables	Update runtime options defined with the scope of SYSTEM or IMSID	Register and configure functions, templates, and variables defined with the scope of SYSTEM or IMSID	Configure IMS command global options and IMS command job options
Regular user	Not available	Update runtime options defined with the scope of IMSID	Register and configure functions, templates, and variables defined with the scope of IMSID	Configure IMS command job options

If ATYADMIN.SETUP class is not defined to SAF, users of IMS Administration Tool are not classified; all users can use any function.

Procedure

The ATYADMIN.SETUP class is defined and permitted in the member #A5RACF2 in the CUSTJCL data set, which is generated by IMS Tools Setup.

If you have not yet submitted member #A5RACF2, issue RACF commands through TSO by modeling the following sample commands:

```
RDEFINE FACILITY ATYADMIN.SETUP
PERMIT ATYADMIN.SETUP CLASS(FACILITY) ID(atyuserid/groupid) ACCESS(READ)
SETROPTS RACLIST(FACILITY) REFRESH
```

Restricting IMS command group or IMS ID for issuing commands

Use FACILITY class ATYADMIN.EXEGRP.*IMS_command_group_name* or *IMSID*, which is an optional class, to authorize users who can issue commands to a specific IMS command group or to a specific IMS system through IMS Administration Tool.

Procedure

To authorize users, issue the following RACF commands:

```
RDEF FACILITY ATYADMIN.EXEGRP.[ATYGroup|IMSID] UACC(NONE) OWNER(securitygroup)
and/or
RDEF FACILITY ATYADMIN.EXEGRP.* UACC(NONE) OWNER(securitygroup)
PE ATYADMIN.EXEGRP.[ATYGroup|IMSID] CLASS(FACILITY) ACCESS(READ)
ID(atyuserid/groupid)
SETR REFRESH RACLIST(FACILITY)
```

Setting up IMS Administration Tool in an IMS system

For each IMS system, IMS Administration Tool must be configured so you can use IMS Administration Tool functions on that IMS system. The configuration tasks are done by the JCL members that IMS Tools Setup generates. If you want to add more IMS systems after you have configured IMS Administration with IMS Tools Setup, you must complete the following tasks.

About this task

The following steps are explained in the #C6IMS1@ member in the CUSTJCL data set that IMS Tools Setup generated.

Member #C6IMS1@ covers configuration tasks for IMS Administration Tool and other products. The following procedure explains only the configuration tasks for IMS Administration Tool.

Procedure

1. Add the customized load libraries and product load libraries of IMS Administration Tool to the STEPLIB concatenation of the IMS control region and OM region JCL.

   When you initially configured IMS Administration Tool with CUSTJCL jobs, they created the following data sets. You must add these data sets to the STEPLIB concatenation.

   - CUSTLOAD, which contains IMS exit routine modules
   - SYSLOAD, which contains ATY#OPTS and ATYSTFWD modules
   - COMBLOAD and COMBLOAD.PDSE (or SATYLOAD if you did not select "combine libraries" during IMS Tools Setup.), which contain the product load libraries of IMS Administration Tool
2. Set up exit routines for the IMS control region and the OM region.
   a) Set up the IMS AO exit routine for the IMS control region.

      Follow the instructions in “Implementing IMS AO exit routines” on page 38.

   b) Specify a partner product user exit for the IMS control region.

      Complete either of the following steps:

      - Define ATYPPUE0 as a partner product user exit to the IMS DFSDF member as follows:

        ```
        <SECTION=USER_EXITS>
         EXITDEF=(TYPE=PPUE,EXITS=(ATYPPUE0))
        ```

      - If your IMS system uses the IMS Tools Base generic partner exit routine, add the following statements to the GPR*xxxx*0 member in the IMS PROCLIB, where *xxxx* is the IMS ID.

        ```
        EXITDEF(TYPE(PARTNER) EXITNAME(ATYPPUE0)  LOADLIB(CUSTLOAD loadlib data set name))
        ```

A sample is provided in CUSTPARM(GPR*ssid*0), where *ssid* is the IMSID.

For more information, see the *IMS Tools Base IMS Tools Common Services User's Guide and Reference*.

c) Set up the BPE OM exit routines for the OM region. These exit routines are used to process IMS commands and replies, to enable automatic backup of IMS directories, and to write log data to the z/OS log stream.

Specify the BPE OM exit routines to the PROCLIB member of IMS OM region procedure. Refer to CUSTJCL(#A7ATY6@).

i) Locate or specify the BPECFG=*BPE configuration parameter member* in the IMS OM region parameter list.

ii) Specify the following EXITMBR statement in the BPECFG member in the OM PROCLIB data set. Refer to CUSTPARM(BPECFG00).

```
EXITMBR=(BPE exit list member,OM)
```

iii) Specify the following two statements to the BPE exit list member in the OM PROCLIB data set. Refer to CUSTPARM(BPEOMXIT).

```
EXITDEF (TYPE=INITTERM,EXITS=(ATYOINI0),ABLIM=0,COMP=OM)
EXITDEF (TYPE=OUTPUT,EXITS=(ATYOPST0),ABLIM=0,COMP=OM)
```

3. Set up the z/OS System logger (LOGR) log stream.

a) If you want to use a different LOGR log stream for the added IMS system, define a log stream. Refer to CUSTJCL(#A7ATY5).

b) Specify the name of the z/OS System Logger log stream in the ATYPARMS member of the IMS OM region PROCLIB data set. Refer to CUSTPARM(ATYPARMS).

```
ATYLOGR=log stream name
```

4. Prepare IMS command processor JCLs for the IMS system.

If you want to submit IMS command batch jobs (IMS BMP batch job, IMS DL/I batch job, and z/OS standard batch job) and IMS command REDO BMP jobs, prepare JCLs for the IMS system.

You can refer to the following batch job samples:

- BMP region: Member ATYBMP
- DL/I region: Member ATYDLI
- Standard batch: Member ATYBATCH

For REDO BMP JCL samples, refer to CUSTJCL(#A7ATY4@) or SATYSAMP(ATYBMPR).

For more information, see Part 8, “IMS command processing,” on page 211.

5. Register the IMS system to IMS Administration Tool.

Start the IMS Administration Tool ISPF interface and register the IMS system to IMS Administration Tool: **Setup and Administration** > **Register IMS System**

For details, see Chapter 7, “Registering IMS systems,” on page 59.

Implementing IMS AO exit routines

Beginning with IMS 14, you can implement the IMS automated operator interface (AOI) as a refreshable user exit. Refreshable user exits can call multiple exit routines of that type (for example, AOIE) at the same exit point.

For IMS Administration Tool, the IMS automated operator interface (AOI) uses:

- DFSAOE00, if you are implementing a non-refreshable user exit.
- ATYAOE00, if you are implementing a refreshable user exit.

DFSAOE00 is not used if you are implementing a refreshable exit routine.

Implementing refreshable user exits

To support refreshable user exits in IMS Administration Tool, the following conditions apply:

- A refreshable user exit does not use a DFSAOE00 alias.
- A refreshable user exit can be installed in a PDS or PDSE library.
- ATYAOE00 must be added to the AOIE USER EXIT list of DFSDF*xxx* in the subsystem PROCLIB.
- The **User DFSAOE00 Name** field (**Setup and Administration** > **Register an IMS Subsystem**) must be left blank.

  ATYAOE00 ignores any entered value if the SXPL_F1ENHSRV flag is on.

To implement refreshable user exits in IMS Administration Tool, use the following steps as guidelines:

1. Define refreshable user exit routines as values of the EXITDEF parameter in the USER_EXITS section of the IMS DFSDF*xxx* member of the IMS PROCLIB data set.

   Use ATYAOE00, if you are implementing a refreshable user exit.

   For example:

   ```
   <SECTION=USER_EXITS>
    EXITDEF=(TYPE=AOIE,
         EXITS=(ATYAOE00 ))
   ```

2. Remove the ATYAOE00 alias of DFSAOE00 from SATYLOAD.
3. Update the IMS control region started task JCL by adding the SATYLOAD library to the STEPLIB concatenation.
4. Use the IMS Administration Tool ISPF dialog **Setup and Administration** > **Register IMS Systems** to select the appropriate IMS system.
5. Ensure the **User DFSAOE00 Name** field is blank.

   DFSAOE00 is not used if you are implementing a refreshable user exit routine.
6. Restart the IMS system.
7. Verify the implementation of the user exit by reviewing IMS Administration Tool messages in the IMS control region z/OS log.

   If implementation is successful, message ATY8101I (ATYLOGR INITIALIZATION COMPLETE) should be present.

Implementing non-refreshable user exits

To support non-refreshable user exits in IMS Administration Tool, the following conditions apply:

- The non-refreshable user exit must be installed in a PDS library.

To implement a non-refreshable user exit in IMS Administration Tool, use the following steps as guidelines:

1. To determine whether the AOI exit has already been implemented, check to see if the STEPLIB concatenation contains a DFSAOE00 entry.

   If a DFSAOE00 entry exists, browse the module and search for a character string of ATYAOE00 (the exit provided by IMS Administration Tool).

   If the string ATYAOE00 is present, the AOI non-refreshable exit has already been implemented.
2. Copy ATYAOE00 and its shipped alias to a PDS library.

   Update the IMS control region started task JCL by adding this PDS library to the STEPLIB concatenation.

3. It is possible for DFSAOE00 to conflict with a user-defined DFSAOE00 or another vendor product user AOI exit.

   If you already have an existing DFSAOE00 exit in SDFSRESL, or another library in the STEPLIB concatenation of your IMS control region, you must rename that existing exit to another name that meets your requirements.

   The recommended name is DFSA0E01.

   (The IMS DFSAOE00 exit calls the renamed DFSAOE01 exit, if present.)
4. Perform this next step if you renamed an existing DFSAOE00 exit.

   (If there is no DFSAOE00 to rename in Step 3, there is no need to perform this step.)

   Use the IMS Administration Tool ISPF dialog (**Setup and Administration** > **Register an IMS Subsystem**) to specify the appropriate IMS system.

   In the **User DFSAOE00 Name** field, specify the renamed DFSAOE00 exit (for example: DFSA0E01).

   If you do not use a user-defined DFSAOE00 exit, then you can leave the **User DFSAOE00 Name** field blank.
5. Restart the IMS system.
6. Verify the implementation of the user exit by reviewing IMS Administration Tool messages in the IMS control region z/OS log.

   If implementation is successful, message ATY8101I ATYLOGR INITIALIZATION COMPLETE should be present.

If you intend to continue using an existing DFSAOUE0 exit, the following additional considerations apply:

- If IMS Administration Tool is being used to suppress a specific message, the existing DFSAOUE0 exit cannot handle the same message.
- If IMS Administration Tool is being used to create an AOI automation token for a specific message, the existing DFSAOUE0 exit cannot handle the same message.
- IMS Administration Tool cannot route command response messages to the AOI automation token if you are using your own DFSAOUE0 exit, or an exit from another vendor.

Verifying that the setup completed successfully on IMS system

After you set up IMS Administration Tool on an IMS system, start the IMS systems and verify that the setup completed successfully.

Procedure

1. In the IMS control region, ensure that the following messages are displayed:
   - The following message indicates that the AO exit is defined correctly.

     ```
     ATY8108I - ATYAOE00 ANCHOR ESTABLISHED AT xxxxxxxx
     ```

   - The following messages indicate that the log stream is defined correctly.

     ```
     ATY8406I - ATY LOGSTREAM IS READY.
     ATY8106I - ATY USING MAXBUFSIZE   xxx LOGSTREAM log_stream_name
     ATY8101I - ATYLOGR INITIALIZATION COMPLETE
     ```

   - The following message indicates that the partner exit is defined correctly. Upon receiving this message, IMS Administration Tool recognizes that the IMS system is active.

     ```
     ATY0310I INITIALIZATION COMPLETED
     ```
2. In the OM region, ensure that the following messages, which indicate that the log stream is defined correctly, are displayed:

```
ATY8406I - ATY LOGSTREAM IS READY.
ATY8106I - ATY USING MAXBUFSIZE xxx LOGSTREAM log_stream_name
```

3. Issue the following DISPLAY USEREXIT command to the OM region.

```
F om_region,DIS USRX NAME(INITTERM,OUTPUT) OWNER(OM)
```

For details about the DISPLAY USEREXIT command, see the topic "Base Primitive Environment commands" in *IMS Commands*.

Ensure that the following command response is returned. These messages indicate that the setup has completed successfully.

```
BPE0030I EXITTYPE MODULE   OWNER ACTIVE     ABENDS
BPE0000I INITTERM ATYOINI0 OM          0          0
BPE0000I OUTPUT   ATYOPST0 OM          0          0
```

Setting up a Java environment for IMS SPUFI JBP

The IMS SPUFI function of IMS Administration Tool enables you to issue IMS SQL statements to IMS databases. SQL statements are executed in a COBOL application (IMS BMP application) or Java application (IMS JBP application). To execute SQL statements in a Java application, you must set up a Java environment.

Procedure

Before you set up a Java environment for the IMS SPUFI Java application, you must ensure that the following prerequisite tasks are completed:

1. IMS system is configured so that it can start the IMS JBP region. IMS requires the following procedures to start the IMS JBP region:
   - DFSJBP PROCLIB member
   - DFSJVMEV PROCLIB member
   - DFSJVMMS PROCLIB member

   These IMS procedures do not require IMS Administration Tool libraries nor path information.
2. Complete initial product customization with IMS Tools Setup. If you have not yet completed the customization, see Chapter 3, “Configuration prerequisites and checklist,” on page 27.

Migration from IBM IMS Command Control Facility for z/OS

You can use batch JCLs and application programs of IMS Command Control Facility (CCF) with IMS Administration Tool after you complete the migration task.

During the migration task, you define alias names of IMS Command Control Facility modules to IMS Administration Tool. By defining alias names, you can run batch jobs and application programs of IMS Command Control Facility using the load modules of IMS Administration Tool.

To use IMS Command Control Facility modules with IMS Administration Tool, you must modify the STEPLIB concatenation to include the load module libraries of IMS Administration Tool instead of load module libraries of IMS Command Control Facility.

In addition to defining alias names, you must also set up VSAM data sets and the IMS system. To use batch JCLs and application programs of IMS Command Control Facility with IMS Administration Tool, complete the steps in “Migrating IMS Command Control Facility resources” on page 43.

Compatibility between IMS Administration Tool and IMS Command Control Facility

This topic describes compatibility between IMS Administration Tool and IMS Command Control Facility.

IMS Command Control Facility resources that can be used with IMS Administration Tool

After you complete the migration steps in “Migrating IMS Command Control Facility resources” on page 43, you can use the following resources of IMS Command Control Facility with IMS Administration Tool.

CCF callable API

- The STEPLIB concatenation of the batch JCL of the CCF callable API must be changed to include the load module libraries of IMS Administration Tool instead of load module libraries of IMS Command Control Facility.
- Application programs that call the CCF callable API (CCFCAPI0) can be used without modification or re-compilation. When you migrate from IMS Command Control Facility to IMS Administration Tool, you define alias name CCFCAPI0 to module ATYCAPI0. This step makes module ATYCAPI0 compatible with module CCFCAPI0.
- /CCFDEADQ command can be used.

Batch JCLs

- The STEPLIB concatenation of the JCL must be changed to include the load module libraries of IMS Administration Tool instead of load module libraries of IMS Command Control Facility.
- Parameters and resource names used in of IMS Command Control Facility batch JCLs (IMS BMP batch JCL, IMS DL/I batch JCL, and z/OS standard batch JCL) require no modification.
  - PGM= and PARM= in the EXEC statement
  - CCFSYSIN, CCFLIST, CCFOPTS, and CCFJOPRT DD names
  - CCFDDTBL module, which is a ddname table that defines input and output DD names
  - CCFOPTS ddname input statements

REDO BMP batch JCLs

- The STEPLIB concatenation of the JCL must be changed to include the load module libraries of IMS Administration Tool instead of load module libraries of IMS Command Control Facility.
- Parameters and resource names used in IMS Command Control Facility REDO batch JCLs require no modification.
  - PGM= and PARM= in the EXEC statement
  - CCFPRE, CCFPRINT, and CCFPOST DD names

CCF commands

- /CCFMOD,/CCFWAIT, and /CCFDEADQ commands
- /LOG CCFREFRESH | CCFCONNECT | CCFDISCONN commands

Archive utility batch JCLs

The STEPLIB concatenation of the JCL must be changed to include the load module libraries of IMS Administration Tool instead of load module libraries of IMS Command Control Facility.

Resources of IMS Administration Tool start with "ATY". However, to keep the compatibility between IMS Command Control Facility and IMS Administration Tool, IMS Administration Tool also supports resources that start with "CCF" (only those introduced in this topic). If both resources are supplied, IMS Administration Tool uses the resource that starts with ATY and ignores the resource that starts with CCF. For example, if both CCFJOPRT and ATYJOPRT DD statements are supplied, IMS Administration Tool uses ATYJOPRT.

For a list of resource names of IMS Administration Tool and IMS Command Control Facility, see "IMS Administration Tool and IMS Command Control Facility resource names" on page 45.

IMS Command Control Facility resources that cannot be used with IMS Administration Tool

The following resources of IMS Command Control Facility are not supported by IMS Administration Tool. These resources must be redefined during migration. Migration steps in "Migrating IMS Command Control Facility resources" on page 43 cover redefinition of these resources.

- IMS exit routines and definitions in IMS PROCLIB
- CCFPARMS
- VSAM option data set
- Command store/forward VSAM data set

Log record compatibility considerations

Log records that IMS Command Control Facility generates are not compatible with log records that IMS Administration Tool generates.

You can continue to use the same log stream that you have been using with IMS Command Control Facility with IMS Administration Tool.

The Command and Audit Log Archive (ATYARCH0) utility of IMS Administration Tool supports archiving CCF log records (log records generated by IMS Command Control Facility). The View Audit Log function and the View IMS Command Log function do not support CCF log records.

IMS Command Control Facility functions that are not supported by IMS Administration Tool

IMS Administration Tool does not support the following functions of IMS Command Control Facility:

- The Command processor list
- APPC/MVS™ and APPC/IMS

The following options, which are for APPC/MVS and APPC/IMS, are not supported by IMS Administration Tool:

- APPC/STC Tpname
- Use DB pre-scan for remote STC
- Use GENERAL option for syntax error
- WTO database command

Option **Add NOFEOV to ISPF command** is not supported with IMS Administration Tool. Use **Add NOFEOV to /DBD and /DBR** option instead.

Migrating IMS Command Control Facility resources

Complete the migration steps summarized in the following table. These steps must be completed to use batch JCLs of IMS Command Control Facility with IMS Administration Tool.

About this task

Before migrating from IMS Command Control Facility, ensure that you have completed initial product customization with IMS Tools Setup. If you have not yet completed the customization, see Chapter 3, "Configuration prerequisites and checklist," on page 27.

After you complete these migration steps, it is recommended that you keep all the IMS Command Control Facility resources. You might need these resources in case you want to fallback to IMS Command Control Facility.

Procedure

Table 4. Migration tasks to migrate from IMS Command Control Facility to IMS Administration Tool

Step	Description
1. Run the archive utility	Submit the Command and Audit Log Archive (ATYARCH0) utility job. This step is optional. Log records of IMS Command Control Facility and IMS Administration Tool can be archived any time after migration.
2. Remove IMS Command Control Facility resources	If the load module members of IMS Command Control Facility (CCF prefix) and IMS Administration Tool (ATY prefix) reside in the same data set, move the IMS Command Control Facility load module members to a different data set.
3. Modify CCF batch JCLs	In each CCF batch JCL, you must modify the STEPLIB DD statement. Specify the IMS Administration Tool customized and product load library data sets in the following order: 1. SYSLOAD 2. COMBLOAD.PDSE These load library data sets are created by IMS Tools Setup jobs: • SYSLOAD contains ATY#OPTS and ATYSTFWD modules. • ATY#OPTS and ATYSTFWD modules are not referenced from the archive utility JCL. You can ignore SYSLOAD for CCFARCH0 JCL. • If you did not select "Combine libraries" while setting up IMS Administration Tool with IMS Tools Setup, specify the SATYLOAD data set instead of COMBLOAD.PDSE.
4. Modify the IMS system	The exit routines and the PROCLIB members of IMS Command Control Facility cannot be used with IMS Administration Tool. Remove all IMS Command Control Facility resources (load libraries, PROCLIB members) from the IMS control region, OM region, dependent regions, and PROCLIB. Then set up IMS Administration Tool in the IMS systems. For details, see “Setting up IMS Administration Tool in an IMS system” on page 37.
5. Register IMS subsystems and IMS command groups	Register IMS subsystems and IMS command groups to IMS Administration Tool. IMS subsystems and command groups that are used in IMS Command Control Facility are recorded in the CCF VSAM option data set. However, because this information is not reusable in IMS Administration Tool, the information is not copied by the ATYCPYV job. You must register IMS subsystems and command groups by using the Setup and Administration function of IMS Administration Tool.

IMS Administration Tool and IMS Command Control Facility resource names

IMS Administration Tool supports IMS Command Control Facility resources that you have been using with IMS Command Control Facility.

Note: To enable IMS Command Control Facility resources with IMS Administration Tool, you must complete the migration steps described in “Migrating IMS Command Control Facility resources” on page 43.

The following table provides a mapping of IMS Command Control Facility resources and IMS Administration Tool resources used by the features that both products support.

At run time, IMS Administration Tool generally searches for IMS Administration Tool resources (starts with "ATY") first. When it cannot find the resource, it looks for IMS Command Control Facility resources (starts with "CCF").

IMS Command Control Facility resource	IMS Administration Tool resource	Description
CCFCMD00	ATYCMD00	Program name used in IMS command batch jobs
CCFJOPRT	ATYJOPRT	DD name used in IMS command batch jobs
CCFOPTS	ATYOPTS	DD name to override IMS command job options and global options in IMS command batch jobs
CCFODSET	ATYODSET	DD name for the VSAM options data set used in IMS command batch jobs **Note:** If both ATYODSET and CCFODSET DD statements are not specified, IMS Administration Tool dynamically allocates (DYNALLOC) the data set that is defined in the ATY#OPTS customized module.
CCFDDTBL	ATYDDTBL	The load module name for the ddname table used in IMS command batch jobs
CCFSYSIN	ATYSYSIN	DD name used in IMS command batch jobs (z/OS standard batch, IMS DL/I batch, and IMS BMP batch) **Note:** IMS Administration Tool does not actually use DD statements CCFSYSIN, ATYSYSIN, CCFLIST, and ATYLIST. It uses the DD statements that are overridden at run time. For more information, see “Runtime options for IMS command batch jobs” on page 233.
CCFLIST	ATYLIST	DD name used in IMS command batch jobs **Note:** IMS Administration Tool does not actually use DD statements CCFSYSIN, ATYSYSIN, CCFLIST, and ATYLIST. It uses the DD statements that are overridden at run time. For more information, see “Runtime options for IMS command batch jobs” on page 233.
CCFREDO0	ATYREDO0	Program name used in REDO batch jobs
CCFPRE	ATYPRE	DD name used in REDO batch jobs
CCFPRINT	ATYPRINT	DD name used in REDO batch jobs
CCFPOST	ATYPOST	DD name used in REDO batch jobs

IMS Command Control Facility resource	IMS Administration Tool resource	Description
CCFSTFWD	ATYSTFWD	DD name for the store/forward VSAM data set used in REDO batch jobs **Note:** If both ATYSTFWD and CCFSTFWD DD statements are not specified, IMS Administration Tool dynamically allocates (DYNALLOC) the data set that is defined in the ATYSTFWD customized module.
/LOG [CCFREFRESH| CCFCONNECT| CCFDISCONN]	/LOG [ATYREFRESH| ATYCONNECT| ATYDISCONN]	Commands provided by IMS Administration Tool
/CCFWAIT	/ATYWAIT	Command provided by IMS Administration Tool
/CCFMOD	/ATYMOD	Command provided by IMS Administration Tool
/CCFDEADQ	/ATYDEADQ	Command provided by IMS Administration Tool
CCFCAPI0	ATYCAPI0	Program name for the IMS command callable API
CCFARCH0	ATYARCH0	Program name for the archive utility. In IMS Administration Tool, the utility name is Command and Audit Log Archive (ATYARCH0) utility.

Part 3. Setup and Administration

IBM IMS Administration Tool for z/OS (also referred to as IMS Administration Tool) is an IMS Tools product that provides a comprehensive set of functions and features to assist IMS database administrators with managing IMS environments.

The IMS Administration Tool setup and administration options allow you to specify and validate required product configuration and IMS environmental information.

The IMS Tools Knowledge Base repository is used to maintain IMS Administration Tool configuration and IMS environment information. IMS Administration Tool uses the IMS Tools Knowledge Base repository to store enhanced product registry information and product processing output such as reports, command logs, and audit logs. IMS Tools Knowledge Base is a component of IBM IMS Tools Base, and the repository is created and initialized during initial IBM IMS Tools Base installation. The name of the IMS Tools Knowledge Base repository server for the XCF group that operates in the same environment as IMS Administration Tool is provided during product startup, and is not configurable in Setup and Administration.

The topics in this section provide you with information about the setup and administration options for IMS Administration Tool.

Topics:

Chapter 6. Updating the product registry

IMS Tools products that participate in the IMS Administration Tool environment must be registered to the IMS Tools Knowledge Base repository and must define to IMS Administration Tool what functions they can perform.

Topics:

Product registration overview

IMS Tools products that participate in the IMS environment with IMS Administration Tool are required to register information to the central IMS Tools Knowledge Base repository.

This product information is used by the IMS Administration Tool Run IMS utilities feature to help automate and support the JCL generation process.

Product registration includes:

- Register to the IMS Tools Knowledge Base repository for general data storage.
- Register to the IMS Tools Knowledge Base report service for storage of generated product reports.
- Register to the IMS Tools Knowledge Base product registry:
  - Product library names and locations
  - Initial assignment of product "scope=GLOBAL"
- Register specific *functions* provided by the IMS Tool products.
- Register *templates* for each function that represent the JCL code used to perform that function.

  Initial assignment of template "scope=GLOBAL".
- Register a list of *variable* expressions used in the template code that are later populated with values appropriate to the IMS environment.

  Initial assignment of variable "scope=GLOBAL".
- Enhanced initial setup and customization of IMS Administration Tool through IMS Tools Setup.

Product registration process flow

The following diagram shows the IMS Administration Tool product registration process flow.

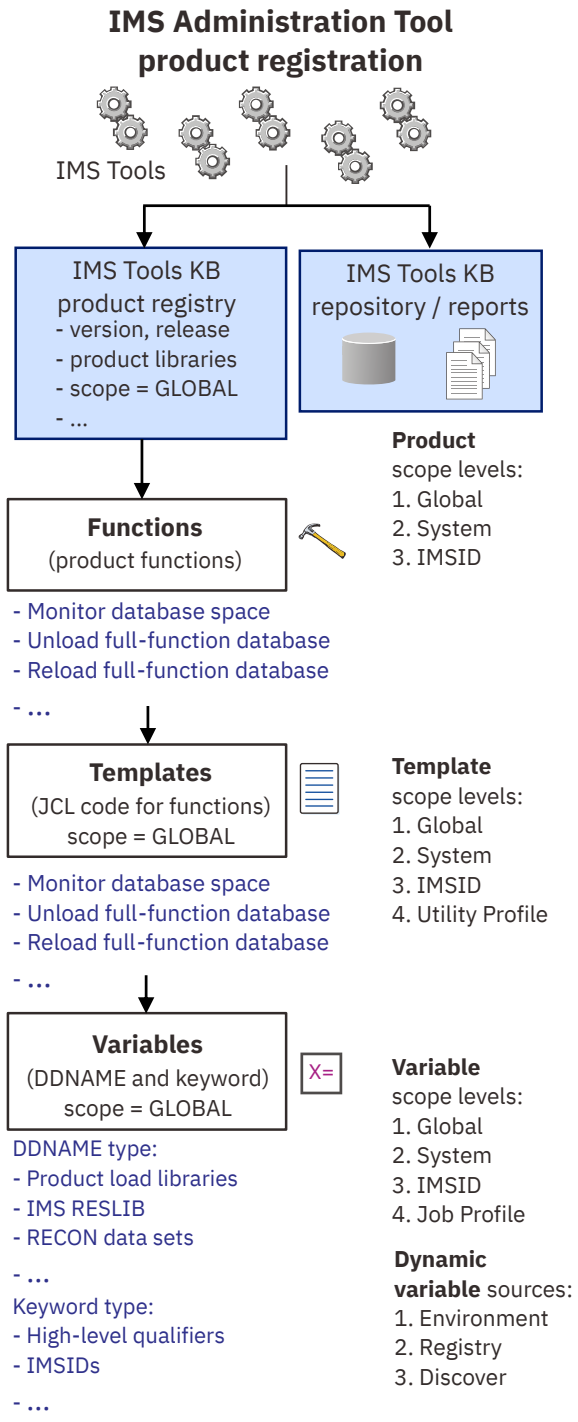

Figure 3. Product registration process flow

Product functions, templates, and variables

To support the Run IMS Utilities feature of IMS Administration Tool, IMS Tools product *functions* are registered and made available to the JCL generation process.

The code to run a specific function is provided in the form of a *template*. The template is JCL code and includes *variable* expressions that are populated with appropriate values before and during the final build process of an actual job JCL.

Functions

Functions are the specific capabilities provided by IMS Tools products.

A sequence of specific functions can be assembled together to define a simple or complex database maintenance task.

Example functions:

- Image copy with pointer check
- Build indexes for full function databases
- Pointer check full function databases
- Unload a full function database
- Reload a full function database
- Prefix resolution and update

Templates

A template is the JCL code containing variables and commands that is used to run a function. Templates are created during the registration of the product functions.

The Run IMS Utilities *utility profile* defines a database maintenance task by specifying the required functions in the correct sequence.

The Run IMS Utilities *job profile* accesses a utility profile and combines the function templates specified by that utility profile into a single master JCL job. The job profile then applies this JCL job to an IMS environment that is defined in an *object profile*.

Variables

Variables are place-holder expressions in template JCL code that require the substitution of specific values when the single master JCL is generated.

There are two types of variables used:

- **DDNAME** (DDNAME parameter and data set names)

  Examples: product load library locations, IMS RESLIB, RECON data set names
- **Keywords**

  Examples: high level qualifiers, IMSID, RECONID, LPAR, USERID, ITKBSRVR

Additionally, some variables and values are dynamically provided during the final JCL build process. Sources for these dynamic variables include:

- **Environment** (z/OS system information)

  Examples: SORTLIB, SYSMAC, USERID, UNIT
- **Registry** (IMS Tools product information)

  Examples: library names (*MENU, *PENU, *SENU, *LOAD)
- **Discovery** (IMS system information)

  Examples: DBDLIB, PROCLIB, RECON1

Rules for DDNAME variables

Values for DDNAME variables can include data set names and the DDNAME parameter itself.

Because JCL code often contains concatenated data set names, all DDNAME variables must be assigned a rule that specifies how the variable values are substituted in the code during a final JCL job build:

- **Before**

  The value for this variable is applied at the beginning of any existing DDNAME concatenation.
- **Replace**

  The value for this variable replaces any existing value or values.
- **After**

  The value for this variable is applied at the end of any existing DDNAME concatenation.

Example:

- DDNAME variable name = DD1, with a data set name value of A.B.C
- Existing JCL code, which includes a DDNAME of DD1:

```
//STEP1  EXEC PGM=IEFBR14
//DD1     DD DSN=FIRST.DSN,DISP=SHR
//         DD DSN=SECOND.DSN,DISP=SHR
//DD2     DD DSN=THIRD.DSN,DISP=SHR
```

- Rule=B (Before) concatenates the variable value **before** any existing allocations of DD1:

```
//STEP1  EXEC PGM=IEFBR14
//DD1     DD DSN=A.B.C,DISP=SHR
//         DD DSN=FIRST.DSN,DISP=SHR
//         DD DSN=SECOND.DSN,DISP=SHR
//DD2     DD DSN=THIRD.DSN,DISP=SHR
```

- Rule=R (Replace) **replaces** any existing allocations of DD1:

```
//STEP1  EXEC PGM=IEFBR14
//DD1     DD DSN=A.B.C,DISP=SHR
//DD2     DD DSN=THIRD.DSN,DISP=SHR
```

- Rule=A (After) concatenates the variable value **after** any existing allocations of DD1:

```
//STEP1  EXEC PGM=IEFBR14
//DD1     DD DSN=FIRST.DSN,DISP=SHR
//         DD DSN=SECOND.DSN,DISP=SHR
//         DD DSN=A.B.C,DISP=SHR
//DD2     DD DSN=THIRD.DSN,DISP=SHR
```

Scope designations for products

The registration for each IMS Tools product includes a categorization called "scope".

The primary purpose of product scope designations is to allow you to distinguish products according to different product version/release levels and maintenance levels. Product scope designation allows you to apply different versions of the same product to specific regions of your environment.

Restriction: For IMS Administration Tool and IMS Library Integrity Utilities, only scope=GLOBAL is valid. scope=SYSTEM or scope=IMSID cannot be used for these two products.

GLOBAL
The initial default scope designation for all products registered to the IMS Administration Tool environment.

Interpretation: A scope=GLOBAL product is available for use to the entire environment, when:

- There is no duplicate of this product with a scope=*IMSID* representing the IMSID of a specific IMS environment, or

- There is no duplicate of this product with a scope=SYSTEM.

Purpose/usage: A product with scope=GLOBAL means the production SMP/E libraries for the product have not been modified or updated since initial installation. A scope=GLOBAL product represents the production product libraries with no maintenance applied since installation.

SYSTEM
A default scope=GLOBAL product that has been customized (modeled) using the product management interface.

Interpretation: A scope=SYSTEM product is available for use to the entire environment, when:

- There is no duplicate of this product with a scope=*IMSID* representing the IMSID of a specific IMS environment.

Purpose/usage: A product with scope=SYSTEM means the production SMP/E libraries for the product have been modified or updated since initial installation. A scope=SYSTEM product represents the production product libraries with maintenance applied since installation.

IMSID
A default scope=GLOBAL or SYSTEM product that has been customized (modeled or updated) using the product management interface.

Interpretation: A product with scope=*IMSID* is available for use only for the specified IMS environment (IMSID).

Purpose/usage: A product with scope=*IMSID* means the production SMP/E libraries for the product have been modified or updated since initial installation. The modification or update is made to be appropriate for use in a specific IMS environment (IMSID).

Best practice scenario

1. When an IMS Tools product is registered through IMS Tools Setup, original SMP/E libraries (registered for a test IMS environment as scope=*IMSID*) are maintained separately from copied libraries (registered as scope=GLOBAL) that are used for the production environment.
2. Maintenance updates (APAR/PTF) are applied to the original SMP/E libraries (scope=*IMSID*) and tested on the test IMS environment.
3. When testing has been validated, the maintenance update is applied to the copied libraries used in production. The scope for the production libraries is changed to scope=SYSTEM.

Scope designations for templates

The configuration for each function template includes a categorization called "scope".

The primary purpose of scope designations for templates is to allow the JCL code for functions to be modified to meet the specific requirements of the environment. The Run IMS Utilities job profile assembles templates at the appropriate scope levels to generate the correct JCL for the target databases and environment.

GLOBAL
The initial default scope designation when templates are created for all product functions that are registered to the IMS Administration Tool environment.

Interpretation: The scope=GLOBAL template is applicable to all job profiles, when:

- There is no equivalent template with a scope=*IMSID* for the IMSID that the job profile belongs to, or
- There is no equivalent template with a scope=SYSTEM.

Purpose/usage: The scope=GLOBAL template represents the JCL code to run the function as originally provided with no modifications.

SYSTEM
A scope=GLOBAL template that has been modified (modeled) using the function and template management interface.

Interpretation: The scope=SYSTEM template is applicable to all job profiles, when:

- There is no equivalent template with a scope=*IMSID* for the IMSID that the job profile belongs to.

Purpose/usage: The scope=SYSTEM template represents JCL code that has been modified to run a customized version of the function for the particular environment or environments.

IMSID

A scope=SYSTEM or GLOBAL template that has been modified (modeled or updated) using the function and template management interface.

Interpretation: The scope=*IMSID* template is applicable only to those job profiles belonging to the specified IMS environment (IMSID).

Purpose/usage: The scope=*IMSID* template represents the JCL code that has been modified to run a customized version of the function for the specified IMS environment (IMSID).

PROFILE

A scope=GLOBAL or SYSTEM or IMSID template that has been modified (modeled or updated) using the manage utility profile interface.

Interpretation: The scope=PROFILE template is created within a specific utility profile itself, and is applicable only to that utility profile and the IMSID associated with the utility profile.

Purpose: The scope=PROFILE template represents the JCL code that has been modified to run a customized version of the function that is appropriate for use only when the job profile uses that utility profile.

Scope designations for variables

The configuration for variables used in templates includes a categorization called "scope".

Variable expressions often occur in the template JCL code as place-holders for actual values. Appropriate values are substituted for the variable expressions when the job profile builds the final JCL.

The primary purpose of scope designations for variables is to allow you to modify the JCL code for functions to meet the specific requirements of the environment. The Run IMS Utilities job profile substitutes values for variable expressions at the appropriate scope levels to generate the correct JCL for the target databases and environment.

GLOBAL

The initial default scope designation for all product variables and values when they are initially registered to the IMS Administration Tool environment.

Interpretation: The scope=GLOBAL variable and value is applicable to all job profiles during variable substitution, when:

- There is no equivalent variable and value with a scope=PROFILE for the specific job profile, or
- There is no equivalent variable and value with a scope=*IMSID* for the IMSID that the job profile belongs to, or
- There is no equivalent variable and value with a scope=SYSTEM.

Purpose/usage: The scope=GLOBAL variable uses the value provided at initial product registration.

SYSTEM

A scope=GLOBAL variable and value that has been modified (modeled) using the variable management interface.

Interpretation: The scope=SYSTEM variable and value is applicable to all job profiles during variable substitution, when:

- There is no equivalent variable and value with a scope=PROFILE for the specific job profile, or
- There is no equivalent variable and value with a scope=*IMSID* for the IMSID that the job profile belongs to.

Purpose/usage: The scope=SYSTEM variable uses a customized value (modified from the scope=GLOBAL value).

IMSID

A scope=GLOBAL or SYSTEM variable and value that has been modified (modeled or updated) using the variable management interface.

Interpretation: The scope=*IMSID* variable and value is applicable during variable substitution only to job profiles created for the specified IMS environment (IMSID).

Purpose: The scope=*IMSID* variable uses a customized value that is appropriate for use only by a job profile created for the specified IMS environment (IMSID).

PROFILE

A scope=GLOBAL or SYSTEM or IMSID variable and value that has been modified (modeled or updated) using the manage job profile interface.

Interpretation: The scope=PROFILE variable and value is created within a specific job profile itself, and is applicable during variable substitution only to that job profile.

Purpose: The scope=PROFILE variable uses a customized value that is appropriate for use only by the job profile where the value was defined.

Dynamically generated variables

Some variables and values are dynamically provided during the final JCL build process. Sources for these dynamic variables include:

ENVIRONMENT

z/OS system information

Examples: SORTLIB, SYSMAC, USERID, UNIT

REGISTRY

IMS Tools product information

Examples: library names (*MENU, *PENU, *SENU, *LOAD)

DISCOVERED

IMS system information

Examples: DBDLIB, PROCLIB, RECON1

Product Management reference

The Product Management interface displays the status of all IMS Tools products that have registered to participate in the IMS Administration Tool environment.

Product scope designations can be used to identify and control different product version/release levels and maintenance levels.

Table 5. Product Management

Option	Description
D (delete)	Delete a SYSTEM or IMSID scope level product. Products with a GLOBAL scope level cannot be updated or deleted. Products with a GLOBAL scope level can only be viewed or modeled.

Table 5. Product Management (continued)

Option	Description
M (model)	Using the selected product as a model and create a new product registry entry that contains a different scope level and/or library designations. Suffixes for SMP/E library members: **LOAD** Product load library **PENU** ISPF panel library for the product **MENU** ISPF message library for the product **SLIB** ISPF skeleton library
U (update)	Update product library designations for SYSTEM and IMSID scope level products. Products with a GLOBAL scope level cannot be updated or deleted. Products with a GLOBAL scope level can only be viewed or modeled.
V (view)	Display product information. No modifications to the product information can be made in this view.

Function and Template Management reference

The Function and Template Management interface displays the list of IMS Tools product functions that have been registered in the IMS Administration Tool environment.

Each function has a template associated with it. The template is the JCL code that runs that function.

Prior to accessing the function list, you must indicate the range of scope level to display:

- By default, all GLOBAL scope level functions display.
- Scope=SYSTEM results in the display of all functions with GLOBAL or SYSTEM scope level.
- Scope=IMSID results in the display of all functions with GLOBAL or SYSTEM or the selected IMSID scope level.

Table 6. Function and Template Management

Option	Description
C (create)	Create a new function and template.
D (delete)	Delete a SYSTEM or IMSID scope level function. Functions and templates with a GLOBAL scope level cannot be updated or deleted. Functions and templates with a GLOBAL scope level can only be viewed or modeled.
M (model)	Using the selected existing function and template as a model, create a new function that contains a new name, a new scope level, and modified template JCL code.

Table 6. Function and Template Management (continued)

Option	Description
U (update)	Update the template JCL code for SYSTEM and IMSID scope level functions. Functions and templates with a GLOBAL scope level cannot be updated or deleted. Functions and templates with a GLOBAL scope level can only be viewed or modeled.
V (view)	Display the template JCL code for the selected function. No modifications to the template code can be made in this view.

Variable Management reference

The Variable Management interface displays the list of IMS Tools product variables and values that have been registered in the IMS Administration Tool environment.

Variables are organized into two categories:

- DDNAME (DDNAME parameter and data set names)
- Keyword

Prior to the variable list display, you must indicate the required scope level to include:

- By default, all GLOBAL scope level variables display.
- Scope=SYSTEM results in the display of all variables with GLOBAL or SYSTEM scope level.
- Scope=IMSID results in the display of all variables with GLOBAL or SYSTEM or the selected IMSID scope level.

Table 7. Variable Management

Option	Description
DDname variables	Add, override, delete DDNAME type variable. DDNAME variables represent data set names such as product load library locations, IMS RESLIB, and RECON data sets.
Keyword variables	Add, override, delete keyword type variable. Keyword variables represent single value information such as high level qualifiers and IMSIDs.
C (create)	Create a new variable and value that can be used in function templates. • New variable name • Type (preset for either DDNAME or KEYWORD • Scope level (SYSTEM or IMSID) • Rule (for placement of variable in an existing concatenation) (DDNAME variables only) – Before (B) – Replace (R) – After (A) • Variable value or values

Table 7. Variable Management (continued)

Option	Description
D (delete)	Delete a SYSTEM or IMSID scope level variable. Variables with a GLOBAL scope level cannot be updated or deleted. Variables with a GLOBAL scope level can only be viewed or modeled.
M (model)	Using the selected existing variable as a model, create a new variable with a new name, a new type, a new scope level, and new value.
U (update)	Update the attributes for SYSTEM and IMSID scope level variables. Variables with a GLOBAL scope level cannot be updated or deleted. Variables with a GLOBAL scope level can only be viewed or modeled.
V (view)	Display the attributes for the selected variable. No modifications to the variable and its value can be made in this view.

Chapter 7. Registering IMS systems

You must initially register all IMS subsystems that participate in the IMS Administration Tool environment.

When registering IMS subsystems, you must provide certain IMS system parameters so that IMS Administration Tool can identify (discover) IMS resources for that system as needed.

Topics:

Technical notes for registering IMS systems

The following technical notes apply for registering IMS systems to the IMS Administration Tool environment.

APF authorization required for IMS instances on different LPARs

When you use IMS Administration Tool to administer multiple IMS systems, you must APF-authorize all data sets in the STEPLIBs for the IMS control region, DLISAS, and DBRC regions of any IMS instance that operates on a different LPAR than the LPAR where IMS Administration Tool is located.

Perform this task on the LPAR where IMS Administration Tool is running.

The role of dynamic discovery

IMS Administration Tool is designed to operate as a centralized task management control center for an IMS and IMS Tools environment.

The single user interface provides access to functions that can simplify complex tasks associated with managing IMS databases, applications, and IMS systems.

When registering IMS subsystems, certain IMS system parameters are provided so that IMS Administration Tool can identify (discover) IMS resources for that system as needed.

IMS Administration Tool dynamic discovery supports the product functions by finding current information and settings about an IMS system. The specific information required varies based on which IMS Administration Tool function is being performed.

The dynamic discovery process is powerful and extensive in order to obtain the information required for any function run by IMS Administration Tool. Some examples of dynamically discovered information include:

- Whether the IMS catalog is enabled or not.
- Whether the IMS system is configured for IMS-managed ACBs.
- The DBDLIB, PSBLIB, ACBLIB, and RECON data sets.

  If DBDLIB, PSBLIB, and ACBLIB are defined to the RECON ID that is associated to the IMS data sharing group, IMS Administration Tool uses those data sets instead of the data sets that it discovers. See Chapter 8, "Managing IMS groups," on page 65 for more information.
- The databases defined to the IMS environment.
- The characteristics, data set names, and other information about the defined databases.

Dynamic discovery assumes the major responsibility of searching for and acquiring the IMS system information required by an IMS Administration Tool function, at the time the function runs. Two ease-of-use goals are achieved because of the discovery process:

- Initial IMS subsystem registration to the IMS Administration Tool environment is minimal.
- User knowledge and maintenance of system information (as needed by IMS Administration Tool) is not required because the discovery process runs dynamically.

  IMS settings can change as necessary with system operation, and dynamic discovery detects the current settings at the time the function needs to run.

Register IMS Systems management reference

The Register IMS Systems management interface displays the list IMS subsystems that have been registered to the IMS Administration Tool environment.

Table 8. Register IMS Systems management

Option	Description
C (Create)	Create and register a new IMS subsystem. Opens the Register an IMS Subsystem panel.
S (Sort)	Sort the IMS subsystem display. Opens the Sort Columns panel. You can specify the sequence order (values: 1-6) for each field to be sorted and the sort orders for each field (A-Ascending or D-Descending).
IMSID Filter	Limits the displayed IMSID list according to the characters and wildcards specified as filter criteria. For example: `ims1, ims*, *`
D (delete)	Delete a currently registered IMS subsystem from the IMS Administration Tool environment. IMS subsystems that are registered to IMS Administration Tool become recognized by IMS Administration Tool, and are enabled to participate in the IMS Administration Tool environment. This delete operation only removes the IMS subsystem from the view of IMS Administration Tool. It does not remove the installation of the IMS subsystem from the overall IMS environment.
M (model)	Create and register a new IMS subsystem using the selected IMS subsystem as a model.
U (update)	Update any system information for the selected IMS subsystem.
V (view)	Display system information for the selected IMS subsystem. No changes to the subsystem information can be made in this view.

Table 8. Register IMS Systems management (continued)

Option	Description
I (show discovered IMS system information)	Display a report of IMS system information that is gathered in real-time upon request. The IMS system report includes information dynamically gathered from the following IMS regions: • IMS Subsystem details • RECON ID Information about the associated RECON ID. The RECON ID is stored in the IMS Tools Knowledge Base repository and it contains information about the RECON data sets that are used by the IMS system. • IMS control region The IMS control region automatically starts the remaining regions as part of its initialization. To complete initialization, the remaining regions must start and then connect to the IMS control region. • DBRC region The DBRC region provides all access to the DBRC recovery control (RECON). Every IMS control region must have a DBRC region, for managing the IMS logs. • DL/I region The DL/I separate address space (DLISAS) performs most data set access functions for IMS databases (except DEDB DB). • IRLM region The internal resource lock manager (IRLM) allows you to perform block-level or sysplex data sharing. • CQS region Common Queue Server (CQS) is a generalized server that manages data objects on a z/OS coupling facility. CQS is used by IMS shared queues and the Resource Manager as part of the Common Service Layer (CSL). The CSL simplifies the administration and operation of multiple IMS systems that share resources or message queues. • JES2 region The job entry subsystem (JES) receives jobs into the operating system, schedules jobs for processing by z/OS, and controls job output processing. **Note:** In the IMS control region: Data Set Information section of the system report, the DFSCX000 ddname, and sometimes the DFSCD000 ddname, do not display the respective data set names.

Register an IMS Subsystem reference

The Register an IMS Subsystem interface allows you to register a new IMS subsystem to the IMS Administration Tool environment.

Table 9. Register an IMS Subsystem

Option	Description
IMS Subsystem ID	The 1-4 character name of the IMS subsystem. Required.
User Description	A 1-24 character informative description for the IMS subsystem that indicates its role and function, and is useful to users.
IMS PROC/JOB DSN	The data set name (up to 44 characters) of a JES PROCLIB or PDS that contains the member of the IMS control region procedure or job JCL. Required. Example: `IMS.COMMON.PROCLIB`
Control Region Member	The 1 to 8 character member name that contains the procedure or job JCL used to start the IMS control region. Required. This member name is required so that IMS Administration Tool can dynamically discover information about the IMS environment when needed. Example: `IEB8CTL`
IRLM PROC/JOB Member	The 1 to 8 character member name that contains the procedure or job JCL used to start the Internal Resource Lock Manager (IRLM). IRLM is a global lock manager and is required if you are performing block-level or sysplex data-sharing. Typically, one IRLM address space runs on each z/OS system to service all IMS subsystems that share the same set of databases. Example: `IEB8IRLM`

Table 9. Register an IMS Subsystem (continued)

Option	Description
IMS Region User Parms	Additional parameters (up to 60 characters), or overrides to existing parameters (up to 60 characters), that are specified when starting the IMS control region. You can also specify parameters for DLISAS, IRLM, DBRC, and JBP regions. IMS Administration Tool needs to know what these parameters are in order to dynamically discover information about the IMS environment when needed. Supply region parameters only when IMS Administration Tool cannot identify IMS libraries and resources from IMS region procedure or JCL. Example: `RGSUF=IE2`
Command Log Stream	IMS command processor setting. Specifies the name of the log stream that captures IMS command and response activity for that IMS subsystem. Command logging is activated only when a command log stream is specified in this field. The command log stream that is specified can be the single global IMS Administration Tool audit log stream (recommended) or a separately configured command log stream associated with this IMS subsystem. Any log stream used as an audit or command log is initially created during z/OS configuration and is defined as a z/OS System Logger log stream data set. System Logger is a z/OS component that provides a logging facility for applications that run in a single-system or multi-system sysplex. The z/OS System Logger log stream data set is defined using the z/OS `IXCMIAPU` utility program. Example: `SYSLOG.IDQ8.ATY.LOGGER`
User DFSAOE00 Name **Note:** Valid only for non-refreshable user exit implementation.	IMS command processor setting. The custom name of a user-defined (or vendor-provided) IMS AOI type 2 non-refreshable DFSAOE00 exit that IMS Administration Tool uses to capture IMS commands and command responses and write them to the log stream. The IMS AOI DFSAOE00 exit, upon completion, passes control to this exit. This exit is not called for any messages that are configured to be suppressed. **Note:** Beginning with IMS 14, the AOI exit can be implemented as a refreshable exit: • The **User DFSAOE00 Name** field is appropriate only for specifying a non-refreshable user exit. • If you implement a refreshable user exit, leave this field blank. Refer to: “Implementing IMS AO exit routines” on page 38.

Table 9. Register an IMS Subsystem (continued)

Option	Description
Message Disposition Table	IMS command processor setting. The 1 to 8 character name of a message disposition table. You can use message disposition to suppress messages from the IMS master terminal, the IMS Administration Tool command log, or the IMS secondary master. You can also use message disposition to route messages to an automated operator interface (AOI) token. User-developed AOI exits are sometimes written to suppress messages that would otherwise be sent to the IMS master terminal, or to route the messages to an alternate destination. Message disposition processing is intended to help eliminate the need for users to develop and maintain this exit to suppress unwanted messages. The message disposition table name is user-defined and is not referred to by any other function. For example, the following name might relate to the message disposition table for IMS1: `IMS1MSGD`

Chapter 8. Managing IMS groups

IMS groups consist of multiple IMS subsystems with similar processing characteristics.

Managing IMS groups overview

You can use IMS groups to manage database processing tasks more efficiently and logically across large numbers of IMS subsystems.

IMS Administration Tool supports two types of IMS groups:

- IMS command groups

  IMS Administration Tool can issue IMS commands synchronously to all of the grouped IMS subsystems.
- IMS data sharing groups

  Members of data sharing groups share common IMS databases, IMS IMS catalog, ACBs, PSBs, DBDs, and IMS Tools Knowledge Base repositories.

  Data sharing groups are equivalent to RECON.

An IMS group can consist of up to 64 IMS subsystems, logically related to benefit the management of your environment. Because an IMS subsystem can be a member of multiple groups, processing by IMS group name can be as flexible as required.

Topics:

Manage IMS Groups reference

The Manage IMS Groups interface lists the existing IMS groups that can function in the IMS Administration Tool environment.

Table 10. Command reference for Manage IMS Groups

Option	Description
C (Create)	Create (define) a new IMS group. Opens the Define a Group panel.
S (Sort)	Sort the group list display. Opens the Sort Columns panel. You can specify the sequence order (values: 1-3) for each field to be sorted and the sort orders for each field (A-Ascending or D-Descending).
Group Filter	Limits the displayed group list according to the characters and wildcards specified as filter criteria. For example: `imsgrp01, imsgrp*, *`

Table 10. Command reference for Manage IMS Groups (continued)

Option	Description
D (Delete)	Delete a previously created IMS group. Opens the Delete Group Confirmation panel.
M (Model)	Create (define) a new IMS group based on (modeled after) the attributes of the selected IMS group. Opens the Define a Group panel and indicates the need to enter a name for the new IMS group that is being created from the model IMS group.
U (Update)	Modify (update) the attributes of the selected IMS group. Opens the Define a Group panel and shows the existing attributes of the IMS group. You can now add or remove attributes to change the IMS group definition.
V (View)	Display (view) the attributes of the selected IMS group. No changes to IMS group attributes can be made in this view.

Table 11. IMS Group List

Option	Description
Group	Name of the IMS group.
Type	Type of the IMS group. **DSHR** IMS data sharing group **CMD** IMS command group
IMSID List	IMS systems in the group.

Create/Update/View IMS Data Sharing Group reference

Use the Create/Update IMS Data Sharing Group panel to create or update an IMS data sharing group, or the View IMS Data Sharing Group panel to view an IMS data sharing group.

Table 12. Create/Update/View IMS Data Sharing Group

Option	Description
Group Name	The name of the IMS group.
Description	Informative description of the IMS group.

Table 12. Create/Update/View IMS Data Sharing Group (continued)

Option	Description
IMS Data Sets	IMS Administration Tool discovers required IMS data sets, such as DBD, PSB, and ACB libraries, IMS catalog, IMS directory, and IMS product libraries from IMS control region JCL and PROCLIB members. However, for the following functions, you can specify DBD, PSB, and ACB libraries to be used. If specified, the specified DBD, PSB, and ACB data sets are registered to IMS Tools Base RECON ID and are obtained at run time. • **Database and Application Administration** > **Object Explorer and IMS Resource Change** • **IMS Catalog and ACBLIB Management** > **Import Objects** • **Run IMS Utilities** **Use RECON ID** Specify Y to register DBD, PSB, and ACB libraries to RECON ID. You can view and update the names of DBD, PSB, and ACB libraries in the next panel. The registered data sets information is shared with IMS Tools Base. Specify N to have DBD, PSB, and ACB libraries discovered from IMS control region JCL and PROCLIB members. This field is not displayed in the View IMS Data Sharing Group panel. **RECON ID** The associated RECON ID, which contains information about the RECON data sets that are used by the IMS system, is obtained from IMS Tools Knowledge Base. If you are creating an IMS group, the RECON ID field is initially blank. RECON ID is displayed after required information is provided through subsequent panels.
IMSIDs	1 - 64 IMS systems (IMSIDs) can belong to one IMS group. All IMS systems in the group must use the same RECON data sets.

Create/Update/View IMS Command Group reference

Use the Create/Update/View IMS Command Group panel to create, update, or view an IMS command group.

Table 13. Create/Update/View IMS Command Group

Option	Description
Group Name	The name of the IMS group.
Description	Informative description of the IMS group.
IMSIDs	1 - 64 IMS systems (IMSIDs) can belong to one IMS group. All IMS systems in the group must use the same RECON data sets.

IMS Tools Base RECON Information – IMS Data Sets reference

Use the IMS Tools Base RECON Information -- IMS Data Sets panel to specify the data set names of DBD, PSB, and ACB libraries.

Table 14. IMS Tools Base RECON Information – IMS Data Sets reference

Option	Description
DBDLIB, PSBLIB, ACBLIB	Specify DBD, PSB, and ACB library data sets to be used by the following functions: • **Database and Application Administration** > **IMS Resource Change** • **IMS Catalog and ACBLIB Management** > **Import Objects** The data sets are used as default libraries in DBDGEN, PSBGEN, ACBGEN, and IMS catalog populate processes. If you do not specify data sets, IMS Administration Tool automatically discovers the data sets from IMS control region JCL and IMS PROCLIB data sets. **Note:** When non-IMS managed ACBs are used, ACB libraries specified in the panel are not used. IMS Administration Tool discovers ACB library data sets from the IMS online system and uses them.
RECON ID	The associated RECON ID that is defined to IMS Tools Base. The RECON data sets defined to the RECON ID and the RECON data sets that the members of the IMS data sharing group use must match. Information about DBD, PSB, and ACB libraries is stored in the RECON ID information in the IMS Tools Knowledge Base repository. The library information is shared with IMS Tools Base and IMS Administration Foundation. IMS Administration Tool sets the RECON ID. You can update the RECON ID but you must make sure that the updated RECON ID uses the same RECON data sets as those used by the IMS data sharing group.

Chapter 9. Managing data sets and data set groups

You can register and manage the data sets that you want to use with tasks of the database and application administration function and the IMS catalog and ACB library management function.

Registered data sets can be used in the following functions:

- Database and application administration - IMS resource change - DBD/PSB resource change
- Database and application administration - IMS resource change - Merge libraries
- IMS catalog and ACB library management - Import objects
- IMS catalog and ACB library management - Export objects - Export logical DBD and GSAM from DBD or PSB library

Registering data sets allows you to easily select the data sets that you want to work with. Registered data sets are managed by the unit of data set group. To enable a specific group of data sets for these tasks, you must register data sets first, then create a data set group and include the registered data sets in the data set group.

When you register a data set or data set group, you associate it with an IMS subsystem. If you want to use the same data set or data set group with multiple IMS subsystems, you must register them for each IMS subsystem.

Registering data sets and creating data set groups are optional tasks. If no data set groups are registered for the IMS subsystem ID that you select, IMS Administration Tool discovers data sets from the IMS control region JCL and IMS PROCLIB members.

Step-by-step instructions for registering data sets and creating data set groups are provided in Technote: How to change DBDs and PSBs by using IBM IMS Administration Tool for z/OS.

Topics:

Data set types

You can register the following types of data sets.

DBD statement source and PSB statement source
Data sets into which DBD or PSB statement source (in readable format) is generated. These data sets are used as input during DBDGEN and PSBGEN of the IMS resource change function (database and application administration).

Note: The import objects function (IMS catalog and ACB library management) does not use DBD statement source data sets and PSB statement source data sets as input. Instead, it uses exported data sets as input. For more information, see "Import objects reference" on page 149.

COBOL copybook and PL/I copybook
Data sets that contain COBOL or PL/I copybooks. These data sets are used as input during copybook import to import copybooks to DBD.

Copybook cross reference
Data sets that contain cross reference information defining linkage between segments and copybooks. These data sets are used as input during copybook import.

DBD statements with copybook
Data sets into which DBD statement source with updates from copybook applied is generated. These data sets are used as output during copybook import, and used as input during DBDGEN.

DBD libraries and PSB libraries
Data sets into which DBDs and PSBs (in binary format) are generated. These data sets are used as output during DBDGEN or PSBGEN, and used as input for ACBGEN.

ACB libraries
Data sets into which ACBs (in binary format) are generated. These data sets are used as output during ACBGEN, and used as input for IMS catalog population.

IMS bootstrap data sets, IMS directory data sets, and IMS catalog database data sets are also updated during the IMS catalog populate process. However, these data sets cannot be registered to IMS Administration Tool. IMS Administration Tool uses discovered data sets.

Manage data sets reference

After you select a data set type, create a data set ID to register a data set. You can also update the data set name and comment fields of registered data sets.

Table 15. Manage data sets reference

Option	Description
DSN ID	The identifier for the data set. IMS Administration Tool uses this identifier to manage the data set. The identifier is one to eight characters in length and can consist of alphanumeric characters as well as the @, #, and $ characters. The first character must be an alphabetic character or the @, #, or $ character.
Data Set Name	Data set name.
Comment	Comment. Up to 24 characters can be used.

Manage data set groups reference

Create a new data set group or manage existing data set groups. Only registered data sets can be included in data set groups.

Table 16. Manage data set groups reference

Option	Description
DS Group ID	Identifier for the data set group. The identifier is one to eight characters in length and can consist of alphanumeric characters as well as the @, #, and $ characters. The first character must be an alphabetic character or the @, #, or $ character.
Default Use	Y indicates that this data set group is used as the default data set group for the associated IMS subsystem ID. **Tip:** If you do not want to set Default Use to Y, you can alternatively enable the data set group by selecting the data set group in **Settings**. • **Database and Application Administration** > **Settings** • **IMS Catalog and ACBLIB Management** > **Import Objects** > **Settings**
Comment	Comment. Up to 24 characters can be used.
Data Set Type	List of data set types. Select the type of the data set that you want to manage.

After you select a data set type, you select the data sets to include in the data set group by entering a sequence number for each data set you want to include.

You can select only from registered data sets. If no data sets are displayed, it means no data sets are registered for this data set type. You must register data sets before adding them to a data set group.

Table 17. Manage data set groups reference - managing data sets in a data set group

Option	Description
E (Exclude all)	Remove all the data sets from the data set group.
Sequence number	For each data set that you want to include in the group, specify a sequence number. The sequence numbers are used to determine the concatenation order in DBD and PSB update tasks. If you want to include only one data set, the number can be any positive integer.

Chapter 10. Managing and viewing the audit log

IMS Administration Tool uses a single global audit log to capture processing information for the entire IMS Administration Tool environment.

Audit log overview

Activities of IMS Administration Tool are logged as audit log records in a log stream of z/OS System Logger. System Logger is a z/OS component that provides a logging facility for applications that run in a single-system or multi-system sysplex.

The audit log is optional. To activate audit logging, define a log stream of System Logger and specify the log stream name in the Manage Audit Log panel.

The following function activities are logged as audit log records:

Function	Activities
Setup and Administration	• Update product management information • Register, update, and delete IMS systems and groups • Register, update, and delete audit log and options • Create, update, and delete message disposition
Database and Application Administration	Create and update DBD/PSB
IMS Catalog and ACBLIB Management	• Delete DBD/PSB instances • Create and update DBD/PSB • Backup IMS directory/BSDS • Restore IMS directory/BSDS
Run IMS Utilities	Create, update, and delete profiles
IMS Command Processor	Create, update, and delete global and job options
Archive Utility	Archive

Security

By using Security Authorization Facility (SAF) facility class ATYADMIN.SETUP, you can control who can change audit log settings. For more information, see “Classifying super administrators and regular users ” on page 35.

Topics:

Manage Audit Log reference

The Manage Audit Log panel allows you to specify recording options for the IMS Administration Tool audit log.

Table 18. Manage Audit Log

Option	Description
Audit Log	Enter the name of the single global predefined IMS Administration Tool audit log stream that captures processing information for the entire IMS Administration Tool environment. • The audit log is initially created during z/OS configuration and is defined as a z/OS System Logger log stream data set. System Logger is a z/OS component that provides a logging facility for applications that run in a single-system or multi-system sysplex. Log stream definition JCL is provided as member #A7ATY5 in the CUSTJCL data set. Refer to the appropriate z/OS documentation for information and syntax. • Only one audit log serves the entire IMS Administration Tool environment. • The audit log is optional. You must define and specify the audit log stream to enable logging. Using the audit log stream to log IMS commands: • By default, IMS commands and responses are not logged to the audit log, unless the audit log is specified as an IMS command log stream. • Command log streams for IMS command logging are configured when you register individual IMS subsystems: **Setup and Administration** > **Register IMS Systems** > **Create** > **Register an IMS Subsystem** > **Command Processor Settings** > **Command Log Stream** Specify the name of the log stream in the ATYPARMS member of the IMS OM region PROCLIB data set. Refer to CUSTPARM(ATYPARMS). Also, refer to “Setting up IMS Administration Tool in an IMS system” on page 37 for more information. • You can name a command log stream to be the same as the global IMS Administration Tool audit log stream (recommended), or alternatively, you can specify a separate command log stream for each individual IMS subsystem. • If the global audit log is also specified as a command log stream for an IMS subsystem, command logging is activated and the audit log additionally captures IMS command records for the associated IMS subsystem.
Record DBD/PSB Statements Before and After Change	Specify Y (Yes) to enable the recording of DBD/PSB statements before and after change when the resource definition is updated. For more information, see Chapter 16, “Record DBD/PSB statements before and after change,” on page 105.

Table 18. Manage Audit Log (continued)

Option	Description
Record at	Specify the IMS Administration Tool functions to record DBD/PSB statements: • IMS Resource Change of Database and Application Administration • Import Objects of IMS Catalog and ACBLIB Management • Both
DBDGEN, PSBGEN, ACBGEN, and IMS Catalog Populate	Enter Y for the task that you want to record DBD/PSB statements before and after the task.
Write records to	Specify where the records should be written to, either the log stream or data sets. If you select the log stream, the DBD/PSB statements are written directly to the log stream. Note that a large number of statements could be written to the log stream. If you select data sets, the DBD/PSB statements are written to the DBD and PSB recording data sets. Because IMS Administration Tool creates these data sets, you do not need to create them. The names of DBD and PSB recording data sets are recorded as log records in the log stream. The data set name in the log record links to the data set. You can use the link to view the data set in the browsing panel.
Data Set HLQ	If you select data sets, specify the high-level qualifier for the recording data sets.

View Audit Log reference

The View Audit Log interface allows you to specify display options for the IMS Administration Tool audit log file.

Table 19. View Audit Log

Option	Description
Audit Log	The audit log name displayed is the single global IMS Administration Tool audit log stream predefined in: **Setup and Administration > Global Settings > Audit Log**

Table 19. View Audit Log (continued)

Option	Description
View Options	The IMS Administration Tool audit log captures records of processing activity. You can limit the view results with the following choices: • Audit Records (*only*) • Command Records (*only*) • Audit and Command Records By default, the audit log does not capture IMS commands and responses, unless the audit log is additionally specified as an IMS command log stream. If also specified as a command log stream, command logging is activated and the audit log additionally captures IMS command records. Alternatively, a dedicated IMS command log stream can be created during IMS subsystem registration. In this case, the audit log does not capture command and response activity. Command log stream configuration: **Setup and Administration > Register IMS Systems > Create > Register an IMS Subsystem > Command Processor Settings > Command Log Stream**
IMSID	Audit Log Filter Limits the view results to the specified IMS subsystem.
User	Audit Log Filter Limits the view results to the specified TSO user ID.
Start Date / Time End Date / Time	Audit Log Filter Limits the view results to the specified start and end time and dates. Date format: `yyyy/mm/dd` • *yyyy* is expressed as a 4-digit year. • *mm* is expressed as a 2-digit month between 01 and 12. • *dd* is expressed as a 2-digit day between 01 and 31. Time format: `hh:mm:ss` • *hh* is expressed as a 2-digit value for hours between 00 and 23. • *mm* is expressed as a 2-digit value for minutes between 00 and 59. • *ss* is expressed as a 2-digit value for seconds between 00 and 59.

Commands, fields, and sample for viewing audit log

This topic provides the list of information fields that are included in each audit log record. It also explains extended commands and PF keys that are supported for the view audit log panel.

Log record fields

The audit log captures a variety of product activity.

Each record includes:

- Audit log indicator

  A = audit, C = command
- Date / Timestamp
- IMSID
- IMS Tools Knowledge Base server name
- Action
- Jobname of Distributed Access Infrastructure SOT (Subordinate Tools Access Servers) address space
- TSO user ID
- Return code, reason code, error message

Finding DBD and PSB recording data sets

The View Audit Log panel supports several commands and PF keys to help you locate and view the data sets that contain recorded DBD and PSB statements.

If the DBD/PSB statements (before and after change) are recorded in the DBD and PSB recording data sets, the names of recording data sets are shown with ATYDSN=. You can use primary commands FI or FL, or the PF5 key to locate lines that contain ATYDSN=, then use the PF6 key to browse DBD and PSB statements after putting the cursor on ATYDSN=.

Primary commands

FI - Find ATYDSN (DBD and PSB recording data set)
Find a line that contains ATYDSN=.

FL - Find Last ATYDSN
Find the last line that contains ATYDSN=.

PF keys

PF5 - Rfind
Repeat-find. Find the next occurrence of ATYDSN=.

PF6 - Browse DS
Browse the data set. Put the cursor on ATYDSN= and press PF6.

Audit log sample

```
A 2022/11/28 00:50:11 IMSAB    FPQSRV01 UPDATE  GUIS0006 USERW              Update/add Group Information
A 2022/11/28 00:50:11 IMSAB    FPQSRV01 UPDATE  GUIS0006 USERW              RC=00000000 RSN=00000000
A 2022/11/28 00:53:29 IMSA     FPQSRV01 ADD     GUIS0007 USERW              Object profile  USERW   OBJA
A 2022/11/28 00:53:29 IMSA     FPQSRV01 ADD     GUIS0007 USERW              RC=00000000 RSN=00000000
A 2022/11/28 00:56:37 IMSA     FPQSRV01 DFS3PU10GUIS0007 USER01             Delete Obsolete DBD/PSB Started. IMSCAT=IMS.IMSA.DFSCD000
A 2022/11/28 00:56:37 IMSA     FPQSRV01 DFS3PU10GUIS0007 USER01             RC=00000000 RSN=00000000 Delete Obsolete DBD/PSB Ended.
                                                                            IMSCAT=IMS.IMSA.DFSCD000
A 2022/11/28 20:08:01 IMSA     FPQSRV01 DBDGEN  USER01RC USER01             DBD source Before DBDGEN
A 2022/11/28 20:08:01 IMSA     FPQSRV01 DBDGEN  USER01RC USER01               ATYDSN=IMSTST.IMSA.DBDG.B221128.T72480
A 2022/11/28 20:08:01 IMSA     FPQSRV01 DBDGEN  USER01RC USER01             DBFSAMD3 Started  USER01.IMSA.DECODE.DBD
A 2022/11/28 20:08:01 IMSA     FPQSRV01 DBDGEN  USER01RC USER01             RC=00000000 RSN=00000000 DBFSAMD3 Ended    IMS.IMSA.DBDLIB
A 2022/11/28 20:08:02 IMSA     FPQSRV01 DBDGEN  USER01RC USER01             DBD source After  DBDGEN
A 2022/11/28 20:08:02 IMSA     FPQSRV01 DBDGEN  USER01RC USER01               ATYDSN=IMSTST.IMSA.DBDG.A221128.T72480
A 2022/11/28 20:08:02 IMSA     FPQSRV01 PSBGEN  USER01RC USER01             PSB source Before PSBGEN
A 2022/11/28 20:08:02 IMSA     FPQSRV01 PSBGEN  USER01RC USER01               ATYDSN=IMSTST.IMSA.PSBG.B221128.T72480
A 2022/11/28 20:08:02 IMSA     FPQSRV01 PSBGEN  USER01RC USER01             AUTPSBAL Started  USER01.IMSA.DECODE.PSB
A 2022/11/28 20:08:02 IMSA     FPQSRV01 PSBGEN  USER01RC USER01             RC=00000000 RSN=00000000 AUTPSBAL Ended    IMS.IMSA.PSBLIB
A 2022/11/28 20:08:03 IMSA     FPQSRV01 PSBGEN  USER01RC USER01             PSB source After  PSBGEN
A 2022/11/28 20:08:03 IMSA     FPQSRV01 PSBGEN  USER01RC USER01               ATYDSN=IMSTST.IMSA.PSBG.A221128.T72480
A 2022/11/28 20:08:03 IMSA     FPQSRV01 ACBGEN  USER01RC USER01             Decoded source Before ACBGEN
A 2022/11/28 20:08:03 IMSA     FPQSRV01 ACBGEN  USER01RC USER01               ATYDSN=IMSTST.IMSA.ACBG.B221128.T72480
A 2022/11/28 20:08:03 IMSA     FPQSRV01 ACBGEN  USER01RC USER01             AUTPSBAL Started  IMS.IMSA.PSBLIB
A 2022/11/28 20:08:03 IMSA     FPQSRV01 ACBGEN  USER01RC USER01             RC=00000000 RSN=00000000          Ended    IMS.IMSA.ACBLIB
A 2022/11/28 20:08:03 IMSA     FPQSRV01 ACBGEN  USER01RC USER01             DBFSAMD3 Started  IMS.IMSA.DBDLIB
A 2022/11/28 20:08:04 IMSA     FPQSRV01 ACBGEN  USER01RC USER01             RC=00000000 RSN=00000000          Ended    IMS.IMSA.ACBLIB
A 2022/11/28 20:08:04 IMSA     FPQSRV01 ACBGEN  USER01RC USER01             Decoded source After  ACBGEN
A 2022/11/28 20:08:04 IMSA     FPQSRV01 ACBGEN  USER01RC USER01               ATYDSN=IMSTST.IMSA.ACBG.A221128.T72480
A 2022/11/28 20:08:04 IMSA     FPQSRV01 DFS3PU00USER01RC USER01             POPULATE Started from IMS.IMSA.ACBLIB
A 2022/11/28 20:08:05 IMSA     FPQSRV01 DFS3PU00USER01RC USER01             RC=00000000 RSN=00000000 POPULATE Ended from   IMS.IMSA.ACBLIB
A 2022/11/30 03:32:33          FPQSRV01 UPDATE  GUIS0007 USER01             Update Audit Log Settings - Started
A 2022/11/30 03:32:34          FPQSRV01 UPDATE  GUIS0007 USER01             RC=00000000 RSN=00000000  - Ended
A 2022/11/30 19:06:07 IMSA     FPQSRV01 DELETE  GUIS0006 USERW              Object profile  USERW   OBJA
A 2022/11/30 19:06:07 IMSA     FPQSRV01 DELETE  GUIS0006 USERW              RC=00000000 RSN=00000000
A 2022/12/08 02:12:00          FPQSRV01 UPDATE  GUIS0001 USER01             Update Audit Log Settings - Started
A 2022/12/08 02:12:00          FPQSRV01 UPDATE  GUIS0001 USER01             RC=00000000 RSN=00000000  - Ended
```

Chapter 11. Configuring message disposition

You can use message disposition to suppress messages from the IMS master terminal (MTO), the IMS Administration Tool message log, or the IMS secondary master. You can also use message disposition to route messages to an automated operator interface (AOI) token.

Message disposition overview

IMS Administration Tool message disposition processing is controlled by user-defined tables that are stored in the options data set and that are loaded into storage at IMS start up. Multiple IMS systems can be defined to load the same tables from the options data set, but they do not share the tables after the tables loaded into memory.

You use the IMS Administration Tool user interface to add message IDs to the message tables and specify their disposition. The messages can be suppressed from the IMS master terminal or the IMS Administration Tool combined message log.

Message disposition tables can be updated without requiring an IMS startup.

Message disposition is invoked as part of the IMS automated operator interface (AOI) exit:

- DFSAOE00, if you are implementing a non-refreshable user exit.
- ATYAOE00, if you are implementing a refreshable user exit.

  DFSAOE00 is not used if you are implementing a refreshable exit routine.

You can also write your own AOI exit to suppress messages that would otherwise be sent to the IMS master terminal, or to route the messages to an alternate destination.

You can use message disposition to:

- Suppress messages from the IMS master terminal.
- Suppress messages from the IMS Administration Tool message log.
- Suppress messages from the IMS secondary master terminal.
- Route messages to an AOI token.
- Manage message disposition tables and the list of messages designated for disposition.
- Dynamically refresh the list of messages without an IMS restart.
- Help control or eliminate messages from user-developed code.

Topics:

Configure Message Disposition management reference

The Configure Message Disposition management interface allows you to specify new message disposition configuration and manage existing message disposition configuration.

Table 20. Configure Message Disposition

Option	Description
C (Create)	Create (define) a new message disposition table and message ID.
D (Delete)	Delete a message ID from a message disposition table.

Table 20. Configure Message Disposition (continued)

Option	Description
M (Model)	• Add a new message ID to an existing message disposition table, or • Create a new message disposition table with the same message ID or a new message ID.
U (Update)	Modify (update) the message disposition configuration for the selected message ID in the selected message disposition table.
V (View)	Display (view) the message disposition configuration for the selected message ID in the selected message disposition table. No changes to message disposition configuration can be made in this view.

Create, Update, View Message Disposition reference

The Create, Update, View Message Disposition interface allows you to view, create, or change message disposition configuration.

Table 21. Create, Update, View Message Disposition

Option	Description
Message Table	User-defined message disposition table name. The message table name can be unique to an individual IMS subsystem, or all IMS subsystems can share the same table.
Message ID	Message ID to configure for disposition.
Suppress Messages	Message disposition configuration: **IMS Master Terminal (MTO)** Suppress this message ID if it comes from the IMS master terminal (MTO). Y-Yes, N-No **IMS Secondary Master** Suppress this message ID if it comes from the IMS secondary master. Y-Yes, N-No **IMS Administration Tool Logger** Suppress this message ID if it comes from the IMS Administration Tool logger. Y-Yes, N-No
AOITOKEN	Route the message ID to a valid AOI token for any user-written or vendor-provided automated operations (AO) application that can process the specified message ID. The AO application informs IMS what messages it is interested in receiving based on the AOITOKEN name.

Refreshing message disposition table configuration

IMS Administration Tool message disposition tables and message ID configuration are stored in the options data set and are loaded into storage at IMS start up.

Any changes made to message disposition configuration after IMS startup are not implemented until you:

- Stop and restart IMS, or
- Dynamically refresh the message disposition tables

You can dynamically refresh the message disposition tables by issuing the following command from any 3270 terminal that is connected to an IMS system:

```
/LOG ATYREFRESH
```

After a successful table refresh, message ATY8301I displays in the IMS control region z/OS log.

Part 4. Database and application administration

The database and application administration function in IMS Administration Tool provides a way for you to view, create, and change IMS databases (DBDs) and application views (PSBs).

Topics:

Chapter 12. Database and application administration settings

Settings allow you to register data sets and define runtime options for database (DBD) and application (PSB) update tasks.

Data set selection method

Change the data set selection method for IMS resource change sessions. Two methods are available:

Discovered Data Sets
Use data sets that IMS Administration Tool identifies from the RECONID. If no data sets are defined to the RECONID, IMS Administration Tool identifies data sets from the IMS control region JCL and IMS PROCLIB members.

Data Set Group
Use data sets included in a predefined data set group. Data set groups can be predefined from **Setup and Administration** > **Manage Data Sets and Groups**.

Runtime options

The runtime options are applied when copybook import, DBDGEN, PSBGEN, ACBGEN, or IMS Catalog Populate (DFS3PU00) is performed in the following functions:

- IMS resource change function of database and application administration
- Import objects function of IMS catalog and ACB library management

Runtime options include IMS MACLIB, Assemble and COBOL compile options, PL/I and COBOL compiler libraries, and copybook options.

For each runtime option, specify the scope to apply the option (either IMS subsystem ID or system) and a value.

Table 22. Runtime options for DBD/PSB change tasks

Option	Description
IMS Macro Library	IMS macro library data set. Used during DBDGEN and PSBGEN.
Assemble Option	Data set (and member if it is partitioned) that contains assemble options. Used during DBDGEN and PSBGEN.
COBOL Compiler	COBOL compiler library data set. Used during copybook import.
COBOL Compile Option	Data set that contains the COBOL compile option IGYCDOPT module.
PL/I Compiler	PL/I compiler library data set. Used during copybook import.
Copybook Default Lang	Copybook language, either PLI or COBOL. The default is COBOL. Used during copybook import.
Copybook XREF Format	Format of the copybook XREF file, either TYPE1 or TYPE0. The default is TYPE0. Used during copybook import.

Chapter 13. Object explorer

The object explorer function provides you the ability to browse the property, online status, and recovery status of IMS databases (DBDs) and application views (PSBs), as well as view, create, and update DBD statements and PSB statements.

The function extracts IMS control blocks (DBDs and PSBs) from the DBDLIB, PSBLIB, ACBLIB, IMS directory, or IMS catalog database depending on how IMS is configured. Then it decodes the extracted control blocks to readable DBD or PSB statement source code enabling you to edit the source code.

After editing the DBD or PSB source code, you can specify them as an input for the DBD/PSB resource change function of IMS resource change to update IMS control blocks.

Topic:

Object explorer reference

You must select a DBD or a PSB to work with. The function extracts the selected control block from the DBDLIB, PSBLIB, ACBLIB, IMS directory, or IMS catalog and decodes the control block to readable DBD or PSB macro source.

Table 23. Object explorer DBD and PSB selection reference

Option	Description
Selection Criteria	
DBD or PSB Filter	Specify a wildcard expression to control the number of DBD or PSB objects that display.
IMSID	The 1-4 character name of the IMS subsystem.
Decode Options for DBD or PSB Statement Source	
Decoded Source Data Set	The name of the master working data set where DBD- and PSB-related information from a DBDLIB, PSBLIB, ACBLIB, IMS directory, or the IMS catalog is translated into DBD and PSB source code.
Updated Source Data Set	The name of the working data set that contains a duplicate of the decode source data set. Modifications to DBDs or PSBs can be made to the contents of the update source data set.
Format of DBD or PSB Statements	Format of decoded DBDGEN or PSBGEN macro statements. **Default** Macro statements are printed using the default format of IMS Library Integrity Utilities. **FORMAT_COL10** Macro statements are printed using the FORMAT_COL10 format (each line starts at column 10). For more information about this format, see the description of DECOPT FORMAT_COL10 in the *IMS Library Integrity Utilities User's Guide*.

Table 23. Object explorer DBD and PSB selection reference (continued)

Option	Description
Select Library to View Property, Status, and DBD/PSB Statements	Library information and status for the selected IMS subsystem. Select the library to obtain the DBD or PSB from. • DBD or PSB Library • ACB Active Library • ACB Inactive Library • ACB Staging Library • IMS Directory Active Data Sets Available if the IMS management of ACBs is enabled. • IMS Directory Staging Data Set Available if the IMS management of ACBs is enabled. • IMS Catalog Database Available if the IMS catalog is defined to IMS. • Specify other DBDLIB data set names or PSBLIB data set names Specify DBD or PSB library data set names to select different libraries • Specify other ACBLIB data set names Specify ACB library data set names to select different libraries The following lines are displayed when a data set group is selected: • DBD or PSB Library in Data Set Group • ACB Library in Data Set Group On each library row, an indicator that shows whether IMS Administration Tool was able to determine the library is displayed. **Discovered** The library is determined from RECONID, or the IMS control region JCL and PROCLIB. **Data Set Group ID** The library is determined from the data sets that are registered to the selected data set group. **N/A (not available)** The library is not determined.
Library Information	Libraries enabled on this IMS subsystem. When a data set group is used, displays a list of data sets included in the data set group.

The following table summarizes the options available after you select a DBD or a PSB. If you select create, alter, or model, you can edit the DBD or the PSB macro source code.

Table 24. Object explorer DBD and PSB list option reference

Option	Description
Create	Create a new DBD or PSB.

Table 24. Object explorer DBD and PSB list option reference (continued)

Option	Description
Alter	Update an existing DBD or PSB. Alter uses the DBD or PSB copy in the update source data set.
Model	Create a new DBD or PSB that is based on (modeled after) the selected DBD or PSB. The new DBD or PSB can then be imported.
Source	View the DBD or PSB code. When working with copybooks, the source view can provide detailed DBD segment information.
Expand Info from IMS	Select an object from an active library (ACB active library or IMS directory active data sets) to view detailed (expanded) object information. The detailed information provides a convenient single view of object attributes gathered from multiple sources. For example: • Database level properties • Online status • Data set level properties • Recovery state

After you edit all the DBDs and PSBs that you want to edit, go to the IMS Resource Change panel to process all the edited resources.

Chapter 14. IMS resource change

IMS resource change supports two functions; DBD/PSB resource change and merge libraries.

DBD/PSB resource change
Perform DBD and PSB change tasks. During DBD/PSB resource change, IMS Administration Tool calls the DBDGEN, PSBGEN, ACBGEN utilities, and, if the IMS catalog is defined in the IMS subsystem, populates the IMS catalog by calling the IMS Catalog Populate utility (DFS3PU00).

Merge libraries
Merge multiple DBD libraries, PSB libraries, or ACB libraries into a single data set.

Topics:

DBD and PSB resource change

Use DBD/PSB resource change to apply changes made to DBD and PSB statement source to the IMS libraries and IMS catalog.

Supported resource change tasks are DBDGEN, PSBGEN, ACBGEN, and IMS Catalog Populate (DFS3PU00). You can optionally import COBOL or PL/I copybooks to DBD before DBDGEN.

Notes:

- An online IMS system must be active in the same LPAR where IMS Administration Tool runs to perform IMS Catalog Populate.
- IMS Catalog Populate requires that the IMS catalog database be registered to DBRC. If IMS Catalog Populate is requested and the IMS catalog database is not registered to DBRC, DBD and PSB resource change fails.

Input and output data sets
You specify the following data sets, which are referred to during IMS resource change tasks, through the DBD and PSB Resource Change panel (Table 25 on page 92).

- DBD and PSB statement source data sets
- Copybook and cross reference data sets
- DBD statement source updated with copybook import

Instead of specifying these data sets through the DBD and PSB Resource Change panel, you can register these data sets to a data set group and use them at run time.

You can select a data set group from **Database and Application Administration** > **Settings**.

Step-by-step instructions for changing DBDs and PSBs are provided in Technote: How to change DBDs and PSBs by using IBM IMS Administration Tool for z/OS.

IMS data sets
DBD and PSB resources that are generated by this task will be stored to data sets such as DBD, PSB, and ACB libraries, IMS directory, and IMS catalog data sets. You do not need to specify these data sets through the panels because IMS Administration Tool discovers them according to the following rules:

ACB libraries (non-IMS-managed environment), IMS directory, and IMS catalog database
Data sets are discovered from the information defined in the IMS control region JCL and IMS PROCLIB members, which means that the data sets defined for the IMS online environment will be discovered.

ACB library (IMS-managed environment), DBD library, and PSB library
Because these data sets are not defined in the IMS control region JCL, IMS Administration Tool discovers them according to the following rules:

- If Data Set Group ID is selected as data set selection method, discovers data sets from the IMS Administration Tool data set group.
- If Discovered Data Sets is selected as data set selection method, IMS Administration Tool attempts to discover data sets in the following order:
  1. If a RECON ID is specified for the IMS data sharing group, discovers data sets from the IMS Tools Base RECON ID.
  2. Discovers DBD and PSB libraries from IMS PROCLIB data sets DBDGEN or PSBGEN member, and ACB library from the IMS control region JCL or the MDA library.

Related information:

- For data set selection methods, see Chapter 12, "Database and application administration settings," on page 85.
- For data set groups, see Chapter 9, "Managing data sets and data set groups," on page 69.
- For IMS data sharing groups, see Chapter 8, "Managing IMS groups," on page 65.

Activate DBDs and PSBs after IMS resource change
After the IMS resource change completes, you must perform an IMS online change (OLC) or issue the IMPORT DEFN SOURCE(CATALOG) command to activate DBDs and PSBs in the online IMS system.

Tip: Runtime options for resource change tasks
Runtime options can be predefined from **Database and Application Administration** > **Settings**.

Table 25. DBD and PSB resource change reference

Option	Description
Object Selection Criteria	Specify the DBDs and PSBs to process.
Object Type	Specify the type of the resources. DBD, PSB, or both.
DBD Source Data Set	Specify the data set that contains the DBD source codes to process. If a data set group is selected, you cannot specify this field. IMS Administration Tool uses the DBD source data set found in the selected data set group.
Select DBDs	Two methods to select DBDs from the DBD update data set: • By filter Specify a wildcard expression to control the number of DBDs that display. • From list View and select DBDs to be updated. DBDs selected here are not applicable to IMS Catalog Populate (DFS3PU00) processing. The IMS Catalog Populate utility determines the objects to process.
PSB Source Data Set	Specify the data set that contains the PSB source codes to process. If a data set group is selected, you cannot specify this field. IMS Administration Tool uses the PSB source data set found in the selected data set group.

Table 25. DBD and PSB resource change reference (continued)

Option	Description
Select PSBs	Two methods to select PSBs from the PSB update data set: • By filter Specify a wildcard expression to control the number of PSBs that display. • From list View and select PSBs to be updated. PSBs selected here are not applicable to IMS Catalog Populate (DFS3PU00) processing. The IMS Catalog Populate utility determines the objects to process.
Resource Change Tasks Select one or more tasks to perform. The tasks are performed in the order listed.	
DBDGEN	Specify 1 or 2 to perform DBDGEN. If you specify 2, IMS Resource Change imports copybooks before DBDGEN. For details about using copybook, see Chapter 15, “Copybook import,” on page 97. • Input: DBD statement source data sets. Additionally, copybooks and copybook cross reference data sets if 2 is selected. • Output: The DBD library concatenated first in the data set group.
PSBGEN	Specify 1 to perform PSBGEN. • Input: PSB statement source data sets. • Output: The PSB library concatenated first in the data set group.
ACBGEN	Specify 1 to perform ACBGEN. If IMS Library Integrity Utilities is registered to IMS Tools Knowledge Base, the Advanced ACBGEN utility of IMS Library Integrity Utilities is used. • Input: DBD and PSB library data sets. • Output: The ACB library concatenated first in the data set group.
IMS Catalog Populate	Specify 1 to populate the IMS catalog with the IMS Catalog Populate utility (DFS3PU00). It can be selected only if IMS catalog is defined in the IMS system. An online IMS system must be active while it is running. • Input: ACB libraries. • Output: IMS catalog database and IMS directory staging data set. IMS Administration Tool discovers these resources from IMS control region JCL and IMS PROCLIB.
Resource Change Options	
Execute (run) or Build JCL	Specify to execute the IMS resource change or to generate IMS resource change JCL. For details about the JCL it generates, see Chapter 36, “Reference: DBD and PSB update (ATY@OBJU) JCL,” on page 259.
Save JCL when Exec ?	If you select E for Exec or Build JCL, IMS resource change tasks are performed but no JCL is saved. Enter Y to save the JCL for later use.

Table 25. DBD and PSB resource change reference (continued)

Option	Description
Use COPYBOOK	Specify Y to import copybook information to the DBD source code. If you specify Y, the function analyzes the copybook and inserts corresponding metadata statements into the DBD source for DBDGEN.
Copybook Data Sets Displayed only when **discovered data sets** is selected.	
COPYBOOK Cross Reference (XREF) Data Sets	The name of the data set that pairs the DBD with the copybook. You can specify up to 10 data sets. Specify Y to view, change, or add data set names. For the format of COPYBOOK XREF files and examples, see "Copybook XREF file" on page 100.
COBOL or PL/I COPYBOOK Data Sets	The names of the data sets where the copybook resides. You can specify up to 120 data sets, maximum of 60 for COBOL copybook data sets and 60 for PL/I copybook data sets. Specify Y to view, change, or add data set names.
DBD Source with COPYBOOK	Specify the name of the output data set for storing the updated DBD source.
JCL Output Options	
JCL Output Data Set	The name of the partitioned data set where the generated JCL is stored. The data set must be pre-allocated before you can generate the JCL
Member	The name of the member in the partitioned data set where the generated JCL is stored.
Job Statements	Specification of the JOB statement of the JCL.
Allocate JCL Output Data Set?	Allocate the data set where the generated JCL is stored.

Merge libraries

Use the merge libraries function to merge multiple DBD libraries, PSB libraries, or ACB libraries into a single data set.

The libraries to merge must be selected from a predefined data set group. Before you use this function, ensure that one or more data set groups are created and that those data set groups contain the libraries that you want to merge. If no data set groups exist or the libraries that you want to merge do not belong to any data set group, create or modify data set groups from **Setup and Administration** > **Manage Data Sets and Groups**.

Table 26. Merge libraries reference

Option	Description
Merge Data Sets	

Table 26. Merge libraries reference (continued)

Option	Description
Input DBD/PSB/ACB Libraries	Select input data sets. • Y - Select from DS Groups Select data sets. In the subsequent panels, you will select data set groups and then data sets. • N - Done Indicates that the data sets are already selected. • V - View View selected data sets. • *n* selected The number of data sets currently selected.
Output DBD/PSB/ACB Libraries	Select an output data set.
Merge Libraries Options	
Execute or Build JCL Only	Select to execute merge libraries immediately in TSO/ISPF or build JCL for batch job. • E - Execute Execute the function in TSO/ISPF immediately. • B - Build JCL only Build JCL. You can run the JCL at a later time.
JCL Output Options	
JCL Output Data Set	Specify the data set and member to store the JCL.
Job Statements	Specify the JOB statements to add to the JCL.

Chapter 15. Copybook import

The copybook import function imports metadata in COBOL or PL/I copybooks to DBD source. Copybook import is supported as a part of the database and application administration function and the IMS catalog and ACB library management function.

The copybook import function can be called from the following functions:

- IMS resource change function
- DBD resource change function
- Import objects (IMS catalog and ACB library management)

After importing metadata from copybooks to the DBD source, the function that called the copybook import function uses the updated DBD source and calls the DBDGEN utility, the PSBGEN utility, the ACBGEN utility, and the IMS Catalog Populate utility (DFS3PU00) to update relevant IMS control blocks.

The copybook import function uses the following information to import metadata from copybooks to the DBD. You supply the location of the resources through the ISPF interface.

DBD
The DBD to update.

COBOL or PL/I copybook
One or more copybooks to import.

Copybook cross reference (XREF) file
A file that defines linkage between segments and copybooks.

Output data sets
Output data sets such as for storing updated DBD source and generated DBD resource change JCL.

Subsections:

- "Data attribute mapping" on page 97
- "Considerations for importing PL/I copybooks" on page 99

Data attribute mapping

The copybook import function inserts FIELD statements with EXTERNALNAME parameters based on data definitions in the copybook. The copybook import function calculates the start position and the length, and adds START and BYTES parameters. It also adds DATATYPE parameters based on the mapping rules summarized in the following tables:

Table 27. Data attribute mapping from COBOL copybook to DBD DATATYPE

COBOL data type	DBD DATATYPE
PIC S9(4) BINARY	SHORT
PIC S9(9) BINARY	INT
PIC S9(18) BINARY	LONG
PIC 9(4) BINARY	USHORT
PIC 9(9) BINARY	UINT
PIC 9(18) BINARY	ULONG
COMP-1	FLOAT
COMP-2	DOUBLE

Table 27. Data attribute mapping from COBOL copybook to DBD DATATYPE (continued)

COBOL data type	DBD DATATYPE
PIC S9(*n*) COMP-3	DECIMAL(*n*,*p*) INTERNALTYPECONVERTER=PACKEDDECIMAL DFSMARSH statement is added to define data marshaling characteristics.
PIC X(*n*)	CHAR
PIC G(*n*)	BINARY(2*n*)
PIC N(*n*) DISPLAY-1	BINARY(2*n*)
PIC N(*n*) NATIONAL	BINARY(2*n*)
PIC 9(*n*) DISPLAY	DECIMAL(*n*,*p*) INTERNALTYPECONVERTER=ZONEDDECIMAL DFSMARSH statement is added to define data marshaling characteristics.
Field with OCCURS attribute	ARRAY
First element of group items	STRUCT

Table 28. Data attribute mapping from PL/I copybook to DBD DATATYPE

PL/I data type	DBD DATATYPE
REAL FIXED BINARY(15,0)	SHORT
REAL FIXED BINARY(31,0)	INT
REAL FIXED BINARY(63,0)	LONG
REAL FIXED BINARY(16,0) UNSIGNED	USHORT
REAL FIXED BINARY(32,0) UNSIGNED	UINT
REAL FIXED BINARY(64,0) UNSIGNED	ULONG
REAL FLOAT DECIMAL(6)	FLOAT
REAL FLOAT DECIMAL(16)	DOUBLE
FIXED DECIMAL(*n*,*p*)	DECIMAL(*n*,*p*) INTERNALTYPECONVERTER=PACKEDDECIMAL DFSMARSH statement is added to define data marshaling characteristics.
CHAR(*n*)	CHAR
GRAPHIC(*n*)	BINARY(2*n*)
WIDECHAR(*n*)	BINARY(2*n*)
PICTURE '(*n*)9'	CHAR(*n*)
WIDEPIC '(*n*)9'	CHAR(2*n*)
CHAR(*n*) VAR	CHAR(*n*)+2
CHAR(*n*) VARYING4	CHAR(*n*)+4
CHAR(*n*) VARYINGZ	CHAR(*n*)+1

Table 28. Data attribute mapping from PL/I copybook to DBD DATATYPE (continued)

PL/I data type	DBD DATATYPE
Field with array attribute	ARRAY
First element of structure	STRUCT

Considerations for importing PL/I copybooks

The following considerations apply when you import copybooks written in PL/I.

- The length of variable names specified in a PL/I copybook must be equal to or less than 30. Otherwise, the variable names will be truncated.
- When a structure in a PL/I copybook contains an array with the REFER option (variable for declared length), the PL/I compiler does not provide sufficient information about that structure. This may result in having an incorrect length in the DBD source.

  In the following PL/I copybook example, Y is an array with 20 bytes. However, when this structure is imported, the length is changed to 2 bytes in the DBD source.

```
DECLARE 1 STR BASED(P),
            2 X FIXED BINARY(31,0),
            2 Y (10 REFER (X)),
              3 DATA CHAR(2);
```

  To prevent this, review and remove all REFER options in the PL/I copybook before you import or update from the PL/I copybook.

Topics:

- "Runtime options for copybook import" on page 99
- "Copybook XREF file" on page 100
- "Examples for copybook import" on page 101

Runtime options for copybook import

Before you import metadata from copybooks, you must register runtime options using the ISPF interface.

Database and Application Administration > **Settings** > **View and update runtime options**

For more information, see the following topics:

- Chapter 12, "Database and application administration settings," on page 85
- "Import objects settings" on page 146

The following list provides DDname variables and keyword variables.

COBOL and PL/I compiler library

Required DDname variable. Register the language compiler library for COBOL, PL/I, or both.

Variable name	Description
CBLLIB	Specify the name of the COBOL compiler library data set.
PLILIB	Specify the name of the PL/I compiler library data set.

Copybook XREF format

Optional keyword variable. The copybook XREF file has two formats, type-0 and type-1. Type-0 is supported for both COBOL and PL/I. Type-1 is supported only for COBOL. Type-0 is the default. If you want to use type-1, you must register this keyword variable.

Variable name	Description
XREFFORM	Specify the format of the copybook XREF file, TYPE1 or TYPE0. If omitted, the default is TYPE0.

For more information about the format of copybook XREF files, see “Copybook XREF file” on page 100.

Copybook language

Optional keyword variable. If the copybook XREF file has type-0 format, XREF statements contain the copybook language, either COBOL or PL/I. This keyword variable overrides the language specified on the XREF statements. The default is COBOL. If you mainly use PL/I, you can change the value to PLI.

Variable name	Description
COPYLANG	Specify the language of the copybook, PLI or COBOL. If omitted, the default is COBOL.

COBOL compiler option

Optional DDname variable. If you want to change the COBOL compiler options, specify the data set that contains the IGYCDOPT module.

The data set is a load library and the data set organization must be RECFM=U, LRECL=0.

Variable name	Description
CBLOPT	Specify the data set that contains the IGYCDOPT module.

Copybook XREF file

A copybook XREF file contains copybook XREF statements that define mapping of each copybook to a segment.

A copybook XREF file is a PDS or PDSE, attributes are RECFM=FB and LRECL=80. The member name must match the name of the DBD to map.

Two formats are supported for copybook XREF files, type-0 and type-1. Type-0 can be used for both COBOL and PL/I, type-1 can be used for COBOL only. Type-0 is assumed unless the copybook XREF format keyword variable (XREFFORM) is set to TYPE1.

Subsections:

- “Type-0 copybook XREF statement syntax” on page 100
- “Type-1 copybook XREF statement syntax” on page 101

Type-0 copybook XREF statement syntax

Type-0 copybook XREF file supports both COBOL and PL/I. Each XREF statement specifies the language of the copybook, either COBOL or PL/I.

The following figure shows the syntax for type-0 copybook XREF statements.

```
----+----1----+----2----+----3----+----4----+
SEGM=SEGMENT1 COPYBOOK=SEG1COPY LANG=COBOL
SEGM=SEG2     COPYBOOK=S2COPY   LANG=COBOL
|    |        |        |        |
|    |        |        |        |
|    |        |        |        |-Col33-42 LANG=COBOL or LANG=PLI
|    |        |        |-Col24-31 Copybook name
|    |        |-Col15-23 Keyword
|    |-Col6-13 Segment name
|-Col1-5 Keyword
```

Figure 4. Type-0 copybook XREF statement syntax

Position	Description
Columns 1 - 5	Specify the SEGM= keyword.
Columns 6 - 13	Specify, left-aligned, a segment name.
Column 14	Filler. A blank or any character. The character in this column is ignored.
Columns 15 - 23	Specify the COPYBOOK= keyword.
Columns 24 - 31	Specify, left-aligned, the name of the copybook to map the segment. The name of the copybook must match a member in the copybook data set.
Column 32	Filler. A blank or any character. The character in this column is ignored.
Columns 33 - 42	Optional. Specify LANG=COBOL or LANG=PLI. If omitted, LANG=COBOL is applied. To change the default language, set the copybook language keyword variable (COPYLANG). For more information, see copybook language in "Runtime options for copybook import" on page 99.

Type-1 copybook XREF statement syntax

Type-1 copybook XREF file supports COBOL only. To use a type-1 copybook XREF file, you must set the copybook XREF format keyword variable (XREFFORM) to TYPE1. For more information, see copybook XREF format in "Runtime options for copybook import" on page 99.

The following figure shows the syntax for type-1 copybook XREF statements.

```
----+----1----+----2----+----3----+----4----+
   @@ The first line of Type1 is skipped. @@
         SEGNAME1               SEG1COPY
         SEGMENT2               SEG2COPY
|        |       |              |
|        |       |              |-Col34-41 Copybook name
|        |       |-Col18-33 Filler
|        |
|        |-Col10-17 Segment name
|-Col1 - 9 Filler
```

Figure 5. Type-1 copybook XREF statement syntax

The first line is ignored. You can write comments on this line.

Position	Description
Columns 1 - 9	Filler. Blanks or any characters. Characters in these columns are ignored.
Columns 10 - 17	Specify, left-aligned, a segment name.
Columns 18 - 33	Filler. Blanks or any characters. Characters in these columns are ignored.
Columns 34 - 41	Specify, left-aligned, the name of the copybook to map the segment. The name of the copybook must match a member in the copybook data set.

Examples for copybook import

Use the following example to learn how to use the copybook import function.

In this example:

- DBD name is ATYDBD0. The DBD has two segments, ATYSEG1 and ATYSEG2.
- The copybook data set contains two members, ATYCOPY1 and ATYCOPY2. The language used for the copybooks is COBOL.

- The name of the copybook XREF file is ATYDBD0, which is the same as the DBD name. This file exists in the ATY.XREF data set. The format of the copybook XREF file is type-0.
- The copybook XREF file contains the following copybook XREF statements:

```
SEGM=ATYSEG1 COPYBOOK=ATYCOPY1 LANG=COBOL SEGM=ATYSEG2 COPYBOOK=ATYCOPY2 LANG=COBOL
```

The decoded DBD (DBD source) contains the following statements.

```
         DBD   NAME=ATYDBD0,ACCESS=(HDAM,OSAM),                          X
               RMNAME=(DFSHDC40,8,360,3000)
*
DS1    DATASET DD1=SAMPL0,SIZE=(4096),SCAN=0
*
 SEGM    NAME=ATYSEG1,BYTES=20,PARENT=0,RULES=(LLL,LAST),               X
               PTR=(TWIN,,,,)
         FIELD NAME=(FLD1,SEQ,U),BYTES=10,START=1,TYPE=C
         FIELD NAME=(FLD2),BYTES=10,START=11,TYPE=C
*
 SEGM    NAME=ATYSEG2,BYTES=40,PARENT=((ATYSEG1,)),                     X
               PTR=(TWIN,,,,),RULES=(LLL,LAST)
         FIELD NAME=(FLD10,SEQ,U),BYTES=30,START=1,TYPE=C
         FIELD NAME=(FLD20),BYTES=5,START=31,TYPE=C
         FIELD NAME=(FLD30),BYTES=5,START=31,TYPE=C
*
 DBDGEN
 FINISH
 END
```

Figure 6. DBD source (decoded)

The following examples show the contents of copybooks ATYCOPY1 and ATYCOPY2. The names of the members in the copybook data set are ATYCOPY1 and ATYCOPY2.

```
000100*************************************************************************00010000
000200*   SAMPLE COPYBOOK FOR DBD ATYDBD0                                      00020000
000300*   ATYSEG1 SEGMENT                                                      00030002
000400*************************************************************************00040000
000500*                                                                        00050000
000600 01  STRUCT-FIELD0.                                                     00060001
000700     10 FIELD1                  PIC X(5).                              00070000
000800     10 FIELD2                  PIC X(10).                             00080000
000900     10 FIELD3                  PIC X(5).                              00090000
```

Figure 7. Content of copybook ATYCOPY1

```
000100*************************************************************************00010000
000200*   SAMPLE COPYBOOK FOR DBD ATYDBD0                                      00020000
000300*   ATYSEG2 SEGMENT                                                      00030001
000400*************************************************************************00040000
000500*                                                                        00050000
000600 01  STRUCT-FIELD10.                                                    00060000
000700     10 FIELD11                 PIC X(2).                              00070000
000800     10 FIELD12                 PIC X(10).                             00080000
```

Figure 8. Content of copybook ATYCOPY2

After the copybook import function imports metadata in copybook ATYCOPY1 to segment ATYSEG1 and metadata in copybook ATYCOPY2 to segment ATYSEG2, the DBD source is updated as follows:

```
         DBD   NAME=ATYDBD0,ACCESS=(HDAM,OSAM),                          X
               RMNAME=(DFSHDC40,8,360,3000)
*
DS1    DATASET DD1=SAMPL0,SIZE=(4096),SCAN=0
*
 SEGM    NAME=ATYSEG1,BYTES=20,PARENT=0,RULES=(LLL,LAST),               X
               PTR=(TWIN,,,,)
         FIELD NAME=(FLD1,SEQ,U),BYTES=10,START=1,TYPE=C
         FIELD NAME=(FLD2),BYTES=10,START=11,TYPE=C
*
         FIELD EXTERNALNAME=STRUCT_FIELD0,                              +
               BYTES=20,                                                +
               START=1,                                                 +
               DATATYPE=STRUCT,                                         +
               REMARKS='Generated from Copybook ATYCOPY0 imported 2020/+
               08/01 04:15:08 by TS6444  '
         FIELD EXTERNALNAME=FIELD1,                                     +
               PARENT=STRUCT_FIELD0,                                    +
               BYTES=5,                                                 +
               START=1,                                                 +
               DATATYPE=CHAR,                                           +
               REMARKS='Generated from Copybook ATYCOPY0 imported 2020/+
               08/01 04:15:08 by TS6444  '
         FIELD EXTERNALNAME=FIELD2,                                     +
               PARENT=STRUCT_FIELD0,                                    +
               BYTES=10,                                                +
               START=6,                                                 +
               DATATYPE=CHAR,                                           +
               REMARKS='Generated from Copybook ATYCOPY0 imported 2020/+
               08/01 04:15:08 by TS6444  '
         FIELD EXTERNALNAME=FIELD3,                                     +
               PARENT=STRUCT_FIELD0,                                    +
               BYTES=5,                                                 +
               START=16,                                                +
               DATATYPE=CHAR,                                           +
               REMARKS='Generated from Copybook ATYCOPY0 imported 2020/+
               08/01 04:15:08 by TS6444  '
```

Figure 9. DBD source updated with copybook (Part 1 of 2)

```
 SEGM    NAME=ATYSEG2,BYTES=40,PARENT=((ATYSEG1,)),                     X
               PTR=(TWIN,,,,),RULES=(LLL,LAST)
         FIELD NAME=(FLD10,SEQ,U),BYTES=30,START=1,TYPE=C
         FIELD NAME=(FLD20),BYTES=5,START=31,TYPE=C
         FIELD NAME=(FLD30),BYTES=5,START=31,TYPE=C
*
         FIELD EXTERNALNAME=STRUCT_FIELD10,                             +
               BYTES=12,                                                +
               START=1,                                                 +
               DATATYPE=STRUCT,                                         +
               REMARKS='Generated from Copybook ATYCOPY1 imported 2020/+
               08/01 04:15:08 by TS6444  '
         FIELD EXTERNALNAME=FIELD11,                                    +
               PARENT=STRUCT_FIELD10,                                   +
               BYTES=2,                                                 +
               START=1,                                                 +
               DATATYPE=CHAR,                                           +
               REMARKS='Generated from Copybook ATYCOPY1 imported 2020/+
               08/01 04:15:08 by TS6444  '
         FIELD EXTERNALNAME=FIELD12,                                    +
               PARENT=STRUCT_FIELD10,                                   +
               BYTES=10,                                                +
               START=3,                                                 +
               DATATYPE=CHAR,                                           +
               REMARKS='Generated from Copybook ATYCOPY1 imported 2020/+
               08/01 04:15:08 by TS6444  '
 DBDGEN
 FINISH
 END
```

Figure 10. DBD source updated with copybook (Part 2 of 2)

Chapter 16. Record DBD/PSB statements before and after change

IMS Administration Tool can record DBD and PSB statements during IMS resource change (database and application administration) and import objects (IMS catalog and ACB library management). When the recording option is enabled, IMS Administration Tool writes DBD and PSB statements before and after change to the audit log or data sets.

Recording option overview

When IMS resource change or import objects is performed, tasks such as DBDGEN, PSBGEN, ACBGEN, and IMS catalog populate are executed internally to update DBDs and PSBs. If you enable the recording option, DBD and PSB statements are recorded before and after each task.

DBDGEN
Before and after the change, finds the specified DBDs from the DBD library, decodes them, and records the DBD statements. DBDs are decoded from the DBD library that IMS Administration Tool discovers or from the data set that is in the user-defined data set group.

PSBGEN
Before and after the change, finds the specified PSBs from the PSB library, decodes them, and records the PSB statements. PSBs are decoded from the PSB library that IMS Administration Tool discovers or from the data set that is in the user-defined data set group.

ACBGEN
Before and after the change, finds the ACB members that correspond to the specified DBDs and PSBs from the ACB library, decodes them, and records the DBD and PSB statements. DBDs and PSBs are decoded from the ACB library that IMS Administration Tool discovers or from the data set that is in the user-defined data set group.

ACBGEN can be performed for DBDs and PSBs that are not specified on the panel if they are referred to by one of the specified DBDs or PSBs. However, any DBDs and PSBs that are not specified will not be recorded. Only the DBDs and PSBs specified on the panel are recorded.

The following rules apply when the ACB library that IMS Administration Tool discovers is used:

- When the IMS management of ACBs is disabled, DBDs and PSBs are decoded from the following resources. This is applicable to the recording that occurs before the change:
  - If the member exists in the staging ACB library, the DBD or PSB is decoded from the staging ACB library.
  - If the member does not exist in the staging ACB library but exists in the active ACB library, the DBD or PSB is decoded from the active ACB library.
- When the IMS management of ACBs is enabled, IMS does not distinguish between active, inactive, staging ACB libraries. In this case, IMS Administration Tool treats one of the discovered ACB libraries as the staging ACB library and stores the member generated by ACBGEN in that library. Any members that exist in this data set prior to the change are used for recording DBD and PSB statements before the change. IMS Administration Tool does not check for the presence of other ACB library members.

IMS Catalog Populate
When the IMS management of ACBs is enabled, before and after the change, finds the specified DBDs and PSBs from the members in the IMS directory, decodes them, and records the DBD and PSB statements. The IMS directory is the one that IMS Administration Tool discovers from the IMS DFSDF definitions.

Catalog population can be performed for DBDs and PSBs that are not specified on the panel if they are referred to by one of the specified DBDs or PSBs. However, any DBDs and PSBs that are not specified will not be recorded. Only the DBDs and PSBs specified on the panel are recorded.

DBDs and PSBs are decoded from the following resources. This is applicable to the recording that occurs before the change:

- If the member exists in the IMS directory staging data set, the DBD or PSB is decoded from the staging data set.
- If the member does not exist in the staging data set but exists in the IMS directory active data sets, the DBD or PSB is decoded from the IMS directory active data sets.

When the IMS management of ACBs is disabled, DBD and PSB statements are not recorded.

Notes:

- You can view the DBD, PSB, and ACB library data sets that IMS Administration Tool discovers from **Setup and Administration** > **Register IMS Systems** > **I - View discovered IMS information**.
- With IMS resource change, DBD and PSB statements will not be recorded if IMS catalog populate is executed without the DBDGEN, PSBGEN, or ACBGEN process.
- If the Initial Load option is selected (Y) with import objects, which means that you want to initialize the IMS catalog, the recording option is disabled. No recording will be done.

Recording destination

You can select where the records should be written to, either the audit log or data sets.

Audit log
DBD and PSB statements are written to the log stream of z/OS System Logger. Note that a large number of statements might be written to the log stream. Consider selecting data sets instead of audit log if you are planning to process many DBDs and PSBs.

Data sets
DBD and PSB statements are written to data sets. The names of these data sets are written to the audit log records.

IMS Administration Tool generates the data sets. You supply the high-level qualifier (HLQ) for the data sets, and IMS Administration Tool uses it to determine data set names by adding the lowest-level qualifier (LLQ, which consists of a task type, the timing of the recording, timestamp, and other information). DBD and PSB statements are stored as members with the following naming convention: data set name + DBD/PSB member name. These data sets are PDSE; you must specify an HLQ that supports PDSE.

View records

Recorded DBD and PSB statements and the data sets that contain DBD and PSB statements can be viewed from the View Audit Log panel. For more information, see “Commands, fields, and sample for viewing audit log” on page 76.

Archive records

By using the Command and Audit Log Archive utility (ATYARCH0), you can archive log records that contain DBD and PSB statements and the names of stored data sets. For more information about the archive utility, see Chapter 37, “Reference: Log data archiving: Configure the Command and Audit Log Archive (ATYARCH0) utility,” on page 263.

Chapter 17. DBD/PSB compare

The compare function validates DBD and PSB resources by comparing the resources in IMS directory, backup of IMS directory, ACB libraries, and IMS catalog database.

DBD and PSB resources can be compared between:

- IMS directory and ACB library
- IMS directories:
  - Active and staging data sets within the same IMS directory
  - Two IMS directories
  - IMS directory and backup of IMS directory
- IMS directory (original or backup) and IMS catalog database

Compare business scenarios

You can use the compare function to:

- Confirm consistency of resources in the IMS directory to resources in the ACB library. The IMS directory and the ACB library to compare can be for different IMS subsystems. For example, in a data sharing environment consisting of two IMS subsystems, you can compare the IMS directory for an IMS subsystem to the ACB library used by another IMS subsystem.
- Identify and review differences in resources between the IMS directory active data sets and the IMS directory staging data set within an IMS directory.
- Compare resources between two IMS directories. Also, compare resources between the IMS directory and a backup that was created with the backup function.
- Compare resources between the IMS directory and the IMS catalog database. Also, compare resources between the backup of IMS directory and the IMS catalog database.

Here are some common business scenarios:

- After migrating from non-IMS-managed ACBs to IMS catalog-managed ACBs (IMS management of ACBs), use the compare function to verify that the IMS directory is successfully populated from the ACB library.
- When migrating from non-IMS-managed ACBs to IMS catalog-managed ACBs in a data sharing environment where one IMS subsystem uses non-IMS-managed ACBs and the other IMS subsystem uses IMS catalog-managed ACBs, the resources in the ACB library and the IMS directory must be in sync. Use the compare function to ensure that the consistency is maintained during migration.
- If IMS catalog-managed ACBs are used, use the compare function before activating changes to resources. The compare function reports differences between the resources in the IMS directory active data sets and the IMS directory staging data set and you can ensure that the changes that will be activated are what you intended.
- When two IMS systems are using different IMS directories, use the DBD/PSB compare function to verify whether the DBD and PSB resources in two IMS directories are identical.
- After you restore the IMS directory from the latest backup, compare DBD and PSB resources in the IMS directory with those in the IMS catalog database. If one or more DBD or PSB instances exist only in the IMS catalog database, it means that these resources were added after the backup was created. To keep IMS directory and the IMS catalog database consistent, take one of the following actions to synchronize the IMS catalog database and the IMS directory and then restart IMS subsystems in the IMSplex to activate DBD and PSB resources in the IMS directory:

  Synchronize the IMS catalog database with the restored IMS directory
  Delete the instances that exist only in the IMS catalog database. You can delete them from **View DBD Detail Report** and **View PSB Detail Report** in **IMS Catalog and ACBLIB Management**.

Synchronize the restored IMS directory with the IMS catalog database
Update DBDs and PSBs in the IMS directory. To do so, generate DBD and PSB statements from the IMS catalog database by using **Object Explorer** in **Database and Application Administration**. Then, perform DBDGEN, PSBGEN, ACBGEN, and populate the IMS catalog by using **IMS Resource Change**. Issue the IMPORT command from IMS Command Processor.

Terminology for DBD/PSB compare

For comparison selection, DBDs and PSBs are known as *objects*.

Objects can be further distinguished as resources and instances:

- *Resource* refers to a DBD object that is identified by a DBD name, or a PSB object that identified by a PSB name.
- *Instance* refers to a specific time/date occurrence of a resource.

  For example, a PSB resource can have multiple instances with different time stamps.

Topics:

DBD/PSB compare reference—between IMS directory and ACB library

The compare function of IMS Administration Tool allows you to compare versions of DBD and PSB resources in the IMS directory and the IMS ACB library.

Table 29. Compare criteria selection (IMS directory to ACB library)

Option	Description
Comparison Scope	Options for comparison: • Compare a single resource (Compare) • Compare multiple resources (Compare All) You can choose one or more DBDs or PSBs to compare. Resources can be selected using filters.
Resource Type	Resource types include: • DBD • PSB You can choose one or more DBDs or PSBs to compare. Resources can be selected using filters.
IMS Directory Resource Criteria	
IMSID (of IMS Directory)	The IMSIDs in the selection list are catalog-managed ACBs. Catalog-managed ACBs means the IMS catalog is enabled, ACBs are managed with the IMS catalog, and resources are stored in the IMS directory.

Table 29. Compare criteria selection (IMS directory to ACB library) (continued)

Option	Description
Resource Name	You can choose one or more DBDs or PSBs to compare. Select a single resource from the IMS directory for single resource comparison. Select multiple resources from the IMS directory for multiple resource comparisons.
Data Set	Enter A to select the IMS directory active data sets, or S to select the IMS directory staging data set, which includes the pending ACB members.
ACB Library Resource Criteria	
IMSID (of ACB Library)	The IMSIDs in the selection list satisfies the one of the following conditions: • IMS catalog is not enabled. • IMS catalog is enabled and ACBs are managed with ACB libraries. You can alternatively specify another ACBLIB library data set.
Resource Name	You can choose one or more DBDs or PSBs to compare. Select a single resource from the ACB library for single resource comparison. Select multiple resources from the ACB library for multiple resource comparisons.
Resource (Instance) Status (Data and Time Instance)	When OLC is enabled, the selected DBD or PSB resource instance status can be: • Active Active instances are in the active ACB libraries. • Inactive Inactive instances are in the inactive ACB libraries. • Staging Staging instances are in the staging ACB libraries.

Table 29. Compare criteria selection (IMS directory to ACB library) (continued)

Option	Description
Compare Options	Compare options to ignore certain comparison differences: **Ignore VERSION= in DBD** Ignore the differences of VERSION= *parameter* in the DBD statement. **Note:** VERSION= *parameter* is different from DBVER= *parameter*. DBVER is the version number of the database versioning and is always compared. **Ignore METADATA in DBD and PSB** Ignore the metadata differences in DBD and PSB. The metadata is as follows: **DBD** • DFSMARSH, DFSMAP, DFSCASE statements Includes the statements and any parameters on the statements. • FIELD statements CASENAME=, DATATYPE=, DEPENDSON=, EXTERNALNAME=, MINOCCURS=, MAXOCCURS=, MAXBYTES=, PARENT=, REDEFINES=, RELSTART=, REMARKS=, STARTAFTER= • Other statements ENCODING=, EXTERNALNAME=, REMARKS= **PSB** EXTERNALNAME=, REMARKS= **Ignore PCB Name** Ignore the differences for the NAME= *parameter* or the label in the PSBGEN statement of the PSB. **Ignore RMNAME= in DBD** Ignore the differences for the RMNAME= *parameter* in the DBD statement. **Ignore Segment/Edit Compression Exit Routine Name** Ignore the differences for the COMPRTN= *parameter* in the SEGM statement of the DBD. **Ignore KEYLEN of PCB** Ignore KEYLEN= in the PCB statement of the PSB **Ignore DEDB AREA Statement** Ignore AREA statements in the DBD and any parameters on the AREA statements.

DBD/PSB compare reference—IMS directories

The compare function allows you to compare versions of DBD and PSB resources in IMS directories.

You can use the compare function to compare DBD and PSB resources between:

- IMS directory active data sets and IMS directory staging data set of an IMS directory
- Two IMS directories
- IMS directory and a backup created with the backup function

Table 30. Compare criteria selection (IMS directory to IMS directory)

Option	Description
Comparison Scope	Options for comparison: • Compare a single resource (Compare) • Compare multiple resources (Compare All) You can choose one or more DBDs or PSBs to compare. Resources can be selected using filters.
Resource Type	Resource types include: • DBD • PSB You can choose one or more DBDs or PSBs to compare. Resources can be selected using filters.
Source IMS Directory	
Select From	You can select the source IMS directory data set from an IMSID or the backup list.
IMSID (of IMS Directory)	The IMSIDs in the selection list are catalog-managed ACBs that are used when the IMS management of ACBs is enabled. Catalog-managed ACBs means the IMS catalog is enabled, ACBs are managed with the IMS catalog, and resources are stored in the IMS directory.
Backup	You can select a backup data set from the backup list. To select from the backup list, the backup list must be created from the IMS directory/BSDS backup and restore menu in advance.
Resource Name	You can choose one or more DBDs or PSBs to compare. Select a single resource from the IMS directory for single resource comparison. Select multiple resources from the IMS directory for multiple resource comparisons.
Data Set	Enter A to select the IMS directory active data sets, or S to select the IMS directory staging data set, which includes the pending ACB members.
Target IMS Directory	
Select From	You can select the source IMS directory data set from an IMSID or the backup list, or by specifying the high-level qualifier (HLQ).
IMSID (of IMS Directory)	The IMSIDs in the selection list are catalog-managed ACBs that are used when the IMS management of ACBs is enabled. Catalog-managed ACBs means the IMS catalog is enabled, ACBs are managed with the IMS catalog, and resources are stored in the IMS directory.
Backup	You can select a backup data set from the backup list. To select from the backup list, the backup list must be created from the IMS directory/BSDS backup and restore menu in advance.

Table 30. Compare criteria selection (IMS directory to IMS directory) (continued)

Option	Description
Specify HLQ	You can specify the high-level qualifier of the bootstrap data set for the desired target IMS directory.
Resource Name	You can choose one or more DBDs or PSBs to compare. Select a single resource from the IMS directory for single resource comparison. Select multiple resources from the IMS directory for multiple resource comparisons.
Data Set	Enter A to select the IMS directory active data sets, or S to select the IMS directory staging data set, which includes the pending ACB members.
Compare Options	Compare options to ignore certain comparison differences: **Ignore VERSION= in DBD** Ignore the differences of VERSION= *parameter* in the DBD statement. **Note:** VERSION= *parameter* is different from DBVER= *parameter*. DBVER is the version number of the database versioning and is always compared. **Ignore METADATA in DBD and PSB** Ignore the metadata differences in DBD and PSB. The metadata is as follows: **DBD** • DFSMARSH, DFSMAP, DFSCASE statements Includes the statements and any parameters on the statements. • FIELD statements CASENAME=, DATATYPE=, DEPENDSON=, EXTERNALNAME=, MINOCCURS=, MAXOCCURS=, MAXBYTES=, PARENT=, REDEFINES=, RELSTART=, REMARKS=, STARTAFTER= • Other statements ENCODING=, EXTERNALNAME=, REMARKS= **PSB** EXTERNALNAME=, REMARKS= **Ignore PCB Name** Ignore the differences for the NAME= *parameter* or the label in the PSBGEN statement of the PSB. **Ignore RMNAME= in DBD** Ignore the differences for the RMNAME= *parameter* in the DBD statement. **Ignore Segment/Edit Compression Exit Routine Name** Ignore the differences for the COMPRTN= *parameter* in the SEGM statement of the DBD. **Ignore KEYLEN of PCB** Ignore KEYLEN= in the PCB statement of the PSB **Ignore DEDB AREA Statement** Ignore AREA statements in the DBD and any parameters on the AREA statements.

DBD/PSB compare reference—IMS directory and IMS catalog

The compare function allows you to compare versions of DBD and PSB resources in IMS directories.

You can use the compare function to compare DBD and PSB resources between:

- IMS directory and IMS catalog database
- Backup of IMS directory (created with the backup function) and IMS catalog database

Table 31. Compare criteria selection (IMS directory to IMS catalog)

Option	Description
Comparison Scope	Options for comparison: • Compare a single resource (Compare) • Compare multiple resources (Compare All) You can choose one or more DBDs or PSBs to compare. Resources can be selected using filters.
Resource Type	Resource types include: • DBD • PSB You can choose one or more DBDs or PSBs to compare. Resources can be selected using filters.
Source IMS Directory	
Select From	Select source data sets: • IMSID Select an IMS ID from a list of IMS IDs. This list contains all the IMS systems that have the IMS management of ACBs enabled. • Backup Select a backup data set from the backup list. To select from the backup list, the backup list must be created from the IMS directory/BSDS backup and restore menu in advance. • Specify HLQ Specify the high-level qualifier of the bootstrap data set for the desired source IMS directory.
Data Set	Enter A to select the IMS directory active data sets, or S to select the IMS directory staging data set, which includes the pending ACB members.
Resource Name	You can choose one or more DBDs or PSBs to compare. Select a single resource from the IMS directory for single resource comparison. Select multiple resources from the IMS directory for multiple resource comparisons.
Target IMS Catalog Database	

Table 31. Compare criteria selection (IMS directory to IMS catalog) (continued)

Option	Description
IMSID	Specify an IMSID or select an IMS system from the list of IMS catalogs defined.
Resource Status	The selected DBD or PSB resource instance status can be: • Active Active instances are stored in the IMS catalog database. • Pending Pending instances are stored in the IMS catalog database. • Select from List Select an instance from the instance list for the specified DBD/PSB resource. This option is available when comparing a single resource.
Resource Name	You can choose one or more DBDs or PSBs to compare. Select a single resource from the IMS directory for single resource comparison. Select multiple resources from the IMS directory for multiple resource comparisons.

Table 31. Compare criteria selection (IMS directory to IMS catalog) (continued)

Option	Description
Compare Options	Compare options to ignore certain comparison differences: **Ignore VERSION= in DBD** Ignore the differences of VERSION= *parameter* in the DBD statement. **Note:** VERSION= *parameter* is different from DBVER= *parameter*. DBVER is the version number of the database versioning and is always compared. **Ignore METADATA in DBD and PSB** Ignore the metadata differences in DBD and PSB. The metadata is as follows: **DBD** • DFSMARSH, DFSMAP, DFSCASE statements Includes the statements and any parameters on the statements. • FIELD statements CASENAME=, DATATYPE=, DEPENDSON=, EXTERNALNAME=, MINOCCURS=, MAXOCCURS=, MAXBYTES=, PARENT=, REDEFINES=, RELSTART=, REMARKS=, STARTAFTER= • Other statements ENCODING=, EXTERNALNAME=, REMARKS= **PSB** EXTERNALNAME=, REMARKS= **Ignore PCB Name** Ignore the differences for the NAME= *parameter* or the label in the PSBGEN statement of the PSB. **Ignore RMNAME= in DBD** Ignore the differences for the RMNAME= *parameter* in the DBD statement. **Ignore Segment/Edit Compression Exit Routine Name** Ignore the differences for the COMPRTN= *parameter* in the SEGM statement of the DBD. **Ignore KEYLEN of PCB** Ignore KEYLEN= in the PCB statement of the PSB **Ignore DEDB AREA Statement** Ignore AREA statements in the DBD and any parameters on the AREA statements.

DBD/PSB compare results reference

A compare report contains results from the comparison of two instances.

The source of DBD or PSB in the IMS directory is taken as the basis for the comparisons.

An initial comparison results report provides a summary analysis.

You can also access a detailed results report with side-by-side comparison.

Table 32. Compare results

Option	Description
Compare Results	The initial comparison results report indicates one of the following analysis categories: **Identical** The resource instances in the IMS directory and in the ACB library are identical. **Different** The resource instances in the IMS directory and the ACB library are different. **Unmatched** The resource instance exists in the IMS directory or the ACB library, but not both.
Comparison Results Detail	

Number of Different Statements	The first header section of the comparison report contains the summary information about statements which were inserted, deleted, or changed.
	INSERTED
	The number of statements which were found only in the DBDs or the PSBs in the ACB library.
	DELETED
	The number of statements which were found only in the DBDs or the PSBs in IMS directory.
	CHANGED
	The number of statements which were found in both the DBDs or the PSBs in the IMS directory and the ACB library, but were detected to be different.
	Example:
	`NUMBER OF DIFFERENT STATEMENTS`
	`INSERTED  :     44`
	`DELETED   :      8`
	`CHANGED   :     10`

Table 32. Compare results (continued)

Option	Description

IMS Environment and DBD or PSB Profile	The second header section of the comparison report contains the summary of the IMS environment and the compared instances of DBD or PSB resources:
	• IMSID
	• IMS directory high level qualifier and ACB library data set name
	• Status of the selected resource instance
	• DBD or PSB resource name
	• Time stamp when the resource instance was generated
	• IMS Version when the resource instance was generated
	Example:
	`IMSID : IFB8 |`
	`CATALOG HLQ : |`
	`IMS.IFB8.DFSCD000 |`
	`STATUS : ACTIVE |`
	`RESOURCE : DBFSAMD4 |`
	`GENERATED : 06/12/2023 19.41 |`
	`GENERATED IMS : 1530 |`

Line-by-line Comparison Result	The detail section of the comparison report shows a side-by-side and line-by-line display of the similarities and differences between the DBD or PSB sources. The following characters in the CHK column of the report indicate the type of difference found in the DBD or PSB source between the IMS directory and the ACB library: **I** A statement is inserted into the DBD or PSB in the ACB library. **D** A statement is deleted from the DBD or PSB in the IMS directory. **C** A statement in the DBD or PSB in the IMS directory is different from that in the ACB library. An asterisk (*) is shown on the row of each data that is determined to be different. The SOURCE LINES column shows the IMS DBDGEN or PSBGEN utility control statements that were decoded from the DBD or PSB instance in the IMS directory or the ACB library.

Chapter 18. View audit log

IMS Administration Tool uses a single global audit log to capture processing information for the entire IMS Administration Tool environment. The view audit log interface allows you to specify display options for the IMS Administration Tool audit log file.

For super administrators, the view audit log interface is also available from the **Setup and Administration** panel.

Topics:

View Audit Log Filters reference

Specify filters to view audit log records.

Table 33. View Audit Log Filters

Option	Description
IMSID	Limits the view results to the specified IMS subsystem ID.
User	Limits the view results to the specified TSO user ID.
Start Date / Time End Date / Time	Audit log filter. Limits the view results to the specified start and end time and dates. Date format: *yyyy/mm/dd* • *yyyy* is expressed as a 4-digit year. • *mm* is expressed as a 2-digit month between 01 and 12. • *dd* is expressed as a 2-digit day between 01 and 31. Time format: *hh:mm:ss* • *hh* is expressed as a 2-digit value for hours between 00 and 23. • *mm* is expressed as a 2-digit value for minutes between 00 and 59. • *ss* is expressed as a 2-digit value for seconds between 00 and 59.

Commands, fields, and sample for viewing audit log

This topic provides the list of information fields that are included in each audit log record. It also explains extended commands and PF keys that are supported for the view audit log panel.

Log record fields

The audit log captures a variety of product activity.

Each record includes:

- Audit log indicator

  A = audit, C = command
- Date / Timestamp
- IMSID

- IMS Tools Knowledge Base server name
- Action
- Jobname of Distributed Access Infrastructure SOT (Subordinate Tools Access Servers) address space
- TSO user ID
- Return code, reason code, error message

Finding DBD and PSB recording data sets

The View Audit Log panel supports several commands and PF keys to help you locate and view the data sets that contain recorded DBD and PSB statements.

If the DBD/PSB statements (before and after change) are recorded in the DBD and PSB recording data sets, the names of recording data sets are shown with ATYDSN=. You can use primary commands FI or FL, or the PF5 key to locate lines that contain ATYDSN=, then use the PF6 key to browse DBD and PSB statements after putting the cursor on ATYDSN=.

Primary commands

FI - Find ATYDSN (DBD and PSB recording data set)
Find a line that contains ATYDSN=.

FL - Find Last ATYDSN
Find the last line that contains ATYDSN=.

PF keys

PF5 - Rfind
Repeat-find. Find the next occurrence of ATYDSN=.

PF6 - Browse DS
Browse the data set. Put the cursor on ATYDSN= and press PF6.

Audit log sample

```
A 2022/11/28 00:50:11 IMSAB    FPQSRV01 UPDATE  GUIS0006 USERW               Update/add Group Information
A 2022/11/28 00:50:11 IMSAB    FPQSRV01 UPDATE  GUIS0006 USERW               RC=00000000 RSN=00000000
A 2022/11/28 00:53:29 IMSA     FPQSRV01 ADD     GUIS0007 USERW               Object profile  USERW   OBJA
A 2022/11/28 00:53:29 IMSA     FPQSRV01 ADD     GUIS0007 USERW               RC=00000000 RSN=00000000
A 2022/11/28 00:56:37 IMSA     FPQSRV01 DFS3PU10GUIS0007 USER01              Delete Obsolete DBD/PSB Started. IMSCAT=IMS.IMSA.DFSCD000
A 2022/11/28 00:56:37 IMSA     FPQSRV01 DFS3PU10GUIS0007 USER01              RC=00000000 RSN=00000000 Delete Obsolete DBD/PSB Ended.
                                                                             IMSCAT=IMS.IMSA.DFSCD000
A 2022/11/28 20:08:01 IMSA     FPQSRV01 DBDGEN  USER01RC USER01              DBD source Before DBDGEN
A 2022/11/28 20:08:01 IMSA     FPQSRV01 DBDGEN  USER01RC USER01                ATYDSN=IMSTST.IMSA.DBDG.B221128.T72480
A 2022/11/28 20:08:01 IMSA     FPQSRV01 DBDGEN  USER01RC USER01              DBFSAMD3 Started  USER01.IMSA.DECODE.DBD
A 2022/11/28 20:08:01 IMSA     FPQSRV01 DBDGEN  USER01RC USER01              RC=00000000 RSN=00000000 DBFSAMD3 Ended    IMS.IMSA.DBDLIB
A 2022/11/28 20:08:02 IMSA     FPQSRV01 DBDGEN  USER01RC USER01              DBD source After  DBDGEN
A 2022/11/28 20:08:02 IMSA     FPQSRV01 DBDGEN  USER01RC USER01                ATYDSN=IMSTST.IMSA.DBDG.A221128.T72480
A 2022/11/28 20:08:02 IMSA     FPQSRV01 PSBGEN  USER01RC USER01              PSB source Before PSBGEN
A 2022/11/28 20:08:02 IMSA     FPQSRV01 PSBGEN  USER01RC USER01                ATYDSN=IMSTST.IMSA.PSBG.B221128.T72480
A 2022/11/28 20:08:02 IMSA     FPQSRV01 PSBGEN  USER01RC USER01              AUTPSBAL Started  USER01.IMSA.DECODE.PSB
A 2022/11/28 20:08:02 IMSA     FPQSRV01 PSBGEN  USER01RC USER01              RC=00000000 RSN=00000000 AUTPSBAL Ended    IMS.IMSA.PSBLIB
A 2022/11/28 20:08:03 IMSA     FPQSRV01 PSBGEN  USER01RC USER01              PSB source After  PSBGEN
A 2022/11/28 20:08:03 IMSA     FPQSRV01 PSBGEN  USER01RC USER01                ATYDSN=IMSTST.IMSA.PSBG.A221128.T72480
A 2022/11/28 20:08:03 IMSA     FPQSRV01 ACBGEN  USER01RC USER01              Decoded source Before ACBGEN
A 2022/11/28 20:08:03 IMSA     FPQSRV01 ACBGEN  USER01RC USER01                ATYDSN=IMSTST.IMSA.ACBG.B221128.T72480
A 2022/11/28 20:08:03 IMSA     FPQSRV01 ACBGEN  USER01RC USER01              AUTPSBAL Started  IMS.IMSA.PSBLIB
A 2022/11/28 20:08:03 IMSA     FPQSRV01 ACBGEN  USER01RC USER01              RC=00000000 RSN=00000000          Ended    IMS.IMSA.ACBLIB
A 2022/11/28 20:08:03 IMSA     FPQSRV01 ACBGEN  USER01RC USER01              DBFSAMD3 Started  IMS.IMSA.DBDLIB
A 2022/11/28 20:08:04 IMSA     FPQSRV01 ACBGEN  USER01RC USER01              RC=00000000 RSN=00000000          Ended    IMS.IMSA.ACBLIB
A 2022/11/28 20:08:04 IMSA     FPQSRV01 ACBGEN  USER01RC USER01              Decoded source After  ACBGEN
A 2022/11/28 20:08:04 IMSA     FPQSRV01 ACBGEN  USER01RC USER01                ATYDSN=IMSTST.IMSA.ACBG.A221128.T72480
A 2022/11/28 20:08:04 IMSA     FPQSRV01 DFS3PU00USER01RC USER01              POPULATE Started from IMS.IMSA.ACBLIB
A 2022/11/28 20:08:05 IMSA     FPQSRV01 DFS3PU00USER01RC USER01              RC=00000000 RSN=00000000 POPULATE Ended from   IMS.IMSA.ACBLIB
A 2022/11/30 03:32:33          FPQSRV01 UPDATE  GUIS0007 USER01              Update Audit Log Settings - Started
A 2022/11/30 03:32:34          FPQSRV01 UPDATE  GUIS0007 USER01              RC=00000000 RSN=00000000  - Ended
A 2022/11/30 19:06:07 IMSA     FPQSRV01 DELETE  GUIS0006 USERW               Object profile  USERW   OBJA
A 2022/11/30 19:06:07 IMSA     FPQSRV01 DELETE  GUIS0006 USERW               RC=00000000 RSN=00000000
A 2022/12/08 02:12:00          FPQSRV01 UPDATE  GUIS0001 USER01              Update Audit Log Settings - Started
A 2022/12/08 02:12:00          FPQSRV01 UPDATE  GUIS0001 USER01              RC=00000000 RSN=00000000  - Ended
```

Part 5. IMS catalog and ACB library management

The IMS catalog is a system database that, when enabled, stores the definitions of your databases and program specification blocks (PSBs), as well as other metadata about your databases and application programs.

The IMS catalog and ACB library management function helps you to manage the IMS catalog, IMS directory, and IMS ACB libraries that you need to maintain.

IMS catalog and ACB library management business scenarios

Some typical scenarios on using the IMS catalog and ACB library management function include:

- Perform space utilization analysis and view the number of DBDs (databases), PSBs (programs), DBD/PSB objects, and DBD/PSB instances in the IMS catalog database.
- Generate reports to help analyze the databases and applications defined in the IMS catalog, IMS directory, and IMS ACB libraries.
- Identify obsolete DBDs and PSBs in the IMS catalog database (DBDs and PSBs that are not referred to by the IMS system), and delete them to improve the performance or increase available space in the IMS catalog database.
- Find inconsistencies in IMS catalog, IMS directory, and IMS ACB libraries.
- Perform impact analysis when either 1) planning for the IMS catalog maintenance or 2) adding a large number of objects to the IMS catalog.
- Copy DBD and PSB objects between the IMS catalog on one IMS system to the IMS catalog on another IMS system.
- Migrate non-IMS-managed ACBs to IMS-managed ACBs.
- Include and update individual (or bulk) IMS database definitions (DBD) with schema from COBOL or PL/I copybooks during the import process to the IMS catalog.
- Create backups of IMS directory and bootstrap data sets (BSDS) whenever an IMPORT DEFN SOURCE(CATALOG) command is issued, and restore the data sets from the latest backup when needed.

Topics:

Chapter 19. IMS catalog space and DBD/PSB analysis

The IMS catalog space and DBD/PSB analysis function analyzes the sizes of and verifies the integrity of the IMS catalog, IMS directory, and ACB libraries to help you maintain the IMS catalog.

The function provides the following capabilities:

- Provides information about the IMS catalog database, such as database structure and space utilization.
- To help you reuse space in the IMS catalog database and reduce maintenance tasks (such as reorganizing the database and expanding partitions), identifies unused data in the IMS catalog database and provides capabilities to delete the data.
- To help you prevent erroneous processing, detects inconsistencies between the IMS catalog database and the IMS directory.
- To ease the management of DBDs and PSBs, provides a list of all DBDs or all PSBs found in the IMS catalog, IMS directory, and ACB libraries. You can accomplish the following tasks from these lists:
  - Detect inconsistent DBDs and PSBs.
  - Identify DBDs and PSBs that are no longer used by IMS (obsolete instances that can be deleted).
  - Identify DBDs that are not referenced by PSBs.
  - Ensure that the number of PSBs that refer to a specific DBD is correct.
  - View the generation date and time information of each DBD or PSB.
  - Display DBDs and PSBs in readable format (DBD and PSB macro statements) by decoding DBDs and PSBs.
  - Delete a specific DBD or PSB.
  - Delete all obsolete DBDs and PSBs at once.

  These actions available from the lists can be used in combination to efficiently manage DBDs and PSBs. For example, identify obsolete DBDs, review the generation timestamps and DBD macro statements to ensure that the DBDs are no longer used, and then delete the DBDs.

IMS catalog space and DBD/PSB analysis functional overview

The IMS catalog space and DBD/PSB analysis function provides information through reports and panels.

The following table summarizes the information (reports and lists) that the function provides and how you can obtain the information.

Tip: The DBD and PSB Summary report and DBD/PSB Detail reports are generated by running a batch job. Because DBD/PSB Detail reports contain information about all DBDs and PSBs in the IMS catalog, the batch job can take some time to complete. Recommendation is to run the batch job during maintenance periods to obtain an overall view the IMS catalog and DBDs/PSBs, review DBD/PSB Detail reports and make necessary changes, then view DBD/PSB Lists through the panel to ensure that the changes were made correctly.

Report or list	Description	How to display the report or list
IMS Catalog Database Space Analysis report	Summary of space utilization analysis for the IMS catalog database.	Displayed in the **IMS Catalog Space and DBD/PSB Analysis** panel.

Report or list	Description	How to display the report or list
DBD and PSB Summary report	Result of analysis done for all the DBDs and PSBs found in the IMS catalog database, IMS directory, and ACB libraries. This reports is generated by running a batch job. The batch job can take some time to complete depending on the size of the IMS catalog.	Select **Submit and View Summary and DBD/PSB Detail Report**. • Select **Build JCL** to create a batch job, and run the batch job. • Select **View Summary and DBD/PSB Detail Report** to view the report.
DBD Detail report	List of all DBD instances stored in the IMS catalog database and all DBD members in the IMS directory or ACB libraries, and information about each instance and member. For each instance and member, this report displays database version, size, result of consistency check, status, whether the instance is pointed to by PSBs, and generation date and time. While viewing the report, you can display DBD macro statements, delete instances, and create a batch job for deleting all obsolete instances at once. This reports is generated by running a batch job. The batch job can take some time to complete depending on the size of the IMS catalog.	Select **Submit and View Summary and DBD/PSB Detail Report**. • Select **Build JCL** to create a batch job, and run the batch job. • Select **View Summary and DBD/PSB Detail Report** to view the report.
PSB Detail report	List of all PSB instances stored in the IMS catalog database and all PSB members in the IMS directory or ACB libraries, and information about each instance and member. For each instance and member, this report displays size, result of consistency check, status, and generation date and time. While viewing the report, you can display PSB macro statements, delete instances, and create a batch job for deleting all obsolete instances at once. This reports is generated by running a batch job. The batch job can take some time to complete depending on the size of the IMS catalog.	Select **Submit and View Summary and DBD/PSB Detail Report**. • Select **Build JCL** to create a batch job, and run the batch job. • Select **View Summary and DBD/PSB Detail Report** to view the report.

Report or list	Description	How to display the report or list
DBD List	List of DBD instances stored in the IMS catalog database and DBD members in the IMS directory or ACB libraries, and information about each instance and member. This list shows up to 100 instances and members. You can filter the instances and members to show only the DBDs that you want to view. This list has two fewer columns than the DBD Detail report. The following information is not provided in this report: size and whether the instance is referred to by PSBs.	Select **View DBD List**.
PSB List	List of PSB instances stored in the IMS catalog database and PSB members in the IMS directory or ACB libraries, and information about each instance and member. This list shows up to 100 instances and members. You can filter the instances and members to show only the PSBs that you want to view. This list has one fewer column than the PSB Detail report. The following information is not provided in this report: size.	Select **View PSB List**.

Terminology for the IMS catalog space and DBD/PSB analysis function

The following terms are used in the reports generated by the IMS catalog space and DBD/PSB analysis function:

Object
DBDs and PSBs are known as *objects*. Objects can be further distinguished as resources and instances.

Resource
Resource refers to a DBD object that is identified by a DBD name, or a PSB object that identified by a PSB name.

Instance
IMS catalog database stores historical copies of DBDs and PSBs. Each historical copy has its own timestamp. *Instance* refers to a historical copy with a specific time/date occurrence of a resource. For example, a PSB resource can have multiple instances with different timestamps.

Topics:

IMS Catalog Database Space Analysis reference

The IMS Catalog Database Space Analysis report provides environmental and allocation information about the IMS catalog database. Allocation information is based on information obtained from the VTOC, such as extents and high used RBA.

This report contains the following information:

IMS Catalog Environment

The IMS Catalog Environment section displays the following information:

- IMS ID
- IMS version
- Managed ACBs
  - ACBLIB: IMS management of ACBs is not enabled. ACBMGMT=ACBLIB is defined in the DFSDF member.
  - Catalog: IMS management of ACBs is enabled. ACBMGMT=CATALOG is defined in the DFSDF member.
- DFSDF member

  DFSDF*xxx* member name in IMS PROCLIB
- Catalog DB Name

  IMS catalog PHIDAM database name
- Partition Number

  Number of PHIDAM partitions
- DB Org

  Organization type of the data set

IMS Catalog Database Space Usage

The IMS Catalog Database Space Usage section displays the following information:

- Partition Name

  PHIDAM partition name
- Grp

  Data set group ID
- Data set name
- Allocated extents

  The number of allocated extents of the database data set.
- IMS size limit

  Maximum data set size that is limited by IMS.
- Allocated space (Bytes)

  Allocated space size of the database data set.
- Used space (Bytes) (see Note)

  Used space size that is high used RBA (Relative Bytes Address) of the database data set. It is the place of end-of-file.
- IMS limit used (%) (see Note)

  Ratio of used space to IMS space limit.
- Allocated space used (%)

  Ratio of used space to allocated space.

Note: Values displayed for used space and IMS limit used are derived from the data set high used RBA, which is the relative byte address of the end-of-file position. The end-of-file position does not change when instances are deleted from the IMS catalog; therefore, these values will not change even when instances are deleted from the IMS catalog. However, when instances are deleted from the space below the high used RBA, IMS can reuse the space as free space. To obtain the size of actual free space, use the HD Pointer Checker utility of IMS High Performance Pointer Checker or the FF Stand-alone Database Sensor.

- IMS High Performance Pointer Checker
- FF Stand-alone Database Sensor

DBD and PSB Summary report reference

The DBD and PSB Summary report shows analysis summary of all DBDs and PSBs found in the IMS catalog, IMS directory, and ACB libraries.

You can generate this report by creating and running a batch job from **IMS Catalog Space and DBD/PSB Analysis** > **Submit and View Summary and DBD/PSB Detail Report**.

This report contains the following information:

IMS Catalog Database section
This section provides the following information for DBDs and PSBs found in the IMS catalog:

- Number of resources
- Number of instances
- Number of obsolete instances
- Number of active instances
- Number of pending instances

IMS Directory section
This section is displayed only when the IMS management of ACBs is enabled. This section provides the following information for DBDs and PSBs found in the IMS directory:

- Number of active members
- Number of pending members in the staging data set

ACB Library section
This section is displayed only when the IMS management of ACBs is not enabled. This section provides the following information for DBDs and PSBs found in the ACB libraries:

- Number of active members in the active ACB library
- Number of pending members in the staging ACB library
- Number of inactive members in the inactive ACB library

Mismatch in IMS Catalog and IMS Directory
This section is displayed only when the IMS management of ACBs is enabled. Shows the number of instances (in the IMS catalog) and members (in the IMS directory) in which a mismatch was found.

Mismatch in IMS Catalog and IMS ACB Libraries
This section is displayed only when the IMS management of ACBs is not enabled. Shows the number of instances (in the IMS catalog) and members (in ACB libraries) in which a mismatch was found.

All DBD and PSB Instances
The number of instances found in the IMS catalog database and the average size of instances.

DBD Instance Information
All DBD Instances

- Number of DBD instances
- Average size of DBD instances

Number of DBD resources having multiple instances

- Number of DBD resources
- Number of DBD resources having multiple instances
- Average number of instances per DBD resource
- Highest number of instances within one DBD resource

Obsolete DBD Instances

- Number of obsolete DBD instances
- Average size of obsolete DBD instances

DBDs not pointed to by PSB

- Number of DBD instances not pointed to by PSBs
- Average size of DBD instances not pointed to by PSBs

PSB Instance Information

All PSB Instances

- Number of PSB instances
- Average size of PSB instances

Number of PSB resources having multiple instances

- Number of PSB resources
- Number of PSB resources having multiple instances
- Average number of instances per PSB resource
- Highest number of instances within one PSB resource

Obsolete PSB Instances

- Number of obsolete PSB instances
- Average size of obsolete PSB instances

The following figure shows an example of the DBD and PSB Summary report.

```
IBM IMS Administration Tool - "DBD and PSB Summary Report"
5655-CAT             DATE: 08/30/2024 TIME: 00.30.28           ATY@OBJU - V1.R1

                 DBD and PSB Summary Report         IMSID: IMSA

IMS Catalog Database:

         Resource   Instance   Obsolete     Active   Pending
                                                    (Staging)
_____________________________________________________________
DBD          1244       3777       1293       1240       1234
PSB          1545       4742       1662       1544       1536
     ____________ __________ __________ __________ __________
Total        2789       8519       2955       2784       2770


IMS Directory:

           Active   Pending
                   (Staging)
_____________________________
DBD          1239       1234
PSB          1542       1535
     ____________ __________
Total        2781       2769


Mismatch in IMS Catalog and Directory  :
_________________
DBD              1
PSB              3
     ____________
Total            4
```

```
================================================================================

All DBD and PSB Instances:

    DBD      Average          PSB      Average                    Average
 Instances Size(Bytes)     Instances Size(Bytes)       Total   Size(Bytes)
---------- ------------   ---------- ------------   --------- ------------
   3777      19449.4         4742        7353.9        8519      12716.6


DBD Instance Information:

   All DBD Instances                  Multiple Instance DBDs
---------------------- ------------------------------------------------------
    DBD      Average     Num of   DBD with Multi. Ave. Num of  Highest Num
 Instances Size(Bytes)     DBDs      Instances     Instances    Instances
---------- ------------ ---------- ---------------- ------------ ------------
   3777      19449.4       1244         1243           3.0          14

 Obsolete DBD Instances  DBDs not pointed to by PSB
------------------------ ------------------------------
 Obsolete    Average    DBDs not pointed   Average
 Instances Size(Bytes)     to by PSB     Size(Bytes)
---------- ------------ ----------------- ------------
   1293      19414.1           5           22294.8

PSB Instance Information:

   All PSB Instances                  Multiple Instance PSBs
---------------------- ------------------------------------------------------
    PSB      Average     Num of   PSB with Multi. Ave. Num of  Highest Num
 Instances Size(Bytes)     PSBs       Instances     Instances    Instances
---------- ------------ ---------- ---------------- ------------ ------------
   4742       7353.9       1545         1544           3.1          25

 Obsolete PSB Instances
------------------------
 Obsolete    Average
 Instances Size(Bytes)
---------- ------------
   1662      7154.1
```

DBD Detail report reference

The DBD Detail report displays DBD instances stored in the IMS catalog database and information about them. The report also shows DBD members in the IMS directory or ACB library data sets, allowing you to check the consistency of DBDs in the IMS catalog, IMS directory, and ACB libraries.

You can generate this report by creating and running a batch job from **IMS Catalog Space and DBD/PSB Analysis** > **Submit and View Summary and DBD/PSB Detail Report**.

Operations available from the DBD Detail Report panel

You can perform the following operations from the DBD Detail Report panel:

View DBD statements
Place the cursor on the line for the DBD instance or member, and press the PF4 key.

Delete an instance
Place the cursor on the line for the DBD instance, and press the PF6 key.

- An instance can be deleted only when the IMS system is online. To delete instances when the IMS system is offline, build JCL statements and submit the batch job.
- Active and pending instances cannot be deleted if the IMS management of ACBs is enabled.
- Members in the IMS directory and the ACB library cannot be deleted.
- If the IMS catalog database is not registered to DBRC, instances cannot be deleted. To delete instances from an IMS catalog database that is not registered to DBRC, build JCL statements and submit the batch job.

Generate JCL to delete all obsolete instances

You can delete all obsolete instances at once by a batch job. Obsolete instances are indicated as OBSOLETE in the Status column.

Use primary command DEL (Build JCL to Delete Obsoleted All) to build JCL statements for deleting obsolete instances and submit the batch job. Obsolete instances that will be deleted at run time are those identified as obsolete at the time when the job is executed. The job can be run when the IMS system is online or offline.

DBD Detail report reference

The DBD Detail report displays the following information:

- DBD resource name
- Database (DB) version
- Generation date and time
- Size of DBD instance in IMS catalog database
- C: Condition of the DBD resource.

  The function compares the following timestamps and displays an asterisk (*) in this column when it detects a mismatch:

  – IMS catalog header timestamp and the timestamp of the instance (if the IMS catalog header segment contains timestamps)

  – Timestamp of the instance in the IMS catalog and the timestamp of the member in the IMS directory or ACB libraries
- Status

  The status indicators differ based on how the IMS system is configured.

  Status indicators for IMS-managed ACBs environment

  The following table summarizes status indicators used for members in the IMS directory active and staging data sets.

Table 34. Status indicators for members in the IMS directory active and staging data sets

Status	Description
ACT-DIR	DBD member is in the IMS directory active data sets.
PEND-DIR	DBD member is in the IMS directory staging data set.

The following table summarizes status indicators used for instances in the IMS catalog database.

Table 35. Status indicators for instances in the IMS catalog database

Status	Description
ACTIVE	Instance whose timestamp matches the active timestamp in the header segment of the IMS catalog database. The header segment of the IMS catalog database contains active timestamp and pending timestamp. Each instance also has its timestamp. IMS Administration Tool compares the timestamp of the instance with the active timestamp in the header segment. Each member in the IMS directory also has its timestamp. The three timestamps (active timestamp in the header segment of the IMS catalog database, timestamp of the instance in the IMS catalog database, and the timestamp of the member in the IMS directory) must be the same. If they are different, an asterisk (*) is displayed in column C.

Table 35. Status indicators for instances in the IMS catalog database (continued)

Status	Description
PENDING	Instance whose timestamp matches the pending timestamp in the header segment of the IMS catalog database. The header segment of the IMS catalog database contains active timestamp and pending timestamp. Each instance also has its timestamp. IMS Administration Tool compares the timestamp of the instance with the pending timestamp in the header segment. Each member in the IMS directory also has its timestamp. The three timestamps (pending timestamp in the header segment of the IMS catalog database, timestamp of the instance in the IMS catalog database, and the timestamp of the member in the IMS directory) must be the same. If they are different, an asterisk (*) is displayed in column C.
USABLE	This indicator is used if a database version is defined with the DBVER= keyword in the DBD. Out of all instances that have the same database version (but excluding the instances with the latest database version), the instance that has the latest timestamp. Instances identified as USABLE might be used by application programs that specifies a specific database version. Because the header segment of the IMS catalog database contains only the latest timestamp and IMS directory stores only the members with the latest database version, the consistency of old instances are not checked.
(LOGICAL)	Logical DBD instance that has the latest timestamp. IMS does not store active or pending timestamp in the header segment for logical DBDs in the IMS catalog. For this reason, (LOGICAL) is set instead of ACTIVE or PENDING. IMS does not store logical DBD members in IMS directory. For this reason, IMS directory members for the logical DBD are not displayed in the report. Consistency between the IMS catalog and the IMS directory is not checked.
OBSOLETE	Instance that is not used by the IMS system. OBSOLETE is shown for the instance that is not ACTIVE, PENDING, nor USABLE. If OBSOLETE is shown for a logical DBD instance, it means that the logical DBD instance has an old timestamp. You can delete obsolete instances by using the delete command (PF6 key) or by building JCL statements and running the job.

The following figure shows an example of the DBD Detail report when IMS-managed ACBs are used:

```
                    Size in IMS              Pointed   ----- Generation -----
DBD Name  DB Version Catalog(B)   C Status    by PSB(#) Date       Time

AUTODB    0000000003       63500   PENDING           2  2024/09/03 10:21:44.10
AUTODB                             PEND-DIR             2024/09/03 10:21:44.10
AUTODB    0000000002       63500   ACTIVE            2  2024/08/20 04:19:35.92
AUTODB                             ACT-DIR              2024/08/20 04:19:35.92
AUTODB    0000000001       63230   USABLE            1  2024/06/26 03:34:37.92
AUTODB    0000000001       84724   OBSOLETE             2024/06/06 22:11:27.14
AUTODB    0000000001       84724   OBSOLETE             2024/06/06 22:09:51.63
AUTOLDB   0000000000        4768   (LOGICAL)         1  2024/07/01 01:55:00.00
            :
```

Status indicators for non-IMS-managed ACBs environment

The following table summarizes status indicators used for members in the ACB libraries.

Table 36. Status indicators for members in the ACB libraries

Status	Description
ACT-ACBL	DBD member is in the ACB library active data set.
PEND-ACBL	DBD member is in the ACB library staging data set.
INACT-ACBL	DBD member is in the ACB library inactive data set.

The following table summarizes status indicators used for instances in the IMS catalog database.

When the IMS management of ACBs is not enabled, the header segment of the IMS catalog database does not contain active and pending timestamps. IMS Administration Tool determines whether an instance is active or pending by comparing the timestamp of the instance with the timestamp of the member in ACB libraries. To distinguish from ACTIVE and PENDING indicators, which are used when the instance timestamp and header timestamp match, (ACTIVE) and (PENDING) indicators are used.

Table 37. Status indicators for instances in the IMS catalog database

Status	Description
(ACTIVE)	Instance whose timestamp matches the timestamp of the member in the ACB library active data set.
(PENDING)	Instance whose timestamp matches the timestamp of the member in the ACB library staging data set.
(INACT)	Instance whose timestamp matches the timestamp of the member in the ACB library inactive data set.
USABLE	This indicator is used if a database version is defined with the DBVER= keyword in the DBD. Out of all instances that have the same database version (but excluding the instances with the latest database version), the instance that has the latest timestamp. Instances identified as USABLE might be used by application programs that specifies a specific database version. Because the header segment contains only the latest timestamp and ACB libraries store the only the members with the latest database version, the consistency of old instances are not checked.
(LOGICAL)	Logical DBD instance that has the latest timestamp. IMS does not store active or pending timestamp in the header segment for logical DBDs in the IMS catalog. For this reason, (LOGICAL) is set instead of (ACTIVE) or (PENDING). IMS does not store logical DBD members in ACB libraries. For this reason, ACB library members for the logical DBD are not displayed in the report. Consistency between the IMS catalog and the ACB libraries is not checked.
(GSAM)	GSAM DBD instance that has the latest timestamp. IMS does not store GSAM DBD members in ACB libraries. Active or pending cannot be determined from the header segment or the ACB libraries. For this reason, (GSAM) is displayed. In addition, ACB library members for the GSAM DBD are not displayed in the report. Consistency between the IMS catalog and the ACB libraries is not checked.

Table 37. Status indicators for instances in the IMS catalog database (continued)

Status	Description
OBSOLETE	Instance that is not used by the IMS system. OBSOLETE is shown for the instance that is not (ACTIVE), (PENDING), nor USABLE. If OBSOLETE is shown for a logical DBD instance or GSAM DBD instance, it means that the logical DBD instance or the GSAM DBD instance has an old timestamp. You can delete obsolete instances by using the delete command (PF6 key) or by building JCL statements and running the job.

The following figure shows an example of the DBD Detail report when ACBs are not managed by IMS.

```
                    Size in IMS                Pointed   ----- Generation -----
DBD Name  DB Version Catalog(B)   C Status     by PSB(#) Date       Time

AUTODB    0000000003       63500    (PENDING)          2  2024/09/03 10:21:44.10
AUTODB                             PEND-ACBL             2024/09/03 10:21:44.10
AUTODB    0000000002       63500    (ACTIVE)           2  2024/08/20 04:19:35.92
AUTODB                             ACT-ACBL              2024/08/20 04:19:35.92
AUTODB    0000000002       63500    (INACT)            2  2024/07/03 15:56:43.06
AUTODB    0000000002                INACT-ACBL            2024/07/03 15:56:43.06
AUTODB    0000000001       63230    USABLE             1  2024/06/26 03:34:37.92
AUTODB    0000000001       84724    OBSOLETE              2024/06/06 22:11:27.14
AUTODB    0000000001       84724    OBSOLETE              2024/06/06 22:09:51.63
AUTOLDB   0000000000        4768    (LOGICAL)          1  2024/07/01 01:55:00.00
BGSAM                       2000    (GSAM)             1  2024/08/20 04:19:35.92
```

Status indicators for non-IMS-managed ACBs environment - When IMS catalog is shared with other IMS systems that use IMS-managed ACBs

The header segment of the IMS catalog database contains active timestamp and pending timestamp. ACTIVE and PENDING indicators are shown for instances whose timestamp matches the timestamp in the header segment. Other indicators are the same as those used for "Status indicators for non-IMS-managed ACBs environment " on page 131.

- Pointed by PSB(#): The number of PSB resources referring this DBD.
  - The number of active PSB instances that reference the active or usable DBD instance.
  - For GSAM and logical DBDs, instances flagged with (GSAM) or (LOGICAL) are calculated.
  - When DB Versioning is enabled, the following IMS definitions are evaluated for this calculation:
    - DBLEVEL=BASE or CURRENT in the DFSDF*xxx* member of the IMS PROCLIB
    - DBLEVEL=BASE or CURRENT in the PSB
    - DBVER=*n* in the PSB

    Note: The INIT VERSION call in an IMS application program is not evaluated.
  - DBD and PSB members in the IMS directory or ACB library are not calculated.

PSB Detail report reference

The PSB Detail report displays PSB instances stored in the IMS catalog database and information about them. The report also shows PSB members in the IMS directory or ACB library data sets, allowing you to check the consistency of PSBs in the IMS catalog, IMS directory, and ACB libraries.

You can generate this report by creating and running a batch job from **IMS Catalog Space and DBD/PSB Analysis** > **Submit and View Summary and DBD/PSB Detail Report**.

Operations available from the PSB Detail Report panel

You can perform the following operations from the PSB Detail Report panel:

View PSB statements
Place the cursor on the line for the PSB instance or member, and press the PF4 key.

Delete an instance
Place the cursor on the line for the PSB instance, and press the PF6 key.

- An instance can be deleted only when the IMS system is online. To delete instances when the IMS system is offline, build JCL statements and submit the batch job.
- Active and pending instances cannot be deleted if the IMS management of ACBs is enabled.
- Members in the IMS directory and the ACB library cannot be deleted.
- If the IMS catalog database is not registered to DBRC, instances cannot be deleted. To delete instances from an IMS catalog database that is not registered to DBRC, build JCL statements and submit the batch job.

Generate JCL to delete all obsolete instances
You can delete all obsolete instances at once by a batch job. Obsolete instances are indicated as OBSOLETE in the Status column.

Use primary command DEL (Build JCL to Delete Obsoleted All) to build JCL statements for deleting obsolete instances and submit the batch job. Obsolete instances that will be deleted at run time are those identified as obsolete at the time when the job is executed. The job can be run when the IMS system is online or offline.

PSB Detail report reference

The PSB Detail report displays the following information:

- PSB resource name
- Generation date and time
- Size of PSB instance in IMS catalog database
- C: Condition of the PSB resource.

  The function compares the following timestamps and displays an asterisk (*) in this column when it detects a mismatch:

  – IMS catalog header timestamp and the timestamp of the instance (if the IMS catalog header segment contains timestamps)
  – Timestamp of the instance in the IMS catalog and the timestamp of the member in the IMS directory or ACB libraries
- Status

  The status indicators differ based on how the IMS system is configured.

  Status indicators for IMS-managed ACBs environment
  The following table summarizes status indicators used for members in the IMS directory active and staging data sets.

Table 38. Status indicators for members in the IMS directory active and staging data sets

Status	Description
ACT-DIR	PSB member is in the IMS directory active data sets.
PEND-DIR	PSB member is in the IMS directory staging data set.

The following table summarizes status indicators used for instances in the IMS catalog database.

Table 39. Status indicators for instances in the IMS catalog database

Status	Description
ACTIVE	Instance whose timestamp matches the active timestamp in the header segment of the IMS catalog database. The header segment of the IMS catalog database contains active timestamp and pending timestamp. Each instance also has its timestamp. IMS Administration Tool compares the timestamp of the instance with the active timestamp in the header segment. Each member in the IMS directory also has its timestamp. The three timestamps (active timestamp in the header segment of the IMS catalog database, timestamp of the instance in the IMS catalog database, and the timestamp of the member in the IMS directory) must be the same. If they are different, an asterisk (*) is displayed in column C.
PENDING	Instance whose timestamp matches the pending timestamp in the header segment of the IMS catalog database. The header segment of the IMS catalog database contains active timestamp and pending timestamp. Each instance also has its timestamp. IMS Administration Tool compares the timestamp of the instance with the pending timestamp in the header segment. Each member in the IMS directory also has its timestamp. The three timestamps (pending timestamp in the header segment of the IMS catalog database, timestamp of the instance in the IMS catalog database, and the timestamp of the member in the IMS directory) must be the same. If they are different, an asterisk (*) is displayed in column C.
OBSOLETE	Instance that is not used by the IMS system. OBSOLETE is shown for the instance that is not ACTIVE nor PENDING. You can delete obsolete instances by using the delete command (PF6 key) or by building JCL statements and running the job.

The following figure shows an example of the PSB Detail report when IMS-managed ACBs are used:

```
          Size in IMS                ----- Generation -----
PSB Name  Catalog(B)   C Status      Date       Time
ACCTPSBA         1000    PENDING     2024/07/21 15:46:52.45
ACCTPSBA                 PEND-DIR    2024/07/21 15:46:52.45
ACCTPSBA          884    ACTIVE      2024/06/06 22:11:27.14
ACCTPSBA                 ACT-DIR     2024/06/06 22:11:27.14
ACCTPSBA          884    OBSOLETE    2024/06/06 22:09:51.63
     :
ACCTPSBX         1600  * PENDING     2024/06/14 22:13:27.19
ACCTPSBX         1600    ACTIVE      2024/06/06 22:11:27.14
ACCTPSBX                 ACT-DIR     2024/06/06 22:11:27.14
ACCTPSBX         1600    OBSOLETE    2024/06/06 22:09:51.63
ACCTPSBX         1512    OBSOLETE    2024/06/04 20:12:03.55
```

Status indicators for non-IMS-managed ACBs environment

The following table summarizes status indicators used for members in the ACB libraries.

Table 40. Status indicators for members in the ACB libraries

Status	Description
ACT-ACBL	PSB member is in the ACB library active data set.
PEND-ACBL	PSB member is in the ACB library staging data set.
INACT-ACBL	PSB member is in the ACB library inactive data set.

The following table summarizes status indicators used for instances in the IMS catalog database.

When the IMS management of ACBs is not enabled, the header segment of the IMS catalog database does not contain active and pending timestamps. IMS Administration Tool determines whether an instance is active or pending by comparing the timestamp of the instance with the timestamp of the member in ACB libraries. To distinguish from ACTIVE and PENDING indicators, which are used when the instance timestamp and header timestamp match, (ACTIVE) and (PENDING) indicators are used.

Table 41. Status indicators for instances in the IMS catalog database

Status	Description
(ACTIVE)	Instance whose timestamp matches the timestamp of the member in the ACB library active data set.
(PENDING)	Instance whose timestamp matches the timestamp of the member in the ACB library staging data set.
(INACT)	Instance whose timestamp matches the timestamp of the member in the ACB library inactive data set.
OBSOLETE	Instance that is not used by the IMS system. OBSOLETE is shown for the instance that is not (ACTIVE) nor (PENDING). You can delete obsolete instances by using the delete command (PF6 key) or by building JCL statements and running the job.

The following figure shows an example of the PSB Detail report when ACBs are not managed by IMS.

```
          Size in IMS                 ----- Generation -----
PSB Name  Catalog(B)   C Status       Date       Time
ACCTPSBA         1022    (PENDING)    2024/08/02 18:32:01.23
ACCTPSBA                 PEND-ACBL    2024/08/02 18:32:01.23
ACCTPSBA          884    (ACTIVE)     2024/06/13 22:11:27.14
ACCTPSBA                 ACT-ACBL     2024/06/13 22:11:27.14
ACCTPSBA          884    (INACT)      2024/06/08 22:11:27.14
ACCTPSBA                 INACT-ACBL   2024/06/08 22:11:27.14
ACCTPSBA          884    OBSOLETE     2024/06/06 22:09:51.63
     :
ACCTPSBX                *PEND-ACBL    2024/08/06 12:13:27.19
ACCTPSBX         1600    (ACTIVE)     2024/07/14 03:11:27.14
ACCTPSBX                 ACT-ACBL     2024/07/14 03:11:27.14
ACCTPSBX         1600    (INACT)      2024/06/12 22:11:27.14
ACCTPSBX                 INACT-ACBL   2024/06/12 22:11:27.14
ACCTPSBX         1600    OBSOLETE     2024/06/06 22:09:51.63
ACCTPSBX         1512    OBSOLETE     2024/06/04 20:12:03.55
```

Status indicators for non-IMS-managed ACBs environment - When IMS catalog is shared with other IMS systems that use IMS-managed ACBs

The header segment of the IMS catalog database contains active timestamp and pending timestamp. ACTIVE and PENDING indicators are shown for instances whose timestamp matches the timestamp in the header segment. Other indicators are the same as those used for “Status indicators for non-IMS-managed ACBs environment ” on page 135.

DBD List reference

The DBD List displays DBD instances stored in the IMS catalog database and information about them. The list also shows DBD members in the IMS directory or ACB library data sets, allowing you to check the consistency of DBDs in the IMS catalog, IMS directory, and ACB libraries.

You can view this list from **IMS Catalog Space and DBD/PSB Analysis** > **View DBD List**.

Differences between DBD List and DBD Detail report

- The DBD Detail report is generated by running a batch job. The DBD List can be viewed through the interactive interface allowing you to view DBD information at that point in time.
- The DBD List shows up to 100 instances and members. You can filter the instances and members to show only the DBDs that you want to view.
- The DBD List has two fewer columns than the DBD Detail report. The following information is not provided in the DBD List: size and whether the instance is referred to by PSBs.
- Line command R opens the DBD Detail report and displays the DBD instance or member in the DBD Detail report. Use line command R when you want to view more than 100 DBDs or complete information about DBDs.

Operations available from the DBD List panel

You can perform the following operations from the DBD List panel:

View DBD statements
Use line command V (View) to display DBD statements of the instances in the IMS catalog database or of the members in the IMS directory or the ACB library.

Delete instances
You can delete obsolete instances from the IMS catalog database.

Delete an instance
Use line command D (Delete) to delete an instance from the IMS catalog database.

Delete all obsolete instances
Use primary command D (Delete) to delete all obsolete instances displayed in the list. Obsolete instances that are not displayed in the list will not be deleted.

Tip: You can delete obsolete instances of specific DBDs at once. To do so, use the DBD Filter to display only the DBD instances that have specific strings in their names and use primary command D to delete all instances that are displayed.

Notes:

- Instances can be deleted only when the IMS system is online. To delete instances when the IMS system is offline, build JCL statements and submit the batch job.
- Active and pending instances cannot be deleted if the IMS management of ACBs is enabled.
- Members in the IMS directory and the ACB library cannot be deleted.
- If the IMS catalog database is not registered to DBRC, instances cannot be deleted. To delete instances from an IMS catalog database that is not registered to DBRC, build JCL statements and submit the batch job.

Generate JCL to delete all obsolete instances
You can delete all obsolete instances at once by a batch job. Obsolete instances are indicated as OBSOLETE in the Status column.

Use primary command J (Build JCL to Delete All) to build JCL statements for deleting obsolete instances and submit the batch job. Obsolete instances that will be deleted at run time are those identified as obsolete at the time when the job is executed. The job can be run when the IMS system is online or offline.

Tip: If you use the DBD Filter to display DBD instances that have specific strings in their names and then use primary command J, the generated JCL contains JCL statements for deleting only the obsolete instances that match the filter criteria. All obsolete instances that match the filter criteria (whether they are displayed in the DBD List or not) will be deleted when the batch job is run.

View DBD Detail Report
Use line command R (View DBD Detail Report) to display a specific instance or member in the DBD Detail report. The DBD Detail report provides additional information (size information and whether the DBD is referenced by PSBs) about the DBD.

Tip: The DBD List can help you quickly find a specific DBD in the DBD Detail report. If your IMS catalog database has a large number of DBDs and you want to find a specific DBD, use the DBD List to filter the DBDs and then use line command R to view the DBD in the DBD Detail report.

DBD List reference

The DBD List displays the following information:

- DBD resource name
- Database (DB) version
- Generation date and time
- C: Condition of the DBD resource.

  The function compares the following timestamps and displays an asterisk (*) in this column when it detects a mismatch:

  – IMS catalog header timestamp and the timestamp of the instance (if the IMS catalog header segment contains timestamps)
  – Timestamp of the instance in the IMS catalog and the timestamp of the member in the IMS directory or ACB libraries
- Status

  The status indicators differ based on how the IMS system is configured.

  Status indicators for IMS-managed ACBs environment

  The following table summarizes status indicators used for members in the IMS directory active and staging data sets.

Table 42. Status indicators for members in the IMS directory active and staging data sets

Status	Description
ACT-DIR	DBD member is in the IMS directory active data sets.
PEND-DIR	DBD member is in the IMS directory staging data set.

The following table summarizes status indicators used for instances in the IMS catalog database.

Table 43. Status indicators for instances in the IMS catalog database

Status	Description
ACTIVE	Instance whose timestamp matches the active timestamp in the header segment of the IMS catalog database. The header segment of the IMS catalog database contains active timestamp and pending timestamp. Each instance also has its timestamp. IMS Administration Tool compares the timestamp of the instance with the active timestamp in the header segment. Each member in the IMS directory also has its timestamp. The three timestamps (active timestamp in the header segment of the IMS catalog database, timestamp of the instance in the IMS catalog database, and the timestamp of the member in the IMS directory) must be the same. If they are different, an asterisk (*) is displayed in column C.

Table 43. Status indicators for instances in the IMS catalog database (continued)

Status	Description
PENDING	Instance whose timestamp matches the pending timestamp in the header segment of the IMS catalog database. The header segment of the IMS catalog database contains active timestamp and pending timestamp. Each instance also has its timestamp. IMS Administration Tool compares the timestamp of the instance with the pending timestamp in the header segment. Each member in the IMS directory also has its timestamp. The three timestamps (pending timestamp in the header segment of the IMS catalog database, timestamp of the instance in the IMS catalog database, and the timestamp of the member in the IMS directory) must be the same. If they are different, an asterisk (*) is displayed in column C.
USABLE	This indicator is used if a database version is defined with the DBVER= keyword in the DBD. Out of all instances that have the same database version (but excluding the instances with the latest database version), the instance that has the latest timestamp. Instances identified as USABLE might be used by application programs that specifies a specific database version. Because the header segment of the IMS catalog database contains only the latest timestamp and IMS directory stores only the members with the latest database version, the consistency of old instances are not checked.
(LOGICAL)	Logical DBD instance that has the latest timestamp. IMS does not store active or pending timestamp in the header segment for logical DBDs in the IMS catalog. For this reason, (LOGICAL) is set instead of ACTIVE or PENDING. IMS does not store logical DBD members in IMS directory. For this reason, IMS directory members for the logical DBD are not displayed in the report. Consistency between the IMS catalog and the IMS directory is not checked.
OBSOLETE	Instance that is not used by the IMS system. OBSOLETE is shown for the instance that is not ACTIVE, PENDING, nor USABLE. If OBSOLETE is shown for a logical DBD instance, it means that the logical DBD instance has an old timestamp. You can delete obsolete instances by using delete commands or by building JCL statements and running the job.

The following figure shows an example of the DBD List when IMS-managed ACBs are used:

```
                                  ----- Generation -----
DBD Name  DB Version C Status     Date       Time

AUTODB    0000000003   PENDING    2024/09/03 10:21:44.10
AUTODB                 PEND-DIR   2024/09/03 10:21:44.10
AUTODB    0000000002   ACTIVE     2024/08/20 04:19:35.92
AUTODB                 ACT-DIR    2024/08/20 04:19:35.92
AUTODB    0000000001   USABLE     2024/06/26 03:34:37.92
AUTODB    0000000001   OBSOLETE   2024/06/06 22:11:27.14
AUTODB    0000000001   OBSOLETE   2024/06/06 22:09:51.63
AUTOLDB   0000000000   (LOGICAL)  2024/07/01 01:55:00.00
BGSAM                  (GSAM)     2024/08/20 04:19:35.92
```

Status indicators for non-IMS-managed ACBs environment

The following table summarizes status indicators used for members in the ACB libraries.

Table 44. Status indicators for members in the ACB libraries

Status	Description
ACT-ACBL	DBD member is in the ACB library active data set.
PEND-ACBL	DBD member is in the ACB library staging data set.
INACT-ACBL	DBD member is in the ACB library inactive data set.

The following table summarizes status indicators used for instances in the IMS catalog database.

When the IMS management of ACBs is not enabled, the header segment of the IMS catalog database does not contain active and pending timestamps. IMS Administration Tool determines whether an instance is active or pending by comparing the timestamp of the instance with the timestamp of the member in ACB libraries. To distinguish from ACTIVE and PENDING indicators, which are used when the instance timestamp and header timestamp match, (ACTIVE) and (PENDING) indicators are used.

Table 45. Status indicators for instances in the IMS catalog database

Status	Description
(ACTIVE)	Instance whose timestamp matches the timestamp of the member in the ACB library active data set.
(PENDING)	Instance whose timestamp matches the timestamp of the member in the ACB library staging data set.
(INACT)	Instance whose timestamp matches the timestamp of the member in the ACB library inactive data set.
USABLE	This indicator is used if a database version is defined with the DBVER= keyword in the DBD. Out of all instances that have the same database version (but excluding the instances with the latest database version), the instance that has the latest timestamp. Instances identified as USABLE might be used by application programs that specifies a specific database version. Because the header segment contains only the latest timestamp and ACB libraries store the only the members with the latest database version, the consistency of old instances are not checked.
(LOGICAL)	Logical DBD instance that has the latest timestamp. IMS does not store active or pending timestamp in the header segment for logical DBDs in the IMS catalog. For this reason, (LOGICAL) is set instead of (ACTIVE) or (PENDING). IMS does not store logical DBD members in ACB libraries. For this reason, ACB library members for the logical DBD are not displayed in the report. Consistency between the IMS catalog and the ACB libraries is not checked.
(GSAM)	GSAM DBD instance that has the latest timestamp. IMS does not store GSAM DBD members in ACB libraries. Active or pending cannot be determined from the header segment or the ACB libraries. For this reason, (GSAM) is displayed. In addition, ACB library members for the GSAM DBD are not displayed in the report. Consistency between the IMS catalog and the ACB libraries is not checked.
OBSOLETE	Instance that is not used by the IMS system. OBSOLETE is shown for the instance that is not (ACTIVE), (PENDING), nor USABLE. If OBSOLETE is shown for a logical DBD instance or GSAM DBD instance, it means that the logical DBD instance or the GSAM DBD instance has an old timestamp. You can delete obsolete instances by using delete commands or by building JCL statements and running the job.

The following figure shows an example of the DBD List when ACBs are not managed by IMS.

```
                                  ----- Generation -----
DBD Name  DB Version C Status     Date       Time

AUTODB    0000000003   (PENDING)  2024/09/03 10:21:44.10
AUTODB                 PEND-ACBL  2024/09/03 10:21:44.10
AUTODB    0000000002   (ACTIVE)   2024/08/20 04:19:35.92
AUTODB                 ACT-ACBL   2024/08/20 04:19:35.92
AUTODB    0000000002   (INACT)    2024/07/03 15:56:43.06
AUTODB    0000000002   INACT-ACBL 2024/07/03 15:56:43.06
AUTODB    0000000001   USABLE     2024/06/26 03:34:37.92
AUTODB    0000000001   OBSOLETE   2024/06/06 22:11:27.14
AUTODB    0000000001   OBSOLETE   2024/06/06 22:09:51.63
AUTOLDB   0000000000   (LOGICAL)  2024/07/01 01:55:00.00
BGSAM                  (GSAM)     2024/08/20 04:19:35.92
```

Status indicators for non-IMS-managed ACBs environment - IMS catalog is shared with other IMS systems that use IMS-managed ACBs

The header segment of the IMS catalog database contains active timestamp and pending timestamp. ACTIVE and PENDING indicators are shown for instances whose timestamp matches the timestamp in the header segment. Other indicators are the same as those used for "Status indicators for non-IMS-managed ACBs environment " on page 139.

PSB List reference

The PSB List displays PSB instances stored in the IMS catalog database and information about them. The list also shows PSB members in the IMS directory or ACB library data sets, allowing you to check the consistency of PSBs in the IMS catalog, IMS directory, and ACB libraries.

You can view this list from **IMS Catalog Space and DBD/PSB Analysis** > **View PSB List**.

Differences between PSB List and PSB Detail report

- The PSB Detail report is generated by running a batch job. The PSB List can be viewed through the interactive interface allowing you to view PSB information at that point in time.
- The PSB List shows up to 100 instances and members. You can filter the instances and members to show only the PSBs that you want to view.
- The PSB List has one fewer column than the PSB Detail report. Size information is not provided in the PSB List.
- Line command R opens the PSB Detail report and displays the PSB instance or member in the PSB Detail report. Use line command R when you want to view more than 100 PSBs or complete information about PSBs.

Operations available from the PSB List panel

You can perform the following operations from the PSB List panel:

View PSB statements

Use line command V (View) to display PSB statements of the instances in the IMS catalog database or of the members in the IMS directory or the ACB library.

Delete instances

You can delete obsolete instances from the IMS catalog database.

Delete an instance

Use line command D (Delete) to delete an instance from the IMS catalog database.

Delete all obsolete instances

Use primary command D (Delete) to delete all obsolete instances displayed in the list. Obsolete instances that are not displayed in the list will not be deleted.

Tip: You can delete obsolete instances of specific PSBs at once. To do so, use the PSB Filter to display only the PSB instances that have specific strings in their names and use primary command D to delete all instances that are displayed.

Notes:

- Instances can be deleted only when the IMS system is online. To delete instances when the IMS system is offline, build JCL statements and submit the batch job.
- Active and pending instances cannot be deleted if the IMS management of ACBs is enabled.
- Members in the IMS directory and the ACB library cannot be deleted.
- If the IMS catalog database is not registered to DBRC, instances cannot be deleted. To delete instances from an IMS catalog database that is not registered to DBRC, build JCL statements and submit the batch job.

Generate JCL to delete all obsolete instances

You can delete all obsolete instances at once by a batch job. Obsolete instances are indicated as OBSOLETE in the Status column.

Use primary command J (Build JCL to Delete All) to build JCL statements for deleting obsolete instances and submit the batch job. Obsolete instances that will be deleted at run time are those identified as obsolete at the time when the job is executed. The job can be run when the IMS system is online or offline.

Tip: If you use the PSB Filter to display PSB instances that have specific strings in their names and then use primary command J, the generated JCL contains JCL statements for deleting only the obsolete instances that match the filter criteria. All obsolete instances that match the filter criteria (whether they are displayed in the PSB List or not) will be deleted when the batch job is run.

View PSB Detail Report

Use line command R (View PSB Detail Report) to display a specific instance or member in the PSB Detail report. The PSB Detail report provides additional information (size information) about the PSB.

Tip: The PSB List can help you quickly find a specific PSB in the PSB Detail report. If your IMS catalog database has a large number of PSBs and you want to find a specific PSB, use the PSB List to filter the PSBs and then use line command R to view the PSB in the PSB Detail report.

PSB List reference

The PSB List displays the following information:

- PSB resource name
- Generation date and time
- C: Condition of the PSB resource.

  The function compares the following timestamps and displays an asterisk (*) in this column when it detects a mismatch:

  – IMS catalog header timestamp and the timestamp of the instance (if the IMS catalog header segment contains timestamps)

  – Timestamp of the instance in the IMS catalog and the timestamp of the member in the IMS directory or ACB libraries
- Status

  The status indicators differ based on how the IMS system is configured.

  Status indicators for IMS-managed ACBs environment

  The following table summarizes status indicators used for members in the IMS directory active and staging data sets.

Table 46. Status indicators for members in the IMS directory active and staging data sets

Status	Description
ACT-DIR	PSB member is in the IMS directory active data sets.
PEND-DIR	PSB member is in the IMS directory staging data set.

The following table summarizes status indicators used for instances in the IMS catalog database.

Table 47. Status indicators for instances in the IMS catalog database

Status	Description
ACTIVE	Instance whose timestamp matches the active timestamp in the header segment of the IMS catalog database. The header segment of the IMS catalog database contains active timestamp and pending timestamp. Each instance also has its timestamp. IMS Administration Tool compares the timestamp of the instance with the active timestamp in the header segment. Each member in the IMS directory also has its timestamp. The three timestamps (active timestamp in the header segment of the IMS catalog database, timestamp of the instance in the IMS catalog database, and the timestamp of the member in the IMS directory) must be the same. If they are different, an asterisk (*) is displayed in column C.
PENDING	Instance whose timestamp matches the pending timestamp in the header segment of the IMS catalog database. The header segment of the IMS catalog database contains active timestamp and pending timestamp. Each instance also has its timestamp. IMS Administration Tool compares the timestamp of the instance with the pending timestamp in the header segment. Each member in the IMS directory also has its timestamp. The three timestamps (pending timestamp in the header segment of the IMS catalog database, timestamp of the instance in the IMS catalog database, and the timestamp of the member in the IMS directory) must be the same. If they are different, an asterisk (*) is displayed in column C.
OBSOLETE	Instance that is not used by the IMS system. OBSOLETE is shown for the instance that is not ACTIVE nor PENDING. You can delete obsolete instances by using delete commands or by building JCL statements and running the job.

The following figure shows an example of the PSB List when IMS-managed ACBs are used:

```
                          ----- Generation -----
PSB Name  C Status        Date       Time
ACCTPSBA    PENDING       2024/07/21 15:46:52.45
ACCTPSBA    PEND-DIR      2024/07/21 15:46:52.45
ACCTPSBA    ACTIVE        2024/06/06 22:11:27.14
ACCTPSBA    ACT-DIR       2024/06/06 22:11:27.14
ACCTPSBA    OBSOLETE      2024/06/06 22:09:51.63
      :
ACCTPSBX  * PEND-DIR      2024/06/14 22:13:27.19
ACCTPSBX    ACTIVE        2024/06/06 22:11:27.14
ACCTPSBX    ACT-DIR       2024/06/06 22:11:27.14
ACCTPSBX    OBSOLETE      2024/06/06 22:09:51.63
ACCTPSBX    OBSOLETE      2024/06/04 20:12:03.55
```

Status indicators for non-IMS-managed ACBs environment

The following table summarizes status indicators used for members in the ACB libraries.

Table 48. Status indicators for members in the ACB libraries

Status	Description
ACT-ACBL	PSB member is in the ACB library active data set.
PEND-ACBL	PSB member is in the ACB library staging data set.
INACT-ACBL	PSB member is in the ACB library inactive data set.

The following table summarizes status indicators used for instances in the IMS catalog database.

When the IMS management of ACBs is not enabled, the header segment of the IMS catalog database does not contain active and pending timestamps. IMS Administration Tool determines whether an instance is active or pending by comparing the timestamp of the instance with the timestamp of the member in ACB libraries. To distinguish from ACTIVE and PENDING indicators, which are used when the instance timestamp and header timestamp match, (ACTIVE) and (PENDING) indicators are used.

Table 49. Status indicators for instances in the IMS catalog database

Status	Description
(ACTIVE)	Instance whose timestamp matches the timestamp of the member in the ACB library active data set.
(PENDING)	Instance whose timestamp matches the timestamp of the member in the ACB library staging data set.
(INACT)	Instance whose timestamp matches the timestamp of the member in the ACB library inactive data set.
OBSOLETE	Instance that is not used by the IMS system. OBSOLETE is shown for the instance that is not (ACTIVE) nor (PENDING). You can delete obsolete instances by using delete commands or by building JCL statements and running the job.

The following figure shows an example of the PSB List when ACBs are not managed by IMS.

```
                         ----- Generation -----
PSB Name  C Status       Date       Time
ACCTPSBA    (PENDING)    2024/08/02 18:32:01.23
ACCTPSBA    PEND-ACBL    2024/08/02 18:32:01.23
ACCTPSBA    (ACTIVE)     2024/06/13 22:11:27.14
ACCTPSBA    ACT-ACBL     2024/06/13 22:11:27.14
ACCTPSBA    (INACT)      2024/06/08 22:11:27.14
ACCTPSBA    INACT-ACBL   2024/06/08 22:11:27.14
ACCTPSBA    OBSOLETE     2024/06/06 22:09:51.63
      :
ACCTPSBX  * PEND-ACBL    2024/08/06 12:13:27.19
ACCTPSBX    (ACTIVE)     2024/07/14 03:11:27.14
ACCTPSBX    ACT-ACBL     2024/07/14 03:11:27.14
ACCTPSBX    (INACT)      2024/06/12 22:11:27.14
ACCTPSBX    INACT-ACBL   2024/06/12 22:11:27.14
ACCTPSBX    OBSOLETE     2024/06/06 22:09:51.63
ACCTPSBX    OBSOLETE     2024/06/04 20:12:03.55
```

Status indicators for non-IMS-managed ACBs environment - IMS catalog is shared with other IMS systems that use IMS-managed ACBs

The header segment of the IMS catalog database contains active timestamp and pending timestamp. ACTIVE and PENDING indicators are shown for instances whose timestamp matches the timestamp in the header segment. Other indicators are the same as those used for “Status indicators for non-IMS-managed ACBs environment ” on page 144.

Chapter 20. Export objects and import objects

The export objects function, in combination with the import objects function, allows you to easily bulk copy DBD and PSB resource definitions from one IMS system to another IMS system, regardless of whether both systems are using the IMS catalog or not.

The export objects function extracts IMS ACB control blocks of DBDs and PSBs from ACB libraries or IMS directory, decodes the control blocks into readable DBD and PSB sources codes, and stores them in the *export data set*. An export data set is an intermediate data set generated by the export objects function and used by the import objects function.

The import objects function reads the export data set and calls the DBDGEN, PSBGEN, ACBGEN utilities, and, if IMS catalog is defined in the IMS system, the IMS catalog populate utility (DFS3PU00). If the Use COPYBOOK option is selected, the import objects function also performs copybook import before DBDGEN.

By using the export objects function and the import objects function, you can transfer DBDs and PSBs from one IMS system to another IMS system.

Export/import business scenarios

Because these two functions use DBD and PSB source codes as intermediate data, and DBDGEN, PSBGEN, and ACBGEN are done in the target system environment, the functions allow to maintain different IMS environments for the source system and the target system. For example, you can transfer DBDs and PSBs to a target system that uses a different release of IMS, or transfer DBDs and PSBs between two systems that manage ACBs differently (one with ACBLIB and another by IMS). You can also use these functions to manage objects in a single IMS system. For example, you can export and import objects when you migrate to a new release of IMS, or when you want to import copybooks to DBDs and PSBs and replace DBDs and PSBs in the IMS system.

Typical business scenarios can include:

- Build a test IMS system.
- Synchronize two IMS environments.
- Create a mirror-image IMS system from an existing IMS system.
- Move the IMS system to a different IMS environment, for example, migrate to an IMS catalog-enabled environment or migrate to an IMS-managed ACBs environment.
- Restore the IMS system from IMS-managed ACBs to non-IMS-managed ACBs.
- Import COBOL or PL/I copybooks in bulk to the IMS catalog to accommodate a change of application programs and make the information available to Java applications.

Use cases for the import objects function

The import objects function supports several options that help you in recreating the data sets for IMS catalog and IMS directory or changing your IMS environment.

Recreating IMS catalog and IMS directory

- When IMS manages ACBs (IMS-managed ACBs), you can recreate the IMS catalog, IMS catalog index database, and the IMS directory.

  You must stop online IMS systems that share the IMS catalog and the IMS directory because the IMS catalog database and the IMS directory data sets will be initialized during the import objects job.

  When the import objects job ends, all DBDs and PSBs in the ACB library are populated to the IMS catalog as active instances and stored in the IMS directory active data sets.

When you restart the IMS online systems, the IMS online system loads the ACBs of DBDs and PSBs from the IMS directory active data sets.

- When ACBs in the ACB library are used (non-IMS-managed ACBs), you can recreate the IMS catalog database and the IMS catalog index database.

  You must stop any access to the IMS catalog database and the IMS catalog index database in IMS online systems. You can do so by issuing IMS command /DBR or /STO.

  When the import objects job ends, DBDs and PSBs are stored in the staging ACB library, and all DBDs and PSBs in the staging ACB library are populated to the IMS catalog. Perform the IMS online change (OLC) to activate DBDs and PSBs in the ACB library staging data set.

Make changes to IMS environment

By enabling the Initialize IMSCat Database option together with the Migrate to Managed ACBs option, you can migrate to IMS environment in which the IMS catalog is enabled or the IMS management of ACBs is enabled.

For details about making such changes, see “Migration scenarios using the export objects and import objects functions ” on page 156.

Topics:

Import objects settings

Settings allow you to register data sets and define runtime options for database (DBD) and application (PSB) update tasks.

Data set selection method

Change the data set selection method for import objects sessions. Two methods are available; select data sets from a group of data sets that IMS Administration Tool identifies or from a predefined data set group.

- **Discovered Data Sets:** Use data sets that IMS Administration Tool identifies from the IMS control region JCL and IMS PROCLIB members.
- **Data Set Group:** Use data sets included in a predefined data set group. Data set groups can be predefined from **Setup and Administration** > **Manage Data Sets and Groups**.

Note: The import objects function does not use DBD statement source data sets and PSB statement source data sets as input. Instead, it uses exported data sets as input. For more information, see “Import objects reference” on page 149.

Runtime options

The runtime options are applied when copybook import, DBDGEN, PSBGEN, ACBGEN, or IMS Catalog Populate (DFS3PU00) is performed in the following functions:

- IMS resource change function of database and application administration
- Import objects function of IMS catalog and ACB library management

Runtime options include IMS MACLIB, Assemble and COBOL compile options, PL/I and COBOL compiler libraries, and copybook options.

For each runtime option, specify the scope to apply the option (either IMS subsystem ID or system) and a value.

Table 50. Runtime options for DBD/PSB change tasks

Option	Description
IMS Macro Library	IMS macro library data set. Used during DBDGEN and PSBGEN.
Assemble Option	Data set (and member if it is partitioned) that contains assemble options. Used during DBDGEN and PSBGEN.
COBOL Compiler	COBOL compiler library data set. Used during copybook import.
COBOL Compile Option	Data set that contains the COBOL compile option IGYCDOPT module.
PL/I Compiler	PL/I compiler library data set. Used during copybook import.
Copybook Default Lang	Copybook language, either PLI or COBOL. The default is COBOL. Used during copybook import.
Copybook XREF Format	Format of the copybook XREF file, either TYPE1 or TYPE0. The default is TYPE0. Used during copybook import.

Export objects reference

The export objects function extracts IMS control blocks (DBDs and PSBs) from either the ACB library or IMS directory depending on how IMS is configured. Then it decodes the extracted control blocks to readable DBD or PSB source code enabling you to import DBDs and PSBs with the import objects function.

The ACB library and IMS directory are automatically determined by IMS Administration Tool from the parameters and the PROCLIB libraries of the IMS system.

The following options allow you to set up the process of exporting selected resource objects to export data sets. The export objects function generates a JCL job based on the options you select. You submit the JCL job to export objects to the export data set.

Table 51. Exporting objects

Option	Description
Object Selection Criteria	
IMSID	The 1-4 character name of the IMS subsystem to export from.
Export Objects	Specification of resource types to export (and import): • DBD • PSB • Both (DBD and PSB)
DBD and PSB Filters	Specify a wildcard expression to control the number of resource objects that display.
Export from	

Table 51. Exporting objects (continued)

Option	Description
Export from and Object Status	Specify the location and the status of the objects to export from. • If the IMS management of ACBs is not enabled, select ACB library. • If the IMS management of ACBs is enabled, select IMS directory. **ACB library** • Active Active ACB library. • Inactive Inactive ACB library. • Staging Staging ACB library. **IMS directory** • Active IMS directory data sets. • Staging IMS directory staging data set.
Export Object Options	
Prefix of Export Data Sets	The high-level qualifier prefix of the output data sets that are used for the export process (35 character maximum). The data sets must be PDS or PDSE.
Initialize Export Data Sets	Specify whether to delete existing object members in the export data sets before export processing. **Y** Delete all existing object members in the export data sets before exporting objects. By selecting Y, only the members that are exported during this export objects job will be stored in the export data sets. **N** Existing object members in the export data sets are not deleted. During the export, new objects are added, and any object with the same name is overwritten. After the export, the export data sets contain exported objects as well as the objects that were previously exported. Specify N if you want to store objects created in multiple export objects job in a single set of data sets.

Table 51. Exporting objects (continued)

Option	Description
Export Logical DBD and GSAM from DBDLIB/ PSBLIB	This option is available if the IMS management of ACBs is not enabled. Use this option to export GSAM DBDs, GSAM PCBs, and logical DBDs. By entering 1, 2, or 3, you can view and specify DBD and PSB libraries that contain logical DBDs, GSAM DBDs, and GSAM PSBs (including GSAM PCBs) to export. This option is not enabled if you specify 0. **0 (No)** Do not export logical DBDs, GSAM DBDs, and GSAM PSBs (including GSAM PCBs). JCL is generated without this option. After the JCL is generated, this field shows blank and `No Export`. **1 (Discovered)** Export from DBD and PSB libraries that IMS Administration Tool discovers from the IMS data sharing group, IMS control region JCL, and IMS PROCLIB data set. If you enter 1, the Discovered Data Sets panel is displayed. After you select data sets and exit the Discovered Data Sets panel, this field shows blank and `Discovered Data Sets`. **2 (Data Set Group)** Export from DBD and PSB libraries that belong to a data set group. If you enter 2, the Select Data Set Group panel is displayed. After you select a data set group and exit the Select Data Set Group panel, this field shows blank and `DSGID "`*`data_set_group`*`"`. **3 (Others)** Export from DBD and PSB libraries that you specify. If you enter 3, the DBDLIB Data Sets panel or the PSBLIB Data Sets panel is displayed. After you select library data sets and exit the DBDLIB Data Sets panel or the PSBLIB Data Sets panel, this field shows blank and `Other Data Sets`. **Blank** Apply the option that was previously selected. By entering 1, 2, or 3, you can view and change the option.
Format of DBD/PSB Statements	Format of decoded DBDGEN or PSBGEN macro statements. **Default** Macro statements are printed using the default format of IMS Library Integrity Utilities. **FORMAT_COL10** Macro statements are printed using the FORMAT_COL10 format (each line starts at column 10). For more information about this format, see the description of DECOPT FORMAT_COL10 in the *IMS Library Integrity Utilities User's Guide*.

Import objects reference

The import objects function performs resource change tasks by calling the DBDGEN, PSBGEN, ACBGEN utilities, and, if IMS catalog is defined in the IMS system, the IMS catalog populate utility (DFS3PU00). If

the Use COPYBOOK option is selected, the import objects function also performs copybook import before DBDGEN.

The import objects function requires an export data set as input. The export data set must contain DBD and PSB source codes generated by the export objects function.

Input and output data sets

You specify the following data sets, which are referred to during import objects, through the Import Objects panel (Table 52 on page 151).

- Export data sets: The import objects function requires an export data set as input. The export data set must contain DBD and PSB source codes generated by the export objects function.
- Copybook and cross reference data sets.
- DBD statement source updated with copybook import.
- Backup data sets.

For copybook and cross reference data sets and DBD statement source that is updated with copybook import, you can register them to a data set group and use them at run time.

You can select a data set group from **Database and Application Administration** > **Settings**.

Step-by-step instructions for changing DBDs and PSBs are provided in Technote: How to change DBDs and PSBs by using IBM IMS Administration Tool for z/OS.

IMS data sets

DBD and PSB resources that are generated by this task will be stored to data sets such as DBD, PSB, and ACB libraries, IMS directory, and IMS catalog data sets. You do not need to specify these data sets through the panels because IMS Administration Tool discovers them according to the following rules:

ACB libraries (non-IMS-managed environment), IMS directory, and IMS catalog database

Data sets are discovered from the information defined in the IMS control region JCL and IMS PROCLIB members, which means that the data sets defined for the IMS online environment will be discovered.

ACB library (IMS-managed environment), DBD library, and PSB library

Because these data sets are not defined in the IMS control region JCL, IMS Administration Tool discovers them according to the following rules:

- If Data Set Group ID is selected as data set selection method, discovers data sets from the IMS Administration Tool data set group.
- If Discovered Data Sets is selected as data set selection method, IMS Administration Tool attempts to discover data sets in the following order:
  1. If a RECON ID is specified for the IMS data sharing group, discovers data sets from the IMS Tools Base RECON ID.
  2. Discovers DBD and PSB libraries from IMS PROCLIB data sets DBDGEN or PSBGEN member, and ACB library from the IMS control region JCL or the MDA library.

Related information:

- For data set selection methods, see Chapter 12, “Database and application administration settings,” on page 85.
- For data set groups, see Chapter 9, “Managing data sets and data set groups,” on page 69.
- For IMS data sharing groups, see Chapter 8, “Managing IMS groups,” on page 65.

Although IMS-managed ACBs do not require DBD, PSB, and ACB libraries, you must ensure that the names of these data sets and resources are available in relevant resources so that IMS Administration Tool can discover the data sets.

By using these data sets, the import objects function updates the ACB library, IMS directory, and IMS catalog as follows:

During the ACBGEN process, the import objects function stores ACB members of DBD and PSB objects to the staging ACB library (IMSACB).

During IMS catalog population, the import objects function determines whether DBDs and PSBs should be active or pending according to the following conditions. Depending on the condition, the status of IMS online system (active or inactive) must be changed.

- If initialization of the IMS catalog or migration to IMS-managed ACBs is requested, the import objects function stores ACB members to the IMS directory active data sets and loads DBDs and PSBs as active instances. You must stop the IMS system or stop any access to the IMS catalog database and the IMS catalog index database. For details, see Table 52 on page 151.
- For other requests, the import objects function stores ACB members to the IMS directory staging data set and inserts DBDs and PSBs to the IMS catalog database as pending instances. Import objects jobs can run whether the IMS system is active or inactive.

When ACB members are added to the staging ACB library or the IMS directory staging data set, after the IMS resource change completes, you must perform an IMS online change (OLC) or issue the IMPORT DEFN SOURCE(CATALOG) command to activate DBDs and PSBs in the online IMS system.

Tip: Runtime options for resource change tasks
You can predefine runtime options for resource change tasks by using the ISPF interface: **IMS Catalog and ACBLIB Management** > **Import Objects** > **Settings**.

The following options allow you to set up the process of importing selected resource objects from the export data set to a new target destination. The import objects function generates a JCL job, ATY@OBJU, based on the options you select. For more information about ATY@OBJU, see Chapter 36, “Reference: DBD and PSB update (ATY@OBJU) JCL,” on page 259.

Table 52. Importing objects

Option	Description
Object Selection Criteria	
Import Objects	Specification of resource types to import from the export data set: • DBD • PSB • Both (DBD and PSB)
DBD and PSB Filters	Specify a wildcard expression to control the number of resource objects that display.
Import Object Options	

Table 52. Importing objects (continued)

Option	Description
Initialize IMSCat Database	This option is available if the IMS catalog is defined to the IMS system. Specify whether to initialize or update the IMS catalog and IMS directory. **Y** Initialize the IMS catalog and IMS directory. If an IMS catalog and IMS directory exist, the data sets are initialized. If they do not exist, IMS Administration Tool creates data sets. When the import objects job is run, all DBD and PSB objects in the ACB library are populated to the IMS catalog, not just the DBDs and PSBs that are processed in the import objects job. Specify Y for the following use cases: • Recreate the IMS catalog and IMS directory that are currently being used. • Make changes to the IMS environment; for example, when you start using the IMS catalog or when you migrate non-IMS-managed ACBs to IMS-managed ACBs. **N** Update the existing IMS catalog and IMS directory. Only the DBDs and PSBs that are processed in the import objects job are populated to the IMS catalog database. The import objects job can run whether the IMS online system is active or inactive. When ACBs are managed by IMS (IMS-managed ACBs), DBDs and PSBs are stored in the IMS directory staging data set and inserted into the IMS catalog as pending objects. When ACBs in the ACB library (non-IMS-managed ACBs) are used, DBDs and PSBs are stored in the ACB library staging data sets and the IMS catalog. After the import objects job ends, either issue the IMPORT DEFN CATALOG command of IMS or perform IMS online change (OLC) to activate the updated DBDs and PSBs.

Table 52. Importing objects (continued)

Option	Description
Migrate to Managed ACBs	Use this option to migrate non-IMS-managed ACBs to IMS-managed ACBs. **Y** Migrate non-IMS-managed ACBs to IMS-managed ACBs. All DBD and PSB resources that are found in the exported data sets are migrated. The filtering option of DBD and PSB resources is ignored. All DBD and PSB objects in the ACB library are populated to the IMS catalog. DBDs and PSBs are stored in the IMS directory active data sets, and inserted to the IMS catalog database as active instances. By selecting the Initialize IMSCat Database option, you can control whether to store DBD and PSB instances that were used before migration. For details, see “Migration scenarios using the export objects and import objects functions ” on page 156. **N** Do not migrate non-IMS-managed ACBs to IMS-managed ACBs.

Table 52. Importing objects (continued)

Option	Description
Overwrite Existing Objects	Specify whether to overwrite existing DBD and PSB objects. For non-IMS-managed ACBs, specifies whether to overwrite the DBD and PSB members in the staging ACB library with the DBD and PSB members processed in this job. When you activate the staging ACB library after the import objects job is run: • If you want to use the DBDs and PSBs that are processed in this job, specify Y. • If you want to use the DBDs and PSBs that currently exist in the staging ACB library, specify N. For IMS-managed ACBs, specifies whether to populate all DBDs and PSBs identified by the filter (Y), or populate only the new DBDs and PSBs (N). Even when ACBs are managed by IMS, IMS Administration Tool checks the ACB library to determine if the members exist in the ACB library. It is recommended that in an IMS-managed ACBs environment, the ACB library used for DBDGEN, PSBGEN, and ACBGEN is in sync with the IMS directory. For this reason, DBDs and PSBs that exist in the ACB library should also exist in the IMS directory active or staging data sets. If you specify N (do not overwrite), only the new DBDs and PSBs that do not exist in the IMS directory (neither in the active data sets nor in the staging data set) are added. DBDs and PSBs that are selected will go through the DBDGEN, PSBGEN, and ACBGEN processes and then finally populated into the IMS catalog database. Whether the DBDs and PSBs will be populated into the IMS directory active data sets or into the IMS directory staging data set cannot be specified with this option. Generally, they will be populated into the IMS directory staging data set but if either or both of the following options are Y, they will be populated into the IMS directory active data sets: • Initialize IMSCat Database • Migrate to Managed ACBs **Y** Overwrite existing objects. **N** Do not overwrite existing objects.
Prefix of Export Data Sets	The high-level qualifier prefix of the export data set created by the export objects function.
Use COPYBOOK	This option is available only for DBD objects. Specify Y to import copybook information to the DBD source code. If you specify Y, the function analyzes the copybook and inserts corresponding metadata statements into the DBD source for DBDGEN.
COPYBOOK Data Sets Displayed when **discovered data sets** is selected.	

Table 52. Importing objects (continued)

Option	Description
COPYBOOK Cross Reference (XREF) Data Sets	The name of the data set that pairs the DBD with the copybook. You can specify up to 10 data sets. Specify Y to view, change, or add data set names. For the format of COPYBOOK XREF files and examples, see "Copybook XREF file" on page 100.
COBOL or PL/I COPYBOOK Data Sets	The names of the data sets where the copybook resides. You can specify up to 120 data sets, maximum of 60 for COBOL copybook data sets and 60 for PL/I copybook data sets. Specify Y to view, change, or add data set names.
DBD Source with COPYBOOK	Specify the name of the output data set for storing the updated DBD source.
Backup Options	
Backup Existing Objects	To provide rollback capability, backup existing objects in the backup data sets before importing. This option creates backup copies of the library or the data sets that the import objects function might update. The backup copies contain DBDs and PSBs in the form of source codes. **Yes** Back up existing objects. The import objects function decodes ACB members in the ACB library or IMS directory into DBD and PSB source codes and stores them in the backup data sets. • If the IMS management of ACBs is not enabled, creates a backup copy of the ACB staging library. • If the IMS management of ACBs is enabled, creates backup copies of the following data sets: – IMS directory active and staging data sets – The ACB library that is pointed to from the IMSACB DD in the IMS control region JCL or that is registered to the IMS data sharing group. **No** Do not create backup data sets.
Initialize Backup Data Sets	Specify whether to delete object members in the backup data sets before import processing. **Y** Before creating new members in the backup data set, deletes all existing members that were created during previous import objects jobs. **N** Existing members in the backup data set are not deleted. During the import objects job, new members are added, and any member with the same name is overwritten. Specify N if you want to store backups created in multiple import objects job in a single data set.
Prefix of Backup Data Sets	The high-level qualifier prefix of the backup data sets (35 character maximum). The data sets must be PDS or PDSE.

Table 52. Importing objects (continued)

Option	Description
JCL Output Options	
JCL Output Data Set	The name of the partitioned data set where the generated import JCL is stored. The data set must be pre-allocated before you can generate the JCL
Member	The name of the member in the partitioned data set where the generated import JCL is stored.
Job Statements	Specification of the JOB statement of the import JCL.
Allocate Data Set	Allocate the data set where the generated import JCL is stored.

Migration scenarios using the export objects and import objects functions

You can enable the IMS catalog, migrate to IMS-managed ACBs environment, or do both at the same time by using the export objects function and the import objects function.

The following topics provide migration scenarios:

- "Migration scenario 1: Enabling IMS catalog while retaining non-IMS-managed ACBs" on page 156
- "Migration scenario 2: Migrating to IMS-managed ACBs while retaining DBDs and PSBs in the IMS catalog" on page 157
- "Migration scenario 3: Migrating to IMS-managed ACBs and initializing the IMS catalog" on page 158
- "Migration scenario 4: Migrating to IMS-managed ACBs and enabling the IMS catalog" on page 159

Migration scenario 1: Enabling IMS catalog while retaining non-IMS-managed ACBs

This scenario explains how to start using the IMS catalog while retaining the non-IMS-managed ACBs environment.

Before you begin

Copy DBD and PSB members of the IMS catalog from IMS.SDFSRESL to DBD library and PSB library, and create ACB members in the staging ACB library by performing ACBGEN. Then activate the ACB library to enable the DBDs and PSBs in the IMS system.

- For information about DBD and PSB member names of the IMS catalog, see the topic "Installing the IMS catalog DBDs and PSBs" in *IMS Installation*.
- For information about activating the ACB library, see the topic "Changing or adding IMS.ACBLIB members online" in *IMS Administration*.

Procedure

1. Run the export objects function to export all DBD and PSB members in the active ACB library to exported data sets.
2. Define the IMS catalog to the IMS system.
   a) Specify CATALOG=Y in the CATALOG section of the DFSDF member.

Example:

```
<SECTION=CATALOG>
CATALOG=Y   * required *
ALIAS=DFSC
RETENTION=(DAYS=40,VERSIONS=55)
IXVOLSER=VOL100
ACBMGMT=ACBLIB
ACCESS=UPDATE
```

b) Use DBRC to register the IMS catalog database and the IMS catalog index database to the RECON data sets. For more information, see the topic "Defining the IMS catalog with DBRC" in *IMS System Definition*.

Alternatively, to define the IMS catalog database without using DBRC, add the DFSHDBSC DD statement to the import objects JCL.

3. Open the Import Objects panel and specify as follows to generate import objects JCL.
   a) Specify **3-Both** for **Import Objects**, and an asterisk (*****) for **Filter**.
   b) Specify **Y** for **Initialize IMSCat Database**.
   c) Specify **N** for **Migrate to Managed ACBs**.
   d) Specify **Y** for **Overwrite Existing Objects**.
4. Run the import objects job.
   - All DBD and PSB members in the exported data sets are migrated. ACB members of DBDs and PSBs are inserted into the staging ACB library.
   - The IMS catalog database and the IMS catalog index database are created, and the DBD and PSB instances are stored in the IMS catalog.
   - IMS directory data sets and bootstrap data sets are created by the IMS catalog populate utility (DFS3PU00) that is called during the job, but they are not used by IMS systems. You can delete them.
5. Stop the IMS system and restart it to activate the ACB members in the staging ACB library.

Migration scenario 2: Migrating to IMS-managed ACBs while retaining DBDs and PSBs in the IMS catalog

This scenario explains how to migrate non-IMS-managed ACBs to IMS-managed ACBs while retaining DBDs and PSBs in the existing IMS catalog.

Procedure

1. Use the export objects function and export all DBDs and PSBs from the active ACB library to the exported data sets.
2. Ensure that CATALOG=Y and ACBMGMT=ACBLIB are defined in the DFSDF member of the IMS system. ACBMGMT must not specify CATALOG at this point.
3. Open the Import Objects panel and specify as follows to generate import objects JCL.
   a) Specify **3-Both** for **Import Objects**, and an asterisk (*****) for **Filter**.
   b) Specify **N** for **Initialize IMSCat Database**.
   c) Specify **Y** for **Migrate to Managed ACBs**.
   d) Specify **Y** for **Overwrite Existing Objects**.
4. Stop accesses to the IMS catalog. Either stop all IMS systems that share the IMS catalog, or issue IMS command /DBR or /STO to stop any access to the IMS catalog database and the IMS catalog index database.
5. Run the import objects job.
   - IMS directory data sets, a staging data set, and a bootstrap data set are created.

- DBDGEN, PSBGEN, ACBGEN, and IMS catalog populate processes are performed against all DBD and PSB members in the exported data sets. ACB members of DBDs and PSBs are inserted into the IMS directory data set as active members.
- DBDs and PSBs are inserted into the IMS catalog database as active instances. History of DBD and PSB instances before migration are retained in the IMS catalog.

6. In the IMS DFSDF member, change the ACBMGMT parameter to ACBMGMT=CATALOG.
7. Restart the IMS system. If you did not stop IMS systems in step “4” on page 157, stop them now and restart the IMS system.

   IMS-managed ACBs environment is applied when the IMS system is restarted.
8. If the IMS catalog is shared by multiple IMS systems, activate IMS online systems or issue IMS commands to allow access to the IMS catalog database.

Migration scenario 3: Migrating to IMS-managed ACBs and initializing the IMS catalog

This scenario explains how to migrate non-IMS-managed ACBs to IMS-managed ACBs and initialize the IMS catalog at the same time.

Procedure

1. Use the export objects function and export all DBDs and PSBs from the active ACB library to the exported data sets.
2. Ensure that CATALOG=Y and ACBMGMT=ACBLIB are defined in the DFSDF member of the IMS system. ACBMGMT must not specify CATALOG at this point.
3. Open the Import Objects panel and specify as follows to generate import objects JCL.
   a) Specify **3-Both** for **Import Objects**, and an asterisk (*****) for **Filter**.
   b) Specify **Y** for **Initialize IMSCat Database**.
   c) Specify **Y** for **Migrate to Managed ACBs**.
   d) Specify **Y** for **Overwrite Existing Objects**.
4. Stop accesses to the IMS catalog. Either stop all IMS systems that share the IMS catalog, or issue IMS command /DBR or /STO to stop any access to the IMS catalog database and the IMS catalog index database.
5. Run the import objects job.
   - IMS directory data sets, a staging data set, and a bootstrap data set are created.
   - The IMS catalog database and IMS catalog index database are initialized. History of DBD and PSB instances are deleted.
   - DBDGEN, PSBGEN, ACBGEN, and IMS catalog populate processes are performed against all DBD and PSB members in the exported data sets. ACB members of DBDs and PSBs are stored to the IMS directory data set as active members.
   - DBDs and PSBs are loaded into the IMS catalog as active instances.
6. In the IMS DFSDF member, change the ACBMGMT parameter to ACBMGMT=CATALOG.
7. Restart the IMS system. If you did not stop IMS systems in step “4” on page 158, stop them now and restart the IMS system.

   IMS-managed ACBs environment is applied when the IMS system is restarted.
8. If the IMS catalog is shared by multiple IMS systems, activate IMS online systems or issue IMS commands to allow access to the IMS catalog database.

Migration scenario 4: Migrating to IMS-managed ACBs and enabling the IMS catalog

This scenario explains how to migrate non-IMS-managed ACBs to IMS-managed ACBs and enable the IMS catalog at the same time.

Before you begin

Copy DBD and PSB members of the IMS catalog from IMS.SDFSRESL to DBD library and PSB library, and create ACB members in the staging ACB library by performing ACBGEN. Then activate the ACB library to enable the DBDs and PSBs in the IMS system.

- For information about DBD and PSB member names of the IMS catalog, see the topic "Installing the IMS catalog DBDs and PSBs" in *IMS Installation*.
- For information about activating the ACB library, see the topic "Changing or adding IMS.ACBLIB members online" in *IMS Administration*.

Procedure

1. Run the export objects function to export all DBD and PSB members in the active ACB library to exported data sets.
2. Define the IMS catalog to the IMS system.
   a) Specify CATALOG=Y in the CATALOG section of the DFSDF member. ACBMGMT must not specify CATALOG at this point.

      Example:

      ```
      <SECTION=CATALOG>
      CATALOG=Y   * required *
      ALIAS=DFSC
      RETENTION=(DAYS=40,VERSIONS=55)
      IXVOLSER=VOL100
      ACBMGMT=ACBLIB
      ACCESS=UPDATE
      ```

   b) Use DBRC to register the IMS catalog database and the IMS catalog index database to the RECON data sets. For more information, see the topic "Defining the IMS catalog with DBRC" in *IMS System Definition*.

      Alternatively, to define the IMS catalog database without using DBRC, add the DFSHDBSC DD statement to the import objects JCL.
3. Open the Import Objects panel and specify as follows to generate import objects JCL.
   a) Specify **3-Both** for **Import Objects**, and an asterisk (*****) for **Filter**.
   b) Specify **Y** for **Initialize IMSCat Database**.
   c) Specify **Y** for **Migrate to Managed ACBs**.
   d) Specify **Y** for **Overwrite Existing Objects**.
4. Run the import objects job.
   - IMS directory data sets, a staging data set, and a bootstrap data set are created.
   - DBDGEN, PSBGEN, ACBGEN, and IMS catalog populate processes are performed against all DBD and PSB members in the exported data sets. ACB members of DBDs and PSBs are inserted into the IMS directory data set as active members.
   - DBDs and PSBs are loaded into the IMS catalog database as actives instances.
5. In the IMS DFSDF member, change the ACBMGMT parameter to ACBMGMT=CATALOG.
6. Stop the IMS system and restart it. IMS-managed ACBs environment is applied when the IMS system is restarted.

Chapter 21. IMS directory/BSDS backup and restore

Use the IMS directory/BSDS backup function (backup function) to create a backup of the data sets used for the IMS directory. Use the IMS directory/BSDS restore function (restore function) to restore the IMS directory from a backup.

When the IMS management of ACBs is enabled, the runtime application control blocks (ACBs) of DBD and PSB resources are managed using the IMS directory. An IMS directory consists of the following data sets:

- IMS directory data sets (referred to as *IMS directory active data sets* in this documentation)
- Staging data set (referred to as *IMS directory staging data set* in this documentation)
- Bootstrap data set (BSDS)

IMS systems cannot start if these data sets do not exist or if these data sets have problems. The IMS directory/BSDS backup and restore function of IMS Administration Tool provides capabilities to back up and restore these data sets.

Topics:

Overview of IMS directory/BSDS backup and restore

IMS directory/BSDS backup and restore provides the backup function and the restore function.

Backup function

The backup function creates a backup of data sets used for the IMS directory.

Use the backup function after you update DBD and PSB resources with one of the following operations:

- Populate DBD and PSB resources by using the IMS Catalog Populate utility (DFS3PU00).
- Use IMS DDL (data definition language) to create, alter, or drop DBD and PSB resources.
- Activate DBD and PSB resources by using the IMPORT DEFN SOURCE(CATALOG) command.

Two backup methods are supported:

Auto Backup
A backup is automatically taken after a successful completion of the IMPORT DEFN command. IMPORT DEFN commands are monitored in the OM region by OM exit routines, and an automatic backup is started in the Administration Tool task in the IMS Tools DAI SOT address space. You do not need to prepare or submit backup JCL. You can enable Auto Backup from the IMS Directory and BSDS Backup Settings panel.

Manual Backup
Generate backup JCL and submit it manually when you want to take a backup. Use the Backup IMS Directory and BSDS - Manual Backup panel to start a manual backup.

Tip: It is recommended that you use IMS High Performance Image Copy or an image copy utility of IMS to create an image copy of the IMS catalog database when you create a backup of IMS directory data sets.

Restore function

The restore function generates restore JCL, which you can submit to restore the data sets of IMS directory (IMS directory active and staging data sets and the bootstrap data set) from a backup created with the backup function.

You can select a backup or use the latest backup found at restore run time:

Restore using the latest backup
Generates restore JCL that restores the data sets of the IMS directory from the latest backup found at restore run time. Because IMS Administration Tool identifies the latest backup at restore run time, you do not need to identify and specify the latest backup every time you run the restore JCL.

Restore using a specific backup
Generates restore JCL that restores the data sets of the IMS directory from the backup you select. You can select a backup from a list of backups (backup list).

Backup and restore business scenario

If a problem occurs with data sets of IMS directory, for instance when some data sets cannot be found, you must recover the data sets of the IMS directory. Generally, these data sets can be recovered from the ACB library or the IMS catalog database. However, you cannot recover the data sets if the ACB library and the IMS catalog database cannot be used such as when the ACB library is not kept up-to-date, the IMS catalog database has some problems, or when the IMS catalog database is being held by DBRC. Even under such circumstances, you can still recover the data sets of IMS directory by using the restore function of IMS Administration Tool.

Here is a scenario that illustrates how to restore the IMS directory, and then recover the ACB library and the IMS catalog database from the restored IMS directory:

1. Submit the restore JCL that is generated with the restore function (the restore using the latest backup option enabled) to restore the data sets of the IMS directory.
2. Compare the IMS directory and the IMS catalog by using the DBD/PSB compare function to validate DBD and PSB resources in the IMS catalog database with those in the IMS directory.
3. If any inconsistency is detected in the resources in the IMS directory and the IMS catalog database, use the object explorer (enable the decode option) to generate DBD and PSB statements of the resources in which the inconsistency was detected.
4. Use the IMS resource change function to run DBDGEN, PSBGEN, ACBGEN, and populate the IMS catalog. The DBD and PSB resources in the IMS catalog database are now in sync with the resources in the IMS directory.
5. Stop and restart IMS systems with the /NRE or /ERE command.

Considerations for IMS systems that share an IMS directory

An IMS directory can be shared by multiple IMS systems by specifying the ACBSHR=Y parameter to each IMS system. To enable the backup and restore function for all IMS systems that share an IMS directory, you must register all sharing IMS systems to an IMS data sharing group and define settings parameters for one of the sharing IMS systems. For more information, see “IMS directory/BSDS backup and restore settings reference” on page 163.

Considerations for the backup function:

Auto backup
When an IMS directory is shared by multiple IMS systems, a backup is taken automatically with the IMSID that is used as the command master of the IMPORT DEFN command. Therefore, a backup is taken once per IMPORT command even when an IMS directory is shared by multiple IMS systems. If you issue an IMPORT command with the IMS Administration Tool command processor, only one backup is created whether you specify the IMSID or the IMS command group.

Manual backup
You can take a backup manually by using any of the IMS system that shares the IMS directory.

Considerations for the restore function:

Because a backup can be taken with any sharing IMS system, the restore function manages backups as follows.

Restore from the Latest
Identifies the latest backup from all the backups taken with the IMSID (specified in the panel) and any sharing IMS systems.

Backup List
Lists all backups taken with the IMSID (specified in the panel) and any sharing IMS systems.

IMS directory/BSDS backup and restore settings reference

Before creating backups, you must define some parameters that are used for creating backups and restoring data sets from backups.

IMS systems that share an IMS directory

If the IMS system is sharing an IMS directory with other IMS systems (ACBSHR=Y parameter is set to IMS), define settings parameters only for one of the sharing IMS systems. IMS Administration Tool applies the same settings parameters to other IMS systems that share the same IMS directory.

Before you define settings parameters with the Settings panel, ensure that an IMS data sharing group (DSHR group) is defined and that the IMS system that you intend to do settings for is included in the group. An IMS data sharing group can be defined from **Setup and Administration** > **Manage IMS Groups**. If you defined settings parameters before defining an IMS data sharing group, you must define a group and then define settings parameters again.

Settings for IMS directory and BSDS backup

Table 53. Settings for IMS directory and BSDS backup

Option	Description
Retention Generations	The number of backup generations to retain. Specify a value in the range of 1 - 99. If the number of backup generations reaches this value, IMS Administration Tool deletes the oldest backup.
Enable Auto Backup	Specify Y to enable Auto Backup. When enabled, a backup is automatically taken after a successful completion of the IMPORT DEFN command. You must set up OM user exit routines for Auto Backup. For details, see “Setting up IMS Administration Tool in an IMS system” on page 37. Specify N to disable Auto Backup. N is the default.
Backup Data Sets	Specify the high-level qualifier (HLQ) and the SMS class for backup data sets. These values are used for both Auto Backup and Manual Backup.
HLQ	Specify the high-level qualifier (HLQ) for backup data sets. HLQ can be up to 27 characters. The names of backup data sets are determined by the HLQ, IMSID, and the generation number. For example, if HLQ is "IMS.DFSCD000.BACKUP", IMSID is IMSA, and the current generation number is 02, the backup data set for IMS directory active data set DI1001 is named as"IMS.DFSCD000.BACKUP.IMSA.B02.DI1001".

Table 53. Settings for IMS directory and BSDS backup (continued)

Option	Description
SMS Class	Specify the SMS class used for creating backup data sets. **MGMTCLAS** Management class. **STORCLAS** Storage class. If you specify non-SMS managed storage, you must also specify the volume serial. **VOLSER** Volume serial. **Use STORCLAS of IMS Data Sets** Specify Y to use the storage class of IMS data sets (IMS directory active and staging data sets and bootstrap data set). Y cannot be specified if MGMTCLAS, STORCLAS, or VOLSER is specified.
Restore Data Sets to use when discovery fails	The discovery function of IMS Administration Tool identifies restore data sets (IMS data sets to restore) from IMS definitions. However, if discovery fails due to a condition detected in IMS, it uses the HLQ to find the data sets and performs restore as follows: • If restore data sets are found, restores the data sets. • If restore data sets are not found, creates IMS data sets using the HLQ and the SMS class specifications.
HLQ	The high-level qualifier of IMS directory data sets. The value can be up to 37 characters.
SMS Class	Specify the SMS class used for creating IMS data sets. **MGMTCLAS** Management class. **STORCLAS** Storage class. If you specify non-SMS managed storage, you must also specify the volume serial. **VOLSER** Volume serial. **Use STORCLAS of Backup Data Sets** Specify Y to use the storage class of backup data sets. Y cannot be specified if MGMTCLAS, STORCLAS, or VOLSER is specified.

The IMS Data Sets field shows a list of data sets that are currently used for the IMS directory, which include IMS directory active data sets, an IMS directory staging data set, and a bootstrap data set. IMS Administration Tool identifies IMS data sets at run time; that is, when a backup or restore is performed. If you change IMS definitions, IMS data sets that IMS Administration Tool backs up or restores might be different from the IMS data sets listed in this field.

During restore, IMS Administration Tool restores IMS directory active and staging data sets and the bootstrap data set. If IMS Administration Tool cannot find IMS directory active and staging data sets to restore, it creates these data sets using the SMS management class and the storage class of the bootstrap data set.

Backup IMS directory and BSDS - Manual Backup reference

In the Backup IMS Directory and BSDS - Manual Backup panel, specify the required fields to generate backup JCL, which you can submit to create a backup of IMS directory active data sets, the IMS directory staging data set, and the bootstrap data set.

Note: If you enabled Auto Backup, you do not need to generate backup JCL except when you want to take a backup manually.

IMS Administration Tool creates data sets for backup when the backup JCL is run. The names of backup data sets are determined by the retention generation and HLQ parameters defined in Settings.

Table 54. Backup IMS directory and BSDS

Option	Description
IMS Data Sets to Backup View Data Sets	Enter a Y next to View Data Sets to show a list of IMS directory data sets to back up. This list contains IMS directory active data sets, an IMS directory staging data set, and a bootstrap data set. IMS Administration Tool identifies these data sets from IMS definitions. IMS Administration Tool creates backup data sets from the latest IMS directory data sets that it finds at backup run time. If you change IMS definitions, IMS data sets that IMS Administration Tool backs up might be different from the IMS data sets listed in this panel.
JCL Output Data Set	Specify the data set and member for storing the manual backup JCL.
Job Statements	Specify the job statements to be added to the manual backup JCL.

Restore IMS directory and BSDS reference

In the Restore IMS Directory and BSDS panel, specify the required fields to generate restore JCL, which you can submit to restore IMS directory active data sets, the IMS directory staging data set, and the bootstrap data set from a backup.

Requirement: Stop and restart the IMS control region to load the restored DBDs/PSBs.

The Restore IMS Directory and BSDS panel can be accessed from the following menus:

- To restore from the latest backup: **IMS Directory/BSDS - Backup and Restore** > **Restore from Latest**
- To restore from a specific backup: **IMS Directory/BSDS - Backup and Restore** > **Backup List**. Enter line command R next to the backup you want to use

The following table summarizes the options in the restore panel.

Table 55. Restore IMS directory and BSDS

Option	Description
IMS Data Sets to Restore	A list of IMS data sets that IMS Administration Tool discovered from IMS definitions. IMS data sets will be discovered again when the restore job is run. IMS data sets will be overridden by backup data sets. If you update IMS definitions to change the data sets used for the IMS directory, IMS Administration Tool restores the new (changed) IMS data sets.

Table 55. Restore IMS directory and BSDS (continued)

Option	Description
View Data Sets	Enter a Y next to View Data Sets to show a list of data sets to restore. This list contains IMS directory active data sets, an IMS directory staging data set, and a bootstrap data set. IMS Administration Tool identifies these data sets from IMS definitions. The data sets of the IMS directory will be discovered again when the restore job is run. If you update IMS definitions to change the data sets used for the IMS directory, IMS Administration Tool restores the new (changed) IMS data sets. If IMS Administration Tool cannot find IMS directory active and staging data sets to restore, it creates these data sets using the SMS management class and the storage class of the bootstrap data set.
IMS Directory and BSDS to restore	This option is displayed only when the discovery of IMS data sets fails. The discovery function of IMS Administration Tool identifies restore data sets (IMS data sets to restore) from IMS definitions. However, if discovery fails due to a condition detected in IMS, it uses the HLQ to find the data sets and performs restore as follows: • If restore data sets are found, restores the data sets. • If restore data sets are not found, creates IMS data sets using the HLQ and the SMS class specifications. The HLQ and the SMS class you specify in this panel are effective only for the JCL created this time; the values specified in the Settings panel are not updated.
Restore Options	
Force Restore (restore even if data set names are different)	When the restore job runs, IMS Administration Tool checks whether the names of data sets that are currently used by the IMS directory (the one to be restored) match the names of data sets in the backup. If the names are different, the job is stopped unless you specify Y. **Y** Restores IMS directory data sets even if the names of data sets are different from the names of IMS data sets at the time when the backup was created. **N** If data set names are different, cancels the restore operation.
Compare Options	

Table 55. Restore IMS directory and BSDS (continued)

Option	Description
Compare before Restore	IMS Administration Tool can compare DBD/PSB resource instances in the backup with those in the IMS catalog database before restoring IMS data sets. **Y** Compare DBD/PSB resource instances in the backup with those in the IMS catalog database. **Note:** The following parameters cannot be compared because these parameters cannot be obtained from the PSB-type ACB members that refer to the reported DBD-type ACB members: • The VERSION parameter of the DBD statement for Fast Path databases. • The EXIT parameter of the DBD and SEGM statements for Fast Path databases. **N** Do not compare DBD/PSB resource instances.
Active/Staging	Select the DBD/PSB instances to compare. **A** Active. Compare DBD and PSB resources in the backup of IMS directory active data set with active instances in the IMS catalog database. **B** Both active and staging. In addition to A (Active), also compare DBD and PSB resources in the backup of IMS directory staging data set with staging instances in the IMS catalog database.
Force Restore	**Y** Restore IMS data sets even if one or more instances are different or missing either in the backup or in the IMS catalog database. **N** Do not restore IMS data sets if one or more instances are different or missing either in the backup or in the IMS catalog database. **Tip:** In the comparison list, each DBD/PSB resource instance is marked with one of the following indicators: • Identical: The resource instance in the backup is identical to the one found in the IMS catalog database. • Different: The resource instance in the backup is different from the one found in the IMS catalog database. • Unmatched: The resource instance exists only in the backup or in the IMS catalog database.

Table 55. Restore IMS directory and BSDS (continued)

Option	Description
Keep Comparison List	You can retain the comparison list, which contains a list of DBD/PSB resource instances that were compared. **O** Print the list to SYSOUT with an output class of *. **D** Store the list in a data set. **N** Do not store the list.

IMS directory/BSDS backup list reference

This panel displays a list of backups. You can view the details of each backup, delete one or all backups, or create restore JCL that restores IMS directory data sets (IMS directory active and staging data sets and bootstrap data set) from a specific backup.

Tips:

- To narrow down the list, use the filter.
- To delete multiple backups at once, filter the backups and then use primary command D.

The backups are listed in the order they were created (backup date and time).

A Y in the Restored column indicates that the backup was used to restore the IMS directory in the past.

If `Not available for restore.` is displayed in the message column, it means that the backup cannot be used for restore because some data sets are missing in the backup. In this case, use line command D to delete the backup.

Table 56. IMS directory/BSDS backup list

Option	Description
Primary Commands	**S** Sort the list. **F** Filter the list. **C** Clear the filter. **D** Delete all backups.
Line Commands	**R** Generate restore JCL. The restore JCL generated with the R line command restores IMS data sets from the selected backup. **I** Display detailed information about the backup. **D** Delete the backup.

Part 6. Run IMS utilities (JCL generation)

IMS Administration Tool helps you automate the process of generating the JCL required to run IMS utilities provided by IMS Tools products that are registered to participate in the IMS Administration Tool environment.

The Run IMS utilities feature helps automate the JCL generation process and enables you to set up recurring utility jobs for conditional and routine IMS maintenance tasks.

Topics:

Chapter 22. Run IMS Utilities overview and process flow

The Run IMS Utilities feature of IMS Administration Tool provides a detailed and flexible mechanism to generate single master JCL that you can run to perform simple and complex IMS maintenance tasks.

Topics:

Process summary for product registration

The Run IMS Utilities function generates JCL for IMS Tools products. Information about each IMS Tools product is stored in the IMS Tools Knowledge Base repository.

IMS Tools products information stored in the IMS Tools Knowledge Base repository includes JCL templates to run the functions provided by that IMS Tools product. You can create your own JCL by customizing JCL templates.

You can specify values for the variables used in JCL statements from the following panels:

- (Super administrators only) **Setup and Administration** > **Updating Product Registry**
- **Run IMS Utilities** > **Settings**

For more information about product registration, functions, templates, and variables, see Chapter 6, "Updating the product registry," on page 49.

Process summary for JCL generation

The JCL generation process used to run IMS maintenance tasks is dependent on the product registration information gathered from IMS Tools that participate in the IMS Administration Tool environment.

To support the Run IMS Utilities feature of IMS Administration Tool, IMS Tools product *functions* are registered and made available to the JCL generation process.

The code to run a specific function is provided in the form of a *template*. The template is JCL code and includes *variable* expressions that are populated with appropriate values before and during the final build process of an actual job JCL.

Run IMS Utilities uses the registered functions, templates, and variables to create three types of configuration files that are used to build custom JCL jobs: *object profiles*, *utility profiles*, and *job profiles*.

1. Create an *object profile* that identifies the specific resource or resources in the IMS environment where the master JCL job for the maintenance task is run.

   IMS Administration Tool runs in an IMS environment, identified by an IMSID/Group designation.

   The IMS environment is made up of one or more databases and/or database groups.

   Example IMS resource objects: single databases, PSBs, DBRC groups (CAGRP, DBDSGRP, RECOVGRP, DBGRP)
2. Create a *utility profile* that represents an IMS maintenance task, and identifies the IMS Tools functions required for the task, plus the sequence in which the functions need to be performed.

   The utility profile defines a database maintenance task by specifying the required functions in the correct sequence.

   Example utility specification:

- Task: Database reorganization
- Required functions and sequence:
  a. Unload a full function database
  b. Reload a full function database
  c. Build indexes for a full function database
  d. Pointer check a full function database
  e. Prefix resolution and update
  f. ...

3. Create a *job profile* that combines a utility profile and an object profile to build a single JCL job that can perform a database maintenance task for a specific IMS environment.

   The job profile combines the function templates specified by that utility profile into a single master JCL job. The master JCL code is a correctly sequenced concatenation of the individual function template code provided by the utility profile.

   The JCL job is applicable to an IMS environment that is defined by the *object profile*.

   The templates for each function are selected by the scope level (GLOBAL, SYSTEM, IMSID, or PROFILE) that is appropriate for this task.

   Example job profile task: Run database reorganization on PSB1

   - Object profile: PSB1
   - Utility profile: Database reorganization

4. During the master JCL build process, variable expressions in the templates are populated with appropriate values.

   There are two types of variables:

   - DDNAME
   - Keyword

   Values are selected by the scope level (GLOBAL, SYSTEM, IMSID) that is appropriate for this task.

   When creating the job profile, any variable can be further customized to contain a value that is appropriate only for this specific job profile (scope=PROFILE).

   Additionally, some variables and values are dynamically provided during the JCL build process. Sources for these dynamic variables include:

   Environment (z/OS system information)
   Examples: SORTLIB, SYSMAC, USERID, UNIT

   Registry (IMS Tools product information)
   Examples: library names (*MENU, *PENU, *SENU, *LOAD)

   Discovery (IMS system information)
   Examples: DBDLIB, PROCLIB, RECON1

5. Build a master z/OS batch job for this job profile containing the JCL to run the correct sequence of functions specified in the utility profile (example: Database reorganization).
6. The resulting job can be run immediately on the resource object specified by the object profile (example: PSB1), or saved and inserted into a job scheduler.

JCL generation process flow

The following diagram illustrates the relationship between the initial IMS Tools product registration process and how functions, templates, and variables are used to create object, utility, and job profiles for JCL generation.

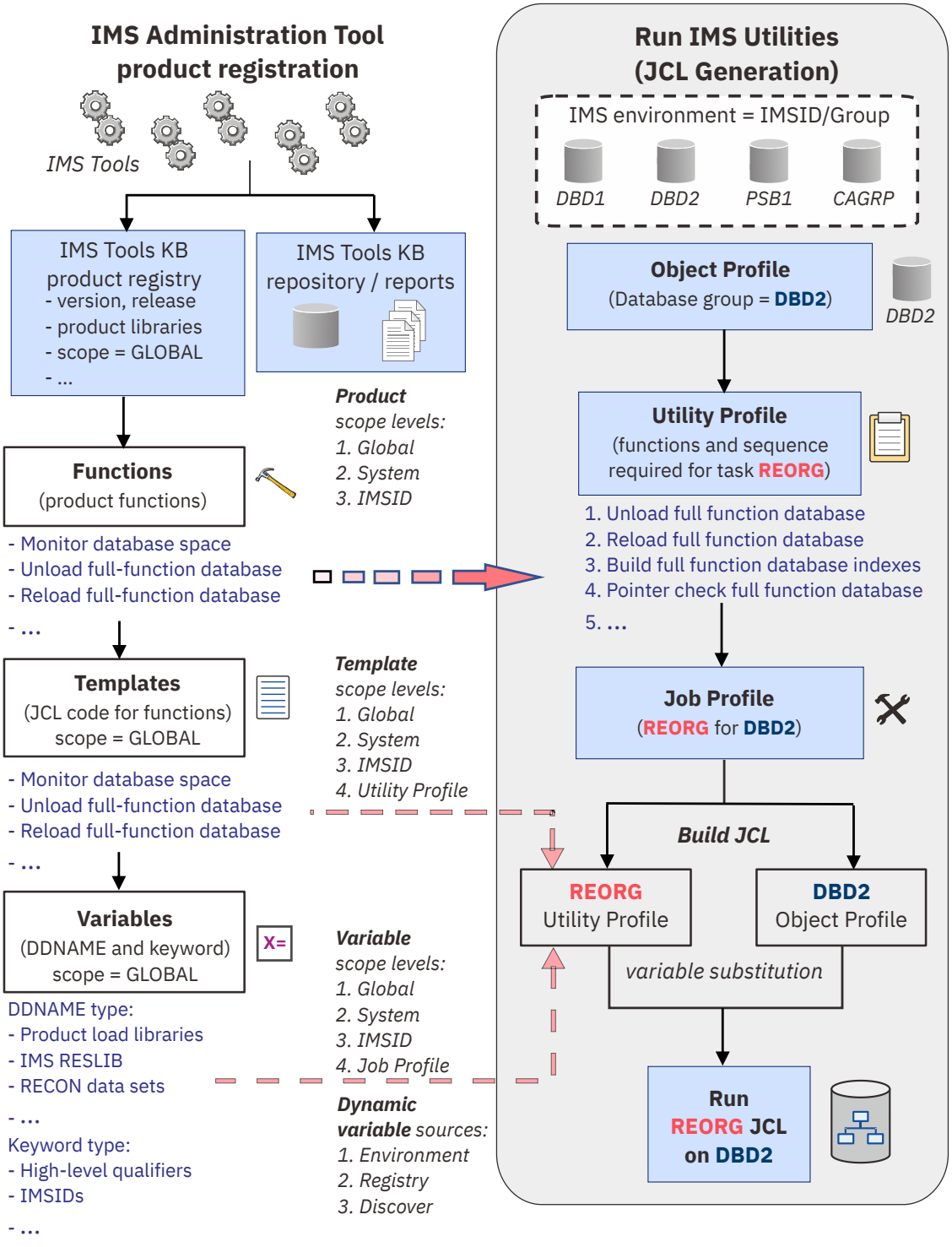

Figure 11. JCL generation process flow

Chapter 23. Run IMS Utilities Settings overview and reference

Use the **Settings** menu to create, update, or delete functions, templates, and variables for Run IMS Utilities.

See Chapter 6, “Updating the product registry,” on page 49 to learn about product registration, functions, templates, and variables.

Chapter 24. Object profile overview and reference

An object profile is a configuration file that is used to define and logically group IMS resources (objects) together so that a custom JCL job can be generated and run specifically for that profile.

Object profile overview

A *job profile* combines the specifications in an object profile and a utility profile to generate a single JCL job that performs a database maintenance task for a specific IMS resource.

- The *utility profile* defines the database maintenance task (utility), the individual IMS Tools functions required for that task, and the sequence in which the functions are performed.
- The *object profile* defines the specific IMS resources (objects) where the generated JCL job is run.

Examples of IMS resources that can be selected as objects in an object profile include:

- Databases (DBDs)
- Program specification blocks (PSBs)
- DBRC groups:
  - CAGRPs
  - DBDSGRPs
  - RECOVGRPs
  - DBGRPs
  - ALL DBRC Groups

Business scenarios for object profiles

The following business scenarios provide examples for creating object profiles:

- The object profile contains just a single database.

  Object profile name suggestion: The same name as the primary database.
- The object profile contains a single DBRC group.

  A DBRC group is a grouping of databases defined in the RECON.

  Object profile name suggestion: A name matching the DBRC group name, or a combination of DBRC group name and DBRC group type.
- The object profile relates to an application.

  There are several ways to define an application in an object profile, such as multiple DBDs, DBD wildcarding, and PSB.

  Object profile name suggestion: The user-defined application name or a name matching closely to the PSB name.

Topics:

Manage Object Profiles reference

The Manage Object Profiles interface provides the options to manage existing object profiles and create new object profiles in your IMS Administration Tool environment.

Table 57. Manage Object Profiles

Option	Description
Display Filters	All object profiles in the IMS Administration Tool environment are initially listed. You can control the number of object profiles that display by using the following filter criteria: **IMSID Filter** Specify an IMSID or IMSID wildcard expression to control the number of object profiles that display. Examples: IMS1, IM*, * **Creator Filter** Specify an object profile creator name or creator name wildcard expression to control the number of object profiles that display. Example: USER* **Profile Filter** Specify an object profile name or name wildcard expression to control the number of object profiles that display. Example: PROFI*
Create	Create a new object profile. An object profile is created for a single IMS environment (IMSID) and includes specifications for one or more resources (objects) from that environment.
Sort	Sort the object profile list display. Opens the Sort Columns panel. You can specify the sequence order (values: 1-6) for each field to be sorted and the sort orders for each field (A-Ascending or D-Descending).
D (delete)	Delete an existing object profile. A Delete Confirmation window requests confirmation of the action. The profile must have the "Update" access control (Share Option) set to allow this action for users other than the object profile creator.
M (model)	Create (define) a new object profile based on (modeled after) the attributes of the selected object profile. The IMSID Selection List allows you to apply this additional object profile to another IMS environment. A double asterisk (**) preceding the modeled name in the Object Profile Options view indicates the need to change the profile name. A different profile name is required if the new profile is being created for the same IMSID as the original profile.

Table 57. Manage Object Profiles (continued)

Option	Description
U (update)	Update an existing object profile. The profile must have the "Update" access control (Share Option) set to allow this action for users other than the object profile creator.
V (view)	View an existing object profile. The profile must have the "Update" or "View" access control (Share Option) set to allow this action for users other than the object profile creator.

Create, model, update object profile reference

The Manage Object Profiles interface provides the options to create, model, and update object profiles in your IMS Administration Tool environment.

Table 58. Create, model, update object profile

Option	Description
Creator	The TSO user ID (owner) of the object profile. This field is pre-populated with the user of the current session.
IMSID	The 1-4 character name of the IMS subsystem where this object profile applies. This field is populated with the IMSID previously selected for this object profile.
Profile Name	Any user-defined name for the object profile (maximum of 24 characters).
Description	A user-defined phrase to describe the object profile (maximum of 24 characters).
Share Option	Access control setting for the management of this object profile by users other than the profile creator. **Update** Other users can edit (update) and make changes to this object profile. **View** Other users can only view the object profile details. No changes to the object profile are allowed by users with this access control. **None** Other users have no edit or view access to this object profile.

Table 58. Create, model, update object profile (continued)

Option	Description
Select One Object Type	An object profile can include any combination of valid IMS resources (objects). However, you must add and configure each object type to the object profile one at a time. When you add an object type, you continue the configuration by creating the rules or criteria by which all or some of these objects are selected for use in the object profile (Define DBD/PSB Object Rules). Valid object types: • DBDs (DB) • PSBs (PS) • DBRC groups: – CAGRPS (CG) – DBDSGRPS (CD) – RECOVGRPS (CR) – DBGRPS (CB) – All DBRC Groups (DR)

Table 58. Create, model, update object profile (continued)

Option	Description
Define DBD Object Rules	Rules for the DBD object type are filter criteria that are used to specify one or more database objects to include in the object profile: **Select by DBD Qualifier** You can specify a single database name or use a wildcard expression to select a wider range of databases. Examples: DBDNAME, DB%%*, DB*, * **Display DBD List?** Lists the database objects that match the filter criteria of the qualifier name. If you intend to include or exclude specific database objects, you must display the list generated by the qualifier and select those objects from the list. Y-Yes, N-No **Include/Exclude** You can include or exclude any number of database objects from the object profile. The best practice procedure is to start with a large group of included objects, and then exclude a few selected objects from the list. I-Include, E-Exclude **Process Dependent Indexes** Specify whether dependent indexes should be processed appropriately according to the task. For example, database reorganization requires that dependent indexes be regenerated. However, no dependent index processing is required for an image copy task. Therefore a database reorganization job profile should have an object profile containing objects with Process Dependent Indexes set to Yes. Y-Yes, N-No **Process Logical Relations** Specify whether logical relationships between separate databases should be recognized and processed appropriately according to the task. If a particular job profile task requires processing of logical relationships, the object profile associated with that job profile should contain objects with Process Logical Relations set to Yes. Y-Yes, N-No

Table 58. Create, model, update object profile (continued)

Option	Description
Define PSB Object Rules	Rules for the PSB object type are filter criteria that are used to specify one or more database objects to include in the object profile: **Select by PSB Qualifier** You can specify a single database name or use a wildcard expression to select a wider range of databases. Examples: PSBNAME, PS%%*, PS*, * **Display PSB List?** Lists the database objects that match the filter criteria of the qualifier name. If you intend to include or exclude specific database objects, you must display the list generated by the qualifier and select those objects from the list. Y-Yes, N-No **Include/Exclude** You can include or exclude any number of database objects from the object profile. The best practice procedure is to start with a large group of included objects, and then exclude a few selected objects from the list. I-Include, E-Exclude **Process Dependent Indexes** Specify whether dependent indexes should be processed appropriately according to the task. For example, database reorganization requires that dependent indexes be regenerated. However, no dependent index processing is required for an image copy task. Therefore a database reorganization job profile should have an object profile containing objects with Process Dependent Indexes set to Yes. Y-Yes, N-No **Process Logical Relations** Specify whether logical relationships between separate databases should be recognized and processed appropriately according to the task. If a particular job profile task requires processing of logical relationships, the object profile associated with that job profile should contain objects with Process Logical Relations set to Yes. Y-Yes, N-No

Table 58. Create, model, update object profile (continued)

Option	Description
Define DBRC Group Rules	Rules for the DBRC object type are filter criteria that are used to specify one or more database objects to include in the object profile. DBRC group types include: • CAGRPS (CG) • DBDSGRPS (CD) • RECOVGRPS (CR) • DBGRPS (CB) • All DBRC Groups (DR) The following default filters are set for DBRC group rules: • Only single DBRC objects can be selected; wildcard expressions are not valid. • Include only • Process dependent indexes is set to no • Process logical relationships is set to no
Expand with All Rules Applied	primary index, secondary index, partition name, area name, DD name

Chapter 25. Utility profile overview and reference

A utility profile is a configuration file that defines an IMS maintenance task, and identifies the IMS Tools functions required for the task, plus the sequence in which the functions are performed.

Utility profile overview

A *job profile* combines the specifications in an object profile and a utility profile to generate a single JCL job that performs a database maintenance task for a specific IMS resource.

- The *utility profile* defines the database maintenance task (utility), the individual IMS Tools functions required for that task, and the sequence in which the functions are performed.
- The *object profile* defines the specific IMS resources (objects) where the generated JCL job is run.

Example utility profile specification:

- Task: Database reorganization
- Required IMS Tools functions and sequence: 1) unload, 2) load, 3) index build, 4) pointer check, 5) etc.

Topics:

Manage utility profile reference

The Manage Utility Profiles interface provides the options to manage existing utility profiles and create new utility profiles in your IMS Administration Tool environment.

Table 59. Manage Utility Profiles

Option	Description
Display Filters	All utility profiles in the IMS Administration Tool environment are initially listed. You can control the number of utility profiles that display by using the following filter criteria: **IMSID Filter** Specify an IMSID or IMSID wildcard expression to control the number of utility profiles that display. Examples: IMS1, IM*, * **Creator Filter** Specify a utility profile creator name or creator name wildcard expression to control the number of utility profiles that display. Example: USER* **Profile Filter** Specify a utility profile name or name wildcard expression to control the number of utility profiles that display. Example: PROFI*

Table 59. Manage Utility Profiles (continued)

Option	Description
Create	Create a new utility profile. A utility profile is created for a single IMS environment (IMSID) and includes specifications for one or more functions that are required to perform a database maintenance task.
Sort	Sort the utility profile list display. Opens the Sort Columns panel. You can specify the sequence order (values: 1-5) for each field to be sorted and the sort orders for each field (A-Ascending or D-Descending).
D (delete)	Delete an existing utility profile. A Delete Confirmation window requests confirmation of the action. The profile must have the "Update" access control (Share Option) set to allow this action for users other than the utility profile creator.
M (model)	Create (define) a new utility profile based on (modeled after) the attributes of the selected utility profile. The IMSID Selection List allows you to apply this additional utility profile to another IMS environment. A double asterisk (**) preceding the modeled name in the Utility Profile Options view indicates the need to change the profile name. A different profile name is required if the new profile is being created for the same IMSID as the original profile.
U (update)	Update an existing utility profile. The profile must have the "Update" access control (Share Option) set to allow this action for users other than the utility profile creator.
V (view)	View an existing utility profile. The profile must have the "Update" or "View" access control (Share Option) set to allow this action for users other than the utility profile creator.

Create, model, update utility profile reference

The Manage Utility Profiles interface provides the options to create, model, and update utility profiles in your IMS Administration Tool environment.

Table 60. Create, model, update utility profile

Option	Description
Creator	The TSO user ID (owner) of the utility profile. This field is pre-populated with the user of the current session.
IMSID	The 1-4 character name of the IMS subsystem where this utility profile applies. This field is populated with the IMSID previously selected for this utility profile.

Table 60. Create, model, update utility profile (continued)

Option	Description
Profile Name	Any user-defined name for the utility profile (maximum of 24 characters).
Description	A user-defined phrase to describe the utility profile (maximum of 24 characters).
Share Option	Access control setting for the management of this utility profile by users other than the profile creator. **Update** Other users can edit (update) and make changes to this utility profile. **View** Other users can only view the utility profile details. No changes to the utility profile are allowed by users with this access control. **None** Other users have no edit or view access to this utility profile.
Enter Sequence Numbers to Add Functions	The Utility Profile Options view lists all IMS Tools functions that have been registered to the IMS Administration Tool environment. Assign sequence numbers to the functions that are required to perform the task. The numbers indicate the order in which the functions are to be performed. The job profile uses the combination of templates for these functions to build a single JCL job that can perform the task for the IMS resource specified in the object profile.
Update a Function Template	You can edit (update) the JCL code (template) for the selected function. **Update a function template** Display the template to modify the JCL code. **View a function template** Display the template to view the JCL code only. **Enter sequence numbers to add and/or resequence functions** Add new sequence numbers, remove sequence numbers, rearrange sequence numbers.

IMS maintenance tasks

This reference topic summarizes all the functions (IMS maintenance tasks) that are supported for the Run IMS utilities (JCL generation) function.

Available functions vary depending on which IMS Tools products are registered to IMS Administration Tool.

JCL generated by the Run IMS utilities (JCL generation) function can be executed in non-IMS-managed ACBs environment and in IMS-managed ACBs environment. However, JCL for some product functions must be modified before they can be executed in IMS-managed ACBs environment.

The following table summarizes IMS Tools product functions that the Run IMS utilities (JCL generation) function supports and whether the generated template JCL requires modification to run with IMS-managed ACBs.

Use this table to determine whether template JCL modification is required to run a product function in an IMS-managed ACBs environment. For example, the Required template modifications for IMS-managed ACBs column for the Analyze DEDB Area Offline function of IMS High Performance Fast Path Utilities contains two tasks; this means that you must modify the generated JCL to use it in an IMS-managed ACBs

environment. Also see “Required template modifications for IMS-managed ACBs environment” on page 192.

Register IMS Administration Tool variables for IMS-managed ACBs

To execute any of the generated product function JCL in an IMS-managed ACBs environment, you must register IMS Administration Tool variables.

1. Open the Keyword Variables panel by either of the following methods:
   - **Setup and Administration** > **Update Product Registry** > **Variable Management** > **Keyword Variables**
   - **Run IMS Utilities** > **Settings** > **Variable Management** > **Keyword Variables**
2. If you use the IMS Catalog Definition exit routine (DFS3CDX0), register variable USERLIB. For variable USERLIB, specify the data set that includes the DFS3CDX0 load module member.
3. If IMSCATHLQ is listed in the Required template modifications for IMS-managed ACBs column in Table 61 on page 188 for the product function that you want to run, specify the high-level qualifier of the IMS catalog to variable CATHLQ.
4. Ensure that the conditions and requirements to run the product function are met. For example, most product functions require that IMS catalog be registered to RECON data sets. Some product functions require the IMS Catalog Definition exit routine (DFS3CDX0) and some require IMS system to be online. For conditions and requirements of each product function, see the product documentation of the IMS Tools product that you are using.

Table 61. IMS maintenance tasks

Function name	**IMS utility**	**Required template modifications for IMS-managed ACBs** **Note: Variable registration is required for any JCL**
Analyze DEDB Area Offline	IMS High Performance Fast Path Utilities	• “Add SGLXLOAD” on page 192 • “Add IMSCATHLQ” on page 192
Analyze DEDB Area Online	IMS High Performance Fast Path Utilities	No modification required.
Build non-FP Index/ILDS Offline	IMS Index Builder	• “Add SGLXLOAD” on page 192 • “Add USERLIB” on page 192 • “IMS Index Builder” on page 193
Build non-FP Sec. Index w/WF1	IMS Index Builder	• “Add SGLXLOAD” on page 192 • “Add USERLIB” on page 192 • “IMS Index Builder” on page 193
Build FP Secondary Index Offline	IMS High Performance Fast Path Utilities	• “Add SGLXLOAD” on page 192 • “Add IMSCATHLQ” on page 192
Check DBD Consistency	IMS Library Integrity Utilities	This function does not support IMS directory and IMS catalog.
Clean-up RECONs for D/R	IMS Database Recovery Facility Extended Functions	No modification required.
Clone one or more databases	IMS Cloning Tool	No modification required.
Collect DB Sensor Data	IMS Solution Packs Data Sensor	“Add SGLXLOAD” on page 192

Table 61. IMS maintenance tasks (continued)

Function name	IMS utility	Required template modifications for IMS-managed ACBs Note: Variable registration is required for any JCL
Collect FP Sensor Data Offline	IMS Solution Packs Data Sensor	• "Add SGLXLOAD" on page 192 • "Add IMSCATHLQ" on page 192
Collect RECOV Sensor Data	IMS Solution Packs Data Sensor	No modification required.
Convert to HALDB offline	IMS HALDB Toolkit	"Add SGLXLOAD" on page 192
Convert to HALDB online	IMS HALDB Toolkit	"Add SGLXLOAD" on page 192
Create a Change Accum	IMS High Performance Change Accumulation Utility	No modification required.
Create a Point-in-Time CA	IMS High Performance Change Accumulation Utility	No modification required.
Create a Recovery Point	IMS Database Recovery Facility Extended Functions	No modification required.
Create DBD/PSB Hierarchy Map	IMS Library Integrity Utilities	To generate a hierarchy map of the IMS catalog database, see "IMS Library Integrity Utilities" on page 193 and create a template.
Create DBD/PSB Map from ACB	IMS Library Integrity Utilities	This function does not support IMS directory and IMS catalog database.
Create IC to prior IC or CA	IMS Database Recovery Facility	No modification required.
Create IC to Current Time	IMS Database Recovery Facility	No modification required.
Create IC to Timestamp	IMS Database Recovery Facility	No modification required.
DELETE/DEFINE Database(s)	z/OS DFSMS Access Method Services (Template supplied by IMS Administration Tool)	No modification required.
Extend DEDB Area Online	IMS High Performance Fast Path Utilities	No modification required.
Extract DEDB Segments Offline	IMS High Performance Fast Path Utilities	• "Add SGLXLOAD" on page 192 • "Add IMSCATHLQ" on page 192
Extract DEDB Segments Online	IMS High Performance Fast Path Utilities	No modification required.
Fast Backup (Offline)	IMS High Performance Image Copy	No modification required.
Health Check Recovery Assets	IMS Database Recovery Facility Extended Functions	No modification required.
Identify Recovery Points	IMS Database Recovery Facility Extended Functions	No modification required.
Image Copy with Pointer Check	IMS High Performance Image Copy	No modification required.

Table 61. IMS maintenance tasks (continued)

Function name	IMS utility	Required template modifications for IMS-managed ACBs **Note: Variable registration is required for any JCL**
Initialize DEDB Area Offline	IMS High Performance Fast Path Utilities	• "Add SGLXLOAD" on page 192 • "Add IMSCATHLQ" on page 192
Monitor DB Space	IMS High Performance Pointer Checker	"Add IMSCATHLQ" on page 192
Pointer Check (non-FP)	IMS High Performance Pointer Checker	"Add SGLXLOAD" on page 192
Pointer Check with HASH (non-FP)	IMS High Performance Pointer Checker	"Add SGLXLOAD" on page 192
Prefix Resolution/Update	IMS High Performance Prefix Resolution	• "Add SGLXLOAD" on page 192 • "Add USERLIB" on page 192 • "Add IMSCATHLQ" on page 192 • "IMS High Performance Prefix Resolution" on page 193
Print DEDB Area DMAC Offline	IMS High Performance Fast Path Utilities	• "Add SGLXLOAD" on page 192 • "Add IMSCATHLQ" on page 192
Print DEDB Area DMAC Online	IMS High Performance Fast Path Utilities	No modification required.
Recover to Current	IMS Database Recovery Facility	No modification required.
Recover to Current (DUP)	IMS Database Recovery Facility	No modification required.
Recover to Current (PRO+DUP)	IMS Database Recovery Facility	No modification required.
Recover to LastIC	IMS Database Recovery Facility	No modification required.
Recover to LastIC (DUP)	IMS Database Recovery Facility	No modification required.
Recover to LastIC (PRO+DUP)	IMS Database Recovery Facility	No modification required.
Recover to LastPITCA	IMS Database Recovery Facility	No modification required.
Recover to LastPITCA (DUP)	IMS Database Recovery Facility	No modification required.
Recover to LastPITCA (PRO+DUP)	IMS Database Recovery Facility	No modification required.
Recover to PITCATime	IMS Database Recovery Facility	No modification required.
Recover to PITCATime (DUP)	IMS Database Recovery Facility	No modification required.
Recover to PITCATime (PRO+DUP)	IMS Database Recovery Facility	No modification required.
Recover to Timestamp	IMS Database Recovery Facility	No modification required.
Recover to Timestamp (DUP)	IMS Database Recovery Facility	No modification required.
Recover to Timestamp (PRO+DUP)	IMS Database Recovery Facility	No modification required.

Table 61. IMS maintenance tasks (continued)

Function name	IMS utility	Required template modifications for IMS-managed ACBs **Note: Variable registration is required for any JCL**
Register database(s) to DBRC	IMS Database Recovery Control Facility (DBRC) (Template supplied by IMS Administration Tool)	No modification required.
Reload Database Offline (non-FP)	• IMS High Performance Load • IMS Database Reorganization Expert	No modification required.
Reload DEDB Area Offline	IMS High Performance Fast Path Utilities	• “Add SGLXLOAD” on page 192 • “Add IMSCATHLQ” on page 192
Reorg w/Shadows Offline (non-FP)	IMS Database Reorganization Expert	No modification required.
Reorg Database Offline (non-FP)	IMS Database Reorganization Expert	No modification required.
Reorg Database Online (non-FP)	IMS Online Reorganization Facility	No modification required.
Reorg DEDB Area w/Shadow Offline	IMS High Performance Fast Path Utilities	• “Add SGLXLOAD” on page 192 • “Add IMSCATHLQ” on page 192
Reorg DEDB Area Online	IMS High Performance Fast Path Utilities	No modification required.
Repartition HALDB offline	IMS HALDB Toolkit	“Add SGLXLOAD” on page 192
Repartition HALDB online	IMS HALDB Toolkit	“Add SGLXLOAD” on page 192
Simulate Repartitioning	IMS HALDB Toolkit	“Add SGLXLOAD” on page 192
Start Database(s)	IMS Administration Tool	No modification required.
Stop Database(s)	IMS Administration Tool	No modification required.
Unload Database Offline (non-FP)	• IMS High Performance Unload • IMS Database Reorganization Expert	No modification required.
Unload Database Online (non-FP)	IMS Online Reorganization Facility	No modification required.
Unload DEDB Area Offline	IMS High Performance Fast Path Utilities	• “Add SGLXLOAD” on page 192 • “Add IMSCATHLQ” on page 192
Verify Recovery Assets	IMS Database Recovery Facility Extended Functions	No modification required.

Required template modifications for IMS-managed ACBs environment

Follow the instructions to run product functions in an IMS-managed ACBs environment.

Look up Table 61 on page 188 to identify which template modifications are required to run the product function, and modify the template by following the instructions in this topic.

Important: Before you run any product function by using a JCL template in an IMS-managed ACBs environment, you must register IMS Administration Tool variables. See "Register IMS Administration Tool variables for IMS-managed ACBs" on page 188.

Add SGLXLOAD

Complete these steps only if the product function requires SGLXLOAD (See Table 61 on page 188).

1. Open the Template Management Panel using the ISPF interface.
   - **Setup and Administration** > **Update Product Registry** > **Function and Template Management**
   - **Run IMS Utilities** > **Settings** > **Function and Template Management**
2. Enter **M (Model)** in the line command next to the function that you want to run.
3. Add the following line to the STEPLIB DD statement:

```
//      DD  DISP=SHR,DSN=?SGLXLOAD
```

Add USERLIB

Complete these steps only if the product function requires USERLIB (See Table 61 on page 188).

1. Open the Template Management Panel using the ISPF interface.
   - **Setup and Administration** > **Update Product Registry** > **Function and Template Management**
   - **Run IMS Utilities** > **Settings** > **Function and Template Management**
2. Enter **M (Model)** in the line command next to the function that you want to run.
3. Add the following three lines to the STEPLIB DD statement:

```
%SELECT ?USERLIB NE ''
//         DD DISP=SHR,DSN=?USERLIB
%ENDSEL
```

Add IMSCATHLQ

Complete these steps only if the product function requires IMSCATHLQ (See Table 61 on page 188).

1. Open the Template Management Panel using the ISPF interface.
   - **Setup and Administration** > **Update Product Registry** > **Function and Template Management**
   - **Run IMS Utilities** > **Settings** > **Function and Template Management**
2. Enter **M (Model)** in the line command next to the function that you want to run.
3. Add %SELECT, an IMSCATHLQ statement and a ?CATHLQ variable, and a %ENDSEL statement. Refer to the following example. Make sure you comply with the IMSCATHLQ control statement syntax of the IMS Tools product that you want to run.

```
%SELECT ?CATHLQ NE ''
     IMSCATHLQ=?CATHLQ
%ENDSEL
```

IMS Index Builder

If you want to use the DFSDF member instead of DFS3CDX0, complete the following steps:

1. Open the Template Management Panel using the ISPF interface.
   - **Setup and Administration** > **Update Product Registry** > **Function and Template Management**
   - **Run IMS Utilities** > **Settings** > **Function and Template Management**
2. Enter **M (Model)** in the line command next to the function that you want to run.
3. Add the PROCLIB DD statement, and the DFSDF statement to the IIUIN control statement as follows:

```
//PROCLIB DD DISP=SHR,DSB=?PROCLIB
...
...
//IIUIN DD  *
  ...
 DFSDF ?DFSDF
```

IMS High Performance Prefix Resolution

If you want to use the DFSDF member instead of DFS3CDX0, complete the following steps:

1. Open the Template Management Panel using the ISPF interface.
   - **Setup and Administration** > **Update Product Registry** > **Function and Template Management**
   - **Run IMS Utilities** > **Settings** > **Function and Template Management**
2. Enter **M (Model)** in the line command next to the function that you want to run.
3. Add the PROCLIB DD statement, and the DFSDF statement to the FABYIN control statement as follows:

```
//PROCLIB DD DISP=SHR,DSB=?PROCLIB
...
...
//FABYIN DD *
  ...
 DFSDF=?DFSDF
```

IMS Library Integrity Utilities

Complete these steps for the Create DBD/PSB Hierarchy Map function of IMS Library Integrity Utilities.

1. Open the Template Management Panel using the ISPF interface.
   - **Setup and Administration** > **Update Product Registry** > **Function and Template Management**
   - **Run IMS Utilities** > **Settings** > **Function and Template Management**
2. Enter primary command **C Create a function**.
3. Create a function by using the following template for DBD/PSB Hierarchy Map.

```
//*-------------------------------------------------*
//*  IMS LIBRARY INTEGRITY UTILITIES                *
//*  IMS Catalog Manager Utility                    *
//*   Template :                                    *
//*    DBD/PSB map and reports of active instance   *
//*-------------------------------------------------*
//STEP     EXEC PGM=FABXCATM
//STEPLIB  DD DISP=SHR,DSN=?SHPSLMD0
//         DD DISP=SHR,DSN=?RESLIB
//         DD DISP=SHR,DSN=?SGLXLOAD
//DFSRESLB DD DISP=SHR,DSN=?RESLIB
//IMS      DD DISP=SHR,DSN=?PSBLIB
//         DD DISP=SHR,DSN=?DBDLIB
//DFSVSAMP DD *
4096,109
16384,100
IOBF=(4096,100,N,N)
/*
```

```
//PROCLIB  DD DISP=SHR,DSN=?PROCLIB
//RECON1   DD DISP=SHR,DSN=?RECON1
//RECON2   DD DISP=SHR,DSN=?RECON2
//RECON3   DD DISP=SHR,DSN=?RECON3
//*
//FABXCRP0 DD SYSOUT=*
//FABXCRP1 DD SYSOUT=*
//FABXCRP2 DD SYSOUT=*
//FABXPPRM DD *
DLI,FABXCATM,DFSCP001,,,,,,,,,,Y,N,,,,,,,,,,,,DFSDF=?DFSDF
//FABXCIN DD *
  PROC   FUNC=MAP,INPUT=CATALOG_DB,INSTANCE=ACTIVE
  REPORT MAP_REPORT=YES
%SELECT %DBD
  DBD NAME=?DBD
%ENDSEL
%SELECT %PSB
  PSB NAME=?PSB
  END
%ENDSEL
```

Chapter 26. Job profiles overview and reference

A job profile is a configuration file that combines a utility profile and an object profile to build a single JCL job that can perform a database maintenance task for a specific IMS environment.

Job profile overview

The job profile combines the one or more function templates specified by the utility profile into a single master JCL job. The master JCL code is a correctly sequenced concatenation of the individual function template code provided by the utility profile.

The JCL is applicable to an IMS environment that is defined by the object profile.

The templates for each function are selected by the scope level (GLOBAL, SYSTEM, IMSID, or PROFILE) that is appropriate for this task.

During the master JCL build process, variable expressions in the templates are populated with appropriate values.

Values are selected by the scope level (GLOBAL, SYSTEM, IMSID) that is appropriate for this task.

When creating the job profile, any variable can be further customized to contain a value that is appropriate only for this specific job profile (scope=PROFILE).

Additionally, some variables and values are dynamically provided during the JCL build process. Sources for these dynamic variables include:

- **Environment** (z/OS system information)
- **Registry** (IMS Tools product information)
- **Discovery** (IMS system information)

Example job profile

Run database reorganization on PSB1

- Object profile: PSB1
- Utility profile: Database reorganization

Example database maintenance tasks for JCL generation

- Run database reorganization on DBD1
- Backup databases for application identified by PSB1
- Recover databases for application identified by PSB1
- Clone one or more databases
- Print DBD/PSB hierarchy map
- Repartition a HALDB database
- Collect sensor data for a group of databases
- Print DEDB Area DMAC

Topics:

Manage Job Profiles reference

The Manage Job Profiles interface provides the options to manage existing job profiles and create new job profiles in your IMS Administration Tool environment.

Table 62. Manage Job Profiles

Option	Description
Display Filters	All job profiles in the IMS Administration Tool environment are initially listed. You can control the number of job profiles that display by using the following filter criteria: **IMSID Filter** Specify an IMSID or IMSID wildcard expression to control the number of job profiles that display. Examples: IMS1, IM*, * **Creator Filter** Specify a utility profile creator name or creator name wildcard expression to control the number of job profiles that display. Example: USER* **Profile Filter** Specify a utility profile name or name wildcard expression to control the number of job profiles that display. Example: PROFI*
Create	Create a new job profile. A job profile is created for a single IMS environment (IMSID) and includes specifications for a utility profile and an object profile that are combined to build a master JCL job that can perform a database maintenance task.
Sort	Sort the job profile list display. Opens the Sort Columns panel. You can specify the sequence order (values: 1-5) for each field to be sorted and the sort orders for each field (A-Ascending or D-Descending).
D (delete)	Delete an existing job profile. A Delete Confirmation window requests confirmation of the action. The profile must have the "Update" access control (Share Option) set to allow this action for users other than the job profile creator.
M (model)	Create (define) a new job profile based on (modeled after) the attributes of the selected job profile. An IMSID Selection List is not available. The utility profile and object profile specified in the original job profile are already associated with the current IMSID. The current IMSID association must remain consistent. A double asterisk (**) preceding the modeled name in the Job Profile Options view indicates the need to change the profile name. A different profile name is required if the new profile is being created for the same IMSID as the original profile.

Table 62. Manage Job Profiles (continued)

Option	Description
U (update)	Update an existing job profile. The profile must have the "Update" access control (Share Option) set to allow this action for users other than the job profile creator.
V (view)	View an existing job profile. The profile must have the "Update" or "View" access control (Share Option) set to allow this action for users other than the job profile creator.

Build JCL for Job Profile reference

The Manage Job Profiles interface provides the options to build the master JCL for the database maintenance task for your IMS Administration Tool environment.

The master JCL code is a correctly sequenced concatenation of the individual function template code provided by the utility profile.

Table 63. Build JCL for Job Profile

Option	Description
Job Profile/IMSID	The pre-populated name of the selected job profile and the ID of the IMS environment that the job profile belongs to.
Creator/Last Updated by/ Timestamp	The pre-populated name of the creator of this job profile, the name of the user who last modified this job profile, and the date and time when the last update was made.
Execute or Build JCL Only	Select to build and immediately run the JCL, or only build and save the JCL. • Execute (run) JCL • Build JCL Only (run at a later time)
Edit Generated JCL	Select to edit the generated JCL before it is run. • Yes • No
JCL Output Data Set	Specify the name and location of the data set where the JCL output will reside.
Member	If you use a partition data set, specify the name of the member where the JCL output will reside within the data set.
Job Statements	Specify the environment-specific job statement information that prefixes the generated JCL. If you previously specified a job statement data set for use by this job profile (Job Profile Generation Options), the build process uses the values from that data set. You do not need to re-enter the job statement information in these fields. However, if you specify alternative job statement information in these fields, the new values override the values from the job statement data set.

Table 63. Build JCL for Job Profile (continued)

Option	Description
Output Data Set Allocation	If the specified JCL output data set does not exist, the Output Data Set Allocation interface appears. Use this interface to confirm or adjust any JCL output data set characteristics and perform the allocation.

Manage Variables for Job Profile reference

The Manage Job Profiles interface provides the options to manage the variables for existing job profiles in your IMS Administration Tool environment.

The Manage (DDNAME/Keyword) Variables for Job Profile interface displays all variables and values available to the IMS Administration Tool environment.

The following **source types** can apply to variables:

- GLOBAL (scope level)

  The initial default scope designation for all product variables and values when they are initially registered to the IMS Administration Tool environment.
- SYSTEM (scope level)

  A scope=GLOBAL variable and value that has been modified (modeled) using the variable management interface.
- IMSID (scope level)

  A scope=GLOBAL or SYSTEM variable and value that has been modified (modeled or updated) using the variable management interface.
- PROFILE (scope level)

  A scope=GLOBAL or SYSTEM or IMSID variable and value that has been modified (modeled or updated) using the manage job profile interface.
- ENVIRONMENT (dynamic)

  z/OS system information dynamically provided during the final JCL build process.
- REGISTRY (dynamic)

  IMS Tools product information dynamically provided during the final JCL build process.
- DISCOVERED (dynamic)

  IMS system information dynamically provided during the final JCL build process.

Table 64. Manage Variables for Job Profile

Option	Description
Create a DDNAME Variable	Create a new DDNAME variable and values. Values for DDNAME variables can include data set names and the DDNAME parameter itself. Because JCL code often contains concatenated data set names, all DDNAME variables must be assigned a rule that specifies how the variable values are substituted in the code during a final JCL job build: • **Replace** The value for this variable replaces any existing value or values. • **Before** The value for this variable is applied at the beginning of any existing DDNAME concatenation. • **After** The value for this variable is applied at the end of any existing DDNAME concatenation.
Create a Keyword Variable	Create a new keyword variable and value.
Delete	Remove a variable name and value from the IMS Administration Tool environment.
Model	Create (define) a new variable based on (modeled after) the attributes of the selected variable.
Update	Update an existing variable value.

Create Job Profile reference

The Manage Job Profiles interface provides the options to create new job profiles in your IMS Administration Tool environment.

Table 65. Create Job Profile

Option	Description
Creator	The TSO user ID (owner) of the job profile. This field is pre-populated with the user of the current session.
IMSID	The 1-4 character name of the IMS subsystem where this job profile applies. This field is populated with the IMSID previously selected for this job profile.
Profile Name	Any user-defined name for the job profile (maximum of 24 characters).
Description	A user-defined phrase to describe the job profile (maximum of 24 characters).

Table 65. Create Job Profile (continued)

Option	Description
Share Option	Access control setting for the management of this job profile by users other than the profile creator. **Update** Other users can edit (update) and make changes to this job profile. **View** Other users can only view the job profile details. No changes to the job profile are allowed by users with this access control. **None** Other users have no edit or view access to this job profile.
Add One Object Profile	Select one object profile from the list of profiles available for this IMS environment (IMSID). You can use wildcard expressions to filter the list by the Creator ID and/or Profile name. You can also arrange the list display by specifying the sequence and order of items under each column header.
Add One Utility Profile	Select one utility profile from the list of profiles available for this IMS environment (IMSID). You can use wildcard expressions to filter the list by the Creator ID and/or Profile name. You can also arrange the list display by specifying the sequence and order of items under each column header.
Generate Job If Errors	Select an option that specifies how an error is handled when the JCL is generated. **Y-Yes** If an error occurs, continue to generate the JCL. **N-No** If an error occurs, do not generate the JCL. **W-Warning** If an error occurs,
Job Statement Data Set	You can specify a data set that stores the environment-specific job statement information that prefixes generated JCL. The job statement information provided by this data set is used by default by your job profiles, unless you provide overriding values at the time a job profile created, modeled, or updated. **Data Set Name** The name and location of the data set where the job statement information resides. **Member** If you use a partition data set, the name of the member where the job statement information resides within the data set.

Part 7. IMS SPUFI (IMS SQL processing using file input)

IMS SQL processing using file input (SPUFI) function allows you to develop interactive SQL commands, run the SQL commands, and review the resulting output from the SQL command.

Topics:

Chapter 27. IMS SPUFI overview

IMS SQL processing using file input (IMS SPUFI) function of IMS Administration Tool allows you to directly interact with an IMS system by developing and running interactive SQL statements and reviewing the resulting output.

You can issue SQL statements SELECT, INSERT, UPDATE, and DELETE to view, insert, update, and delete data in IMS databases.

IMS SQL runtime language environments

The SQL statements that you issue through the ISPF interface are executed as IMS application programming API in the IMS SPUFI application program in z/OS. You can select COBOL or Java for the language environment to execute SQL statements. Based on the selected language environment, the IMS SPUFI application is executed as an IMS COBOL application or IMS Java application. Therefore, considerations and restrictions that apply when using COBOL and Java applications with IMS SQL also apply to IMS SPUFI.

The SQL statements that IMS SPUFI supports are SELECT, INSERT, DELETE, and UPDATE. The syntax of the statements differ between COBOL and Java. For more information, see the topic "SQL statements" in *IMS Application Programming APIs*.

The IMS SPUFI COBOL or Java application runs as a sub task in the IMS Tools Base DAI SOT address space as well as other functions of IMS Administration Tool. The difference from other functions is that the COBOL application runs as IMS BMP and the Java application runs as IMS JBP. The IMS JBP uses type-2 IMS Universal drivers. Therefore, considerations and restrictions that apply when using type-2 IMS Universal drivers also apply to IMS SPUFI. For more information, see the topic "IMS Universal drivers overview" in *IMS Application Programming*.

Restrictions:

- The IMS catalog must be defined to the IMS system to which the SQL statements are issued.
- IMS Administration Tool must be run on the same z/OS LPAR as the IMS system because the IMS SPUFI application program runs as IMS JBP or BMP.
- Supported SQL statements are SELECT, INSERT, DELETE, and UPDATE. Other SQL statements are not supported by IMS SPUFI.
- SQLIMS restrictions that are described in the topic "SQL considerations and restrictions for COBOL" in *IMS Application Programming* also apply to IMS SPUFI if you use COBOL to execute SQL statements.
- The IMS catalog database must be registered to DBRC; otherwise, the function fails.

To select the language environment, specify either COBOL or JBP (Java batch processing) for the SQLLANG variable.

COBOL
: If COBOL is specified for variable SQLLANG or if variable SQLLANG is not defined, IMS SPUFI COBOL application runs as IMS BMP.

  The IMS SPUFI COBOL application uses SQLIMS, which is supported by IMS. SQLIMS requires each SQL statement to begin with EXEC SQLIMS and end with END-EXEC. However, you do not need to write EXEC SQLIMS and END-EXEC statements on the IMS SPUFI panels. IMS SPUFI internally adds EXEC SQLIMS and END-EXEC statements. You can simply start a SQL statement with SELECT, INSERT, UPDATE, or DELETE.

  COBOL is the default value for the SQLLANG variable.

JBP
: If JBP is specified for variable SQLLANG, IMS SPUFI Java application runs as IMS JBP with type-2 IMS Universal drivers.

If you specify JBP for variable SQLLANG, you must also specify the path prefix for the ATY jar file as a variable. For more information, see "Setting up a Java environment for IMS SPUFI JBP" on page 41.

About Structured Query Language for IMS

Because an IMS database is hierarchical in structure, IMS database elements must be mapped to relational database elements when using SQL.

For example, a database segment definition defines the fields for a set of segment instances similar to the way that a relational table defines columns for a set of rows in a table. In this regard, segments relate to tables, and fields in a segment relate to columns in a table. An occurrence of a segment in a database corresponds to a row in a table.

Table 66. Relational versus IMS hierarchical database structure

Relational DB	**IMS DB**
Table	Segment
Column	Field
Row	Segment instance
Scheme	PCB
Table primary key	Segment unique key

When you write an SQL statement, you specify what you want done, not how to do it. To access data, for example, you need only to name the segment and fields that contain the data. You do not need to describe how to get to the data.

IMS transforms each SQL statement (that is, the specification of a result table), into a sequence of operations for data retrieval or modifications.

IMS database structure - the role of PSB for SQL

IMS database is a hierarchical database where data is stored at different levels and each entity is dependent on higher level entities. Each level in the hierarchy contains segments, which are groupings of similar or related data.

A segment is the smallest unit of information that is transferred to and from an application program during any input-output operation.

IMS control blocks define the structure of the IMS database and a program's access to them. The database descriptor (DBD) control block describes the complete physical structure of the database, such as its organization and access method, the segments and fields in a database record, and the relationship between the types of segments.

However, the application programs that process data can have different views of the database. These views are called application data structure and are defined in the program specification block (PSB).

PSBs define the database view and logical message destinations for the IMS database that is appropriate for applications such as SQL that rely on a relational database structure.

The database view for applications provided by a PSB is called a program communication block (PCB). The PSB defines one PCB for each DL/I database that the application program accesses. The number of PCBs depends on the number of databases to be used by the program. There can be many PCBs in a PSB, allowing a program to communicate with (access) multiple IMS databases.

A PCB also defines the access levels allowed to a program. The allowed accesses include SELECT, UPDATE, INSERT, and DELETE. To use SQL statements to browse or update IMS data, you must use a PSB

that contains a PCB that provides the required level of access to the database, to the segments in that database, and to the fields in those segments.

A PCB can also allow a program to use different access paths through a database. It can allow the program to access a database through a secondary index or a logical relationship. The program view of the hierarchical structure of the database can be different from the hierarchical structure defined in the DBD.

Accessing IMS data - IMS catalog

The IMS catalog is the single, authoritative source of database and application metadata for all client applications. The data stored in the IMS catalog includes all the metadata that is traditionally held in the DBD and PSB libraries.

You can write SQL to access IMS data based on the metadata information available in the IMS catalog database. IMS SPUFI requires that the IMS catalog be enabled and loaded with the database metadata needed by SQL.

Like other types of IMS databases, the structure of the IMS catalog is defined by database descriptions (DBDs), and access to the IMS catalog is defined by program specification blocks (PSBs).

The IMS catalog contains metadata derived from the DBD, PSB, and PCB control blocks that define the application and database views. The metadata includes information about the IMS database, including segments, segment names, the segment hierarchy, fields, field types, field names, fields offsets, and field lengths. For example the EXTERNALNAME parameter for a DBD segment or field is described in the IMS catalog metadata.

When an IMS application program requires access to the metadata in the catalog, a PSB to access the catalog database is automatically attached to the PSB that is loaded for the application. IMS can then use that PSB to access the metadata in the IMS catalog.

Commitment of database updates

IMS SPUFI issues a SYNC DL/I call to commit database updates at termination when all of the statements are processed successfully. It issues a ROLB DL/I call at termination if one or more SQL statements fail. However, when SQL statements contain only SELECT statements and all of the SELECT statements are processed successfully, it issues a ROLB call instead of the SYNC call to reduce unnecessary commits.

Summary

The following outline provides a summary of using IMS SPUFI:

- Specify SQL statement and output formatting characteristics from the Set IMS SPUFI Options panel.
- Specify the IMS subsystem (IMSID).

  Use the question mark ("?") to obtain a list of available IMSIDs.
- Specify the required PSB.

  Use the question mark ("?") to obtain a list of PSBs associated with the selected IMSID.

  You can further expand the PSB information to view associated PCBs and the detail for each PCB (Table, Authority, and Column information).

  The PCB authority information shows the types of operations - such as Select, Update, Insert, and Delete - that IMS SPUFI can perform on the segments in the database.
- Specify input and output data set names.

  The data set names can be specified once and then reused repeatedly.

  Alternatively, a temporary output data set can be used, as specified by the temporary output data set characteristics.

Using data sets also means that a possibly-complicated set of SQL commands can persist from session to session rather than being lost upon exit.

- Enter or edit the SQL statements.

  The standard ISPF editor is opened on the input data set.
- Enter EXECSQL on the command line to process the SQL statements

  The ISPF interface uses the configured input and output data sets to record SQL statements and display SQL output.
- The results are placed in the output data set and the ISPF editor is opened (in read-only "browse" mode) on that output.

Chapter 28. Set IMS SPUFI options reference

Options are available to specify SQL statement characteristics and output formatting characteristics.

SQL Statement Characteristics

Table 67. SQL Statement Characteristics

Option	Description

SQL Terminator	Specifies the character that terminates each of multiple SQL statements in an input stream.
	Valid values include the semicolon (;) or the colon (:)
	Default value is the semicolon (;)
	Example:
	`SELECT*`
	`FROM DFSCAT00.FLDRMK`
	`;  <== terminator`

Max SELECT Lines	Specifies the maximum number of lines (rows) that a SELECT statement can return to the caller. Valid values = 1-99999 Default value = 250

Input EXEC Parameters for BMP or JBP

Table 68. Input EXEC Parameters for BMP or JBP

Option	Description
Normal Buffer (NBA)	Specifies a 4-digit number of Fast Path database buffers to be made available when the BMP or JBP region is activated. Valid values are 1 through 9999, or blank.
Overflow Buffer (OBA)	Specifies a 4-digit number of additional page-fixed buffers to be made available to the BMP or JBP region if the normal allotment is used. Valid values are 1 through 9999, or blank.

Output Formatting Characteristics

Table 69. Output Formatting Characteristics

Option	Description
Decimal Point	Specifies how IMS SPUFI displays decimal separators in its output. Valid values include the comma (,) or the period (.) Default value is the period (.) Example: `100.99 or 100,99`
MAX Numeric Field Width	Specifies the maximum column width for returned numeric data. If the numeric data returned is greater than this value, the field is populated with asterisks (*****). Valid values = 1-99 Default value = 33
MAX CHAR Field Width	Specifies the maximum column width for returned non-numeric (character) data. If the non-numeric data returned is greater than this value, the field is truncated at the specified field width. Valid values = 1-99 Default value = 80
Lines/Page of Listing	Specifies the number of lines to print on each page of listing or IMS SPUFI output. When the specified value is reached, column header rows are repeated. Valid values = 50-999 Default value = 60

Chapter 29. Run IMS SPUFI statements reference

IMS SQL processing using file input (SPUFI) allows you to issue pre-written SQL statements and review the resulting output.

IMS SPUFI is used to view data from an IMS database.

IMS SPUFI PSB and Data Set Settings

Table 70. IMS SPUFI PSB and Data Set Settings

Option	Description
IMSID	Specify the ID of the IMS subsystem to interact with. Enter a '?' to list the active IMS systems within the same LPAR.
PSB Name	Specify a PSB name associated with this IMSID. PSB selection methods: • Enter ? to display the list of PSBs associated with the selected IMS subsystem. • Select the name of the appropriate PSB from the PSB list. • From the PSB list, use the Expand line command to display the program view that provides further PSB and PCB details. The PSB program view provides the information detail required to help you construct valid SQL statements. **Note:** If the selected IMS subsystem is not catalog-enabled, the detailed program view cannot be obtained.
Input Data Set Name Member	Specify the data set member name that contains the stored SQL statements to run. • The input data set must be a pre-allocated sequential or a partition data set (PDS) with a record format of fixed block (FB) and a record length of 80 (LRECL). • Specify the PDS name along with the member name, or a sequential data set name with no member name. • The specified data set contains the stored SQL statements to run. • The SQL statements. in the data set can be edited before running. • There is no "list" (?) support for the member name field.

Table 70. IMS SPUFI PSB and Data Set Settings (continued)

Option	Description
Output Data Set Name	Optionally specify the pre-allocated sequential data set name for SQL output. If blank, IMS SPUFI uses a temporary output data set using the output file characteristics that are specified in the Temporary Output Data Set Characteristics section of the panel. • Space Units • Primary Amount • Secondary Amount Record Length • Record Format • Device Type

Part 8. IMS command processing

You can issue IMS commands and review responses from the IMS Administration Tool user interface.

Topics:

Chapter 30. IMS command processor overview

IMS Administration Tool command processor allows you to issue, analyze, and coordinate IMS commands across as many as 64 IMS regions on any number of z/OS images, all from a single point of control.

Topics:

IMS command processor features

The IMS Administration Tool command processor can simplify the issuing, analyzing, and coordinating of IMS commands.

You can use the IMS command processor to:

- Process both IMS type-1 and type-2 commands.
- Issue commands to and from 1 to 64 IMS systems simultaneously.
- Issue commands to any type of IMS system: DBCTL, DCCTL, or DB/DC.
- Pass commands to individual IMS systems, or to a group of IMS systems that are defined as a command group.
- Issue commands using any of the following methods:
  - Batch program
  - ISPF interface
  - Callable application programming interface (API)
- Provide powerful predefined procedures that can:
  - Automate online change processing
  - Clean up the dead letter queue
- Create a combined log for IMS messages, commands, and command responses.
- Manage messages that are to be suppressed from the IMS master terminal, the IMS Administration Tool message log, or the IMS secondary master.

When run as a batch program, the IMS command processor can:

- Provide database command response verification, command conversion, and simulate IMS responses.
- Verify successful command processing for database START, STOP, DBR, and DBD commands.
- Retry failed commands.
- Reissue commands that fail because a member of a command group is unavailable.
- Use automated online change.

Restriction: The following functions, which are supported by IMS Command Control Facility, are not supported by IMS Administration Tool.

- APPC/MVS and APPC/IMS
- Command processor list

For more information about compatibility and incompatibility between IMS Administration Tool and IMS Command Control Facility, see “Migration from IBM IMS Command Control Facility for z/OS” on page 41.

IMS command processor operation environments

The IMS Administration Tool command processor controls the issuing of commands to IMS.

Supported environments for issuing commands

The IMS Administration Tool command processor can issue commands in the following environments:

Batch program
When run as a batch program, the IMS command processor can run as an IMS BMP, IMS DL/I batch, or standard z/OS batch job.

IMS commands are read from an input data set and are processed one-at-a-time across all requested IMS systems.

ISPF interface
When IMS commands are entered from the ISPF interface, the commands are sent to the IMS Tools Base DAI SOT address space where IMS Administration Tool command processor runs as a subtask. Then the commands are routed to a single IMS system or multiple IMS systems that belong to an IMS command group.

IMS command callable application programming interface (API)
When run as an IMS command callable API, the IMS command processor routes the command that was passed by the calling program to either a specific IMS system or to a set of IMS systems that are contained in an IMS command group.

For all environments, IMS Administration Tool can issue commands either to an individual IMS system or up to 64 IMS systems in an IMS command group.

IMS Administration Tool command processor sends IMS commands to IMS Operations Manager (OM) region.

Every IMS system must be configured an IMS OM region to process IMS commands issued by IMS Administration Tool command processor. All IMS systems that belong to the same IMS command group must be managed by one OM region.

Applicable IMS system environment types are DBCTL, DCCTL, and DB/DC.

IMS command processor configurations

The combination of a command-issuing environment and a command routing interface results in a specific command processor configuration.

You can use the IMS command processor in any of the following configurations:

- “IMS Operations Manager (OM) configuration” on page 214

  The command processor issues commands to the IMS Operations Manager address space.
- “Local BMP configuration” on page 216

  The command processor issues commands to the local IMS where the BMP is attached using the ICMD/RCMD automated operator interface.

IMS Operations Manager (OM) configuration

IMS Administration Tool can issue commands to IMS through the IMS Operations Manager (OM) automated operator interface (AOI).

Operations Manager is part of the IMS Common Service Layer (CSL).

To use the IMS Operations Manager to route commands, the target IMS system must be connected to the IMS Operations Manager.

Restriction: If IMS Operations Manager routing is selected for an IMS system in a command group, then all IMS regions in the command group must use the same IMS Operations Manager.

The supported command-issuing environments and command-routing interfaces are illustrated in the following figure.

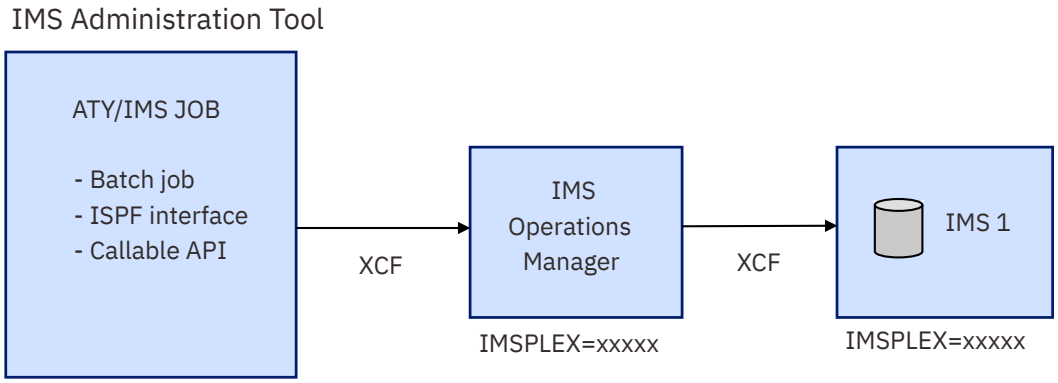

Figure 12. IMS Operations Manager (OM) configuration

The IMS OM configuration is supported when the IMS command driver runs in one of the following environments:

- Batch job (IMS BMP, IMS DL/I batch, or standard z/OS batch)
- ISPF interface
- Callable API

When you use this configuration, the IMS command driver must run in the same z/OS sysplex as the IMS OM.

IMS Administration Tool places no restrictions or limitations on commands when you use this configuration.

IMS OM support provides the following additional flexibility to IMS Administration Tool:

- Support for IMS Type-2 (OM) commands
- Formatting of IMS Type-2 (OM) command responses

Guidelines for IMS OM command routing interface

Advantages:

- A single instance of an IMS OM can be used by several IMS systems.

  A typical scenario would be all IMS systems in a data sharing environment. But it is not limited to systems in a data sharing environment.

  Example: A test environment, with many independent IMS systems, could share a single OM instance.
- Supports both type-1 and type-2 IMS commands
- Supports all IMS region types (DB/DC, DCCTL, DBCTL)
- No VTAM® setup
- No BMP scheduling (remote STC)

Disadvantages:

- Requires additional address spaces (Common Service Layer address spaces)
- Does not allow commands to be routed outside of a sysplex

Recommendations:

The IMS Operations Manager supports all IMS region types, as well as type-2 IMS commands. The Operations Manager is a good command routing interface choice under the following conditions:

- If it is not inconvenient for you to set up additional address spaces
- If you do not need to issue commands outside of the sysplex

Local BMP configuration

IMS Administration Tool can issue commands to IMS using a local batch message processing (BMP) configuration.

IMS Administration Tool can issue commands directly to an IMS where the IMS command driver is attached as an IMS BMP.

The supported command-issuing environments and command-routing interface are illustrated in the following figure.

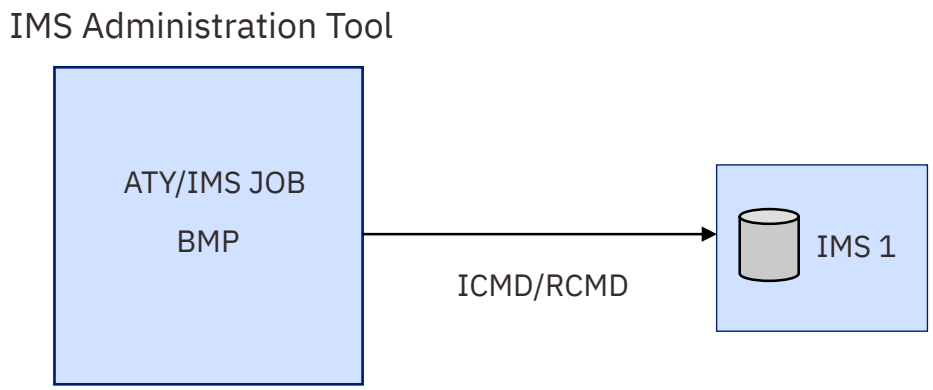

Figure 13. Local BMP configuration

The local BMP configuration is used if the IMS command driver runs as an IMS BMP.

Because IMS accepts only type-1 commands from the ICMD/RCMD DL/I, IMS Administration Tool cannot issue type-2 commands to an IMS system that uses this configuration.

Certain type-1 commands are either not allowed or do not perform as expected when IMS Administration Tool runs as a local BMP. IMS Administration Tool processes these commands uniquely when one of the following commands is encountered:

- /MOD commands
- Commands that change a database/AREA state (for example, /DBD, /DBR, /STA, and /STO)

IMS command groups overview

IMS Administration Tool passes commands to individual IMS systems, or to a group of IMS systems that are defined as an IMS command group.

Typically, IMS command groups are defined to associate together all IMS systems within an IMSplex. These multiple systems share databases that need to be kept in the same state.

All members of a command group must belong to the same IMSplex. IMS command groups allow you to issue IMS commands that are routed to only the members of the group within the IMSplex.

The best practice recommendation is for an IMS command group to contain all members of the IMSplex.

For certain environments where all IMS systems in an IMSplex are not actually data sharing, IMS command groups can be defined to associate together only a select number of IMS systems within the IMSplex. These select systems share databases that need to be kept in the same state.

An IMS command group consists of 1 to 64 IMS systems where commands can be distributed for processing. Typically these IMS systems share resources and keep events synchronized.

IMS command groups consist only of the members that are defined in the command group.

The IMS command group and the IMSplex can contain a different number of IMS regions. If this is the case, IMS Administration Tool verifies that the command was properly routed for only those members of the command group. If a command fails on an IMSplex member that is not part of the command group, IMS Administration Tool continues as if no error were encountered.

To register IMS command groups, use the ISPF interface: **Setup and Administration** > **Manage IMS Groups**.

IMS command log overview

An IMS command log can provide a single point of reference for viewing IMS commands and command responses for a specific IMS subsystem.

You can use one or more optional IMS command logs to capture IMS command and response information.

To activate IMS command logging, you specify the command log stream when you register individual IMS subsystems:

Setup and Administration > Register IMS Systems > Create > Register an IMS Subsystem > Command Processor Settings > Command Log Stream

Technical notes:

- An IMS command log is created through z/OS configuration and is defined as a z/OS System Logger log stream data set. See “Configuring z/OS system logger for audit log and IMS command log” on page 32.
- Multiple command logs can serve multiple IMS subsystems.
- You can name the command log stream the same as the audit log stream (recommended), or alternatively, you can specify a separate command log stream for each individual IMS subsystem.

Command store/forward overview

The command store/forward feature saves commands that fail because a member of a command group is unavailable. The saved commands are then run when the IMS region is started.

Command store/forward is a feature that can keep all members of a command group in synchronization. Command store/forward is used in an IMSplex to ensure that resources are in the same state (for example, stopped or started) across all members of the sysplex.

If a member of the command group is unavailable when the command driver is running as a batch job (IMS BMP, IMS DL/I batch, or standard z/OS batch), the commands are saved in a data set and are subsequently run when the IMS region is started.

Message disposition overview

You can use message disposition to suppress messages from the IMS master terminal, the IMS Administration Tool message log, or the IMS secondary master. You can also use message disposition to route messages to an automated operator interface (AOI) token.

You must define each message that you want IMS Administration Tool to determine the disposition of. You define each message by using the IMS Administration Tool ISPF interface.

Message disposition is invoked as part of the IMS automated operator interface (AOI) exit:

- DFSAOE00, if you are implementing a non-refreshable user exit.
- ATYAOE00, if you are implementing a refreshable user exit.

  DFSAOE00 is not used if you are implementing a refreshable exit routine.

You can use message disposition to:

- Suppress messages from the IMS master terminal.
- Suppress messages from the IMS Administration Tool message log.
- Route messages to an AOI token.
- Manage the list of messages for which IMS Administration Tool is to determine the disposition.
- Dynamically refresh the list of messages without an IMS restart.
- Suppress messages from the IMS secondary master terminal.

Chapter 31. Using IMS Command Processor reference

The IMS Administration Tool command processor allows you to interactively issue IMS commands and to view the IMS command log.

Topics:

Settings – Specifying IMS command global options

You can specify options to control the behavior of the command processor when issuing commands and receiving command responses. These options are managed by command option groups.

An IMS command global options group (global options) is a group of command options that define installation defaults for all batch job steps that run the command processor batch utility.

Some of the options are also supported for IMS commands that are entered through the ISPF interface.

General Processing Options

Table 71. General Processing Options

Option	Description
Command Input DDNAME	The ddname that defines the data set or in-stream command input to the command processor batch process. Except for SYSIN or SYSPRINT, there are no restrictions on the name that can be defined. This could facilitate the use of existing JCL to avoid unnecessary conversions.
Command Output DDNAME	The ddname that defines the output data set where all issued commands and output are displayed. Except for SYSIN or SYSPRINT, there are no restrictions on the name that can be chosen. This also could facilitate the use of existing JCL to avoid unnecessary conversions.

General Processing Options - Command Retry Options

The following options are also effective for IMS commands that are entered through the ISPF interface.

Table 72. General Processing Options - Command Retry Options

Option	Description
Attempts	The command processor retries unsuccessful database commands up to the number specified (0-99). If 0 is specified, no retry is attempted. Use this parameter in conjunction with the Command Retry Interval.

Table 72. General Processing Options - Command Retry Options (continued)

Option	Description
Interval(Sec)	The command processor waits to retry unsuccessful database commands for the specified number of seconds (from 0-999). If 0 is specified, retry is attempted immediately. Use this parameter in conjunction with the Command Retry Attempts.

General Processing Options - Abend/RC Failure Options

Table 73. General Processing Options - Abend/RC Failure Options

Option	Description
ABEND	A selected number (0 - 4095) that specifies the user completion code for any error condition that results in an abend of the processing job step. If a value is not specified (0000), the default of 4070 is used.
Return Code	A selected number (0 - 4095) that specifies the job step condition code for any error condition that does not result in an abend of the processing job step.

Failure options - General

You can instruct IMS Administration Tool how to handle any other unexpected error condition by specifying one of the following options.

Table 74. Failure options - General

Option	Description
ABEND	Abend after an unexpected return code.
Return Code	Set a non-zero job step condition code after an unexpected return code.
Issue WTOR	Issue a WTOR and wait for an operator reply to determine the course of action after an unexpected return code.
Ignore	Ignore the error.

Failure options - Routing

You can instruct IMS Administration Tool how to handle IMS OM routing error conditions by specifying one of the following options.

Table 75. Failure options - Routing

Option	Description
ABEND	Abend after an unexpected error from using IMS OM.
Return Code	Set a non-zero job step condition code after an unexpected error from using IMS OM.
Issue WTOR	Issue a WTOR and wait for an operator reply to determine the course of action after an unexpected error from using IMS OM.

Table 75. Failure options - Routing (continued)

Option	Description
Ignore	Ignore the error.

Failure options - DFS0488I

You can instruct IMS Administration Tool how to handle an unacceptable return code by specifying one of the following options.

Table 76. Failure options - DFS0488I

Option	Description
ABEND	Abend after an unexpected return code.
Return Code	Set a non-zero job step condition code after an unexpected return code.
Issue WTOR	Issue a WTOR and wait for an operator reply to determine the course of action after an unexpected return code.
Ignore	Ignore the error.

Failure options - DBRC

When ABEND, Return Code, or Issue WTOR option is selected, IMS Administration Tool verifies the state of the database in DBRC after /DBD and /DBR commands. These three options instruct IMS Administration Tool how to proceed if a database is still open with update intent by any subsystem after the commands have completed. The NODBRC option sets DBRC validation off.

Table 77. Failure options - DBRC

Option	Description
ABEND	Abend after a database command is issued which shows the database in an unexpected status.
Return Code	Set a non-zero job step condition code after a database command is issued which shows the database in an unexpected status.
Issue WTOR	Issue a WTOR and wait for an operator reply to determine the course of action after a database command is issued that shows the database in an unexpected status.
NODBRC	Do not use DBRC to verify the status of the database.

/ATYMOD Options

You can instruct the command processor how to handle error conditions when attempting to use the /ATYMOD online change procedure.

Table 78. /ATYMOD Options

Option	Description
/ATYMOD Failures	• 1 ABEND If an unexpected error condition occurs while attempting to use the /ATYMOD online change procedure, the command processor should abend the job. • 2 Return Code If an unexpected error condition occurs while attempting to use the /ATYMOD online change procedure, the command processor should terminate the job step with a non-zero return code.
/ATYMOD COMMIT Reversal?	If Y is specified for this option, the command processor attempts to undo any successfully completed online change if an online change error has occurred on at least one of the IMS systems in the IMS command group where the /ATYMOD online change procedure is being attempted. If N is specified, no online change reversal is attempted.

Database Options - Return Codes

If there are non-zero return codes that are acceptable for database commands, up to 20 non-zero return codes can be specified from DFS0488I messages, or up to 5 return codes can be returned from IMS OM.

When the command processor encounters one of these return codes, the command processor treats the command as successfully completed.

The following options are also effective for IMS commands that are entered through the ISPF interface.

Table 79. Database Options - Return Codes

Option	Description
Valid DFS0488I Return Codes	Specify 1-20 acceptable non-zero return codes (2 character length).
Valid IMS OM Return Codes	Specify 1-5 acceptable non-zero return codes (4 character length).

Database Options - /START DB ACCESS

If you want the command processor to determine the database access mode when a /START DB command with the ACCESS=UP parameter is issued, specify one of the following three options.

The following options are also effective for IMS commands that are entered through the ISPF interface.

Table 80. Database Options - /START DB ACCESS

Option	Description
Use SYSGEN	The command processor reads your staging MODBLKS data set to determine access based on how the database stage 1 macro was coded.

Table 80. Database Options - /START DB ACCESS (continued)

Option	Description
Use DBRC	The command processor reviews the output of a LIST.DB command to determine the access to the database. If the database was defined with sharelvl(3), the command processor issues /STA DB x ACCESS=UP on all systems. If sharelvl (1 or 2), the command processor issues /STA DB x ACCESS=UP on the primary IMS (where the BMP is attached or the IMSID for either DL/I or standard batch is defined) and issues /STA DB x ACCESS=R* on the remaining IMS regions.
As coded	The command processor processes the command as it is coded.

Database Options - Questions

Preference settings for database options.

The following options are also effective for IMS commands that are entered through the ISPF interface.

Table 81. Database Options - Questions

Option	Description
Expand DATAGRP Commands?	Specify Y if the command processor should issue individual commands for each database defined to a DBRC database group instead of issuing database commands with the DATAGRP keyword. Specify N if database commands with the DATAGRP keyword should be issued by the command processor as coded.
Treat DFS3466I as an Error?	Specify either Y or N if the command processor should treat any DFS3466I message as an error condition after any database command.
Add NOFEOV to /DBD and /DBR?	Specify either Y or N if the command processor should append the NOFEOV keyword after any /DBR or /DBD command.
Set rc/ABEND when DB/AREA ALL Fails?	Specify either Y or N if the command processor should analyze responses to Database/AREA commands when the ALL parameter is used.

Settings – Specifying IMS command job options

An IMS command job options group (job options) is a group of command options that define options for the IMS command batch jobs.

A set of job options is identified by a jobname or jobmask. IMS Administration Tool applies the job options whose name matches the name of the command processor batch job. If job option having the name of the command processor batch job does not exist, IMS Administration Tool uses the IMS command global options.

Usage notes:

- Job options and global options are not supported for IMS commands that are issued in a REDO BMP job or IMS command callable API application job.
- Job options are not supported for IMS commands that are entered through the ISPF interface.

Jobname/Jobmask Option

The following information can be specified from the Job Options panel.

Table 82. Jobname/Jobmask Option

Option	Description
Jobname/Jobmask	Specify a jobname of 1 to 8 bytes or a mask of 1 to 8 bytes containing asterisks (*). Each * represents any valid character used for jobname.

Command Retry Options

Table 83. Command Retry Options

Option	Description
Attempts	IMS Administration Tool will retry unsuccessful database commands up to the number specified (0-99). If 00 is chosen, no retry is attempted. Use this parameter in conjunction with the Command Retry Interval.
Interval	IMS Administration Tool will wait to retry unsuccessful database commands for the specified number of seconds (from 1-999). If 000 is chosen, retry is attempted immediately. Use this parameter in conjunction with the Command Retry Attempts.

Abend/RC Failure Options

Table 84. Abend/RC Failure Options

Option	Description
Abend Code	For any error condition that should result in an abend of the executing job step, select a number from 0 through 4095 to specify the user completion code.
Return Code	For any error condition that should not result in an abend of the executing job step, select a number from 0 through 4095 to specify the job step condition code.

Failure Options - General

You can instruct IMS Administration Tool how to handle any other unexpected error condition by specifying one of the following options.

Table 85. Failure Options - General

Option	Description
ABEND	Abend after an unexpected return code.
Return Code	Set a non-zero job step condition code after an unexpected return code.
Issue WTOR	Issue a WTOR and wait for an operator reply to determine the course of action after an unexpected return code.
Ignore	Ignore the error.

Failure Options - Routing

You can instruct IMS Administration Tool how to handle IMS OM routing error conditions by specifying one of the following options.

Table 86. Failure Options - Routing

Option	Description
ABEND	Abend after an unexpected error from using IMS OM.
Return Code	Set a non-zero job step condition code after an unexpected error from using IMS OM.
Issue WTOR	Issue a WTOR and wait for an operator reply to determine the course of action after an unexpected error from using IMS OM.
Ignore	Ignore the error.

Failure Options - DFS0488I

You can instruct IMS Administration Tool how to handle an unacceptable return code by specifying one of the following options.

Table 87. Failure Options - DFS0488I

Option	Description
ABEND	Abend after an unexpected return code.
Return Code	Set a non-zero job step condition code after an unexpected return code.
Issue WTOR	Issue a WTOR and wait for an operator reply to determine the course of action after an unexpected return code.
Ignore	Ignore the error.

Failure Options - DBRC

When option ABEND, Return Code, or Issue WTOR is selected, IMS Administration Tool verifies the state of the database in DBRC after /DBD and /DBR commands. The three options instruct IMS Administration Tool how to proceed if a database is still open with update intent by any subsystem after the commands have completed. Option NODBRC sets DBRC validation off.

Table 88. Failure Options - DBRC

Option	Description
ABEND	Abend after a database command is issued which shows the database in an unexpected status.
Return Code	Set a non-zero job step condition code after a database command is issued which shows the database in an unexpected status.
Issue WTOR	Issue a WTOR and wait for an operator reply to determine the course of action after a database command is issued that shows the database in an unexpected status.

Table 88. Failure Options - DBRC (continued)

Option	Description
NODBRC	Do not use DBRC to verify the status of the database.

Database Options - Return Codes

If there are non-zero return codes that are acceptable for database commands, up to 20 non-zero return codes can be specified from DFS0488I messages, or up to 5 status codes can be returned from IMS OM. When IMS Administration Tool encounters one of these return codes, IMS Administration Tool treats the command as successfully completed.

Table 89. Database Options - Return Codes

Option	Description
Valid DFS0488I Return Codes	Specify 1-20 acceptable non-zero return codes.
Valid IMS OM Return Codes	Specify 1-5 acceptable non-zero return codes.

Database Options - /START DB ACCESS

If you want IMS Administration Tool to determine the database access mode when a /START DB command with the ACCESS=UP parameter is issued, specify one of the following three options.

Table 90. Database Options - /START DB ACCESS

Option	Description
Use SYSGEN	IMS Administration Tool reads your staging MODBLKS data set to determine access based on how the database stage 1 macro was coded.
Use DBRC	IMS Administration Tool reviews the output of a LIST.DB command to determine the access of the database. If the database was defined with sharelvl(3), IMS Administration Tool issues /STA DB x ACCESS=UP on all systems. If sharelvl (1 or 2), IMS Administration Tool issues /STA DB x ACCESS=UP on the primary IMS (where the BMP is attached or the IMSID for either DL/I or standard batch is defined) and issues /STA DB x ACCESS=R* on the remaining IMS regions.
As coded	IMS Administration Tool processes the command as it is coded.

Issuing IMS commands

You can issue IMS commands directly from the IMS Administration Tool ISPF interface.

Issue IMS commands overview

- IMS commands can be issued and routed to either an individual IMS or a group of IMS subsystems (IMS command group).
- Command groups associate a select number of IMS systems within an IMSplex.

  Commands can then be issued and routed only to the members defined in the command group.
- IMS command groups can be defined to the command processor:

Setup and Administration > Define Groups

- The command responses are displayed directly on the screen.

Issue IMS Command reference

Table 91. Issue IMS commands

Option	Description
IMSID/GROUP	Specify one of the following entries: • Enter a 4 character IMS subsystem ID as defined to the command processor: **Setup and Administration > Register IMS Systems** • Enter a 1- 8 character IMS command group name as defined to the command processor: **Setup and Administration** > **Manage IMS Groups**

IMS CMD	Specify an IMS command.
	IMS type-1 and type-2 commands supported.
	Example type-1 command:
	`/DIS DB ALL`
	Example type-2 command:
	`QUERY DB NAME(*) SHOW(ALL)`
	Command input is free form text.
	Type-1 commands must be preceded by the CRC (command recognition character "/").
	Refer to the *IMS Command Reference* for command syntax and examples.

View the IMS command log

IMS command logs record commands and associated command responses issued by users and batch utilities.

View the IMS command log overview

- IMS command log streams are associated with a particular IMS subsystem and are defined during IMS subsystem registration:

  Setup and Administration > Register IMS Systems > Create > Register an IMS Subsystem > Command Processor Settings > Command Log Stream
- IMS command log streams are optional.
- Specifying an IMS command log stream activates IMS Administration Tool command logging for the associated IMS subsystem.
- Alternatively, the single global IMS Administration Tool audit log can be configured to serve additionally as a command log for any IMS subsystem:

  Setup and Administration > **Global Settings** > **Audit Log**
- By default, the audit log does not capture IMS commands and responses.

  When additionally specified as an IMS command log stream, the audit log adds IMS command logging to its capabilities.

- The audit log and IMS command log streams are initially created during z/OS configuration and are defined as z/OS System Logger log stream data sets.

  System Logger is a z/OS component that provides a logging facility for applications that run in a single-system or multi-system sysplex.

Command Log Selection

- You can select the command log for a particular IMS subsystem.

  The IMSID filter allows you to control the list of IMS subsystems that display.
- The names in the Command Log Name list can be the single global IMS Administration Tool audit log stream or separately created IMS command log streams.
- If a command log archive job (ATYARCH0) runs while the command log is being viewed, gaps might be present in the log data.

  These gaps are caused by the archive job deleting log records before they have been read by the ISPF dialog.

  If this occurs, the missing log data can be found in the output data set created by the command log archive job.

IMS Command Log Filters reference

You can apply filter criteria to limit the number of records that are displayed.

More log information is displayed when some or all filter fields are left blank.

Table 92. IMS Command Log Filters

Option	Description
IMSID	The IMSID filter is a 4 character ID of an IMS subsystem. The IMSID filter limits the displayed results to those command/response records that were issued to an individual IMSID through any source. Possible sources of commands include: **IIMS** IMS **ICMD** Application program issuing an IMS ICMD (Issue Command) call **OTHR** Time Controlled Options (TCO) **VTAM** VTAM (Virtual Telecommunications Access Method) terminal **LU62** APPC (Advanced Program-to-Program Communication) **OTMA** Terminal connect to IMS through OTMA (Open Transaction Manager Access) **EMCS** Program acting as an EMCS (Extended Multiple Console Support) console **OMGR** IMS OM (Operations Manager) **Blank** MVS system console or IMS Master Terminal All commands issued through the IMS Administration Tool ISPF interface are routed through OM.
OM Name	The OM Name filter is a 1-8 character name of an IMS Operations Manager address space. An Operations Manager address space can consist of many IMSIDs, as well as several other components. The OM Name filter limits the displayed results to those command/response records that were issued to all IMSIDs and components in the IMSplex through the specified OM only. All commands issued through the IMS Administration Tool ISPF interface are routed through OM.
User	The displayed results are limited to those command records issued by the specified 1-8 character user ID. You can combine the User filter with either the IMSID filter or the OM Name filter.
Start Date	Date format: `yyyy/mm/dd` • *yyyy* is expressed as a 4-digit year. • *mm* is expressed as a 2-digit month between 01 and 12. • *dd* is expressed as a 2-digit day between 01 and 31. If specified, only messages logged on or after the specified date are available for viewing.

Table 92. IMS Command Log Filters (continued)

Option	Description
Start Time	Time format: hh:mm:ss • *hh* is expressed as a 2-digit value for hours between 00 and 23. • *mm* is expressed as a 2-digit value for minutes between 00 and 59. • *ss* is expressed as a 2-digit value for seconds between 00 and 59. **Note:** The values specified for hh, mm, and ss must be separated by a colon (:) character. If specified, **Start Date** must also be specified. Any messages logged before the specified date and time are not available for viewing.
End Date	Date format: yyyy/mm/dd • *yyyy* is expressed as a 4-digit year. • *mm* is expressed as a 2-digit month between 01 and 12. • *dd* is expressed as a 2-digit day between 01 and 31. If specified, messages logged after the specified date are not available for viewing.
End Time	Time format: hh:mm:ss • *hh* is expressed as a 2-digit value for hours between 00 and 23. • *mm* is expressed as a 2-digit value for minutes between 00 and 59. • *ss* is expressed as a 2-digit value for seconds between 00 and 59. **Note:** The values specified for hh, mm, and ss must be separated by a colon (:) character. If specified, **End Date** must also be specified. Any messages logged after the specified date and time are not available for viewing.

Chapter 32. Using IMS Command Processor - batch processing

When the IMS Administration Tool command driver is run as a batch program, it can run as an IMS BMP, IMS DL/I batch, or standard z/OS batch job.

IMS commands are read from an input data set and processed one-at-a-time across all requested regions.

Topics:

IMS command batch processing overview

When the IMS command processor of IMS Administration Tool runs as a batch program, it can run as an IMS BMP, IMS DL/I batch, or standard z/OS batch job.

The only significant difference between the types of batch jobs is how the IMS Administration Tool determines where to route the commands.

When the IMS command processor runs as a standard z/OS batch job, command routing is determined by the EXEC statement PARM specification, which can be one of the following specifications:

- `//job-step EXEC PGM=ATYCMD00,PARM='IMSID=imsid'`
- `//job-step EXEC PGM=ATYCMD00,PARM='GROUP=ims-command-group-id'`

When the IMS command processor is run as an IMS BMP or IMS DL/I batch job, command routing is determined by one of the following specifications. IMS Administration Tool looks for these specifications in the following order and applies the first one found.

1. 'GROUP=*ims-command-group-id*' in the EXEC PARM statement
   - DL/I batch

     ```
     //job-step EXEC PGM=DFSRRC00,
     //              PARM=(DLI,ATYCMD00,psb,,,,,,,,imsid,,dbrc,irlm,irlmnm,,,,
     //              'GROUP=ims-command-group-id')
     ```

   - BMP

     ```
     //job-step EXEC PGM=DFSRRC00,
     //              PARM=(BMP,ATYCMD00,psb,,,,,,,,,,imsid,,,,,'GROUP=ims-command-group-id')
     ```

   If you use a DLIBATCH or IMSBATCH procedure, specify APARM='GROUP=*ims-command-group-id*'.
2. The IMSID from the PARM statement
3. The IMSID in SDFSRESL(DFSVC000)

Sample JCL for each type of batch job can be found in the SATYSAMP sample library:

- Sample JCL for an IMS BMP is in member ATYBMP.
- Sample JCL for an IMS DL/I batch is in member ATYDLI.
- Sample JCL for a standard z/OS batch is in member ATYBATCH.

The following sample JCL member ATYBMP from the SATYSAMP sample library contains a few options specified for the ATYOPTS ddname input statement, including the PRESCAN option:

```
//ATYBMP    JOB  (TECH),ATYBMP,CLASS=A,MSGCLASS=H,
//      REGION=4M,NOTIFY=&SYSUID,COND=(0,NE)
//*
//*      THIS SAMPLE JCL WILL EXECUTE THE ATY/IMS COMMAND PROCESSOR
//*   AS AN IMS BMP JOB.
//*
//*      THE FOLLOWING CHARACTER STRINGS MUST BE TAILORED:
//*   ##ATYLOAD   - DEFINES THE DSN OF THE LOAD LIBRARY INTO WHICH
//*                 ATY WAS INSTALLED (SATYLOAD).
//*   ##SDFSRESL  - MUST BE THE NAME OF YOUR IMS SDFSRESL.
//*   ##IMSID     - MUST BE THE NAME OF THE IMS WHERE THE BMP WILL
//*                 ATTACH.
//*   ##PSB       - CAN BE ANY APPLCTN DEFINED IN THE IMS SYSGEN
//*                 WITH THE GPSB= PARAMETER.
//*
//STEP01  EXEC PGM=DFSRRC00,
//          PARM='BMP,ATYCMD00,##PSB,,,,,,,,,,##IMSID'
//STEPLIB  DD  DISP=SHR,DSN=##ATYLOAD
//         DD  DISP=SHR,DSN=##SDFSRESL
//SYSABEND DD  SYSOUT=*
//ATYLIST  DD  SYSOUT=*
//ATYOPTS  DD  *
PRESCAN=YES NOFEOV=YES SETRC=16
//*
//ATYSYSIN DD  *
/STA DB DI21PART ACCESS UP
```

IMS Command batch processing DD statements

IMS Administration Tool uses the following DD statements to control product behavior. Some statements are required, some are optional, and some are dynamically allocated.

You must not specify SYSIN DD and SYSPRINT DD statements. These DD statements are used internally by the job.

If the job ends with an abend code of B37 with SYSPRINT, contact IBM Software Support. As a workaround, you can rerun the job by specifying a temporary data set with PS attribute and SPACE=(CYL,(5,20)) parameter (or higher value) in the SYSPRINT DD statement.

Required DD statements

The following DD statements are required.

STEPLIB DD

Specify the following loadlib data sets:

- IMS Administration Tool SYSLOAD data set containing the ATY#OPTS and ATYSTFWD load modules. For details of the SYSLOAD data set and these load modules, see “Configuring VSAM options data set” on page 32 and “Configuring command store/forward” on page 253.
- IMS Administration Tool product loadlib data set or IMS Tools combined loadlib COMBLOAD data set. The COMBLOAD data set is created by IMS Tools Setup and it contains IMS Administration Tool load modules.
- IMS RESLIB data set
- IMS MDA library that contains RECON data set names. This library is required if you specify to use DBRC in the IMS command global options and omit RECON1, RECON2, and RECON3 DD statements.

ATYSYSIN DD

An input physical-sequence data set with an LRECL that ranges from 80 to 121 bytes.

This DD statement references the data set that contains the list of commands that IMS Administration Tool is to process.

ATYLIST DD
An output physical-sequence data set where IMS Administration Tool writes the command results and responses.

This data set must be the same LRECL as ATYSYSIN. This DD statement is typically coded as:

```
//ATYLIST DD SYSOUT=*
```

Optional DD statements

The following DD statements are optional.

RECON1 DD
RECON2 DD
RECON3 DD
RECON data sets of the IMS subsystem. These DD statements are used only when you specify to use DBRC in the IMS command global options.

ATYOPTS DD
An input physical-sequence data set that is used to provide runtime options for this particular batch job.

Options that are specified on this DD statement override the options that are specified in the IMS Administration Tool options data set.

This data set must be defined as LRECL=80.

Dynamically allocated DD statement

ATYJOPRT DD
An output print data set that is dynamically allocated.

This data set lists the options that are in effect for the running of this job.

Use the following DD statement if you do not want this list to be created:

```
//ATYJOPRT  DD  DUMMY
```

Runtime options for IMS command batch jobs

You can use IMS command global options to define certain processing characteristics for all jobs.

You can override most processing options by defining the IMS command job options.

The global options can be overridden by the IMS command job options or by specifying ATYOPTS ddname input statements.

Any options that are specified in ATYOPTS will override any previously specified processing options.

ddname input and output specification

At run time when searching for ddname values, IMS Administration Tool uses the following sequence to look up specific batch job ddnames to use for input and output:

1. ATYOPTS ddname input statement:

   You can use the ATYOPTS ddname input statements to specify ddnames by using these parameters:

   - DDNINP
   - DDNOUT

If the DDNINP and DDNOUT parameters and the ddnames are present in the JCL, they are used when the batch job is processed. For example:

```
//STEP01  EXEC PGM=ATYCMD00
//LEM     DD  ......
//LIME  DD  SYSOUT=*
//ATYOPTS  DD  *
  DDNINP=LEM DDNOUT=LIME
```

2. IMS command global options:

   You can use the global options to specify the ddnames to use for batch job input and output data.

   To use a single set of ddnames, specify the name of the input and output ddname in the global options.
3. ddname table (ATYDDTBL):

   You can create a ddname table to hold the multiple ddname listings.

   Sample JCL is located in the SATYSAMP member ATYDDTBL.

ATYOPTS ddname input statements for IMS command batch job

When you run an IMS command batch job (IMS BMP, IMS DL/I batch, or standard z/OS batch), you can use ATYOPTS ddname input statements to override values in the IMS command job options record and global options record.

The values that are specified for DDNINP and DDNOUT are used if the specified names are present in the batch job JCL. If ddnames are not present in the batch job JCL, the batch job input and output ddnames are obtained from the options data set or from the ddname table, ATYDDTBL.

The following table lists the ATYOPTS ddname input statements and describes the valid values.

Table 93. ATYOPTS ddname input statements: definition and values

ATYOPTS ddname input statements	Description	Value
ABEND	Abend code	0 - 4095
CHKDBALL	Analyze Database/AREA command output when the ALL parameter is used	Y or N
DATAGRPEXP	Expand DATAGRP commands	Y or N
DBACCESS	/START DB ACCESS	SYSGEN. DBRC, or ASIS
DBRC	DBRC errors	ABEND, SETRC, WTOR, or NODBRC
DDNINP	DD name of the command input data set	ddname
DDNOUT	DD name of the command output data set	ddname

Table 93. ATYOPTS ddname input statements: definition and values (continued)

ATYOPTS ddname input statements	Description	Value
DFS0488I	Valid DFS0488I return codes	Up to 20 two-character return codes. Specify them without blank characters. For example, 01204584.
ERR488	DFS0488I errors	ABEND, SETRC, WTOR, or IGNORE
ERR3466	Treat DFS3466I as an error	Y or N
GENERAL	General errors	ABEND, SETRC, WTOR, or IGNORE
MODFAIL	/ATYMOD failures	ABEND or SETRC
MODREVERSE	/ATYMOD commit reversal	Y or N
NOFEOV	Add NOFEOV to /DBD and /DBR	Y or N
PRESCAN	Use DB pre-scan for remote-STC	Y or N
RETRYATT	Attempts	0 - 99
RETRYSEC	Interval	0 - 999
ROUTING	Routing errors	ABEND, SETRC, WTOR, or IGNORE
SETRC	Return code	0 - 4095
SYNTAXERR	Use GENERAL error option when IMS returns a DFS107I message	Y or N
WTODBCMD	WTO database command	Y or N

Creating a ddname table for IMS command batch job

You can create a ddname table to hold multiple ddname listings.

About this task

The ddname table defines a list of valid ddname values for IMS command batch jobs of IMS Administration Tool.

Complete the following steps to create and load a ddname table:

Procedure

1. Locate the sample JCL in the SATYSAMP member ATYDDTBL.
2. Copy ATYDDTBL to your working library.
3. Open ATYDDTBL in your working library in edit mode.
4. Type a valid JOB statement for your installation.
5. Modify the SET SATYSAMP= statement to specify the data set name of your SATYSAMP.
6. Modify the SET SATYLOAD= statement to specify the data set name of your load library.
7. Customize the ATYDD macro statements in the SYSIN DD statement of the ASMA90 step to meet your requirements.

   The ATYDD macro supplies the ddnames that you want to search for in each batch job.

   IMS Administration Tool searches the JCL of each job until it finds one of the ddnames that are specified in a ATYDD macro.

   You can use the ATYDD macro with the options that are shown in the following table:

   Table 94. ATYDD options

Option	Description
HELP	Use the HELP option to have information displayed in your assembly output. This macro is typically coded as: `ATYDD HELP=[YES|NO]`
ddname specification	Use the TYPE= and DD= keywords to specify the ddnames to be searched for. The ddname can be an input or an output value. This macro is typically coded as: `ATYDD TYPE=[OUTPUT|INPUT],DD=`*`ddname`*
BUILD	The BUILD option is required as the last statement in your input stream to properly generate and build the object module. This macro is typically coded as: `ATYDD BUILD=YES`

8. Copy member ATYDDTBL into the STEPLIB of all IMS Administration Tool batch jobs.

Example

The SATYSAMP data set includes a sample job in member ATYDDTBL that you can customize.

```
//ATYDDTBL JOB (ACCT),ATYDD,CLASS=A,NOTIFY=&SYSUID,
// MSGCLASS=H,COND=(0,NE),REGION=4M
//*
//*-------------------------------------------------------------------*
//* IBM*
//* ROCKET**
//* LICENSED MATERIALS - PROPERTY OF IBM
//* 5655-CAT
//* COPYRIGHT IBM CORPORATION 2017 ALL RIGHTS RESERVED.
//* COPYRIGHT ROCKET SOFTWARE, INC. 2019 ALL RIGHTS RESERVED.
//* *TRADEMARK OF INTERNATIONAL BUSINESS MACHINES
//* **TRADEMARK OF ROCKET SOFTWARE, INC.
//*-------------------------------------------------------------------*
//  SET  SATYSAMP=SATYSAMP        SET TO DSN OF YOUR SATYSAMP
//  SET  LOADLIB=your library     SET TO DSN OF YOUR LOADLIB
//*
//ASMA90  EXEC PGM=ASMA90,PARM='NOUSING,ALIGN,OBJECT'
//SYSPRINT DD  SYSOUT=*
//SYSLIB   DD  DSN=&SATYSAMP,DISP=SHR
//SYSUT1   DD  UNIT=SYSDA,SPACE=(TRK,(15,15),RLSE)
//SYSLIN   DD  DSN=&&OBJECT,DISP=(,PASS,DELETE),
//         UNIT=SYSDA,SPACE=(TRK,(5,5),RLSE),
//         DCB=(RECFM=FB,LRECL=80,BLKSIZE=3200,DSORG=PS)
//SYSIN    DD  *
*
* GENERATE THE DOCUMENTATION
*
  ATYDD   HELP=YES
*
* DDNAMES USED BY OLD IM COMMAND PROCESSOR NUMBER 1
*
  ATYDD   TYPE=INPUT,DD=CMDIN
  ATYDD   TYPE=OUTPUT,DD=CMDOUT
*
* DDNAMES USED BY THE OTHER COMMAND PROCESSORS
*
  ATYDD   TYPE=OUTPUT,DD=SYSOUT
*
  ATYDD   TYPE=INPUT,DD=INPUT
  ATYDD   TYPE=INPUT,DD=INDD
*
  ATYDD   TYPE=OUTPUT,DD=OUTPUT
  ATYDD   TYPE=OUTPUT,DD=OUTDD
*
* GENERATE THE OBJECT MODULE
*
  ATYDD   BUILD=YES
  END
//*
//IEWL    EXEC PGM=IEWL,PARM='LIST,LET,XREF'
//SYSPRINT DD  SYSOUT=*
//SYSUT1   DD  UNIT=SYSDA,SPACE=(CYL,(1,1))
//OBJECT   DD  DSN=&&OBJECT,DISP=(OLD,DELETE,DELETE)
//SYSLMOD  DD  DSN=&LOADLIB,DISP=SHR
//SYSLIN   DD  *
    INCLUDE OBJECT
      ENTRY ATYDDTBL
       NAME ATYDDTBL(R)
//
```

Error handling in a batch environment

IMS Administration Tool takes specific action for the different categories of errors that can occur in a batch environment.

When IMS Administration Tool command driver runs as a batch job (IMS BMP, IMS DL/I batch, or standard z/OS batch), you might encounter errors that fall into one of the following categories:

- General

  A general error occurs when IMS Administration Tool fails to edit a command.

- Routing

  A routing error occurs when a command fails due to routing problem. This error is viewed by IMS Administration Tool as an IMS region being unavailable.

- DFS0488I

  The DFS04881 error is issued when a command that changes the state of a database/AREA fails to perform the required action.

  This error is typically caused by IMS Administration Tool not receiving an acceptable return code on a DFS0488I/ATY0488I message.

  You can specify whether or not IMS Administration Tool treats a DFS3466I/ATY3466I (database/AREA not defined) as an error condition in the global record by using the ISPF dialog, or by using the ERR3466 parameter in the ATYOPTS ddname input statement.
- DBRC

  The DBRC error occurs if a subsystem record in the RECON has the database/AREA open with update intent after a /DBD or /DBR command.

  Note: IMS Administration Tool DBRC verification does not work in a DBRC environment that utilizes the RECON loss notification option unless user exit DSPSCIX0 provides the name of the XCF group.

IMS Administration Tool allows each error category to be handled by the following actions:

- **Abend**

  Action: Terminate the batch job with the specified abend code.
- **Return code**

  Action: Terminate the batch job with the specified return code.
- **WTOR**

  Action: Issue a WTOR and allow operator intervention to determine course of action.
- **Ignore**

  Action: Continue processing the next command as if no error had occurred.

  (For DBRC, this option is specified as `DBRC=NODBRC`.)

Chapter 33. Predefined procedures and commands

IMS Administration Tool predefined procedures can perform complete tasks with the entry of a single input command.

IMS Administration Tool provides two predefined procedures, automated online change processing and dead letter queue cleanup. These procedures automate tasks that might normally be performed by a master terminal operator (MTO).

Restriction: IMS Administration Tool does not support the features provided by the command list processors of IMS Command Control Facility.

Topics:

Predefined procedures overview

IMS Administration Tool predefined procedures can perform complete tasks with the entry of a single input command.

IMS Administration Tool provides two predefined procedures that can be used by the IMS Administration Tool command driver:

- Coordinated online change.

  IMS Administration Tool can perform an online change across multiple systems by supplying a single command to the IMS Administration Tool batch job.

  Coordinated online change is valid from a batch environment only.

  This process coordinates the online change across multiple systems and minimizes the potential of out-of-sync conditions that might occur when online change is performed manually.
- Dead letter queue cleanup.

  IMS Administration Tool can clean up any dead letter queue entries by supplying a single command to the IMS Administration Tool batch job.

  Dead letter queue cleanup is valid in all command routing environments (batch, ISPF, and callable API).

Automated online change processing (/ATYMOD)

Automated online change processing synchronizes the online change process across multiple IMS regions and reduces out-of-sync conditions.

Automated online change is allowed only when the command driver runs as a batch job (IMS BMP, IMS DL/I batch, or standard z/OS batch).

Command format:

```
/ATYMOD imsparm killconv deqtran
```

imsparm
Specifies the type of online change. Parameters can be found in **/MOD PREPARE** command of the *IMS Operator's Reference* manual.

killconv
Specifies KILLCONV to have IMS Administration Tool terminate any IMS conversations that are preventing online change from completing.

deqtran
Specifies DEQTRAN to have IMS Administration Tool dequeue any transactions that are preventing online change from completing.

The following commands are issued during the automated online change process:

1. Issue /DIS MODIFY ALL on each IMS system.
2. Issue /MOD PREPARE *xxx* on each IMS system.
3. Issue /DIS MODIFY ALL on each IMS system.
   - If the NO WORK PENDING message is received for each IMS system, IMS Administration Tool continues with Step 4.
   - If the NO WORK PENDING message is not received, IMS Administration Tool performs the KILLCONV and DEQTRAN processing, if specified.

     If the NO WORK PENDING message is still not received, IMS Administration Tool aborts the online change.
4. Issue /MOD COMMIT on each system.
5. Issue /DIS MODIFY ALL on each IMS system to verify that changed libraries now use the proper ddnames.

If the online change fails, IMS Administration Tool terminates the batch job using the option defined in the MODFAIL parameter, as specified either in the global options record or the ATYOPTS ddname input statement.

If Step 4 was successful for some, but not all members of a command group, parameter MODREVERSE is used to inform IMS Administration Tool how to proceed.

- If `MODREVERSE=NO` is specified or defaulted to, IMS Administration Tool terminates the job based upon the MODFAIL parameter.
- If `MODREVERSE=YES` is specified, IMS Administration Tool attempts to reverse the online change on the IMS systems where it was successful.
- The MODREVERSE parameter can be specified in either the global record or the ATYOPTS ddname input statement.

Note: Discretion must be used before deciding to use `MODREVERSE=YES`, particularly for ACBLIB changes. Backing out DMB changes might cause unexpected impact on database integrity.

Dead letter queue cleanup (/ATYDEADQ)

You can use the dead letter queue cleanup to manage your IMS message queue utilization. The dead letter queue cleanup process can replace a cold start or manual efforts by the MTO to cleanup unwanted messages.

Dead letter queue cleanup is allowed when the command driver runs as a batch job (IMS BMP, IMS DL/I batch, or standard z/OS batch), from ISPF dialog or from the callable API.

Command format:

```
/ATYDEADQ
```

The process implements the following commands for each IMS system:

1. Issue `/DIS POOL QBUF`
2. Issue `/DIS USER DEADQ`
3. Based on output from the proceeding command, the process performs the following actions for each displayed user that is not currently allocated:

- Issue /STO USER *xxxx*
- Issue /DEQ USER *xxxx* PURGE
- Issue /STA USER *xxxx*

4. Issue /DIS POOL QBUF

This command displays message queue utilization both before and after this process.

/ATYWAIT command

IMS Administration Tool provides the **/ATYWAIT** command to support the command driver in a batch environment.

/ATYWAIT can be used when the command driver runs as a batch job (IMS BMP, IMS DL/I batch, or standard z/OS batch).

Command format:

```
/ATYWAIT nn
```

The **/ATYWAIT** command causes IMS Administration Tool to wait the number (nn) of seconds specified in the command parameter.

Valid values for nn are 1 through 10.

If an invalid value is entered, IMS Administration Tool waits five seconds by default.

Chapter 34. Command processor API

An external application program can call the IMS Administration Tool command driver by using an application programming interface module called ATYCAPI0.

The command driver routes the IMS command to the specified IMSID or command group and presents command responses to the calling program.

Topics:

Command processor API overview

An external application program can call the IMS Administration Tool command driver by using an application programming interface module called ATYCAPI0.

The ATYCAPI0 subroutine can be called by any application program that must issue IMS type-1 or type-2 commands. The subroutine routes the IMS command to the specified IMSID or command group and presents command responses to the calling program.

When run as the callable API, ATYCAPI0, the IMS Administration Tool command driver runs only as a command router. The driver routes the command to one or more IMS systems and returns the command responses to the calling program.

The driver does not perform any of the special processing functions described for the command driver when it runs as a batch program. It is the responsibility of the calling program to perform the analysis of the command responses.

Any application can issue IMS commands and get all output with minimal interface requirements. The application must use the IMS Administration Tool callable API interface block and specify the following basic call types:

- **CMD** (issue command)
- **GCMD** (get response)
- **TERM** (cleanup call type)

Invoking ATYCAPI0: Assembler language example

You can invoke ATYCAPI0 from an assembler language program using the following example as a model.

ATYCAPI0 expects the caller to pass the address of the IMS Administration Tool API interface block using standard linkage conventions.

See member ATYAPIAS in SATYMACS for the following source.

```
ATYAPIAS TITLE 'SAMPLE ASSEMBLER PROGRAM TO ISSUE COMMANDS'
*********************************************************************
*
*  THIS SAMPLE ASSEMBLER PROGRAM USES THE ATY CALLABLE INTERFACE
*  TO ISSUE COMMANDS.  THE PROGRAM READS A RECORD FROM DDNAME
*  SYSIN, CALLS THE ATY COMMAND CALLABLE INTERFACE TO ISSUE THE
*  COMMAND, AND THEN WRITES ALL OF THE RESPONSES TO DDNAME
*  SYSPRINT.  THE PROGRAM REPEATS THE PROCESS UNTIL ALL RECORDS
*  FROM THE DDNAME SYSIN HAVE BEEN READ.
*
*********************************************************************
ATYAPIAS CSECT ,
ATYAPIAS AMODE 31
ATYAPIAS RMODE ANY
         BAKR  R14,0
         LR    R12,R15
         USING ATYAPIAS,R12
         USING SAVWKA,R13
         LA    R3,SAVWKALL
         STORAGE OBTAIN,LENGTH=(R3),ADDR=(R2),LOC=BELOW
         LR    R13,R2
         XR    R15,R15
         MVCL  R2,R14           ZEROES TO SAVE/WORK AREA
         MVC   4(L'F1SA,R13),=A(F1SA)  LINKAGE STACK IN USE
F1SA     EQU   C'F1SA',4
         MVI   OUTCC,X'40'      OUTPUT CARRIAGE CONTROL
*
         LOAD  EP=ATYCAPI0      LOAD ATY API
         STCM  R0,15,@SUB       SAVE ADDR OF ATY API
*
OPNINP   DS    0H
         MVC   XXDCBINP(LLDCBINP),MMDCBINP     DCB TO WORKAREA
         MVC   XXOPNINP(LLOPNINP),MMOPN        OPEN MAC TO WORKAREA
         OPEN  (XXDCBINP),MODE=31,MF=(E,XXOPNINP)
         LTR   R15,R15                         OPEN OK?
         BNZ   RETURN                          NONZERO - NOT OK
OPNINPX  DS    0H
*
OPNPRT   DS    0H
         MVC   XXDCBPRT(LLDCBPRT),MMDCBPRT     DCB TO WORKAREA
         MVC   XXOPNPRT(LLOPNPRT),MMOPN        OPEN MAC TO WORKAREA
         OPEN  (XXDCBPRT,OUTPUT),MODE=31,MF=(E,XXOPNPRT)
         LTR   R15,R15                         OPEN OK?
         BNZ   RETURN                          NONZERO - NOT OK
OPNPRTX  DS    0H
*
*  GET CMD INPUT ROUTINE
*
GETINP   DS    0H
         GET   XXDCBINP,INPREC         GET A RECORD
```

Figure 14. Invoking ATYCAPI0: Assembler language example (ATYAPIAS) (Part 1 of 3)

```
TYPECMD  EQU   C'CMD ',4
         MVC   AOITYPE,=AL4(TYPECMD)   ISSUE API CMD
         MVC   AOIDEST,INPDEST         EITHER IMSID OR GROUP
         MVC   AOINAME,INPNAME         NAME OF IMSID/GROUP
         LA    R0,AOIDATA              CMD TEXT GOES HERE
         LA    R1,L'AOIDATA            MAX LENGTH (256)
         LA    R14,INPDATA             SOURCE OF INP CMD
         LA    R15,L'INPDATA           ACTUAL LENGTH OF INP CMD
         ICM   R15,B'1000',=X'40'      PAD IT WITH SPACES
         MVCL  R0,R14                  MOVE TO INTF BLOCK
*
         ICM   R15,15,@SUB             ADDR OF ATY API
         CALL  (15),ATYAPIIB,MF=(E,PLSUB)  CALL API NOW
*
         MVC   OUTDATA,AOIDATA         FILL OUTPUT AREA
         PUT   XXDCBPRT,OUTREC         PRINT IT NOW
GETRSP   DS    0H
TYPEGCMD EQU   C'GCMD',4
         MVC   AOITYPE,=AL4(TYPEGCMD)  API GET A RESPONSE
         ICM   R15,15,@SUB             ADDR OF ATY API
         CALL  (15),ATYAPIIB,MF=(E,PLSUB)  CALL API NOW
         LTR   R15,R15                 NOT ZERO MEANS NO RESP
         BNZ   GETINP                  TIME FOR MORE INPUT
         MVC   OUTDATA,AOIDATA         FILL OUTPUT AREA
         PUT   XXDCBPRT,OUTREC         PRINT IT NOW
         B     GETRSP                  GET ANOTHER RESPONSE
*
GETINPX  DS    0H                      COME HERE AT END OF FILE
*
TYPETERM EQU   C'TERM',4
         MVC   AOITYPE,=AL4(TYPETERM)  ISSUE API - CLEANUP
         ICM   R15,15,@SUB             ADDR OF ATY API
         CALL  (15),ATYAPIIB,MF=(E,PLSUB)  CALL API NOW
*
         DELETE EP=ATYCAPI0            DELETE MODULE NOW
         XC    @SUB,@SUB               CLEAR ITS OLD ADDR
*
RETURN   DS    0H
         STCM  R15,15,RETCODE          SAVE REG15
*
*  CLOSE INPUT
*
CLSINP   DS    0H
         TM    XXDCBINP+DCBOFLGS-IHADCB,DCBOFOPN  STILL OPEN?
         BZ    CLSINPX                 ZERO MEANS NO
         CLOSE (XXDCBINP),MODE=31,MF=(E,XXOPNINP)
CLSINPX  DS    0H
*
*  CLOSE OUTPUT
*
CLSPRT   DS    0H
         TM    XXDCBPRT+DCBOFLGS-IHADCB,DCBOFOPN  STILL OPEN?
         BZ    CLSPRTX                 ZERO MEANS NO
         CLOSE (XXDCBPRT),MODE=31,MF=(E,XXOPNPRT)
CLSPRTX  DS    0H
*
```

Figure 15. Invoking ATYCAPI0: Assembler language example (ATYAPIAS) (Part 2 of 3)

```
XIT      DS    0H
         ICM   R2,15,RETCODE
         LA    R3,SAVWKALL
         STORAGE RELEASE,ADDR=(R13),LENGTH=(R3)
         LTR   R15,R2
         PR
*
         LTORG
*
MMOPN    OPEN  (,),MODE=31,MF=L
MMDCBPRT DCB   DDNAME=SYSPRINT,                                        X
               DSORG=PS,MACRF=PM,RECFM=FBA,LRECL=L'AOIDATA+1
MMDCBINP DCB   DDNAME=SYSIN,                                           X
               DCBE=MMDCEINP,                                          X
               DSORG=PS,MACRF=GM,RECFM=FB,LRECL=80
MMDCEINP DCBE  EODAD=GETINPX
*
         YREGS
         LTORG
*
*  COMBO SAVE AND WORK AREA
*
SAVWKA   DSECT
SAVEAREA DS    18F
RETCODE  DS    F
@SUB     DS    A
PLSUB    DS    F      ONLY 1 PARM NEEDED FOR THIS CALL
*
*--------------------------------------------------------------------*
*      THIS DSECT IS USED TO MAP THE AREA PASSED TO THE
*   CALLABLE AOI.
*--------------------------------------------------------------------*
ATYAPIIB DS   0D
AOITYPE  DS    CL4                 CALL TYPE
*                                  CMD, GCMD OR TERM
AOIRETCD DS    CL4
AOIRSNCD DS    CL4
AOIDEST  DS    CL8                 CMD DESTINATION IMSID OR GROUP
AOINAME  DS    CL8                 DESTINATION NAME
AOIRESV  DS    CL24                RESERVED
AOIDATA  DS    CL256               I/O AREA
*
XXOPNINP OPEN  (,),MODE=31,MF=L
LLOPNINP EQU   *-XXOPNINP
XXDCBINP DCB   DSORG=PS,MACRF=GM
LLDCBINP EQU   *-XXDCBINP
*
XXOPNPRT OPEN  (,),MODE=31,MF=L
LLOPNPRT EQU   *-XXOPNPRT
XXDCBPRT DCB   DSORG=PS,MACRF=PM
LLDCBPRT EQU   *-XXDCBPRT
*
OUTREC   DS   0CL1
OUTCC    DS    CL1
OUTDATA  DS    CL(L'AOIDATA)
*
INPREC   DS   0CL80
INPDEST  DS    CL8
INPNAME  DS    CL8
INPDATA  DS    CL(INPDLEN)
INPDLEN  EQU   L'INPREC-(INPDATA-INPREC)
*
SAVWKALL EQU   *-SAVWKA
*
         DCBD  DSORG=DA
         IHADCBE
*
         END   ATYAPIAS
```

Figure 16. Invoking ATYCAPI0: Assembler language example (ATYAPIAS) (Part 3 of 3)

Invoking ATYCAPI0: COBOL example

You can invoke ATYCAPI0 from a COBOL program using the following example as a model.

ATYCAPI0 expects the caller to pass the address of the IMS Administration Tool API interface block by using standard linkage conventions.

See member ATYAPICB in SATYMACS for the following source.

```
       IDENTIFICATION DIVISION.
       PROGRAM-ID. ATYAPICB.
       ENVIRONMENT DIVISION.

       INPUT-OUTPUT SECTION.

       FILE-CONTROL.

           SELECT CTL-IN
                 ASSIGN TO UT-S-SYSIN.
           SELECT PRT-OUT
                 ASSIGN TO UT-S-SYSPRINT.

       DATA DIVISION.

       FILE SECTION.

       FD  CTL-IN
           RECORDING MODE IS F
           LABEL RECORDS STANDARD
           BLOCK CONTAINS 00 RECORDS.
       01  CTL-IN-REC.
           05  CTL-IN-DEST             PIC X(08).
           05  CTL-IN-NAME             PIC X(08).
           05  CTL-IN-DATA             PIC X(64).

       FD  PRT-OUT
           RECORDING MODE IS F
           LABEL RECORDS STANDARD
           BLOCK CONTAINS 00 RECORDS.
       01  PRT-OUT-REC.
           05  PRT-OUT-CC              PIC X(1).
           05  PRT-OUT-DATA            PIC X(256).

       WORKING-STORAGE SECTION.

       77  ATYCAPI0                    PIC X(8) VALUE 'ATYCAPI0'.
       77  TYPECMD                     PIC X(4) VALUE 'CMD'.
       77  TYPEGCMD                    PIC X(4) VALUE 'GCMD'.
       77  TYPETERM                    PIC X(4) VALUE 'TERM'.

       01  ATYAPIIB.
           05  AOITYPE                 PIC X(4).
           05  AOIRETCD                PIC X(4).
           05  AOIRSNCD                PIC X(4).
           05  AOIDEST                 PIC X(8).
           05  AOINAME                 PIC X(8).
           05  AOIRESV                 PIC X(24).
           05  AOIDATA                 PIC X(256).

       PROCEDURE DIVISION.

       000-MAINLINE.
           OPEN INPUT CTL-IN.
           OPEN OUTPUT PRT-OUT.
       100-GETINP.
```

Figure 17. Invoking ATYCAPI0: COBOL example (ATYAPICB) (Part 1 of 2)

```
           READ CTL-IN
             AT END
               GO TO 999-CLEANUP.
           MOVE TYPECMD TO AOITYPE.
           MOVE CTL-IN-DEST TO AOIDEST.
           MOVE CTL-IN-NAME TO AOINAME.
           MOVE CTL-IN-DATA TO AOIDATA.
           CALL ATYCAPI0 USING ATYAPIIB.
           MOVE SPACE TO PRT-OUT-CC.
           MOVE AOIDATA TO PRT-OUT-DATA.
           WRITE PRT-OUT-REC.
       200-GETRESP.
           MOVE TYPEGCMD TO AOITYPE.
           CALL ATYCAPI0 USING ATYAPIIB.
           IF RETURN-CODE NOT ZERO
             GO TO 100-GETINP.
           MOVE SPACE TO PRT-OUT-CC.
           MOVE AOIDATA TO PRT-OUT-DATA.
           WRITE PRT-OUT-REC.
           GO TO 200-GETRESP.
       999-CLEANUP.
           MOVE TYPETERM TO AOITYPE.
           CALL ATYCAPI0 USING ATYAPIIB.
           CANCEL ATYCAPI0.
           GOBACK.
```

Figure 18. Invoking ATYCAPI0: COBOL example (ATYAPICB) (Part 2 of 2)

Invoking ATYCAPI0: REXX example

You can invoke ATYCAPI0 from a REXX procedure using the following example as a model.

ATYCAPI0 expects the caller to pass the address of the IMS Administration Tool API interface block by using standard linkage conventions.

See member ATYAPIRX in SATYMACS for the following source.

```
/* REXX ---------------------------------------------------------------*/
/*--------------------------------------------------------------------*
/* IBM*
/* ROCKET**
/* LICENSED MATERIALS - PROPERTY OF IBM
/* 5655-CAT
/* COPYRIGHT IBM CORPORATION 2017 ALL RIGHTS RESERVED.
/* COPYRIGHT ROCKET SOFTWARE, INC. 2019 ALL RIGHTS RESERVED.
/* *TRADEMARK OF INTERNATIONAL BUSINESS MACHINES
/* **TRADEMARK OF ROCKET SOFTWARE, INC.
/*
/* Usage ------------------------------------------------------------ */
/*                                                                    */
/*    THIS SAMPLE REXX WILL CALL THE ATYCAPI0 MODULE TO EXECUTE       */
/*    COMMANDS FROM THE ASSOCIATED JCL MEMBER ATYAPIRX.               */
/*                                                                    */
/*    Please refer to Callable API, Interface Block section           */
/*    in the IBM IMS ADMINISTRATION TOOL FOR Z/OS 01.01.00 User's     */
/*    Guide for a description of the fields in the Interface Block    */
/*    in this sample procedure).                                      */
/*                                                                    */
/*--------------------------------------------------------------------*/
ADDRESS MVS
CMD.0 = 0
"EXECIO 0 DISKR ATYIN (STEM CMD. OPEN)"
if (rc ¬= 0) then
  do
   say 'ATYIN Open failure RC =' RC
   signal ccfret
  END

ATYRD:
ADDRESS MVS
/*                                                                    */
/*  READS A RECORD FROM ATYIN DD AND EXECUTES THE COMMAND             */
/*                                                                    */
"EXECIO 1 DISKR ATYIN (STEM CMD.)"
if (rc = 2) then signal ccfend           /* EOF  */
if (rc ¬= 0) then
  do
   say 'ATYIN Read failure RC =' RC
   signal ccfret
  END

SAY 'ATYIN Record:'
SAY CMD.1
AOIDEST = SUBSTR(CMD.1,1,8)
AOINAME = SUBSTR(CMD.1,9,8)
AOIDATA = SUBSTR(CMD.1,17,54)
APIIB = 'CMD '                           /* AOITYPE   */
APIIB = INSERT(' ',APIIB,4,8,' ')
APIIB = INSERT(AOIDEST,APIIB,12,8,' ')
APIIB = INSERT(AOINAME,APIIB,20,8,' ')
APIIB = INSERT(AOIDATA,APIIB,52,256,' ')
```

Figure 19. Invoking ATYCAPI0: REXX example (ATYAPIRX) (Part 1 of 2)

```
ADDRESS LINKPGM "ATYCAPI0  APIIB"
if (rc ¬= 0) then
  do
   say 'ATYCAPI0 NON-ZERO RC =' RC
   cmdret = substr(apiib,52,256)
   say cmdret
   signal ccfrd
  END
cmdret = substr(apiib,52,256)
say cmdret

ATYGCMD:
/*                                                                  */
/*  RETRIEVE RESULTS OF THE COMMAND                                 */
/*                                                                  */
APIIB = INSERT('GCMD',APIIB,0,4,' ')    /* AOITYPE   */
ADDRESS LINKPGM "ATYCAPI0  APIIB"
if (rc ¬= 0) then
  DO
   APIIB = INSERT('TERM',APIIB,0,4,' ')    /* AOITYPE   */
   ADDRESS LINKPGM "ATYCAPI0  APIIB"
   signal ccfrd
  END
cmdret = substr(apiib,52,256)
say cmdret
signal ccfgcmd

ATYEND:
/*                                                                  */
/*  EOF                                                             */
/*                                                                  */
SAY 'ATYIN End of File'

ATYRET:
return
```

Figure 20. Invoking ATYCAPI0: REXX example (ATYAPIRX) (Part 2 of 2)

This REXX procedure can be invoked from batch using the following sample JCL as a model:

```
//ATYBATRX  JOB  (TECH),ATYBATRX,CLASS=A,MSGCLASS=X,
//      REGION=0M,NOTIFY=&SYSUID
//*
//         SET ATYLOAD=##ATYLOAD                <====  SET
//         SET SDFSRESL=##SDFSRESL              <====  SET
//         SET ATYEXEC=##ATYEXEC                <====  SET
//*
//*-------------------------------------------------------------------*
//*    LICENSED MATERIALS - PROPERTY OF IBM
//*    5655-R58 (C) COPYRIGHT IBM CORP. 2001, 2015.
//*    ALL RIGHTS RESERVED.
//*    US GOVERNMENT USERS RESTRICTED RIGHTS -
//*    USE, DUPLICATION OR DISCLOSURE RESTRICTED
//*    BY GSA ADP SCHEDULE CONTRACT WITH IBM CORP.
//*-------------------------------------------------------------------*
//*
//*      THIS SAMPLE JCL WILL EXECUTE THE ATY/IMS COMMAND PROCESSOR
//*   VIA A REXX EXEC - ATYAPIRX
//*
//*      ATYIN RECORD FORMAT:
//*   COLS 1 - 8        - 'IMSID' OR 'GROUP'
//*   COLS 9 - 16       - IMS SUBSYS ID OR THE NAME OF
//*                       A GROUP OF IMS REGIONS DEFINED IN THE
//*                       ATY OPTIONS DATA SET.
//*   COLS 17 - 70      - THE CMD WITHOUT ANY CONTINUATION
//*
//*      THE FOLLOWING SET VARIABLES MUST BE TAILORED:
//*   ATYLOAD   - DEFINES THE DSN OF THE LOAD LIBRARY INTO WHICH
//*               ATY WAS INSTALLED (SATYLOAD).
//*   SDFSRESL  - MUST BE THE NAME OF YOUR IMS SDFSRESL.
//*   ATYEXEC   - DEFINES THE DSN OF THE EXEC LIBRARY INTO WHICH
//*                 ATY WAS INSTALLED (SATYREXX).
//*-------------------------------------------------------------------*
//*
//*
//ATYAPIRX EXEC PGM=IRXJCL,PARM=ATYAPIRX
//*
//STEPLIB  DD  DISP=SHR,DSN=&ATYLOAD
//         DD  DISP=SHR,DSN=&SDFSRESL
//*
//SYSEXEC  DD  DISP=SHR,DSN=&ATYEXEC
//*
//SYSABEND DD  SYSOUT=*
//*
//SYSTSPRT DD  SYSOUT=*
//*
//ATYIN    DD  *
IMSID   SSID    /DIS ACT
/*
//
```

Command processor API interface block

The following table provides details for the callable API interface block.

Table 95. Callable API interface block

Field	Field Type	Length	Description
AOITYPE	Supplied	4	Specify one of the following character call types padded to 4 bytes with spaces: • CMD Issue IMS command • GCMD Get IMS command response • TERM Cleanup

Table 95. Callable API interface block (continued)

Field	Field Type	Length	Description
AOIRETCD	Returned	4	4 byte binary return code from ATYCAPI0.
AOIRSNCD	Returned	4	4 byte binary return code from ATYCAPI0.
AOIDEST	Supplied	8	Specify one of the following character command destination types padded to 8 bytes with spaces: • IMSID The command should be routed to a specific IMS system. • GROUP The command should be routed to all IMS systems defined for a ATY group.
AOINAME	Supplied	8	If IMSID is specified for AOIDEST, caller must initialize this field with a 4 character IMSID padded to eight characters with spaces. If GROUP is specified for AOIDEST, caller must initialize this field with a one to eight character command group name padded to eight characters with spaces.
AOIRESV	Reserved	24	24 bytes reserved for use by ATYCAPI0.
AOIDATA	Supplied/Returned	256	If the AOITYPE call type is CMD, then this field should be initialized by the caller to the IMS command padded to 256 bytes with spaces. The actual command cannot be longer than 252 bytes. IMS Administration Tool requires the last four bytes to contain spaces. Upon return from the CMD call, this field will either be spaces or contain a message from ATYCAPI0 of up to 256 bytes (padded with spaces). If the AOITYPE call type is GCMD, then this field will contain up to 256 bytes (padded with spaces) if the return code in AOIRETCD is zeroes. Otherwise the contents of this field should be ignored.

Chapter 35. Command store/forward

The command store/forward feature saves commands that fail because a member of an IMS command group is unavailable. The retained commands are then reissued when the IMS is available.

Command store/forward is an optional feature that can keep all members of a command group in synchronization.

You use command store/forward in an IMSplex to ensure that resources are in the same state (for example, stopped or started) across all members of the IMSplex.

Command store/forward consists of two components:

Store/forward VSAM data set
IMS Administration Tool batch jobs (IMS BMP, IMS DL/I batch, or standard z/OS batch) use this data set to store failed commands.

REDO BMP
The REDO BMP reads the store/forward VSAM data set and issues all of the commands that failed for a particular IMS system. You should reschedule the REDO BMP immediately at IMS startup.

The REDO BMP uses the ICMD/RMCD AOI to issue the commands, which means that the user ID that is associated with this BMP needs authorization for all required commands.

Command store/forward restrictions

The following restrictions apply to command store/forward:

- Option for Routing errors must be set to ignore.
- Command store/forward is active only when there is more than one IMS in the IMS command group.
- A command must be successful for at least one IMS in the IMS command group.

  If the command fails for all systems in the IMS command group, it is not written to the store/forward VSAM data set.

The following commands are not candidates for store/forward processing:

- Commands routed to a specific IMS.
- Commands with the GLOBAL parameter.
- DBRC commands (/RMx).
- /MOD commands.

Failed commands are saved in the store/forward VSAM data set only when IMS Administration Tool command driver runs as a batch job (IMS BMP, IMS DL/I batch, or standard z/OS batch).

Topics:

Configuring command store/forward

Complete the following steps to configure command store/forward.

Procedure

1. Allocate and initialize the VSAM command store/forward data set (ATYSTF).

Customize and run the JCL located in member ATYSTF of the IMS Administration Tool sample library (SATYSAMP) to allocate and initialize the VSAM command store/forward data set.

```
hlq.SATYSAMP(ATYSTF)
```

The JCL contains descriptive comments to help you customize the job correctly.

2. Build the ATYSTFWD load module.

   Customize and run the JCL located in member ATYASMSF of the IMS Administration Tool sample library (SATYSAMP) to build the ATYSTFWD load module that is used by IMS Administration Tool for dynamic allocation of the command store/forward data set.

   ```
   hlq.SATYSAMP(ATYASMSF)
   ```

   This module must reside in a STEPLIB library for all jobs that run IMS Administration Tool programs.

   The JCL contains descriptive comments to help you customize the job correctly.

3. Store the ATYSTFWD load module in the SYSLOAD data set.

   When you configured the VSAM option data set (as described in "Configuring VSAM options data set" on page 32), you registered the load library data set that contains module ATY#OPTS to variable SYSLOAD and specified the load library data set to IMS. You must store the ATYSTFWD load module in the same load library data set so that IMS Administration Tool can refer to the ATYSTFWD load module through the data set registered to variable SYSLOAD.

Activating REDO BMP

The REDO BMP reads the store/forward VSAM data set and issues all of the commands that failed for a particular IMS system. You should reschedule the REDO BMP immediately at IMS startup.

About this task

The REDO BMP uses the ICMD/RMCD AOI to issue the commands, which means that the user ID that is associated with this BMP needs authorization for all required commands.

The ROUTING=IGNORE option must be set for all IMS Administration Tool batch jobs that can have their commands stored for later processing by the IMS Administration Tool REDO BMP. Setting the routing error option to IGNORE can be performed from the IMS Administration Tool **Global Options** panel. Alternatively, you can specify the ROUTING=IGNORE option in the IMS Administration Tool batch job JCL from the ATYOPTS DD statement.

Procedure

1. Customize and run the JCL located in member ATYBMPR of the IMS Administration Tool sample library (SATYSAMP) to activate the REDO BMP for command store/forward.

   ```
   hlq.SATYSAMP(ATYBMPR)
   ```

   The JCL contains descriptive comments to help you customize the job correctly. For details about JCL specifications, see "REDO BMP JCL specifications" on page 255.

2. Specify any required commands in the ATYPRE and ATYPOST input data sets.

   The REDO BMP executes the commands in the ATYPRE data set before running the commands in the store/forward data set.

   The commands in the ATYPOST data set are run after all commands for the particular IMS system in the store/forward data set are run.

3. Ensure that the REDO BMP has proper authority:

- For IMS type-1 commands, REDO BMP issues commands to IMS by using the ICMD/RCMD AOI. Therefore, the user ID that is associated with this BMP needs authority to execute all required commands.
- For IMS type-2 commands, the REDO BMP issues commands to IMS by using the IMS Operations Manager. Therefore, the user ID that is associated with this BMP needs authority to execute all required commands.
- If the IMS uses AGN security, the user ID that is associated with the BMP will require authority to connect to the AGN.

What to do next

The REDO BMP must be scheduled immediately when IMS is started and before the system is opened up for processing. See “Scheduling REDO BMP” on page 255.

REDO BMP JCL specifications

Sample JCL for the REDO BMP can be found in SATYSAMP(ATYBMPR).

The following ddname statements are required for the REDO BMP JCL:

ATYPRINT DD
ATYPRINT is an output data set that lists the commands for which execution was attempted during BMP processing.

ATYPRINT is defined as LRECL=131 and RECFM=FBA.

The output can be sent to SYSOUT or a data set.

ATYPRE DD
ATYPRE is an input data set that contains commands to be executed before the commands in the store/forward data set.

ATYPRE is defined as LRECL=80 and RECFM=FB.

ATYPOST DD
ATYPOST is an input data set that contains commands to be executed after all of the commands for this particular IMS system are processed from the store/forward data set.

ATYPOST is defined as LRECL=80 and RECFM=FB.

Sample JCL for the REDO BMP:

```
//jobname JOB
//*
//STEP01   EXEC  PGM=DFSRRC00,
//    PARM=(BMP,ATYREDO0,ATYREDO0,,,,,,,,,,imsid)
//STEPLIB  DD   DISP=SHR,DSN=reslib
//                  DD DISP=SHR,DSN=ccf.loadlib
//ATYPRINT  DD  SYSOUT=*
//ATYPRE  DD  *
ims commands
/*
//ATYPOST  DD  *
ims commands
```

Scheduling REDO BMP

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

About this task

The following steps describe the recommended procedure for scheduling the REDO BMP process.

Procedure

1. Start the IMS control region.
2. Use TSO to start REDO BMP immediately at IMS start up.
3. Add the following commands to the ATYPRE input data set:

```
/STO CLASS ALL
/STA REG  for all required message regions
```

4. Add the following commands to the ATYPOST input data set:

```
/STA CLASS ALL
/STA DC
```

What to do next

Once these actions are completed, command store/forward saves all commands that encounter routing errors in the store/forward VSAM data set.

For commands that are routed using the IMS OM, a routing error is identified as a member of the IMS Administration Tool group being not active in the IMSplex.

A timestamp is added to the commands when they are written to the store/forward VSAM data set. The timestamp ensures the commands are subsequently executed in the proper sequence.

Part 9. Reference

The following reference topics provide information about DBD and PSB update (ATY@OBJU) JCL and the Command and Audit Log Archive (ATYARCH0) utility.

Topics:

Chapter 36. Reference: DBD and PSB update (ATY@OBJU) JCL

ATY@OBJU is the batch processor of IMS Administration Tool. It performs several IMS Administration Tool functions in a batch job. One of the functions is updating DBDs and PSBs.

ATY@OBJU JCL is generated by the following functions:

- The Build JCL option of the IMS resource change function (database and application administration)
- Import objects (IMS catalog and ACB library management)

The ATY@OBJU job performs DBD and PSB update tasks by calling the DBDGEN, PSBGEN, ACBGEN utilities, and, if IMS catalog is defined in the IMS system, the IMS catalog populate utility (DFS3PU00). If the Use COPYBOOK option is selected, the ATY@OBJU job also performs copybook import before DBDGEN.

Requirements:

- The IMS Tools Base Knowledge Base server and the Distributed Access Infrastructure (DAI) TCP server, TAS, and SOT address spaces must be active.
- The IMS system must be either active or inactive under certain circumstances. For details, see "DBD and PSB resource change" on page 91, or "Import objects reference" on page 149 in Chapter 20, "Export objects and import objects," on page 145.

Topics:

ATY@OBJU JCL statements

IMS Administration Tool generates ATY@OBJU JCL based on the specifications supplied through the ISPF interface. Therefore, you do not need to change the content of the JCL.

If you need to change the JCL, follow these instructions:

- Changing data sets: If you want to change a data set on a DD statement, you can change the data set name.
- Changing the tasks to perform: Tasks to perform are controlled by ATYMSGI control statements. See "ATYMSGI DD" on page 259.
- Removing DD statements: Not allowed. Do not remove any DD statements.

STEPLIB DD
The product and customized load library data sets of IMS Administration Tool and IMS Tools Base.

Input DD statements

ATYMSGI DD
Pre-coded internal control statements of ATY@OBJU.

- FUNCTION=UPDATE is set if the JCL was generated by IMS resource change.
- FUNCTION=IMPORT is set if the JCL was generated by Import Objects.

ATYMSGI control statements specify the tasks to perform, which are determined by IMS Administration Tool.

Basically ATYMSGI control statements require no change. The only change allowed is excluding tasks to perform. To exclude tasks, change the following ATYMSGI control statements:

- To exclude DBDGEN: DBDGEN=N

- To exclude copybook import: ADDCPYBK=N
- To exclude PSBGEN: PSBGEN=N
- To exclude ACBGEN: ACB=N (You must also exclude the IMS catalog populate task.)
- To exclude IMS catalog populate (DFS3PU00): CATALOG=N and PENDCAT=N. If INITLOAD parameter exists, INITLOAD=N.

If the ATY@OBJU JCL is for IMS resource change, use the ISPF interface and reselect the tasks in the Resource Change Tasks section to exclude or add tasks.

ATYDBD DD
The data set that contains DBD source codes. The data set organization is PDS or PDSE, RECFM=FB,LRECL=80.

ATYPSB DD
The data set that contains PSB source codes. The data set organization is PDS or PDSE, RECFM=FB,LRECL=80.

ATYXREF DD
The data sets that contain cross reference (XREF) files for copybook import. Up to 10 data sets can be specified. The data set organization is RECFM=FB,LRECL=80.

This DD statement is present if you selected the Use COPYBOOK option when generating the ATY@OBJU JCL. For details about copybook import, see Chapter 15, “Copybook import,” on page 97.

ATYPLI DD
The data sets that contain PL/I copybooks. Up to 60 data sets can be specified. The data set organization is RECFM=FB,LRECL=80.

This DD statement is present if you selected the Use COPYBOOK option when generating the ATY@OBJU JCL.

ATYCOPY DD
The data sets that contain COBOL copybooks. Up to 60 data sets can be specified. The data set organization is RECFM=FB,LRECL=80.

This DD statement is present if you selected the Use COPYBOOK option when generating the ATY@OBJU JCL.

IMS DD
PSB and DBD library data sets. These data sets are referred to during ACBGEN.

IMSACB01 DD
ACB library data sets. These data sets are referred to during the IMS catalog populate task.

Output DD statements

ATYPUTDB DD
The data sets where IMS Administration Tool stores DBD source codes that are updated with copybooks. The data set organization is RECFM=FB,LRECL=80.

This DD statement is used if you selected the Use COPYBOOK option when generating the ATY@OBJU JCL.

DBDLIB DD
The IMS DBD library. This DBD library will be updated by DBDGEN, and will be referred to during ACBGEN.

PSBLIB DD
The IMS PSB library. This PSB library will be updated by PSBGEN, and will be referred to during ACBGEN.

IMSACBA DD
IMSACBB DD
IMSACB DD
IMS active, inactive, and staging ACB libraries. The IMSACB (staging ACB library) will be updated by ACBGEN, and will be referred to by the IMS catalog populate utility.

DBDPRINT DD
PSBPRINT DD
LNKPRINT DD
SYSPRINT DD
ATYMSGS DD
ATYERROR DD
FABXAMSG DD
Output destination for reports, messages, and assemble listing.

IEFRDER DD
The IMS log data set. In the JCL that is generated by the import objects function, DUMMY is set for this DD statement. Change the data set if needed.

Chapter 37. Reference: Log data archiving: Configure the Command and Audit Log Archive (ATYARCH0) utility

IMS Administration Tool provides the Command and Audit Log Archive (ATYARCH0) utility that copies old log data to a DSORG=PS data set, and simultaneously marks it eligible for deletion. The ATYARCH0 utility supports both command log data and audit log data. You can select the log records to archive; command log records, audit log records, or both.

The ATYARCH0 utility provides several options for determining what log records are considered old, and therefore subject to archiving/deletion. Most of the archiving options archive only log records that were written prior to the current date. Use the MAX control card if you must archive log records from the current date.

If the log data needs to be kept for historical purposes, the retention period must be high enough so that the z/OS System Logger will not delete the log data before it is off-loaded by the ATYARCH0 utility.

The output log data is displayed in the same format as the log of **View Audit Log**. To check the format, use the ISPF interface: **Setup and Administration** > **View Audit Log**.

If you are migrating IMS Command Control Facility resources to IMS Administration Tool, the following considerations apply:

- The ATYARCH0 utility supports command log records written by IMS Command Control Facility.
- A CCF log record (log record generated by IMS Command Control Facility) is identified by its first character "c" in the archived data set. A command log record of IMS Administration Tool is identified by its first character "C".
- The View Audit Log function and the View IMS Command Log function of IMS Administration Tool do not support CCF log records. You can view CCF log records only in the archived data set.
- The IMS Command Control Facility archive utility does not support log records that are written by IMS Administration Tool. If log records of both products are stored in the same log stream, use the ATYARCH0 utility.

Subsections:

ATYARCH0 JCL

Sample JCL for archiving log data can be found in the SATYSAMP sample library, member ATYARCH0.

```
//ATYARCH0  JOB  (TECH),ATYARCH0,CLASS=A,MSGCLASS=H,
//      REGION=4M,NOTIFY=&SYSUID,COND=(0,NE)
//*
//*--------------------------------------------------------------------*
//* IBM*
//* ROCKET**
//* LICENSED MATERIALS - PROPERTY OF IBM
//* 5655-CAT
//* COPYRIGHT IBM CORPORATION 2019  ALL RIGHTS RESERVED.
//* COPYRIGHT ROCKET SOFTWARE, INC. 2019 ALL RIGHTS RESERVED.
//* *TRADEMARK OF INTERNATIONAL BUSINESS MACHINES
//* **TRADEMARK OF ROCKET SOFTWARE, INC.
//*--------------------------------------------------------------------*
//*--------------------------------------------------------------------*
//* CHANGES:
//*
//* YY-MM-DD REL APAR    DESCRIPTION
//* -------- --- ------- ---------------------------------------------
//* 19-06-06 110 PH12977 ARCHIVE AUDIT LOG SUPPORT
//*
//*--------------------------------------------------------------------*
//*
//*      THIS SAMPLE JCL IS FOR ARCHIVING THE ATY COMBINED
//*   MESSAGE LOG.
//*
//*      THE FOLLOWING CHARACTER STRINGS MUST BE TAILORED:
//*   ##SATYLOAD -  MUST BE THE NAME OF THE ATY LOAD DATASET.
//*   ##LOGOUT   -  MUST PROVIDE ALL DATA SET INFORMATION.
//*                 THE DATA SET MUST BE LRECL=1024 AND RECFM=VB.
//*                 ALL OTHER PARAMETERS ARE INSTALLATION SPECIFIC.
//*   ##LOGGER   -  MUST BE THE 1-26 BYTE Z/OS LOGSTREAM NAME.
//*
//*   -  ADDITIONAL SYSIN CONTROL CARDS CAN BE FOUND IN
//*      THE ATY USERS GUIDE.  (SYSIN CONTROL CARDS MUST
//*      START IN COLUMN 1 OR 2).
//*
//STEP01   EXEC PGM=ATYARCH0
//STEPLIB   DD  DISP=SHR,DSN=##SATYLOAD
//LOGOUT    DD  ##LOGOUT
//SYSABEND  DD  SYSOUT=*
//SYSPRINT  DD  SYSOUT=*
//SYSIN     DD  *
 LSN=##LOGGER
```

Figure 21. Sample JCL to archive log data (ATYARCH0)

EXEC statement

Specify PGM=ATYARCH0 for the EXEC statement.

DD statements

The following DD statements define the data sets that are required by the ATYARCH0 utility.

STEPLIB DD
Specify the IMS Administration Tool product load library.

LOGOUT DD
Describes the output data set where the command and log data is written.

The data set is defined as LRECL=1024 and RECFM=VB.

The size of the data set is determined by the amount of data that is being archived.

SYSPRINT DD
An output data set that provides informational messages about the utility.

SYSPRINT is defined as LRECL=80 and RECFM=FB.

The output can be written to SYSOUT or a data set.

SYSIN DD
An input data set that contains control statements that specify archiving parameters.

SYSIN is defined as LRECL=80 and RECFM=FB.

SYSIN control statements

The SYSIN data set contains your description of the processing to be done by the ATYARCH0 utility.

Follow these coding conventions when you write control statements in the SYSIN data set:

- Keywords and keyword values must be coded within column 1 and column 71. Keywords must start on column 1 or 2.
- The column 72 must be blank.
- A keyword and its value must be joined with an equal sign (=) and they must be coded on the same line.
- More than one keyword can be coded on one line. Keywords must be separated by blank space.
- Keywords are not positional parameters; they can be specified in any order.
- A comment line must begin with an asterisk (*) in column 1.
- Blank lines are ignored.

The following tables list the control statements.

- Table 96 on page 265 summarizes required control statements.
- Table 97 on page 265 summarizes control statements for narrowing down the records by time range and the number of records. Records identified by these control statements will be marked as eligible for deletion.
- Table 98 on page 266 summarizes control statements for selecting the type of log records to copy to the archive data set. Among the log records that are marked as eligible for deletion, only the type of log records selected by these control statement are copied to the archive data set.

Table 96. ATYARCH0 SYSIN control statements - required control statements

Definition	Value
LSN=*name*	Required. Specify the 1- to 26-byte log stream name.

Table 97. ATYARCH0 SYSIN control statements to narrow the time range

Definition	Value
DATE	Default. The utility starts processing from the oldest record and continues until it encounters a log record with a different date.
HOURS=*nn*	The utility starts processing from the oldest record and continues until *nn* number of hours of log records has been archived, or a log record with the current date is encountered. Valid values for *nn* are 1-24. When the HOURS definition is specified in conjunction with DATE, the processing continues until *nn* hours of records have been processed, or a log record with a date change has been encountered.
RECS=*nnnnnn*	The utility starts processing from the oldest record and continues until *nnnnnn* records have been processed. Valid values for *nnnnnn* are 1-999999. This control statement is not valid with any other control statements listed in this table.

Table 97. ATYARCH0 SYSIN control statements to narrow the time range (continued)

Definition	Value
ALL	The utility starts processing from the oldest record and continues until a log record with the current date minus one day has been encountered. For example, if the utility is run at 2022/10/20 15:32, any log record created on and before 2022/10/19 are processed. This control statement is not valid with any other control statements listed in this table.
MAX	The utility starts processing from the oldest record and continues until a log record with the current hour minus one hour has been encountered. For example, if the utility is run at 2022/10/20 15:32, any log record created at and before 2022/10/20 14:59 are processed. If using this option, it is recommended that the archive job (ATYARCH0) be scheduled at 15 minutes past the hour. This ensures at least 15 minutes of log data is always present in the log stream. This control statement is not valid with any other control statements listed in this table.

Table 98. ATYARCH0 SYSIN control statements to filter the type of log

Definition	Value
FILTER=[A | C | X]	Optional. Specify the type of log records to copy to the archive data set. **A** Audit log records. **C** Command log records. **X** Both command log records and audit log records. This is the default value.
CCFLOG=[Y | N]	Optional. Specify whether to copy CCF log records to the archive data set. **Y** Copies CCF log records to the archive data set. This is the default value. If FILTER=A is specified, CCFLOG=Y is ignored. **N** Does not copy CCF log records to the archive data set.

SYSIN control statement examples

The following SYSIN control statement example is for archiving both command log records and audit log records. Because ALL is specified, the utility starts archiving with the oldest record and continues until it encounters a log record with the current date.

```
//SYSIN DD *
LSN=Logger data set name
FILTER=X
ALL
/*
```

The following SYSIN control statement example is for archiving command log records.

- The first line is a comment line because the first column has an asterisk.
- The second line has keyword LSN starting from the second column. This is valid because keywords must start in column 1 or 2.
- The third line is a blank line. The utility skips this line.
- The forth line has multiple keywords in one line.

```
//SYSIN DD *
*  Comment line
 LSN=Logger data set name

 FILTER=C MAX
/*
```

Part 10. Troubleshooting

IMS Administration Tool issues messages and codes that can help you to diagnose and correct problems that you experience with the product.

Topics:

Chapter 38. Messages and codes

The following topics describe return codes, messages, and abend codes of IMS Administration Tool.

Topics:

Return codes

IMS Administration Tool batch processor modules, ATY@OBJU and ATYARCH0, generate return codes to indicate the result of a job.

ATY@OBJU return codes: DBD and PSB update

The following table summarizes the return codes used when ATY@OBJU runs as an IMS resource change job (database and application administration function) or an import objects job (IMS catalog and ACB library management function).

Code	Meaning
0	DBDs, PSBs, or both were updated successfully. All the requested resource change tasks, which may include copybook import, DBDGEN, PSBGEN, ACBGEN, and IMS catalog populate, completed successfully.
4	DBDs, PSBs, or both were updated successfully. All the requested resource change tasks, which may include copybook import, DBDGEN, PSBGEN, ACBGEN, and IMS catalog populate, completed successfully. However, one or more warning messages were issued.
8	DBDs, PSBs, or both could not be updated. One or more of the requested resource change tasks, which may include copybook import, DBDGEN, PSBGEN, ACBGEN, and IMS catalog populate, failed.

ATY@OBJU return codes: DBD and PSB Summary report and DBD/PSB Detail reports

The following table summarizes the return codes used when ATY@OBJU runs to generate the DBD and PSB summary report and the DBD/PSB Detail reports (IMS catalog and ACB library management function).

Code	Meaning
0	Reports were generated successfully.
4	Reports were generated successfully, but one or more warning messages were issued.
8	Reports were not generated.

ATY@OBJU return codes: Delete all obsolete instances

The following table summarizes the return codes used when ATY@OBJU runs to delete all obsolete instances from the IMS catalog (IMS catalog and ACB library management function).

Code	Meaning
0	Either of the following conditions: • All obsolete instances of DBD or PSB resources that satisfy the filter criteria are deleted. • Obsolete instances of DBD or PSB resources that satisfy the filter criteria do not exist in the IMS catalog.
8	Failed to delete obsolete instances.

ATY@OBJU return codes: IMS directory/BSDS backup and restore

The following table summarizes the return codes used when ATY@OBJU runs as an IMS directory/BSDS backup job or restore job (IMS catalog and ACB library management function).

Code	Meaning
0	Backup or restore completed successfully.
4	Backup or restore completed successfully, but one or more warning messages were issued.
8	Backup or restore did not complete successfully.

ATYARCH0 return codes: Command and Audit Log Archive utility

The following table summarizes the return codes of the Command and Audit Log Archive (ATYARCH0) utility.

Code	Meaning
0	The archive job completed successfully.
12	The archive job failed. Log records are not deleted, and the archive data set contains no data or only partial data. You must delete the archive data set, identify and resolve the cause of the failure, and rerun the job.

Messages (ATY0 - ATY9)

IMS Administration Tool issues messages that can help you understand the status of the infrastructure and help you resolve errors.

Message format

IMS Administration Tool messages adhere to the following format:

```
ATYnnnnx
```

Where:

ATY
Indicates that the message was issued by IMS Administration Tool

nnnn
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.

ATY0100W FOLLOWING RECORD FAILED EDITING

Explanation

ATY/IMS editing failed while trying to analyze the command. The character string is not recognized as an IMS type 1 or type 2 command, nor is it a valid IMS name.

System action

The action taken depends upon the setting for GENERAL errors. The following GENERAL error settings and actions are possible:

WTOR
This record is skipped and processing continues as if no error were encountered.

SETRC
Terminate the job step using the user-defined return code.

ABEND
Terminate the job step using the user-defined abend code.

IGNORE
This record is be skipped and processing continues as if no error were encountered.

User response

Correct the command, and run the job again.

ATY0105I /ATYWAIT OR /CCFWAIT VALUE MUST BE 1-10

Explanation

A /ATYWAIT or /CCFWAIT control card was read but an invalid wait interval was specified.

System action

IMS Administration Tool will wait a default 5 seconds and then resume processing.

User response

None. This message is informational.

ATY0106E IMS PLEX NAME MIS-MATCH DETECTED

Explanation

A configuration error has been encountered. To issue commands to a IMS Administration Tool group using IMS Operations Manager, all IMS records must be defined with the same Operations Manager (PLEX) name.

System action

The job terminates using the user-defined abend code.

User response

Identify the IMS with the mismatched PLEX name using the prior ATY6010I message. Use the IMS Administration Tool user interface to correct the IMS record with the mismatch and run the job again.

ATY0107E **INCOMPATIBLE COMMAND ROUTING TECHNIQUES SPECIFIED**

Explanation

A configuration error has been encountered. The IMS members of an IMS Administration Tool group have been defined to use both Operations Manager and non-Operations Manager command routing techniques. If Operations Manager is specified for the command routing technique, all members of an IMS Administration Tool group must use Operations Manager for their command routing technique.

System action

The job terminates using the user-defined abend code.

User response

Identify the command routing techniques for the IMS Administration Tool group members using the prior ATY6010I message, correct the incompatibility, and run the job again.

ATY0110E **AIB INQY CALL ERROR, RC=*rc*, REASON=*rsn***

Explanation

Program ATYCMD00 encountered an error while processing an INQY ENVIRON call. The AIB return code is displayed as *rc* and the reason code as *rsn*.

System action

The job terminates with the user-defined abend code.

User response

Correct the condition described by the AIB return code and reason codes. If assistance is required, contact IBM Software Support.

ATY0111E **ERROR OPENING DD NAME *ddn***

Explanation

An error occurred while trying to open a data set with the DDNAME of *ddn*. Check the job log for additional messages.

System action

The action taken depends upon the setting for GENERAL errors. If SETRC is specified for GENERAL errors, the job terminates using the user-defined return code. Otherwise the job terminates with the user-defined abend code.

User response

Correct the condition causing the failure and run the job again.

ATY0112E ***ddn* HAS LRECL GREATER THAN MAXIMUM**

Explanation

The data set represented by *ddn* has an LRECL that is greater than 121 bytes. Valid record lengths for the input data set are from 80 to 121 bytes.

System action

The action taken depends upon the setting for GENERAL errors. If SETRC is specified for GENERAL errors, the job terminates using the user-defined return code. Otherwise the job terminates using the user-defined abend code.

User response

Reallocate the data set with a valid LRECL and run the job again.

ATY0113E ***ddn* HAS LRECL LESS THAN MINIMUM**

Explanation

The data set represented by *ddn* has an LRECL that is less than 80 bytes. Valid record lengths for the input data set are from 80 to 121 bytes.

System action

The action taken depends upon the setting for GENERAL errors. If SETRC is specified for GENERAL errors, the job terminates using the user-defined return code. Otherwise the job terminates using the user-defined abend code.

User response

Reallocate the data set with a valid LRECL and run the job again.

ATY0114E **OPEN FAILED FOR STORE/ FORWARD DATA SET, RC=*rc***

Explanation

An error occurred trying to open the store/forward data set. Field *rc* contains the return code from the OPEN.

System action

Processing continues, but the command store/forward function is not active for this job.

User response

Make sure the command store/forward installation completed successfully.

ATY0115E DYNALLOC FAILED FOR: *dsn*

Explanation

Dynamic allocation failed for the command store/forward data set, *dsn*.

System action

Processing continues, but the command store/forward function is not active for this job.

User response

Make sure the command store/forward installation completed successfully.

ATY0150I FOLLOWING RECORD READ FROM: *ddn*

Explanation

The data in the next line of output was read from DDNAME *ddn*.

System action

Processing continues.

User response

None. This message is informational.

ATY0201E ERROR ENCOUNTERED PROCESSING OPTIONS DATA SET

Explanation

An error was encountered by the callable interface module, ATYCAPI0. Additional error messages should be obtained by calling ATYCAPI0 with the GCMD parameter.

System action

Return code of 12 is set and control is returned to the calling program.

User response

Obtain additional error messages using the ATYCAPI0 GMCD call. However, since this is likely a recurring error, no calls other than the GCMD should be attempted.

ATY0202E NAME/TOKEN CREATE FAILED, RC=*rc*

Explanation

An error was encountered trying to create a z/OS name token entry.

System action

Return code of 12 is set and control is returned to the calling program.

User response

This is likely a recurring error, so no other calls should be attempted.

ATY0203W INVALID OPTION SPECIFIED IN AOITYPE PARAMETER

Explanation

The data passed in parameter field AOITYPE is invalid.

System action

The invalid message is skipped, return code 4 is set, and control is returned to the calling program.

User response

Correct the invalid data in the AOITYPE field and retry the operation.

ATY0204W INVALID DATA SPECIFIED IN AOINAME PARAMETER

Explanation

The data passed in parameter field AOINAME is invalid.

System action

The invalid message is skipped, return code 4 is set, and control is returned to the calling program.

User response

Correct the invalid data in the AOINAME field and retry the operation.

ATY0205W INVALID DATA SPECIFIED IN AOIDEST PARAMETER

Explanation

The data passed in parameter field AOIDEST is invalid.

System action

The invalid message is skipped, return code 4 is set, and control is returned to the calling program.

User response

Correct the invalid data in the AOIDEST field and retry the operation.

ATY0206W NO ATY GROUP RECORDS FOUND IN OPTIONS DATA SET

Explanation

Field AOIDEST requested command routing to a IMS Administration Tool group, but there are no group records defined in the options data set.

System action

Return code 4 is set and control is returned to the calling program.

User response

Add a group record using the IMS Administration Tool user interface, or correct the parameter and retry the operation.

ATY0207W GROUP NAME = *grpname* NOT FOUND IN OPTIONS DATA SET

Explanation

grpname not defined as a IMS Administration Tool group in the options data set.

System action

Return code 4 is set and control is returned to the calling program.

User response

Add the IMS Administration Tool group *grpname* using the IMS Administration Tool user interface, or correct the name specified for *grpname* and retry the operation.

ATY0208W NO IMS ENTRIES FOR ATY GROUP - *grpname*

Explanation

grpname is defined in the options data set, but the group does not have any IMS systems defined.

System action

Return code 4 is set and control is returned to the calling program.

User response

Add IMS entries to the IMS Administration Tool group *grpname* using the IMS Administration Tool user interface and retry the operation.

ATY0209W NO IMS RECORDS FOUND IN ATY OPTIONS DATA SET

Explanation

There are no IMS records defined in the options data set.

System action

Return code 4 is set and control is returned to the calling program.

User response

Add IMS entries using the IMS Administration Tool user interface and retry the operation.

ATY0210W IMS NAME = *ims* NOT FOUND IN OPTIONS DATA SET

Explanation

There is no IMS record for *ims* defined in the options data set.

System action

Return code 4 is set and control is returned to the calling program.

User response

Add IMS record *ims* using the IMS Administration Tool user interface, or correct the name specified for *ims* and retry the operation.

ATY0211W IMS NAME SPECIFIED IN AOINAME MORE THAN 4 BYTES

Explanation

Field AOIDEST requested command routing to a specific IMSID, but the data in field AOINAME was more than four bytes long. IMS Administration Tool limits the length of an IMS name to four bytes.

System action

Return code 4 is set and control is returned to the calling program.

User response

Correct the name in AOINAME and retry the operation.

ATY0212W NOT ALL IMS REGIONS USE SAME OPERATIONS MANAGER NAME

Explanation

Some of the IMS members of a IMS Administration Tool group are defined to use a different Operations Manager name. If a member of a IMS Administration Tool group is defined to use Operations Manager for its command routing technique, then all members must use the same Operations Manager name.

System action

Return code 4 is set and control is returned to the calling program.

User response

Correct the routing technique information in the IMS records using the IMS Administration Tool user interface and retry the operation.

ATY0213W INCOMPATIBLE COMMAND ROUTING TECHNIQUES SPECIFIED

Explanation

One or more IMS members of a IMS Administration Tool group was defined to use Operations Manager as its command routing technique, but one or more IMS members were defined to use a command routing technique other than Operations Manager. If Operations Manager is used by an IMS for its command routing technique, all IMS members of the IMS Administration Tool group must use the same Operations Manager.

System action

Return code 4 is set and control is returned to the calling program.

User response

Correct the routing technique information in the IMS records using the IMS Administration Tool user interface and retry the operation.

ATY0214W COMMAND REJECTED, COMMAND IS RESTRICTED

Explanation

The command passed in field AOIDATA is not allowed from the callable API.

System action

Return code 4 is set and control is returned to the calling program.

User response

Do not attempt to issue restricted commands.

ATY0215W INVALID DATA IN COMMAND, OR UNKNOWN IMS SPECIFIED

Explanation

IMS Administration Tool was not able to determine the content of the AOIDATA field.

System action

Return code 4 is set and control is returned to the calling program.

User response

Review the data that was passed to the callable API. If the data is valid, contact IBM Software Support.

ATY0216W COMMAND FAILED EDITING

Explanation

A bad return code was received from module ATYEDIT0. ATYEDIT0 should have returned a descriptive message indicating the nature of the error.

System action

Return code 4 is set and control is returned to the calling program.

User response

Review the message returned from ATYEDIT0, correct the problem, and retry the operation.

ATY0217W ERROR ENCOUNTERED IN COMMAND WILDCARD PROCESSING

Explanation

An internal error occurred when processing a command that contains a wildcard character.

System action

Skips the command and continues from the next command.

User response

If any other error messages are issued before this message, follow the user response for those messages. If no error messages are issued before this message, contact IBM Software Support.

ATY0218W BAD RETURN CODE FROM COMMAND DRIVER

Explanation

A bad return code was received from module ATYEXEC0. ATYEXEC0 should have returned a descriptive message indicating the nature of the error.

System action

Return code 4 is set and control is returned to the calling program.

User response

Review the message returned from ATYEXEC0, correct the problem, and retry the operation.

ATY0219E INQY CALL ERROR, AIB RC=*rc* RSN=*rsn*

Explanation

A non-zero return code was received when making an IMS AIB call.

System action

Return code 12 is set and control is returned to the calling program.

User response

Find the AIB return code and reason codes in *IMS Messages and Codes*, fix the problem identified by the codes, and retry the operation.

ATY0220E INPUT COMMAND LONGER THAN 252 BYTES

Explanation

An application program called the IMS Administration Tool AOI with an input command (AOIDATA) longer than 252 bytes. IMS Administration Tool requires the command be 252 bytes, or less, with the last four bytes of AOIDATA containing spaces.

System action

A return code 12 is returned to the calling program, and the command is ignored.

User response

Correct the command, and run the job again.

ATY0301I COMMAND DISALLOWED BY IMS SECURITY

Explanation

IMS determined the user ID attempting this command is not authorized.

System action

Command is bypassed.

User response

Verify that the user ID attempting this command has proper authorization. If the user should be able to execute this command, correct the security definition, and retry the operation.

ATY0302E DBRC MODULE DSPURX00 NOT FOUND, BYPASSING DBRC PROCESSING

Explanation

DBRC has been requested for either DB verification, or to set ACCESS, but the DBRC load module is not found.

System action

The action taken is determined by the DRBC= *option*.

User response

If DBRC usage is required, add IMS SDFSRESL to the STEPLIB. If DBRC usage is not required, set options DBRC=NODBRC.

ATY0306I NO MODBLKS DDNAME, DRD ASSUMED FOR *imsid*

Explanation

IMS Administration Tool assumes that dynamic resource definition (DRD) is used in the indicated IMS.

System action

Processing continues.

User response

None. This message is informational.

ATY0308W END OF TABLE ENCOUNTERED BUILDING DBRC DB TABLE

Explanation

Option DBACCESS=DBRC was requested, but more databases than expected were found when processing the output of a LIST.DB command. The remaining databases will not be added to the DBRC table.

System action

The job step continues.

User response

The maximum size of the table might need to be increased. Contact IBM Software Support for information.

ATY0317E MODBLKS READ ROUTINE FAILED

Explanation

Option DBACCESS=GEN was requested, but an error was encountered attempting to read the MODBLKS data set.

System action

The job will terminate based upon the setting for GENERAL errors. If GENERAL=SETRC, the job will terminate using the value set in SETRC. Otherwise, the job terminates using the user-defined abend code.

User response

Using the IMS Administration Tool user interface, ensure the IMS System Information in the IMS record is defined correctly.

ATY0329I COMMAND EXECUTING ON: *ims*

Explanation

The following command will execute on the displayed IMS (*ims*).

System action

The job continues processing.

User response

N/A

ATY0330E ERROR IN ONLINE CHANGE INITIALIZATION, FUNCTION TERMINATING

Explanation

An unexpected error occurred while trying to save pre-online change information for all IMS Administration Tool group members.

System action

Online change command processing is terminated.

User response

Correct the problem preventing online change from occurring and resubmit the command.

ATY0331E AN ERROR HAS BEEN ENCOUNTERED, ONLINE CHANGE TERMINATING

Explanation

An unexpected error occurred while trying to issue /MODIFY PREPARE commands to all IMS Administration Tool group members.

System action

Both messages ATY0331E and ATY0336E are displayed and the online change command processing ends abnormally.

User response

Correct the problem preventing the online change command from occurring and resubmit the command.

ATY0332E **AN ERROR HAS BEEN ENCOUNTERED, ONLINE CHANGE TERMINATING**

Explanation

An unexpected error occurred while checking for NO WORK PENDING on all IMS Administration Tool group member systems.

System action

Both messages ATY0332E and ATY0337E are displayed and online change command processing ends abnormally.

User response

Correct the problem preventing the online change from occurring and resubmit the command.

ATY0334I **MODIFY ABORT PROCESSING INITIATED**

Explanation

An unexpected error occurred during the online change process.

System action

Online change command processing is terminated and /MODIFY ABORT commands will be issued to all IMS Administration Tool group members.

User response

Correct the problem preventing the online change from occurring and resubmit the command.

ATY0335E **ONLINE CHANGE FAILED - OPERATOR INTERVENTION MAY BE REQUIRED**

Explanation

An unexpected error occurred while trying to issue / MODIFY ABORT commands to all IMS Administration Tool group member systems.

System action

Online change processing ends abnormally.

User response

Operator intervention will be required to correct and restore all systems to pre-online change conditions.

ATY0338E **ONLINE CHANGE TERMINATED, ERROR DURING MOD COMMIT PROCESSING**

Explanation

An unexpected error occurred while trying to issue / MODIFY COMMIT commands to all IMS Administration Tool group member systems.

System action

Both messages ATY333E and ATY0338E are displayed and online change command processing ends abnormally.

User response

Correct the problem preventing the online change from occurring and resubmit the command.

ATY0339E ***ddn* LIBRARY NOT SWAPPED ON *ims***

Explanation

The online change being attempted was not successful on the indicated system (*ims*). The library where the suffix name did not change is identified by its DDNAME (*ddn*).

System action

The online change process ends abnormally.

User response

Correct the problem preventing the online change from occurring and resubmit the command.

ATY0340I **ONLINE CHANGE FUNCTION SUCCESSFUL**

Explanation

The online change function was successful.

System action

The system continues processing.

User response

N/A

ATY0344E **ERROR ENCOUNTERED PROCESSING "/DIS POOL" COMMAND, REGION BYPASSED**

Explanation

An unexpected error occurred while trying to process this command during Dead Letter Queue cleanup.

System action

Dead Letter Queue cleanup processing is skipped for this particular IMS region.

User response

Resubmit the command. Contact IBM Software Support if problem persists.

ATY0345E ERROR ENCOUNTERED PROCESSING "/DIS USER" COMMAND, REGION BYPASSED

Explanation

An unexpected error occurred while trying to process this command during Dead Letter Queue cleanup.

System action

Dead Letter Queue cleanup processing is skipped for this particular IMS region.

User response

Resubmit the command. Contact IBM Software Support if problem persists.

ATY0346E ERROR ENCOUNTERED PROCESSING "/STO USER" COMMAND, USER BYPASSED

Explanation

An unexpected error occurred while trying to process this command during Dead Letter Queue cleanup.

System action

Dead Letter Queue cleanup processing is skipped for this particular IMS region.

User response

Resubmit the command. Contact IBM Software Support if problem persists.

ATY0347E ERROR ENCOUNTERED PROCESSING "/DEQ USER" COMMAND, JOB TERMINATING

Explanation

An unexpected error occurred while trying to process this command during Dead Letter Queue cleanup.

System action

Dead Letter Queue cleanup processing is skipped for this particular IMS region.

User response

Resubmit the command. Contact IBM Software Support if problem persists.

ATY0348E ERROR ENCOUNTERED PROCESSING "/STA USER" COMMAND, JOB TERMINATING

Explanation

An unexpected error occurred while trying to process this command during Dead Letter Queue cleanup.

System action

Dead Letter Queue cleanup processing is skipped for this particular IMS region.

User response

Resubmit the command. Contact IBM Software Support if problem persists.

ATY0351E ERROR ENCOUNTERED, ACTION DETERMINED BY ERROR FLAG: *flag*

Explanation

A recurring error has been encountered and identified by a prior message. This messages states which error option (*flag*) is used to determine how the job will proceed.

System action

The action taken is determined by the setting for error option flag.

User response

Follow the User Response for the prior error message.

ATY0355W COMMAND BYPASSED DUE TO OPERATOR RESPONSE

Explanation

An operator replied to a WTOR command, causing IMS Administration Tool to skip the prior error.

System action

The system continues processing.

User response

A review may be required to determine whether the command still needs to be issued.

ATY0356W **COMMAND BYPASSED DUE TO ERR488=IGNORE SPECIFICATION**

Explanation

Even though a database command failed to receive a positive response, processing continues due to option ERR488=IGNORE specification.

System action

The system continues processing.

User response

Review the prior response messages and determine whether the command still needs to be issued.

ATY0357E **REGION TERMINATING, MAXIMUM RETRY ATTEMPTS EXCEEDED**

Explanation

The maximum number of command retries has been reached. The reason for command failure is described in a prior message.

System action

The job step ends abnormally.

User response

Correct the condition causing the error and retry the command. Contact IBM Software Support if the error persists.

ATY0358E **REGION TERMINATING, PERMANENT ERRORS ENCOUNTERED AND MAX RETRIES**

Explanation

Recurring errors have been experienced and the maximum number of command retries has been reached.

System action

The action taken is determined by the setting for GENERAL errors.

User response

Correct the condition causing the error and retry the command. Contact IBM Software Support is the error persists.

ATY0359I **COMMAND BEING ATTEMPTED AGAIN DUE TO OPERATOR RESPONSE**

Explanation

An operator reply to a WTOR specified that command retry should be attempted.

System action

The job step resumes processing after the reply to the WTOR.

User response

No further action is required.

ATY0361E **DATAGRP ERROR, JOB TERMINATING, ERR488=ABEND SPECIFIED**

Explanation

An error was encountered when processing an IMS command with the DATAGROUP keyword. The reason for the error should be identified in a prior message.

System action

The action taken is determined by the setting for ERR488 errors.

User response

Correct the problem described in the prior message. Then resubmit the command.

ATY0362E **DATAGRP ERROR, JOB TERMINATING, ERR488=IGNORE NOT SPECIFIED**

Explanation

An error was encountered when processing an IMS command with the DATAGROUP keyword. The reason for the error should be identified in a prior message.

System action

The action taken is determined by the setting for ERR488 errors.

User response

Correct the problem described in the prior message. Then resubmit the command.

ATY0371E **ERROR ATTEMPTING DBRC VALIDATION, VALIDATION BYPASSED**

Explanation

An error described by a prior message was encountered during DBRC validation.

System action

DBRC validation is not performed and the job will proceed as determined by the prior error condition.

User response

Follow User Response described in prior error message.

ATY0372E **DB OPEN FOR SSID= *ssid* ACC= *access* DBD= *database***

Explanation

An IMS /DBD or /DBR command was issued and DBRC validation was requested, but one or more databases are registered in the RECON as being open with UPDATE intent.

- SSID= shows the subsystem that is using the database
- ACC= shows the processing intent
- DBD= shows the database

System action

The action taken is determined by the setting for DBRC errors.

User response

Review prior messages and determine if the command needs to be reissued.

ATY0373E **DB OPEN FOR SSID= *ssid* ACC= *access* DBD= *database* AREA= *area***

Explanation

An IMS /DBD or /DBR command was issued and DBRC validation was requested, but one or more areas are registered in the RECON as being open with UPDATE intent.

- SSID= shows the subsystem that is using AREA
- ACC= shows the processing intent
- DBD= shows the database
- AREA= shows the AREA name

System action

The action taken is determined by the setting for DBRC errors.

User response

Review prior messages and determine if the command needs to be reissued.

ATY0374I **NO DATABASES OPEN WITH UPDATE INTENT**

Explanation

DBRC shows that all database commands executed successfully.

System action

The job step continues processing.

User response

N/A

ATY0375I **DBRC VALIDATION SUCCESSFUL**

Explanation

DBRC shows that all database commands executed successfully.

System action

The job step continues processing.

User response

N/A

ATY0376E **INVALID HELD AUTH STATE=X"*acc*" FOR DBD=*dbd* AREA=*area***

Explanation

DBRC shows that a database for the indicated DBD/AREA did not complete as expected.

System action

The action taken is determined by the setting for DBRC errors.

User response

Issue IMS command /RML DRBC='DB DBD(*dbd*) DBDS' to determine which job has the database open.

ATY0377W COMMAND FAILED ON ALL SYSTEMS, STORE/FORWARD BYPASSED

Explanation

The prior command failed on all systems and is therefore not saved in the store/forward data set. In order for a command to be eligible for command store/forward processing, it must be successfully processed on at least one system.

System action

Processing continues, but the prior command is not saved in the store/forward data set.

User response

Determine whether the failed command needs to be manually entered for all failed systems.

ATY0378I FOLLOWING COMMAND SAVED IN STORE/FORWARD FOR IMS: *ims*

Explanation

The following command encountered routing errors on IMS (*ims*) and is saved in the store/forward data set for subsequent processing.

System action

The failed command is written to the store/forward data set and processing continues.

User response

None. This message is informational.

ATY0381I PRE-SCAN STARTED ON IMS: *ims*

Explanation

Database pre-scan processing has started for IMS (*ims*).

System action

The job step continues processing.

User response

None. This message is informational.

ATY0382I PRE-SCAN ENDED ON IMS: *ims*

Explanation

Database pre-scan processing has completed for IMS (*ims*).

System action

The job step continues processing.

User response

None. This message is informational.

ATY0383I ERROR ENCOUNTERED, ONLINE CHANGE REVERSAL BEING ATTEMPTED

Explanation

An error has been encountered during /ATYMOD processing after at least one system had completed the online change and option MODREVERSE=Y is in effect.

System action

/MODIFY ABORT commands are issued to all systems where the online change has not completed, and IMS Administration Tool reverses the online change for any system where the online change was successful.

User response

Determine the reason for the online change failure, correct it, and resubmit the command.

ATY0389I SYMDEST=*symdest* / PARTNER=*partner*

Explanation

This is an information message that accompanies one of many different error messages. The message identifies the routing information coded on the IMS record of the options data set.

System action

N/A

User response

Correct the problem identified by the accompanying message and, if required, run the job again.

ATY0390I STATUS CHECKING BYPASSED FOR LOCAL ICMD

Explanation

A database command was issued using the ICMD/RCMD AOI in the local IMS. Because the local BMP cannot perform the simulated DFS0488I status checking, ATY/IMS assumes that the command processed successfully.

System action

Processing continues.

User response

If the simulated DFS0488I status checking is required, perform one of the following tasks:

- Run the ATY/IMS job as an IMS DL/I job.
- Run the ATY/IMS job as a standard z/OS batch job.

ATY0398E ERROR ENCOUNTERED ON ICMD CALL, RC=*rc* REASON=*rsn*

Explanation

An unexpected error occurred while trying to issue a command using the local ICMD call. The IMS AIB return code (*rc*) and reason code (*rsn*) are displayed in the message.

System action

The job step might end abnormally, depending upon what options are in effect for the job.

User response

Determine the cause of the error by reviewing the AIB return and reason codes in *IMS Messages and Codes*, correct the error, and retry the command.

ATY0399E ERROR ENCOUNTERED ON RCMD CALL, RC= *rc* REASON= *rsn*

Explanation

An unexpected error occurred while trying to retrieve a command response using the local RCMD call. The IMS AIB return code (*rc*) and reason code (*rsn*) are displayed in the message.

System action

The job step might end abnormally, depending upon what options are in effect for the job.

User response

Determine the cause of the error by reviewing the AIB return and reason codes in *IMS Messages and Codes*, correct the error, and retry the command.

ATY0449I ONE OR MORE DATA BASES STILL HELD IN DBRC

Explanation

DBRC validation has been requested, but one or more databases are still registered in the RECON and open with update intent. This message is accompanied by ATY0450A.

System action

Processing continues.

User response

N/A

ATY0450A REPLY "C" TO CANCEL, "S" TO SKIP OR "R" TO RETRY COMMAND

Explanation

This message accompanies one or more messages, issued previously, that describe the error encountered.

System action

Action taken depends upon the response to this message.

User response

Review the accompanying messages and reply to the WTOR accordingly.

ATY0451E DATA BASE COMMAND UNSUCCESSFUL

Explanation

A database command did not execute successfully. This message is accompanied by additional messages.

System action

Processing continues.

User response

Review the accompanying messages.

ATY0452I ***cmd***

Explanation

The database command (*cmd*) that did not execute successfully is displayed.

System action

Processing continues.

User response

N/A

ATY0455I ***cmd***

Explanation

The command (*cmd*) that did not execute successfully is displayed.

System action

Processing continues.

User response

N/A

ATY0457I ***jobname* - *ims* - SYMD *symdest* PARTNER *partner***

Explanation

This information message is displayed when a WTODBCMD=Y is in effect, and a command that changes the state of a database is executed. This message is accompanied by ATY0458I, which lists the actual command being executed.

System action

Processing continues.

User response

N/A

ATY0458I ***cmd***

Explanation

This message follows ATY0457I, and lists the command that changes database state.

System action

Processing continues.

User response

N/A

ATY0488I ***cmd* COMMAND COMPLETED *type* *dbd* RC=*rc***

Explanation

This is a simulated DFS0488I response. It is in response to a command that changes the state of a database or AREA. The *cmd* indicates the command that is being attempted. The type indicates whether the command is being entered for a database (DBN=) or an AREA (AREA=). The *dbd* is the name of the database or AREA. The *rc* is the return code. When *rc* is 0, the command processed as you requested. Otherwise, the return code is set to 99.

System action

Processing continues.

User response

N/A

ATY0501E **SYSPRINT IS SPECIFIED INCORRECTLY.**

Explanation

SYSOUT or DUMMY is specified for the SYSPRINT DD statement. These parameters are not supported for the SYSPRINT DD statement.

System action

Processing stops.

If option DBRC=SETRC is enabled, the job step terminates with the user-defined return code; otherwise the job terminates with the user-defined abend code.

User response

Remove the SYSPRINT DD statement from the JCL, or rerun the job by specifying a temporary data set with PS attribute and SPACE=(CYL,(5,20)) parameter (or higher value) in the SYSPRINT DD statement.

ATY0502E **SYSIN IS SPECIFIED INCORRECTLY.**

Explanation

SYSIN DD statement must not exist in the JCL.

System action

Processing stops.

If option DBRC=SETRC is enabled, the job step terminates with the user-defined return code; otherwise the job terminates with the user-defined abend code.

User response

Remove the SYSIN DD statement from the JCL.

ATY0503E ***ddn*** **DYNAMIC ALLOCATION ERROR, RC=*rc* REASON=*rsn***

Explanation

Dynamic allocation failed for DDNAME *ddn*. The return code (*rc*) and reason code (*rsn*) identify the cause of the failure.

System action

If option DBRC=SETRC is specified, the job step terminates with the user-defined return code; otherwise the job terminates with the user-defined abend code.

User response

Correct the cause of the failure and run the job again.

ATY0505E **UNABLE TO OPEN DDNAME SYSIN**

Explanation

An error was encountered attempting to open DDNAME SYSIN.

System action

If option DBRC=SETRC is specified, the job step terminates with the user-defined return code; otherwise the job terminates with the user-defined abend code.

User response

Review the z/OS log for additional messages, correct the failure condition, and run the job again.

ATY0506W **NON-ZERO CODE RETURNED FROM DSPURX00, RC=*rc***

Explanation

An unexpected error was returned from DBRC module DSPURX00.

System action

The job step ends abnormally.

User response

If the cause of the error cannot be determined, contact IBM Software Support.

ATY0507E **UNABLE TO OPEN DDNAME SYSPRINT**

Explanation

An error was encountered attempting to open DDNAME SYSPRINT.

System action

If option DBRC=SETRC is specified, the job step terminates with the user-defined return code; otherwise the job terminates with the user-defined abend code.

User response

Review the z/OS log for additional messages, correct the failure condition, and run the job again.

ATY0701E **DYNAMIC ALLOCATION FAILED, RC=*rc* REASON=*rsn***

Explanation

An error occurred during dynamic allocation. The return (*rc*) and reason (*rsn*) codes indicate the nature of the failure. The data set name will be displayed in a subsequent message.

System action

The action taken depends on the options set for this job. The job terminates with the user-defined abend code or the user-defined return code.

User response

Fix the problem that caused the dynamic allocation failure and run the job again.

ATY0702E **DYNAMIC ALLOCATION FAILED, DSN=*dsn***

Explanation

Dynamic allocation failed for the data set name *dsn*. A prior message provides additional information regarding the dynamic allocation failure.

System action

The action taken depends on the options set for this job. The job terminates with the user-defined abend code or the user-defined return code.

User response

Fix the problem that caused the dynamic allocation failure and run the job again.

ATY0703E **OPEN FAILED FOR DATA SET: *dsn***

Explanation

An error occurred trying to open data set named *dsn*.

System action

The action taken depends on the options set for this job. The job terminates with the user-defined abend code or the user-defined return code.

User response

Fix the problem that caused the dynamic allocation failure and run the job again.

ATY0704E ***ver* IS AN UNSUPPORTED VERSION**

Explanation

This is a ATY/IMS internal error.

System action

The action taken depends on the options set for this job. The job terminates with the user-defined abend code or the user-defined return code.

User response

To allow this job to run, specify DBACCESS=ASIS or DBACCESS=DBRC. Contact IBM Software Support to resolve the original error.

ATY0705E **MODBLKS READ ROUTINE NOT LINKED FOR VERSION *ver***

Explanation

This is probably an installation error.

System action

The action taken depends on the options set for this job. The job terminates with the user-defined abend code or the user-defined return code.

User response

To allow this job to run, specify DBACCESS=ASIS or DBACCESS=DBRC. Contact IBM Software Support to resolve the original error.

ATY0711E **DYNAMIC UNALLOCATION FAILED, RC=*rc* REASON=*rsn***

Explanation

An error occurred during dynamic unallocation. The return (*rc*) and reason (*rsn*) codes indicate the nature of the failure. The data set name will be displayed in a subsequent message.

System action

The action taken depends on the options set for this job. The job terminates with the user-defined abend code or the user-defined return code.

User response

Fix the problem that caused the dynamic unallocation failure and run the job again.

ATY0712E **DYNAMIC UNALLOCATION FAILED, DDNAME=*ddn***

Explanation

Dynamic unallocation failed for the data set associated with DDNAME *ddn*. A prior message provides additional information regarding the dynamic unallocation failure.

System action

The action taken depends on the options set for this job. The job terminates with the user-defined abend code or the user-defined return code.

User response

Fix the problem that caused the dynamic unallocation failure and run the job again.

ATY0801E **INTERNAL ERROR, DATA BASE TABLE OVERFLOW**

Explanation

An unexpected condition occurred. This is probably a logic error in the program.

System action

The action taken depends on the options set for this job. The job terminates with the user-defined abend code or the user-defined return code.

User response

Contact IBM Software Support.

ATY0802E ***ims*** **-LOAD FAILED:** ***dsn***

Explanation

Option DBACCESS=GEN is in effect for this job, but IMS Administration Tool was unable to load the MODBLKS members from the specified data set name (*dsn*). This problem is probably a setup error in the IMS record for the specified IMS system (*ims*).

System action

The action taken depends on the options set for this job. The job terminates with the user-defined abend code or the user-defined return code.

User response

Use the IMS Administration Tool user interface to verify that the IMS record is defined with the correct IMS System Information.

ATY1200W **INVALID COMMAND:** ***cmd***

Explanation

IMS Administration Tool was unable to identify the data (*cmd*) read from the input data set.

System action

The action taken is determined by the setting for GENERAL errors.

User response

If the command is not valid, correct the command and run the job again. If a valid command is being attempted, contact IBM Software Support.

ATY1201W **INVALID KEYWORD LENGTH IN FOLLOWING COMMAND:**

Explanation

The keyword specified on the command is longer than IMS Administration Tool allows.

System action

The action taken is determined by the setting for GENERAL errors.

User response

If the command is not valid, correct the command and run the job again. If a valid command is being attempted, contact IBM Software Support.

ATY1202W **INVALID PARAMETER LENGTH IN FOLLOWING COMMAND:**

Explanation

A parameter specified on the command is longer than IMS Administration Tool allows.

System action

The action taken is determined by the setting for GENERAL errors.

User response

If the command is not valid, correct the command and run the job again. If a valid command is being attempted, contact IBM Software Support.

ATY1203W **/ATYMOD OR /CCFMOD CANNOT BE ROUTED TO A SPECIFIC IMSID**

Explanation

The command requested /ATYMOD or /CCFMOD be routed to a specific IMS system. IMS Administration Tool does not support routing the /ATYMOD or /CCFMOD command to a specific IMS system.

System action

The action taken is determined by the setting for GENERAL errors.

User response

Correct the command and run the job again.

ATY1204E **ERROR ENCOUNTERED DETERMINING DATABASE ACCESS**

Explanation

The ACCESS keyword was specified but command parsing failed to find the parameter value.

System action

The action taken is determined by the setting for GENERAL errors.

User response

Correct the command and run the job again.

ATY1205E INVALID DATABASE ACCESS REQUESTED: *acc*

Explanation

An invalid parameter was specified for database access. The command parser determined that *acc* was the access specified in the command. Valid parameter values are RO, RD, UP, or EX.

System action

The action taken is determined by the setting for GENERAL errors.

User response

Correct the invalid command and run the job again.

ATY1206E NO VALID DATABASE NAMES FOUND IN COMMAND

Explanation

After command parsing completed, there were no database names in the command.

System action

The action taken is determined by the setting for GENERAL errors.

User response

Correct the non-valid command and run the job again.

ATY1207E UNABLE TO DETERMINE COMMAND TYPE

Explanation

The command parser failed to recognize the command being attempted.

System action

The action taken is determined by the setting for GENERAL errors.

User response

If the command appears correct, contact IBM Software Support. Otherwise, correct the command and run the job again.

ATY1208E TYPE 2 CMD ENTERED, BUT NOT ALL IMS SYSTEMS USE OM FOR CMD ROUTING

Explanation

A type 2 IMS command was entered, but not all of the IMS systems in the IMS Administration Tool group use Operations Manager for their command routing technique.

System action

Processing continues.

User response

Use the IMS Administration Tool user interface to change all members of the IMS Administration Tool group to use Operations Manager as the command routing technique. Alternatively, do not enter type 2 IMS commands.

ATY1209E INVALID PARAMETER SPECIFICATION ON UPDATE COMMAND

Explanation

The command parser failed to recognize the command keyword.

System action

The action taken is determined by the setting for GENERAL errors.

User response

If the command appears correct, contact IBM Software Support. Otherwise, correct the command and run the job again.

ATY1210W GLOBAL/LOCAL BOTH SUPPLIED, GLOBAL IGNORED

Explanation

Both the GLOBAL and LOCAL parameters were specified on a database command. The GLOBAL parameter will be discarded.

System action

Processing continues.

User response

Correct the command to eliminate this message.

ATY1211W ACCESS INVALID ON GLOBAL COMMAND, ACCESS IGNORED

Explanation

Both the ACCESS and GLOBAL parameter were specified on a database command. The ACCESS parameter will be discarded.

System action

Processing continues.

User response

Correct the command to eliminate this message.

ATY1212E FUNCTION INVALID OR MISSING FOR ATYMOD or CCFMOD REQUEST

Explanation

Command parsing found an invalid parameter, or there were no parameters specified.

System action

The action taken is determined by the setting for GENERAL errors.

User response

Correct the command and run the job again.

ATY1214W PREVIOUS COMMAND BYPASSED DUE TO OPERATOR ACTION

Explanation

The previous command was skipped due as a result of the reply to the WTOR.

System action

Processing continues.

User response

N/A

ATY1215W EDIT ERROR IN PRIOR COMMAND, BYPASS OPTION IN EFFECT

Explanation

The command parsing routine encountered an error on the previous command. The command is bypassed due to the setting of the GENERAL errors option.

System action

Processing continues.

User response

Determine the cause for the failure, correct the command and run the job again. Alternatively, issue the commands manually.

ATY1216E EDIT ERROR IN PRIOR COMMAND, JOB IS TERMINATING

Explanation

The command parsing routine encountered an error in the previous command. The job terminates due to the setting of the GENERAL errors option.

System action

The job terminates with a user-defined abend code or user-defined return code.

User response

Correct the error and run the job again.

ATY1218W BOTH ALL AND GLOBAL SUPPLIED, GLOBAL REMOVED

Explanation

A database command contained both the ALL and GLOBAL parameters. These parameters are mutually exclusive; both cannot be specified on the same command.

System action

The GLOBAL parameter is removed from the command and processing continues.

User response

To eliminate this error message, correct the command before running this job again.

ATY1219E **NO PARAMETERS ARE ALLOWED ON THE /ATYDEADQ OR /CCFDEADQ COMMAND**

Explanation

Parameters were supplied on the /ATYDEADQ or /CCFDEADQ command. No parameters are allowed on this command.

System action

The action taken is determined by the setting for GENERAL errors.

User response

Correct the command and run the job again.

ATY1220E **LTERM KEYWORD SUPPLIED BUT LTERM NAME MISSING**

Explanation

The ATYMOD predefined procedure was requested and the LTERM keyword was supplied, but the LTERM parameter was missing.

System action

The action taken is determined by the setting for the GENERAL errors.

User response

Remove the LTERM keyword, or supply an LTERM parameter name, and run the job again.

ATY1221E **LTERM NAME MORE THAN EIGHT CHARACTERS LONG**

Explanation

An invalid value was supplied for the LTERM name parameter. The LTERM name must be less than eight characters long.

System action

The action taken is determined by the setting for the GENERAL errors.

User response

Correct the invalid LTERM name parameter and run the job again.

ATY1222W **DATAGRP *datagrp* NOT FOUND**

Explanation

DATAGRPEXP=Y is in effect, but IMS Administration Tool could not obtain a list of database names from DBRC. This might be due to the DATAGRP not being defined or the wrong set of RECON data sets in the STEPLIB concatenation.

System action

The command is passed unchanged to IMS.

User response

Turn off DATAGRPEXP, define the DATAGRP to DBRC, or add the correct RECON data sets to the STEPLIB concatenation, and run the job again.

ATY1223E **DATAGRP KEYWORD PRESENT BUT NO DATAGRP NAMES SPECIFIED**

Explanation

The command parser determined a DATAGROUP command was being attempted with DATAGRPEXP=Y in effect, but the command did not specify the DATAGROUP parameter name.

System action

The command is passed unchanged to IMS.

User response

Correct the command and run the job again.

ATY1224E **DATAGRP KEYWORD PRESENT BUT MORE THAN 1 DATAGRP NAME SPECIFIED**

Explanation

The command parser determined a DATAGROUP command was being attempted with DATAGRPEXP=Y in effect, but the command specified more than one DATAGROUP parameter name.

System action

The command is passed unchanged to IMS.

User response

Correct the command and run the job again.

ATY1225W **DATAGRP *datagrp* RECEIVED RETURN CODE = *rc* FROM DSPURX00**

Explanation

The command parser determined a DATAGROUP command was being attempted with DATAGRPEXP=Y in effect, but a non-zero return code was returned from DSPURX00. Additional messages might be displayed on the z/OS Syslog.

System action

The command is passed unchanged to IMS.

User response

Correct the reason for the non-zero return code and run the job again.

ATY1226E INTERNAL ERROR, SYSPRINT DATA SET NOT OPEN

Explanation

An error occurred attempting to open DDNAME SYSPRINT. Additional messages might be displayed on the z/OS Syslog.

System action

The command is passed unchanged to IMS.

User response

Correct the reason for the open failure and run the job again.

ATY1227I FOLLOWING DATABASES FOUND FOR DATAGRP: *datagrp*

Explanation

DATAGRPEXP=Y is in effect and the following records list the databases that were defined to DATAGROUP *datagrp* in DBRC.

System action

Processing continues.

User response

N/A

ATY1228E NO DATABASES RETURNED FOR DATAGRP: *datagrp*

Explanation

DATAGRPEXP=Y is in effect but there were no database names found in the named DATAGROUP *datagrp*.

System action

The command is passed unchanged to IMS.

User response

N/A

ATY1229W DBRC MODULE DSPURXX0 NOT FOUND

Explanation

DATAGRPEXP=Y is in effect but IMS Administration Tool was unable to obtain a list of database names because DBRC module DSPURX00 could not be loaded.

System action

The command is passed unchanged to IMS.

User response

Ensure DBRC module DSPURX00 is in the STEPLIB concatenation and run the job again.

ATY1230W DATAGRP ERROR BYPASSED, ERR488=IGNORE SPECIFIED

Explanation

An invalid DATAGROUP command was encountered and skipped due to option ERR488=IGNORE being in effect.

System action

Command is skipped and processing continues.

User response

Correct the command and run the job again.

ATY1231I ERROR EDITING FOLLOWING COMMAND

Explanation

IMS Administration Tool determined that the command in the following message was not valid. Additional messages that describe the nature of the error are displayed in the job output listing.

System action

Processing continues.

User response

N/A

ATY1232A REPLY "C" TO CANCEL, "S" TO SKIP ALL FAILED COMMANDS

Explanation

An error, described by a previous message, has been encountered. This command requires a response to inform IMS Administration Tool how to handle this error, and possibly future errors, for this job step.

System action

The action taken is dependent upon the operator response to this WTOR.

User response

Reply to the WTOR with the valid character for the required action.

ATY1233E DATAGRP ERROR, JOB TERMINATING, ERR488=IGNORE NOT SPECIFIED

Explanation

An error, described by a previous message, has been encountered, and the setting for ERR488 errors causes this job step to terminate.

System action

The job step terminates with a user-defined return code.

User response

Correct the error described in the previous message and run the job again.

ATY1234E DATAGRP ERROR, JOB TERMINATING, ERR488=ABEND SPECIFIED

Explanation

An error, described by a previous message, has been encountered, and the setting for ERR488 errors causes this job to abend.

System action

The job terminates with the user-defined abend code.

User response

Correct the error described in the previous message and run the job again.

ATY1235W DATAGRP NAME LONGER THAN 8 CHARACTERS

Explanation

The command parser determined the name of the specified DATAGROUP is more than eight characters. Eight characters is the maximum allowed for DATAGROUP names.

System action

The command is passed unchanged to IMS.

User response

Correct the DATAGROUP parameter name and run the job again.

ATY1236W PARM CONFLICT, BOTH IMS AND SCOPE(ACTIVE) SPECIFIED - IMS IGNORED

Explanation

The command parser detected conflict in the following command. The command was requested to be routed to a specific IMS and to all active Operations Manager members.

System action

The IMS routing is ignored and the command is passed to all active Operations Manager members.

User response

To eliminate this message, correct the command prior to running this job again.

ATY1237W BOTH OPEN AND NOOPEN SPECIFIED, NOOPEN DISCARDED

Explanation

Mutually exclusive OPEN and NOOPEN parameters were specified on the input command.

System action

Because the OPEN and NOOPEN parameters cannot be specified on the same command, IMS Administration Tool removed the NOOPEN parameter and continued processing.

User response

To eliminate this message in subsequent schedules of IMS Administration Tool, correct the control card by removing either the OPEN or NOOPEN parameter.

ATY2201E OPEN FAILED FOR DDNAME PROCLIB

Explanation

IMS Administration Tool Operations Manager initialization exit was unable to open DDNAME PROCLIB. Additional messages might be displayed in the z/OS log.

System action

Processing continues, but without the IMS Administration Tool Message Log.

User response

Correct the reason for the open failure and restart IMS Operations Manager.

ATY2202E ATYLOGR INITIALIZATION FAILED

Explanation

An error, described by a previous message, prevented IMS Administration Tool from completing initialization to the IMS Administration Tool Message Log.

System action

Processing continues, but without the IMS Administration Tool Message Log.

User response

Follow User Response for the previous error message.

ATY2203E PROCLIB MEMBER ATYPARMS NOT FOUND

Explanation

The member IMS Administration Tool needs for IMS Administration Tool Message Log initialization is not present in the data set referenced by DDNAME PROCLIB.

System action

Processing continues, but without the IMS Administration Tool Message Log.

User response

Create the required PROCLIB member and restart IMS Operations Manager.

ATY2204W INVALID RECORD, NO DATA IN POSITION 1-10

Explanation

A record that failed editing was read from PROCLIB member ATYPARMS.

System action

The record is ignored and processing continues.

User response

To eliminate this message, correct or remove the erroneous record before the next Operations Manager start up.

ATY2205W UNKNOWN RECORD TYPE FOUND IN ATYPARMS - *data*

Explanation

A record that contained unknown *data* was read from PROCLIB member ATYPARMS. The first few bytes of data from the erroneous record are displayed as data.

System action

The record is ignored and processing continues.

User response

To eliminate this message, correct or remove the erroneous record before the next Operations Manager start up.

ATY2206E ATYLOGR= NOT SPECIFIED

Explanation

IMS Administration Tool Operations Manager initialization exit did not find a control card ATYLOGR= in PROCLIB member ATYPARMS. The ATYLOGR= control card is not valid.

System action

Processing continues, but without the IMS Administration Tool Message Log.

User response

Add or correct the ATYLOGR= *definition* in PROCLIB member ATYPARMS and restart Operations Manager.

ATY2207E ATYLOGR NAME NOT SPECIFIED

Explanation

IMS Administration Tool Operations Manager found control card ATYLOGR= but there was no parameter name specified.

System action

Processing continues, but without the IMS Administration Tool Message Log.

User response

Add the IMS Administration Tool Message Log log stream name to the ATYLOGR= control card and restart Operations Manager.

ATY2208E ATYLOGR NAME LONGER THAN 26 BYTES

Explanation

The log stream name specified as the ATYLOGR= parameter in the PROCLIB member ATYPARMS is longer than the maximum allowed. The maximum length of a log stream name is 26 bytes.

System action

Processing continues, but without the IMS Administration Tool Message Log.

User response

Correct the IMS Administration Tool Message Log log stream name in the ATYLOGR= control card and restart Operations Manager.

ATY2209E NAME/TOKEN ROUTINE ERROR RC=*rc*

Explanation

An error was encountered attempting to create a z/OS name/token anchor. The return code is displayed as *rc*.

System action

Processing continues, but without the IMS Administration Tool Message Log.

User response

Correct the reason for the name/token creation failure and restart Operations Manager.

ATY2210E LOGSTREAM CONNECT FAILED

Explanation

The connect attempt to the IMS Administration Tool Message Log log stream failed. A prior message should indicate the reason for the failure.

System action

Processing continues, but without the IMS Administration Tool Message Log.

User response

Correct the failure described in the prior message and restart Operations Manager.

ATY2299I LOGSTREAM CONNECT SUCCESSFUL

Explanation

IMS Administration Tool message log initialization completed successfully.

System action

Processing continues.

User response

N/A

ATY3001I Return Code: *rc* Reason Code: *rsn*

Explanation

This message is presented with an accompanying message that describes the error condition. *rc* indicates the return code and *rsn* indicates the reason code.

System action

The job terminates with the indicated return code.

User response

Review the conditions that caused the error. Also look up the meanings of return and reason codes to identify the error cause, correct the error condition, and rerun the job. If the problem persists, contact IBM Software Support.

ATY3002I ABEND Code: *code* Reason Code: *rsn*

Explanation

This message is presented with an accompanying message that describes the error condition. *code*

indicates the abend code, and *rsn* indicates the reason code.

System action

The job terminates with the indicated abend code.

User response

Contact IBM Software Support.

ATY3003I Dataset Name: *dsn*

Explanation

This message is presented with an accompanying message. *dsn* indicates the data set name.

System action

Processing continues.

User response

None. This message is informational.

ATY3004I DD Name: *dd*

Explanation

This message is presented with an accompanying message. *dd* indicates the DD name.

System action

Processing continues.

User response

None. This message is informational.

ATY3005I Member: *member*

Explanation

This message is presented with an accompanying message. *member* indicates the member name.

System action

Processing continues.

User response

None. This message is informational.

ATY3009I DMB Type: *dmb-type* DBRC Type: *dbrc-type*

Explanation

This message is presented with an accompanying message that describes the warning condition. *dmb-type* is one of PHDAM, PHIDAM, DEDB, MSDB, INDEX, or DLI. *dbrc-type* is one of DLI, DEDB, or HALDB. This message accompanies message ATY3309W.

System action

The job terminates with return code 4.

User response

Follow the user response for message ATY3309W.

ATY3010I DBRC *type db-name* missing from DMB

Explanation

This message is presented with an accompanying message that describes the warning condition. *type* is DSG or AREA. *db-name* indicates the missing database. This message accompanies message ATY3309W.

System action

The job terminates with return code 4.

User response

Follow the user response for message ATY3309W.

ATY3013I Database : *dbdname*

Explanation

This message is presented with an accompanying message. *dbdname* indicates the DBD name.

System action

Processing continues.

User response

None. This message is informational.

ATY3014I *text1 text2 text3*

Explanation

This message is presented with an accompanying message to provide further information.

System action

Processing continues.

User response

None. This message is informational.

ATY3014E ***text1 text2 text3***

Explanation

This message consists of multiple messages to provide information about the abend.

System action

The job ends abnormally.

User response

If the cause of the error cannot be determined, contact IBM Software Support.

ATY3015I **AREA :** ***area-name***

Explanation

This message is presented with an accompanying message that describes the error condition. *area-name* indicates the area.

System action

See the system action for the accompanying message.

User response

Follow the user response for the accompanying message.

ATY3016I **Partition :** ***part-name***

Explanation

This message is presented with an accompanying message that describes the error condition. *part-name* indicates the HALDB partition.

System action

See the system action for the accompanying message.

User response

Follow the user response for the accompanying message.

ATY3017I **DSG :** ***dsg-name***

Explanation

This message is presented with an accompanying message that describes the error condition. *dsg-name* indicates the data set group.

System action

See the system action for the accompanying message.

User response

Follow the user response for the accompanying message.

ATY3019I **IMS PROCLIB DSN :** ***dsname***

Explanation

This message is presented with an accompanying message. *dsname* indicates the IMS PROCLIB data set name.

System action

Processing continues.

User response

None. This message is informational.

ATY3021I **Group :** ***grp-name***

Explanation

This message is presented with an accompanying message that describes the error condition. *grp-name* indicates the DBRC group.

System action

See the system action for the accompanying message.

User response

Follow the user response for the accompanying message.

ATY3022I **ACB AREA count:** ***a-count*** **DBRC Area count:** ***d-count***

Explanation

This message is presented with message ATY3309W, which describes the error condition. *a-count* indicates area count in ACB, and *d-count* indicates area count in DBRC.

System action

See the system action for message ATY3309W.

User response

Follow the user response for message ATY3309W.

ATY3100E **z/OS LOAD failed for *module-type module-name***

Explanation

An error occurred in the internal load instruction. *module-type* is one of PROGRAM, MDA member, or no value. *module-name* indicates the module that could not be loaded.

System action

The job ends abnormally.

User response

This is an internal error. Contact IBM Software Support.

ATY3101E ***func* call failed for module *module-name***

Explanation

An error occurred during a service call for the indicated module. *func* is one of ENQ, DEQ, Initialization, Ready, Stop, Termination, SWAREQ, or ISGENQ.

System action

The job ends abnormally.

User response

This is an internal error. Contact IBM Software Support.

ATY3102E ***buff-type* Eyecatcher is invalid (x'*code*')**

Explanation

IMS Administration Tool could not identify the buffer. This is an internal error. *buff-type* is either DFSPDBSC or SSCD. *code* is the hexadecimal code of the invalid buffer name area.

System action

The job ends abnormally.

User response

This is an internal error. Contact IBM Software Support.

ATY3103E **Name/Token *func* call failed in *module-name* (*entry-name*)**

Explanation

An error occurred in the indicated module during a function call. *func* is one of GET, DELETE, or Create.

System action

The job ends abnormally.

User response

This is an internal error. Contact IBM Software Support.

ATY3104E **CPOOL *function* call failed**

Explanation

An error occurred while getting a storage area for the indicated function call. *function* is either BUILD or GET.

System action

The job ends abnormally. Other messages are issued to provide more information about the error.

User response

If the cause of the error cannot be determined, contact IBM Software Support.

ATY3105E **The IMS Release of the IMS SSID requested is not supported**

Explanation

The release level of the IMS system identified by the requested IMS SSID is not supported by IMS Administration Tool.

System action

The job ends abnormally.

User response

Consult your System Administrator.

ATY3107E **Dynamic Allocation (SVC99) *type* call Failed in program *program***

Explanation

An error occurred in the internal dynamic allocation call. *type* is one of ALLOCATE, CONCATENATE, DE-CONCATENATE, or FREE. *program* indicates the program in which the error occurred.

System action

The job ends abnormally.

User response

This is an internal error. Contact IBM Software Support.

ATY3108E **BLDL (SVC 18) call for PROCLIB member *memname* failed in program *pgmname***

Explanation

An error occurred trying to issue the BLDL macro to obtain PROCLIB member entries. *memname* is the member name. *pgmname* is the name of the IMS Administration Tool program in which this error occurred. Message ATY3001I, which follows this message, shows the return code and the reason code.

System action

The job ends abnormally.

User response

Refer to *z/OS DFSMS Macro Instructions for Data Sets* for the BLDL return and reason codes. If the problem persists, contact IBM Software Support.

ATY3109E ***member-type name* is in an unknown format**

Explanation

An error is detected in the record format. *member-type* is one of MODSTAT, MODSTAT2, OLCSTAT, or MDA member. *name* is one of Record, RECON1, RECON2, RECON3, IMSACB, IMSACBA, IMSACBB, or DFSHDBSC.

System action

The job ends abnormally.

User response

This is an internal error. Contact IBM Software Support.

ATY3110E **DEVTYPE (SVC 24) call for DD name *dd-name* failed in program *pgmname***

Explanation

An error occurred trying to issue the DEVTYPE macro to check the indicated DD statement that is specified in JCL. *dd-name* is the DD statement. *pgmname* is the IMS Administration Tool program in which this error occurred. Message ATY3001I, which follows this message, shows the return code and the reason code.

System action

The job ends abnormally.

User response

Refer to *z/OS DFSMSdfp Advanced Services* for the return and reason codes from the DEVTYPE macro. If the problem persists, contact IBM Software Support.

ATY3111E **DD required for program *pgm-func* processing is missing**

Explanation

A required DD statement is missing in the JCL. *pgm-func* indicates the program or the function that requires the missing DD statement.

System action

The job ends abnormally.

User response

Supply the missing DD statement and rerun the job. If the problem persists, contact IBM Software Support.

ATY3112E **Unauthorized dataset found in *rgn-name* Region STEPLIB concatenation**

Explanation

An unauthorized data set is found in the STEPLIB concatenation of the indicated region. *rgn-name* is one of CQS, CTL, DBRC, DLIS, IMS Control, IRLM, JBP, OM, RM, or SCI. Message ATY3003I, which follows this message, shows the data set name.

System action

The job ends abnormally.

User response

Review the attribute of the indicated data set that caused the error. Correct the error condition and rerun the job. If the problem persists, contact IBM Software Support.

ATY3113E ***dd-name* Started Task name *mbr-name* was not found in IMS PROCLIB DSN: *dsn***

Explanation

A started task member was not found in the IMS PROCLIB data set. *dd-name* is the DD name. *mbr-name* is the started task that was not found. *dsn* is the data set name of the IMS PROCLIB.

System action

The job ends abnormally.

User response

Ensure that the started task member exists in the IMS PROCLIB data set and rerun the job. If the problem persists, contact IBM Software Support.

ATY3114E **Module: DFSVC000 not found in STEPLIB concatenation**

Explanation

The DFSVC000 module could not be found in the STEPLIB data set concatenation of the IMS control region.

System action

The job ends abnormally.

User response

Ensure that the DFSVC000 module exists in the STEPLIB data set concatenation of the IMS control region and rerun the job. If the problem persists, contact IBM Software Support.

ATY3115E **No STEPLIB data sets found in member *mbr-name* in IMS PROCLIB DSN: *dsn***

Explanation

The indicated member, which exists in the IMS PROCLIB data set, does not have a STEPLIB data set. *dsn* is the data set name of the IMS PROCLIB.

System action

The job ends abnormally.

User response

Ensure that the indicated member contains a STEPLIB data set and rerun the job. If the problem persists, contact IBM Software Support.

ATY3116E **Unable to open INCLUDE member *memname* in DSN: *dsname***

Explanation

An error occurred while trying to open the indicated member. *memname* is the member name, and *dsname* is the data set name.

System action

The job ends abnormally.

User response

Refer to preceding error messages and identify the cause of the error. If the error persists, contact IBM Software Support.

ATY3117E **Member *memname* was not found in either IMS PROCLIB or JES PROCLIB**

Explanation

The indicated member was not found in the IMS PROCLIB data set or in the JES PROCLIB data set.

System action

The job ends abnormally.

User response

Store the member in the IMS PROCLIB or the JES PROCLIB data set.

ATY3118E **Unable to locate *parm* in member *mbr-name* in DSN: *dsn***

Explanation

An error occurred trying to locate the parameter value in the indicated member. *parm* is one of RGSUF, Subsystem Type, or DBRC Started Task Name. *dsn* is the data set that contains this member.

System action

The job ends abnormally.

User response

Ensure that the indicated parameter exists in the member and rerun the job. If the problem persists, contact IBM Software Support.

ATY3119E **ATTACH of program *program* from ATY@PRSB failed. Return Code: *rc***

Explanation

An error occurred in the ATTACH process. The compiler program (*program*), which is required for the copybook import process, could not be attached. *rc* indicates the return code. *program* is either IGYCRCTL (for COBOL compiler) or IBMZPLI (for PL/I compiler).

System action

The job ends abnormally.

User response

This is an internal error. Contact IBM Software Support.

ATY3120E ***task-name* is required when *state***

Explanation

A required task was not found. *task-name* is the required task, and *state* is the specified parameter.

Possible combinations of *task-name* and *state* are as follows:

- IRLM Started Task Name and IRLM=Y
- DLISAS Started Task Name and LSO=S

System action

The job ends abnormally.

User response

Ensure that either the IRLM Started Task Name or the DLISAS Started Task Name is supplied depending on the *state*. Correct the error condition and rerun the job. If the problem persists, contact IBM Software Support.

ATY3122I ***dsn* allocated to *dd***

Explanation

The indicated data set (*dsn*) is allocated to the indicated DD (*dd*).

System action

Processing continues.

User response

None. This message is informational.

ATY3123E **EXPORT data sets from both the Catalog and ACBLIB found**

Explanation

Import processing failed because the export data set was found in both the IMS catalog and the ACB library. Message ATY3124E follows this message.

System action

The job ends abnormally.

User response

Change the prefix of the export data set so that the export data set is found only in the IMS catalog or in the ACB library. Retry the import process.

ATY3124E **Can only IMPORT objects from one source**

Explanation

Objects to import must be found only in one of the sources – either in the IMS catalog or in the ACB library. This message accompanies message ATY3123E.

System action

The job ends abnormally.

User response

Change the prefix of the export data set so that the export data set is found only in the IMS catalog or in the ACB library. Retry the import process.

ATY3125E **No data sets to IMPORT *objects* from located**

Explanation

Import processing failed because IMS Administration Tool could not find the import data set for the indicated objects. *objects* indicate either DBDs or PSBs.

System action

The job ends abnormally.

User response

Ensure that the name of the import data set, which contains the objects to import, is specified correctly.

The import data set name consists of the export data set prefix followed by one of the following strings:

For DBDs:

- CDBDACT
- CDBDPND
- ADBDSTG
- ADBDINA
- ADBDACT

For PSBs:

- CPSBACT
- CPSBPND
- APSBSTG
- APSBINA
- APSBACT

ATY3126E **Invalid data at column *col* of IMS Task User Parms: Quote only valid around parm value**

Explanation

A quotation mark is found at the indicated column position of the IMS task user parameter. Quotation marks can only be used to surround a parameter.

System action

The job ends abnormally.

User response

Review the IMS task user parameter, correct the error condition, and rerun the job. If the problem persists, contact IBM Software Support.

ATY3127E **Invalid value for *item*: *text***

Explanation

An error occurred while parsing the parameter or the DD in the IMS procedure. *item* indicates the parameter or the DD. *text* shows detailed information.

System action

The job ends abnormally.

User response

Review the IMS procedure, correct the error condition, and rerun the job. If the problem persists, contact IBM Software Support.

ATY3128E **Required DD or variable *variable* for *process* is missing**

Explanation

process failed because a required DD statement or variable was not found. *variable* is either CBLLIB, PLILIB, or IMSMAC. *process* is copybook processing, DBDGEN, or PSBGEN.

System action

The job ends abnormally.

User response

If *variable* is CBLLIB or PLILIB, ensure that the compiler library that corresponds to the language of the copybook is registered to the CBLLIB or the PLILIB variable, or supplied with a DD statement.

If *variable* is IMSMAC, ensure that the IMS Macro library is registered to the IMSMAC variable, or supplied with a DD statement.

ATY3129E **Module *module-name*: Member *db-name* is a duplicate in the *func* hash table**

Explanation

The database name appears more than once in the internal table. *module-name* indicates the module that issued this message. *db-name* indicates the database that appears more than once. *func* is DDIR or PDIR.

System action

The job ends abnormally.

User response

This is an internal error. Contact IBM Software Support.

ATY3130E **Data set was not found: *dsn***

Explanation

This message is presented with an accompanying message, ATY3131E, which provides information about the error. *dsn* indicates the missing data set.

System action

The job ends abnormally.

User response

See the explanation of message ATY3131E and correct the error.

ATY3131E **The data set name is specified in the IMS *type* JCL. Member: *member-name***

Explanation

This message accompanies message ATY3130E. IMS *type* JCL is one of the following JCL:

- IMS control region JCL
- IMS DBRC region JCL
- IMS JBP region JCL
- IMS DBDGEN JCL
- IMS PSBGEN JCL

member-name is the JCL member that contains a reference to the missing data set.

System action

The job ends abnormally.

User response

Ensure that the data set exists. Complete either of the following steps and try the failed operation again:

- Specify the name of the existing data set in the indicated JCL member. If a symbol (&) is used, replace the symbol with the actual data set name.
- If the data set name contains a symbol (&), update the IMS subsystem information so that symbols are regarded as variables:
  1. Go to **Setup and Administration** > **Register an IMS Subsystem**.
  2. For Control Region User Parms, specify symbol=variable.

If the problem persists, contact IBM Software Support.

ATY3132E **DESERV call for function *func* failed in program *pgm-name***

Explanation

An error occurred while issuing the DESERV macro. *func* is the function of the DESERV macro, and *pgm-name* is the name of program in which the error occurred. Message ATY3001I, which follows this message, shows the return code and the reason code.

System action

The job ends abnormally.

User response

Refer to *z/OS DFSMS Macro Instructions for Data Sets* for the DESERV return and reason codes. If the problem persists, contact IBM Software Support.

ATY3133E **IEBCOPY ended with errors in program *pgm-name***

Explanation

The IEBCOPY utility returned an error. *pgm-name* is the program that called the IEBCOPY utility. Message ATY3001I, which follows this message, shows the return code and the reason code.

System action

The job ends abnormally.

User response

Refer to *z/OS DFSMSdfp Utilities* for the IEBCOPY return and reason codes. If the problem persists, contact IBM Software Support.

ATY3200E **DBRC-API *service-name* service failed. IMSID *imsid***

Explanation

An error occurred during DBRC-API service call. *service-name* is one of the following services:

- CHANGE.DBDS RECOV
- DSPAPI(QUERY CHANGE ACCUM)
- DSPAPI(QUERY DBD)
- DSPAPI(QUERY LOG)
- DSPAPI(QUERY OLDS)
- DSPAPI(QUERY RECON)
- DSPAPI(QUERY SUBSYS)
- DSPAPI(RELBUF)
- DSPAPI(STARTDBRC)
- DSPAPI(STOPDBRC)
- QUERY CAGRP
- QUERY DBDSGRP
- QUERY DBGRP
- QUERY RECOVGRP

imsid is the IMS system.

System action

The job ends abnormally.

User response

Contact IBM Software Support.

ATY3201E ***func* Request timed-out in program *module-name***

Explanation

A time out occurred during a DBRC function request. *func* is the name of the DBRC function in DBRC API parameters. *module-name* indicates the module that issued this message.

System action

The job ends abnormally.

User response

Contact IBM Software Support.

ATY3300W **No OLDS records found for SSID/RSENAME *imsid* in RECON datasets**

Explanation

Found no OLDS record when obtaining OLDS information for IMS SSID/RSENAME. *imsid* is the IMS system.

System action

The job terminates with return code 4.

User response

Ensure that the OLDS record exists. If the problem persists, contact IBM Software Support.

ATY3307E **The format of the RDDSN dataset *dsn* has changed while processing.**

Explanation

The format of the indicated RDDSN data set is invalid.

System action

The job ends abnormally.

User response

Contact IBM Software Support.

ATY3308E **Module *module-name* was not found in the data set concatenation for DD *dd-name* when processing IMS SSID *imsid***

Explanation

An error occurred while trying to find the DBD names defined in the RDDSN data sets. The indicated module was not found in the DD concatenation.

System action

The job ends abnormally.

User response

Contact IBM Software Support.

ATY3309W **Inconsistencies found between the DMB and DBRC definitions for database *dbname***

Explanation

Found inconsistencies between the DMB definitions and the DBRC definitions. Message ATY3009I, which follows this message, shows the DMB type and DBRC type.

System action

The job terminates with return code 4.

User response

Review the conditions that caused the warning, correct the warning condition, and rerun the job. If the problem persists, contact IBM Software Support.

ATY3313E **QSAM *function* call failed for DD *dd* in PROGRAM *program***

Explanation

An error occurred in the indicated function call for a QSAM data set. *function* is one of PUT, OPEN, or CLOSE. *dd* indicates the DD for the data set. *program* indicates the program in which the error occurred.

System action

The job ends abnormally.

User response

If the cause of the error cannot be determined, contact IBM Software Support.

ATY3314W **There are no *group-type* groups defined in the RECONS used by SSID *imsid***

Explanation

No members found in the indicated DBRC group type. *group-type* is one of CAGRP, DBGRP, DBDSGRP, RECOVGRP, or DBRC. *imsid* is the IMS system.

System action

The job terminates with return code 4.

User response

Review the conditions that caused the warning, correct the warning condition, and rerun the job. If the problem persists, contact IBM Software Support.

ATY3322W ***process* failed, RC=*rc* RSN=*rsn***

Explanation

An error occurred during the indicated process. *process* is DBRC Pre-load. *rc* indicates the return code, and *rsn* indicates the reason code.

System action

The job ends with return code 4.

User response

Review the conditions that caused the warning, correct the warning condition, and rerun the job. If the problem persists, contact IBM Software Support.

ATY3322E ***process* failed, RC=*rc* RSN=*rsn***

Explanation

An error occurred during the indicated process. *process* is one of Catalog OPEN, Catalog CLOSE, Catalog LIST, Catalog GET, or IMSINFO. *rc* indicates the return code, and *rsn* indicates the reason code.

System action

The job ends abnormally.

User response

Contact IBM Software Support.

ATY3327E ***text1 text2 text3 text4***

Explanation

This message is composed of several texts to describe the error condition.

System action

The job ends abnormally.

User response

If the cause of the error cannot be determined, contact IBM Software Support.

ATY3330E ***keyword* is an unsupported FUNCTION**

Explanation

The import objects function, the IMS resource change function, or the DBD resource change function failed because the indicated keyword, which is specified for the FUNCTION statement of the ATYMSGI DD statement, is invalid.

System action

The job ends abnormally.

User response

Correct the keyword for the FUNCTION statement. The FUNCTION statement keyword can be JCLGEN, IMPORT, or UPDATE.

ATY3331E **Missing required parameter *parameter* for FUNCTION=*function***

Explanation

The import objects function, the IMS resource change function, or the DBD resource change function failed because the indicated parameter, which the function requires, is missing. *function* shows the value that is specified for the FUNCTION statement of the ATYMSGI DD statement, and it is one of JCLGEN, IMPORT, or UPDATE.

System action

The job ends abnormally.

User response

Add the missing parameter.

If the cause of the error cannot be determined, contact IBM Software Support.

ATY3332E **Invalid value (*value*) specified for parameter=*parameter***

Explanation

The import objects function, the IMS resource change function, or the DBD resource change function failed because the value specified for the indicated parameter is invalid. This invalid value is present on the ATYMSGI DD statement.

System action

The job ends abnormally.

User response

Correct the value specified for the indicated parameter. The value must be either Y or N.

If the cause of the error cannot be determined, contact IBM Software Support.

ATY3333E **CATALOG=Y specified but Catalog not enabled on target IMS**

Explanation

Although the CATALOG=Y parameter is present in the ATYMSGI DD statement, the IMS catalog is not enabled in the target IMS system.

System action

The job ends abnormally.

User response

Ensure that the target IMS system, in which the IMS catalog will be populated, is specified correctly.

ATY3335E **ACB update required to populate IMS Catalog**

Explanation

An error occurred while checking parameters required for IMS catalog population. To populate the IMS catalog, IMS Administration Tool updates ACBs, but the parameter that is required to process ACBGEN is not found in the ATYMSGI DD statement.

System action

The job ends abnormally.

User response

Review the parameters in the ATYMSGI DD statement.

ATY3336W **Some objects bypassed because they already exist**

Explanation

This message is printed when the Overwrite Existing Objects option is set to No and one or more objects with same names already exist in the ACB library.

System action

Processing continues. Objects with same names are not processed (imported or updated). Prints message ATY3338W to indicate which objects are not processed.

User response

None. This message is informational.

ATY3337E **All members to import already exist and OVERWRITE=N**

Explanation

This message is printed when the Overwrite Existing Objects option is set to No and IMS Administration Tool identified no objects that must be processed.

System action

The job ends abnormally.

User response

Ensure that the correct objects are selected. Also ensure that the Overwrite Existing Objects option is set correctly.

ATY3338E ***object member* already exists in *library* and will not be replaced**

Explanation

This message is printed during the import process when the Overwrite Existing Objects option is set to No and the indicated member already exists in the indicated library. The import process for this member is skipped. *object* is either DBD or PSB.

System action

Skips the import process for the indicated member and continues processing. If there are no more

objects to import, the job ends abnormally and issues message ATY3337E.

User response

None.

ATY3339I **No objects currently exist in *status source-lib* to backup**

Explanation

Found no objects to export in the indicated library. *status* is one of PENDING, ACTIVE, INACTIVE, or STAGING. *source-lib* is ACBLIB or IMSCAT.

System action

Processing continues.

User response

None. This message is informational.

ATY3409E **Requested SSID/GROUP (*name*) not registered in the repository**

Explanation

The indicated SSID/GROUP is not registered to the IMS Tools Knowledge Base repository. *name* is SSID/GROUP name.

System action

The job ends abnormally.

User response

Ensure that the SSID/GROUP name is registered to the IMS Tools Knowledge Base repository. If the problem persists, contact IBM Software Support.

ATY3431W **CAGROUP *group-name* not found in RECON for DB *dbname* DDN *dd-name***

Explanation

The indicated CAGROUP is not found in the RECON data set. *dbname* is the database. *dd-name* is the DD.

System action

The job ends with return code 4.

User response

Review the conditions that caused the warning, correct the warning condition, and rerun the job. If the problem persists, contact IBM Software Support.

ATY3432E **DDN=*dd-name* already allocated to DSN=*dsn***

Explanation

The indicated DDN (*dd-name*), which is for a RECON data set, is already allocated to the indicated RECON data set (*dsn*). Message ATY3433E, which follows this message, shows the requested data set name.

System action

The job ends abnormally.

User response

Contact IBM Software Support.

ATY3433E **Requested DSN=*dsn***

Explanation

This message accompanies message ATY3432E. See the explanation for messages ATY3432E.

System action

The job ends abnormally.

User response

Follow the user response for message ATY3432E.

ATY3462I ***timestamp* DEDB *dedb* NOT VALID FOR /DBD COMMAND**

Explanation

An attempt was made to issue a /DBD command for a Fast Path DEDB (*dedb*). This is not a valid command.

System action

The DEDB is skipped.

User response

Correct the command and run the job again.

ATY3463I ***timestamp* SPECIFIC MSDB *msdb* NOT VALID FOR /DBD COMMAND**

Explanation

An attempt was made to issue a /DBD command for a Fast Path MSDB (*msdb*). This is not a valid command.

System action

The MSDB is skipped.

User response

Correct the command and run the job again.

ATY3464I ***timestamp*** **MSDB** ***msdb*** **NOT VALID FOR /DBR COMMAND**

Explanation

An attempt was made to issue a /DBR command for a Fast Path MSDB (*msdb*). This is not a valid command.

System action

The MSDB is skipped.

User response

Correct the command and run the job again.

ATY3466I ***timestamp*** **DDIR FOR DATABASE NOT FOUND or** ***timestamp*** **DMAC FOR AREA NOT FOUND**

Explanation

The database (*dbd*) or AREA (*area*) was not found in the IMS control blocks.

System action

Processing continues.

User response

N/A

ATY3600E **Unable to read** ***mbr-name*** **from ACBLIB**

Explanation

Failed to read the indicated member from the ACB library. *mbr-name* is either a PSB member or an ACB member.

System action

The job ends abnormally.

User response

Contact IBM Software Support.

ATY3601E **Unable to locate** ***library*** **information**

Explanation

An error occurred while obtaining information about the indicated library. *library* is either Inactive ACBLIB or RECON.

System action

The job ends abnormally.

User response

This is an internal error. Contact IBM Software Support.

ATY3602E **Unable to read** ***psb-name*** **from Catalog**

Explanation

Failed to read the indicated member from the IMS catalog. *psb-name* is the name of the PSB member that could not be read.

System action

The job ends abnormally.

User response

Contact IBM Software Support.

ATY3603E **Fast Path area definition storage blocks not found. Module=*module-name***

Explanation

An internal storage error occurred. *module-name* indicates the module that issued this message.

System action

The job ends abnormally.

User response

This is an internal error. Contact IBM Software Support.

ATY3604E ***type*** **definitions for** ***type type-name*****, database** ***db-name*****, need to**

be registered in DBRC or defined in MDALIB

Explanation

The database definition is not registered correctly. *type* is AREA or DDNAME. *type-name* is the resource name of *type*. *db-name* is the name of the database.

System action

The job ends abnormally.

User response

Review the definition of the database and identify the cause of the error. If the problem persists, contact IBM Software Support.

ATY3605E ***type* definitions for database *db-name* need to be registered in DBRC or defined in MDALIB**

Explanation

The database definition is not registered correctly. *type* is AREA or DDNAME. *db-name* is the name of the database.

System action

The job ends abnormally.

User response

Review the definition of the database and identify the cause of the error. If the problem persists, contact IBM Software Support.

ATY3606E **Database information for *db-name* needs to be defined in RDDS or MODBLKS**

Explanation

The database information is not defined correctly. *db-name* is the name of the database.

System action

The job ends abnormally.

User response

Review the definition of the database and identify the cause of the error. If the problem persists, contact IBM Software Support.

ATY3607E **Information requested from catalog but catalog is not enabled**

Explanation

An error occurred when IMS Administration Tool requested catalog information. The IMS catalog is not enabled.

System action

The job ends abnormally.

User response

Ensure that the IMS catalog is made available to the IMS system. If the problem persists, contact IBM Software Support.

ATY3608E **Unable to locate *variable-name* variable setting**

Explanation

The indicated variable is missing. This variable must be registered.

System action

The job ends abnormally.

User response

Register the indicated variable.

ATY3609W **Unable to locate library for IMS Library Integrity Utilities**

Explanation

Because the load module library of IMS Library Integrity Utilities cannot be located in the import objects job, ACBGEN was done by the IMS ACBGEN utility instead of the Advanced ACBGEN utility of IMS Library Integrity Utilities.

System action

Processing continues. ACBGEN is performed by the IMS ACBGEN utility.

User response

No action is required.

If you want to use the Advanced ACBGEN utility to do ACBGEN, register IMS Library Integrity Utilities to IMS Tools Knowledge Base. To do so, refer to the

registration job in the CUSTJCL data set, which was created by IMS Tools Setup.

ATY3609E **Unable to locate library for IMS Library Integrity Utilities**

Explanation

The load module library of IMS Library Integrity Utilities is required for the following options:

- The backup existing objects option of the import objects job
- Compare before restore option of the IMS directory/ BSDS restore job

System action

The job ends with an error return code of 08.

User response

If you do not use these options, specify N for the options.

If you want to use both or either of these options, register IMS Library Integrity Utilities to IMS Tools Knowledge Base. To do so, refer to the registration job in the CUSTJCL data set, which was created by IMS Tools Setup.

ATY3610E ***function*** **requires function to be run on same LPAR as active IMS**

Explanation

Either this task or job is not executed on the same LPAR as the active IMS system. *function* is either Catalog Update or Catalog Record Purge. To update the IMS catalog or to purge the IMS catalog record, this task or job must be executed on the same LPAR as the active IMS system.

System action

The job ends abnormally.

User response

Ensure that the IMS system is active and that this task or job is executed on the same LPAR as the active IMS system.

ATY3611E **IEBCOPY ended with return code** ***rc***

Explanation

An error occurred trying to invoke the internal IEBCOPY utility. *rc* indicates the return code from the utility.

System action

The job ends abnormally.

User response

This is an internal error. Contact IBM Software Support.

ATY3612E ***function*** **to** ***target*** **cannot be run when IMS is active**

Explanation

The indicated function cannot be performed because the IMS system is active. The indicated function requires that the IMS system be inactive. *function* is either Update or Import. *target* is either Active ACBLIB or Active Catalog.

System action

The job ends abnormally.

User response

Ensure that IMS system is not active.

ATY3613E ***ctl-1*** **not valid when** ***ctl-2*** **specified**

Explanation

The combination of the indicated keywords, which are specified in the ATYMSGI DD statement, is not supported.

When *ctl-2* is ACB=N, *ctl-1* cannot be STAGEACB=Y, ACTACB=Y, or INACTACB=Y.

When *ctl-2* is CATALOG=N, *ctl-1* cannot be PENDACT=Y or ACTCAT=Y.

System action

The job ends abnormally.

User response

Correct the indicated keywords. If the cause of the error cannot be determined, contact IBM Software Support.

ATY3614E **No active ACB found for logically related or index related database**

***dbdname* in the [IMS directory | ACBLIB data set]**

Explanation

The active ACB member for the indicated DBD (*dbdname*) is not found in the IMS directory or in the active ACBLIB data set. *dbdname* is one of the following databases:

- Logically related database
- Index database
- Indexed database

System action

The system stops the requested processing.

User response

Ensure that the active ACB member for the indicated DBD exists in the IMS directory or in the ACBLIB data set and rerun the job. If the problem persists, contact IBM Software Support.

ATY3616E **An I/O error occurred while processing the IMS log data set**

Explanation

During IMS Catalog Record Purge utility (DFS3PU10) processing, an error occurred while reading or writing to the IMS log data set that is specified in the JCL. The return code is displayed in message ATY3957E.

System action

The ATY@OBJU job (deletes all obsolete instances) ends with an error return code of 8.

User response

Free space in the IMS log data set (IEFRDER) might not be enough. Correct the size of the IMS log data set and execute the job again.

ATY3700E **AiiSsi *function* request failed, RC=*rc* RSN=*rsn***

Explanation

An error occurred trying to issue the function call to IMS Tools Base Distributed Access Infrastructure (DAI). *rc* indicates the return code, and *rsn* indicates the reason code. *function* is one of BUILDENV, QRYGRP, FREEBUF, INIT, QRYTAS, FREEBUF, SEND, GET, XCFMSG, or MESSAGE.

System action

The job ends abnormally.

User response

This is an internal error. Contact IBM Software Support.

ATY3702E ***function* request for *target* failed, RC=*rc* RSN=*rsn***

Explanation

An error occurred trying to request the internal function call. *function* is one of the following functions:

- IXGCONN DISCONNECT
- IXGWRITE
- HKTXPEX READ
- HKTXPEX INIT
- HKTXPEX TERM
- IXGCONN CONNECT
- HKTXPEX ADD
- HKTXPEX SYNC
- HKTXPEX DLET
- HKTXPEX GETL
- IXGCONN DISCONNECT
- OBTAIN

target indicates one of log stream name, ITKB XCF group name, or data set name. *rc* indicates the return code, and *rsn* indicates the reason code.

System action

The job ends abnormally.

User response

This is an internal error. Contact IBM Software Support.

ATY3703E **Required ITKB XCF group name was not specified.**

Explanation

An error occurred trying to initialize the IMS Tools Knowledge Base information. The XCF group name for the IMS Tools Knowledge Base repository server was not supplied.

System action

The job ends abnormally.

User response

This is an internal error. Contact IBM Software Support.

ATY3704I Audit log is not written because log stream is being formatted.

Explanation

An temporary error occurred trying to write the audit log. Audit log cannot be written when the log stream is being formatted.

System action

Processing continues.

User response

None. This message is informational.

ATY3900E Entry number *nn* not found in Table : *table*

Explanation

No entry found for the indicated message number in the message table. *nn* is the entry number of the message that was intended to be issued. *table* is ATY#LENU (Literal table) or ATY#MENU (Message table).

System action

The job ends abnormally.

User response

This is an internal error. Contact IBM Software Support.

ATY3901E Program *pgm-name* requires APF-Authorization

Explanation

The indicated program must be APF authorized.

System action

The job ends abnormally.

User response

Contact IBM Software Support.

ATY3902E MVS Service *svc* call from *member* failed

Explanation

An error occurred when the indicated member issued the MVS service (*svc*) call. *svc* is one of ATTACH, ATTACHX, OPEN, LOCASCB, DESERV, IGGCSI00, or STOW.

System action

The job ends abnormally.

User response

This is an internal error. Contact IBM Software Support.

ATY3904E Unable to open *ddname* DD

Explanation

An error occurred while trying to open a data set with the DDNAME of *ddname*.

System action

The job ends abnormally.

User response

If the cause of the error cannot be determined, contact IBM Software Support.

ATY3910E ABEND occurred in program *pgm-name*

Explanation

An abend occurred in the indicated program (*pgm-name*). Message ATY3002I, which follows this message, shows the abend code and the reason code.

System action

The job ends abnormally.

User response

Contact IBM Software Support.

ATY3920I VSAM *operation* call failed

Explanation

An error occurred during an operation call to a VSAM file. *operation* is one of GET, PUT, ERASE, SHOWCB ACB ACBLEN, or SHOWCB RPL RPLLEN. Message ATY3939E, which follows this message, shows the reason code from the VSAM access error.

System action

The job ends abnormally.

User response

Contact IBM Software Support.

ATY3936E **Program *pgm-name* received invalid function (*fc*) in message**

Explanation

An internal error occurred trying to access the VSAM command options. *pgm-name* is the name of program in which the error occurred. *fc* indicates the invalid code character, which is other than G (Get), A (Add), U Update), and D (Delete).

System action

The job ends abnormally.

User response

Contact IBM Software Support.

ATY3937E **Program *pgm-name*: No key supplied for function (*fc*) in message.**

Explanation

An internal error occurred trying to access the VSAM command options. Key data was not supplied. *pgm-name* is the name of program in which the error occurred. *fc* is one of G (Get), A (Add), U (Update), or D (Delete).

System action

The job ends abnormally.

User response

Contact IBM Software Support.

ATY3938E **Program *pgm-name*: Duplicate key for insert with record type (*type*)**

Explanation

An error occurred trying to insert a record to a VSAM data set. Found a duplicate record key. *pgm-name* is the name of program in which the error occurred. *type* is the record type and is one of I (IMS), J (JOB), or M (MSG).

System action

The job ends abnormally.

User response

Contact IBM Software Support.

ATY3939E **RPLERRCD: *errcd***

Explanation

This message indicates the reason code from the VSAM access error. This message accompanies message ATY3920E.

System action

The job ends abnormally.

User response

Contact IBM Software Support.

ATY3940W **Program *pgm-name*: Record not found**

Explanation

A record was not found when IMS Administration Tool accessed a VSAM file. *pgm_name* is the name of the program that detected this warning condition.

System action

The job ends with return code 4.

User response

This is an internal error. Contact IBM Software Support.

ATY3941E **Program *pgm-name*: ENQ failure**

Explanation

An error occurred trying to issue the ENQ macro to the VSAM options file. *pgm-name* is the name of program in which the error occurred. Message ATY3001I, which follows this message, shows the return code and the reason code.

System action

The job ends abnormally.

User response

Contact IBM Software Support.

ATY3942W **LOGSTREAM name *ls-name* not found**

Explanation

An error occurred trying to connect to the log stream. The log stream name is not defined in the LOGR policy. *ls-name* is the log stream name.

System action

The job ends abnormally.

User response

Contact IBM Software Support.

ATY3943E **LOGSTREAM *ls-name* CONNECT error**

Explanation

An error occurred trying to connect to the log stream. *ls-name* is the log stream name.

System action

The job ends abnormally.

User response

Contact IBM Software Support.

ATY3944I **LOGSTREAM *ls-name* is empty**

Explanation

An error occurred trying to browse the log stream. The log stream is empty. *ls-name* is the log stream name.

System action

The job ends abnormally.

User response

Contact IBM Software Support.

ATY3945E **LOGSTREAM *ls-name* BROWSE START error**

Explanation

An error occurred trying to start a browse session for the log stream. *ls-name* is the log stream name. Message ATY3001I, which follows this message, shows the return code and the reason code.

System action

The job ends abnormally.

User response

Contact IBM Software Support.

ATY3946E **LOGSTREAM *ls-name* READCURSOR error**

Explanation

An error occurred trying to read (READCURSOR) the log stream. The end of the log stream has been reached in the direction of the read. *ls-name* is the log stream name. Message ATY3001I, which follows this message, shows the return code and the reason code.

System action

The job ends abnormally.

User response

Contact IBM Software Support.

ATY3950E **Program ATY@PRSB received invalid parameter (*x*) in ATYMSGI**

Explanation

The copybook language parameter, which was passed to ATY@PRSB during the copybook import process, is invalid. *x* indicates the 1-digit invalid parameter that was passed to ATY@PRSB. The copybook language parameter must be either B for COBOL or P for PL/I.

System action

The job ends abnormally.

User response

This is an internal error. Contact IBM Software Support.

ATY3953E **ACBGEN ended with *process* code *cd***

Explanation

The ACBGEN process ended with the indicated return code (*cd*). *process* shows the type of the code, either Abend or Return.

System action

The job ends abnormally.

User response

Identify the cause of the error, correct it, and rerun the job. If the problem persists, contact IBM Software Support.

ATY3954W **Catalog Populate ended with Return code *cd***

Explanation

During the copybook import process, the process to update the IMS catalog ended with the indicated return code (*cd*).

System action

Processing continues. The job ends with return code 4.

User response

None. This message is informational.

ATY3954E **Catalog Populate ended *process* code *rc***

Explanation

During the copybook import process, the process to update the IMS catalog ended with the indicated return code. *process* shows the type of the code, either Abend or Return.

System action

The job ends abnormally.

User response

Locate messages issued by the IMS Catalog Populate utility (DFS3PU00). Identify the cause of the error and correct it.

ATY3955I **EXPORT ended with Return code *cd***

Explanation

The EXPORT process ended with the indicated return code (*cd*).

System action

Processing continues.

User response

None. This message is informational.

If the return code (*cd*) is not zero, either no DBD or PSB resource was found or warning messages might be printed in the DBD or PSB source statements. Look up the meaning of the return code in the topic "IMS Library Integrity Utilities return codes under IMS Administration Tool" in the *IMS Library Integrity Utilities User's Guide*.

ATY3955E **EXPORT ended with *process* code *cd***

Explanation

The EXPORT process ended with the indicated return code (*cd*). *process* shows the type of the code, either Abend or Return.

System action

The job ends abnormally.

User response

Identify the cause of the error, correct it, and rerun the job. If the problem persists, contact IBM Software Support.

ATY3956E **Compiler ended with *process* code *rc***

Explanation

During the copybook import process, the compiler ended with the indicated return code. *process* shows the type of the code, either Abend or Return.

System action

The job ends abnormally.

User response

Identify the cause of the error and correct it. Rerun the job.

ATY3957W **Catalog Record Purge ended with return code *cd***

Explanation

During the IMS Catalog Record Purge, the process ended with the indicated return code (*cd*).

System action

Processing continues. The ATY@OBJU job (deletes all obsolete instances) ends with a return code of 4.

User response

None. This message is informational.

ATY3957E **Catalog Record Purge ended with *process* code *rc***

Explanation

During the IMS Catalog Record Purge, the process ended with the indicated return code (*rc*). *process* shows the type of the code, either Abend or Return.

System action

Process ends abnormally. The ATY@OBJU job (deletes all obsolete instances) ends with a return code of 8 or higher.

User response

Locate messages issued by the IMS Catalog Record Purge utility (DFS3PU10). Identify the cause of the error and correct it.

ATY3958E **The compare process ended with [ABEND | return] code *code***

Explanation

In the compare process of IMS directory/BSDS restore job, IMS Library Integrity Utilities ended abnormally or ended with an error return code.

System action

The IMS directory/BSDS restore job ends with an error return code of 08.

User response

If you do not need to run the compare process, specify N to the compare before restore option. If you want to include the compare process, look up the meaning of the return code in the topic "IMS Library Integrity Utilities return codes under IMS Administration Tool" in the *IMS Library Integrity Utilities User's Guide* and correct the error.

ATY3959E **The decoding process ended with [ABEND | return] code *code***

Explanation

In the decoding process of IMS Resource Change or Import Objects job, IMS Library Integrity Utilities ended abnormally or ended with an error return code.

System action

The IMS Resource Change or Import Objects job ends with an error return code of 08.

User response

If you do not need to run the decoding process, specify N to the "Record DBD/PSB Statements Before and After Change" option. If you want to include the decoding process, look up the meaning of the return code in the topic "IMS Library Integrity Utilities return codes under IMS Administration Tool" in the *IMS Library Integrity Utilities User's Guide* and correct the error.

ATY3960E **The catalog analysis process ended with [ABEND | return] code *code***

Explanation

In the catalog analysis process of the ATY@OBJU job (deletes all obsolete instances), IMS Library Integrity Utilities ended abnormally or ended with an error return code.

System action

The ATY@OBJU job (deletes all obsolete instances) ends with an error return code of 8.

User response

Look up the meaning of the return code in the topic "IMS Library Integrity Utilities return codes under IMS Administration Tool" in the *IMS Library Integrity Utilities User's Guide* and correct the error.

ATY3999E **Internal Logic Error: *module* (Code: *number*)**

Explanation

An internal logic error occurred. *module* indicates the module in which the error occurred, and *number* indicates the code number, which is one of the following values:

- 001: Invalid Handle passed
- 002: Invalid Function passed
- 003: Invalid Parameter passed

System action

The job ends abnormally.

User response

This is an internal error. Contact IBM Software Support.

ATY5001E ATYPRINT OR CCFPRINT OPEN FAILED

Explanation

The REDO BMP encountered an error attempting to open DDNAME ATYPRINT or CCFPRINT. Additional messages might be displayed on the z/OS Syslog.

System action

The REDO BMP ends with a return code of 12.

User response

Correct the error that caused the open failure and run the job again.

ATY5002E DYNALLOC FAILED FOR DSN=*dsn*

Explanation

The REDO BMP encountered a dynamic allocation failure for data set *dsn*. The return code for the DYNALLOC failure can be found in subsequent message ATY5003E.

System action

The REDO BMP ends with a return code of 12.

User response

Correct the error that caused the DYNALLOC failure and run the job again.

ATY5003E DYNALLOC RETURN CODE =*rc*

Explanation

The data set named in message ATY5002E received an invalid return code (*rc*) during DYNALLOC processing.

System action

The REDO BMP ends with a return code of 12.

User response

Correct the error that caused the DYNALLOC failure and run the job again.

ATY5004E LOAD FAILED FOR MODULE ATYSTFWD

Explanation

IMS Administration Tool was unable to load the store/forward dynamic allocation member ATYSTFWD.

System action:
The REDO BMP ends with a return code of 12.

User response

Ensure the proper ATYSTFWD member is present in the STEPLIB of the REDO BMP and run the job again.

ATY5005E OPEN FAILED FOR ATYSTFWD OR CCFSTFWD, RETURN CODE=*rc*

Explanation

IMS Administration Tool was unable to open the data set associated the DDNAME ATYSTFWD or CCFSTFWD. The return code from the open is contained in field *rc*. Additional messages might be displayed on the z/OS Syslog.

System action

The REDO BMP ends with a return code of 12.

User response

Correct the error that caused the open failure and run the job again.

ATY5006E INQY CALL FAILED, AIBRETRN=*rc* AIBREASN=*rsn*

Explanation

The REDO BMP was not able to successfully issue an IMS INQY/ENVIRON call. The AIBRETRN and AIBREASN codes are contained in *rc* and *rsn*, respectively.

System action

The job step might end abnormally, depending on what options were in effect for the job.

User response

Correct the problem and retry the command.

ATY5007W OPEN FAILED FOR DD ATYPRE OR CCFPRE

Explanation

The REDO BMP encountered an error attempting to open DDNAME ATYPRE or CCFPRE. This is

probably due to erroneous DCB parameters. Additional messages might be displayed on the z/OS Syslog.

System action

Processing continues without ATYPRE or CCFPRE input. Unless a more severe error is encountered, the REDO BMP sets a return code of 4 upon completion.

User response

Make sure the data set associated with DDNAME ATYPRE or CCFPRE is defined with LRECL=80 and DSORG=PS.

ATY5008E PREVIOUS RECORD IGNORED, UNRECOGNIZED COMMAND

Explanation

A record that contained a non-valid command was read from the store/forward data set. This is an internal error that should not occur.

System action

The record is bypassed and processing continues.

User response

Contact IBM Software Support.

ATY5009I STORE/FORWARD DSN=*dsn*

Explanation

This is an informational message displayed by the REDO BMP to indicate the name of the store/forward data set.

System action

Processing continues.

User response

None. This message is informational.

ATY5010W ERROR DURING ICMD CALL, AIBRETRN=*rc* AIBREASN=*rsn*

Explanation

Program ATYREDO0 was not able to successfully issue an IMS command using the ICMD interface. The AIBRETRN and AIBREASN codes are contained in *rc* and *rsn*, respectively.

System action

The job step might end abnormally, depending on what options were in effect for the job.

User response

Correct the problem and retry the command.

ATY5011W ERROR DURING ICMD CALL, AIBRETRN=*rc* AIBREASN=*rsn*

Explanation

Program ATYREDO0 was not able to successfully issue an IMS command using the ICMD interface. The AIBRETRN and AIBREASN codes are contained in *rc* and *rsn*, respectively.

System action

The job step might end abnormally, depending on what options were in effect for the job.

User response

Correct the problem and retry the command.

ATY5012W ERROR DURING RCMD CALL, AIBRETRN=*rc* AIBREASN=*rsn*

Explanation

Program ATYREDO0 was not able to successfully retrieve a response to an IMS command using the RCMD call. The AIBRETRN and AIBREASN codes are contained in *rc* and *rsn*, respectively.

System action

The job step might end abnormally, depending on what options were in effect for the job.

User response

Correct the problem and retry the command.

ATY5013W ERROR DURING RCMD CALL, AIBRETRN=*rc* AIBREASN=*rsn*

Explanation

Program ATYREDO0 was not able to successfully retrieve a response to an IMS command using the RCMD call. The AIBRETRN and AIBREASN codes are contained in *rc* and *rsn*, respectively.

System action

The job step might end abnormally, depending on what options were in effect for the job.

User response

Correct the problem and retry the command.

ATY5014I ATYPRE OR CCFPRE PROCESSING STARTED

Explanation

The REDO BMP has started processing the commands read from DDNAME ATYPRE or CCFPRE.

System action

Processing continues.

User response

None. This message is informational.

ATY5015I ATYPRE OR CCFPRE PROCESSING COMPLETED

Explanation

The REDO BMP has completed processing all commands from DDNAME ATYPRE or CCFPRE.

System action

Processing continues.

User response

None. This message is informational.

ATY5016W OPEN FAILED FOR DD ATYPOST OR CCFPOST

Explanation

The REDO BMP encountered an error attempting to open DDNAME ATYPOST or CCFPOST. This is probably due to erroneous DCB parameters. Additional messages might be displayed on the z/OS Syslog.

System action

Processing continues without ATYPOST or CCFPOST input. Unless a more severe error is encountered, the REDO BMP sets a return code of 4 upon completion.

User response

Make sure the data set associated with DDNAME ATYPOST is defined with LRECL=80 and DSORG=PS.

ATY5017I ATYPOST OR CCFPOST PROCESSING STARTED

Explanation

The REDO BMP has started processing commands read from DDNAME ATYPOST or CCFPOST.

System action

Processing continues.

User response

None. This message is informational.

ATY5018I ATYPOST OR CCFPOST PROCESSING COMPLETED

Explanation

The REDO BMP has completed processing all commands from DDNAME ATYPOST or CCFPOST.

System action

Processing continues.

User response

None. This message is informational.

ATY5019W IMS *ims* NOT FOUND IN GROUP CSLplex

Explanation

The IMS record in the options data set for *ims* specifies Operations Manager for its command routing technique, but *ims* is not an active member in CSLplex.

System action

Processing continues with all type 1 IMS commands. Type 2 IMS commands are skipped and erased from the store/forward data set. Unless a more severe error is encountered, the REDO BMP sets a return code of 4 upon completion.

User response

Use the IMS Administration Tool user interface to correct the IMS routing technique specification for *ims*.

ATY5020E **READ ERROR ON STORE/ FORWARD DATA SET, RC=*rc* RPLFDBK=*rplfdbk***

Explanation

The REDO BMP encountered an error reading the store/forward data set. The VSAM return code and RPLFDBK are represented by *rc* and *rplfdbk*, respectively.

System action

The REDO BMP ends with a return code of 12.

User response

Correct the error caused by the non-zero return code and run the job again.

ATY5021I **STORE/FORWARD PROCESSING STARTED**

Explanation

The REDO has started processing commands from the store/forward data set.

System action

Processing continues.

User response

None. This message is informational.

ATY5022I **FOLLOWING RECORD FROM JOB=*job* DATE-TIME: *date -time***

Explanation

The REDO BMP read the following record from the store/forward data set. The record was written to the store/forward by job name *job* on date (*date*) and time (*time*) specified in the message.

System action

Processing continues.

User response

None. This message is informational.

ATY5023I **NO RECORDS FOUND ON STORE/ FORWARD FOR: *ims***

Explanation

The REDO BMP found no records in the store/forward data set for IMS region listed in *ims*.

System action

Processing continues.

User response

None. This message is informational.

ATY5024I **STORE/FORWARD PROCESSING COMPLETED**

Explanation

The REDO BMP completed processing all relevant records from the store/forward for this particular IMS.

System action

Processing continues.

User response

None. This message is informational.

ATY5025I **FOLLOWING RECORD FROM JOB=*job* DATE-TIME: *date – time* DELETED BY USER *user***

Explanation

The following record was read from the store/forward data set for this particular IMS, but it is not processed because it was flagged for deletion by USER *user*.

System action

The record is deleted from the store/forward data set and processing continues.

User response

None. This message is informational.

ATY5026I ***stfrec***

Explanation

This message lists the record described by previous message ATY5025I.

System action

Processing continues.

User response

None. This message is informational.

ATY5027I ATY OPTIONS DATA SET NAME = *dsn*

Explanation

This is an informational message displayed by the REDO BMP to indicate the name of the options data set. The options data set is read by the REDO BMP because a type 2 IMS command has been read, and the REDO BMP needs to read the IMS record to obtain the Operations Manager PLEX name.

System action

Processing continues.

User response

None. This message is informational.

ATY5028W READ ERROR ON ATY OPTIONS DATA SET, RC=*rc* RPLFDBK=*rplfdbk*

Explanation

The REDO BMP encountered an error reading the options data set. The VSAM return code and RPLFDBK are represented by *rc* and *rplfdbk*, respectively.

System action

The REDO BMP ends with a return code of 12.

User response

Correct the error caused by the non-zero return code and run the job again.

ATY5029W LOAD FAILED FOR MEMBER ATY#OPTS

Explanation

IMS Administration Tool was unable to load the options data set dynamic allocation member ATY#OPTS.

System action:
The REDO BMP ends with a return code of 12.

User response

Ensure the proper ATY#OPTS member is present in the STEPLIB of the REDO BMP and run the job again.

ATY5030W OPEN FAILED FOR OPTIONS DS, RETURN CODE=*rc*

Explanation

IMS Administration Tool was unable to open the options data set. The return code from the open is contained in field *rc*. Additional messages might be displayed on the z/OS Syslog.

System action

Processing continues with all type 1 IMS commands. Type 2 IMS commands are skipped and erased from the store/forward data set. Unless a more severe error is encountered, the REDO BMP sets a return code of 4 upon completion.

User response

Correct the error that caused the open failure and run the job again.

ATY5031W OPTIONS DATA SET RECORD FOR *ims* NOT FOUND

Explanation

The options data set did not contain an IMS record for *ims*. The options data set IMS record is needed to obtain the Operations Manager name because a type 2 IMS command has been read.

System action

Processing continues with all type 1 IMS commands. Type 2 IMS commands are skipped and erased from the store/forward data set. Unless a more severe error is encountered, the REDO BMP sets a return code of 4 upon completion.

User response

Ensure correct options data set is being used. If so, use the IMS Administration Tool user interface to add an IMS record to the options data set.

ATY5032W IMS *imsid* NOT DEFINED TO USE OPERATIONS MANAGER

Explanation

The IMS record in the options data set for *ims* does not specify Operations Manager as its command routing technique.

System action

Processing continues with all type 1 IMS commands.

Type 2 IMS commands are skipped and erased from the store/forward data set.

Unless a more severe error is encountered, the REDO BMP sets a return code of 4 upon completion.

User response

If type 2 IMS commands are to be executed, use the IMS Administration Tool user interface and change the IMS record for *imsid* to use Operations Manager as its command routing technique.

ATY5033W OPERATIONS MANAGER NAME NOT SPECIFIED FOR *ims*

Explanation

The IMS record in the options data set for *ims* specifies Operations Manager as its command routing technique, but the PLEX name is not defined.

System action

Processing continues with all type 1 IMS commands. Type 2 IMS commands are skipped and erased from the store/forward data set. Unless a more severe error is encountered, the REDO BMP sets a return code of 4 upon completion.

User response

If type 2 IMS commands are to be executed, use the IMS Administration Tool user interface to define the Operations Manager PLEX name.

ATY5034W CSLSCREG FAILED FOR CSLplex RC=*rc* RSN=*rsn*

Explanation

The REDO BMP encountered an error attempting to connect to the Common Service Layer PLEX plex. The return and reason codes are contained in *rc* and *rsn*, respectively.

System action

Processing continues with all type 1 IMS commands. Type 2 IMS commands are skipped and erased from the store/forward data set. Unless a more severe error is encountered, the REDO BMP sets a return code of 4 upon completion.

User response

Find the return (*rc*) and reason (*rsn*) code for CSLSCREG in the *IMS Common Service Layer Guide and Reference*.

ATY5035W CSLSCQRY FAILED WITH RC=*rc* RSN=*rsn*

Explanation

The REDO BMP encountered an error attempting to query the Common Service Layer PLEX plex. The return and reason codes are contained in *rc* and *rsn*, respectively.

System action

Processing continues with all type 1 IMS commands. Type 2 IMS commands are skipped and erased from the store/forward data set. Unless a more severe error is encountered, the REDO BMP sets a return code of 4 upon completion.

User response

Find the return (*rc*) and reason (*rsn*) code for CSLSCQRY in the *IMS Common Service Layer Guide and Reference*.

ATY5036W INVALID DATA RETURNED FROM CSLSCQRY

Explanation

The REDO BMP does not recognize the data returned from the CSLSCQRY call.

System action

Processing continues with all type 1 IMS commands. Type 2 IMS commands are skipped and erased from the store/forward data set. Unless a more severe error is encountered, the REDO BMP sets a return code of 4 upon completion.

User response

This is an internal error. Contact IBM Software Support.

ATY5037W INVALID DATA RETURNED FROM CSLSCQRY

Explanation

The REDO BMP does not recognize the data returned from the CSLSCQRY call.

System action

Processing continues with all type 1 IMS commands. Type 2 IMS commands are skipped and erased from the store/forward data set. Unless a more severe error

is encountered, the REDO BMP sets a return code of 4 upon completion.

User response

This is an internal error. Contact IBM Software Support.

ATY5038W NO MEMBER INFO RETURNED FROM CSLSCQRY

Explanation

The REDO BMP does not recognize the data returned from the CSLSCQRY call.

System action

Processing continues with all type 1 IMS commands. Type 2 IMS commands are skipped and erased from the store/forward data set. Unless a more severe error is encountered, the REDO BMP sets a return code of 4 upon completion.

User response

This is an internal error. Contact IBM Software Support.

ATY5039W OPERATIONS MANAGER NOT ACTIVE IN GROUP CSLplex

Explanation

The REDO BMP did not find an active Operations Manager task in the Common Service Layer group.

System action

Processing continues with all type 1 IMS commands. Type 2 IMS commands are skipped and erased from the store/forward data set. Unless a more severe error is encountered, the REDO BMP sets a return code of 4 upon completion.

User response

Ensure an Operations Manager task is started.

ATY5040W IMS *ims* NOT IN ACTIVE STATE IN GROUP CSLplex

Explanation

The IMS (*ims*) where the REDO BMP is attached is connected to the Common Service Layer group (CSLplex), but is not in an active state and therefore cannot process commands.

System action

Processing continues with all type 1 IMS commands. Type 2 IMS commands are skipped and erased from the store/forward data set. Unless a more severe error is encountered, the REDO BMP sets a return code of 4 upon completion.

User response

Determine why the IMS is not in an active state and correct the condition.

ATY5041W CSLOMCMD RECEIVED RC = *rc* RSN = *rsn*

Explanation

The REDO BMP encountered an error attempting to issue a type 2 IMS command. The return and reason codes are contained in *rc* and *rsn*, respectively.

System action

The record is erased from the store/forward data set and processing continues. Unless a more severe error is encountered, the REDO BMP sets a return code of 4 upon completion.

User response

Find the return (*rc*) and reason (*rsn*) code for CSLSCQRY in the *IMS Common Service Layer Guide and Reference*.

ATY5042W COMMAND BYPASSED DUE TO PRIOR SCI CONNECT FAILURE

Explanation

Due to the failure of a previous attempt to issue a type 2 IMS command, all type 2 IMS commands are bypassed. The reason for the previous failure is displayed in a previous message.

System action

The record is erased from the store/forward data set and processing continues. Unless a more severe error is encountered, the REDO BMP sets a return code of 4 upon completion.

User response

None. This message is informational.

ATY6007I CHANGED TO DBACCESS=ASIS DUE TO MISSING MODBLKS DSN IN *xxxx*

Explanation

The runtime option for this job is specified by the DBACCESS=SYSGEN parameter, but the IMS entry for *xxxx* in the IMS Administration Tool options data set did not contain a MODBLKS data set name.

System action

The runtime option for this job is changed from DBACCESS=SYSGEN to DBACCESS=ASIS, and processing continues.

User response

To use the DBACCESS=SYSGEN runtime option, add a MODBLKS data set name in the IMS Administration Tool options data set for IMS *xxxx*, and rerun the job.

ATY6008I COMMAND STORE/FORWARD ACTIVE

Explanation

Command store/forward is active for this job.

System action

Processing continues.

User response

None. This message is informational.

ATY6009I STORE/FORWARD DSN=*dsn*

Explanation

This information message displays the name of the command store/forward data set (*dsn*).

System action

Processing continues.

User response

None. This message is informational.

ATY6010I ERRORS .: ABEND=U*code* SETRC=*rc* ERRORS .: GENERAL=*opt* ROUTING=*opt* ERR488=*opt* DBRC=*opt* RETRY OPTIONS .....: RETRYATT=*att* RETRYSEC=*sec* / ATYMOD OR /CCFMOD OPTIONS ...: MODFAIL=*modfail* MODREVERSE=*modrev* DATABASE OPTIONS ..: WTODBCMD=*wto* DATAGRPEXP=*grpexp* DBACCESS=ASIS NOFEOV=Y ERR3466=X PRESCAN=X DFS0488I: *rc rc rc rc rc rc rc rc rc rc* OPERATIONS MANAGER RETURN CODE: *omrc omrc omrc omrc omrc* JOB= MASK=*mask route=name* OPTIONS DATA SET NAME = *dsn* IMS LIST: ERRORS .: SYNTAXERR=% TIMEOUT SECONDS ...: TIMEOUT=%%%%

Explanation

This message lists all of the options in effect for this job.

System action

Processing continues.

User response

None. This message is informational.

ATY6011E MISSING ATY#OPTS MEMBER FOR ATY OPTIONS DATA SET

Explanation

An attempt to LOAD member ATY#OPTS failed. The member is not present in the ATY Product Load Library.

System action

If the ATY command driver is running as a batch job, the job ends with a U4095 abend. If the ATY command driver is called by the callable API (ATYCAPI0), the call to the API fails with a non-zero return and reason code.

User response

Ensure member ATY#OPTS is present in a STEPLIB or JOBLIB data set, and try the operation again.

ATY6012E ATY OPTIONS NOT FOUND - DSN=*dsn*

Explanation

A LOCATE failed for the ATY options data set name (*dsn*) obtained from member ATY#OPTS.

System action

If the ATY command driver is running as a batch job, the job ends with a U4095 abend. If the ATY command

driver is called by the callable API (ATYCAPI0), the call to the API fails with a non-zero return and reason code.

User response

Ensure member ATY#OPTS contains the correct data set name for the ATY options data set.

ATY6013E DYNAMIC ALLOCATION FAILED FOR ATY OPTIONS DATA SET

Explanation

Dynamic allocation failed for the ATY options data set name that is obtained from member ATY#OPTS.

System action

If the ATY command driver is running as a batch job, the job ends with a U4095 abend. If the ATY command driver is running from the callable API (ATYCAPI0), the call to the API fails with a non-zero return and reason code.

User response

Ensure member ATY#OPTS contains the correct data set name for the ATY options data set.

ATY6014E OPEN FAILED FOR ATY OPTIONS DATA SET

Explanation

An open failed for the ATY options data set.

System action

If the ATY command driver is running as a batch job, the job ends with a U4095 abend. If the ATY command driver is called by the callable API (ATYCAPI0), the call to the API fails with a non-zero return and reason code.

User response

Ensure member ATY#OPTS contains the correct data set name for the ATY options data set.

ATY6015E IMS NOT DEFINED - IMSID=*iiii*

Explanation

A request was made to issue a command to an IMS system (*iiii*) that was not defined in the ATY options data set.

System action

If the ATY command driver is running as a batch job, the job ends with the abend code specified in either the global, or job, record in the ATY options data set. If the ATY command driver is called by the callable API (ATYCAPI0), the call to the API fails with a non-zero return and reason code.

User response

Ensure member ATY#OPTS contains the correct data set name for the ATY options data set.

ATY6016E ATY GROUP NOT DEFINED - IMSID=*iiii* GROUP=*gggggggg*

Explanation

A request was made to issue a command to a ATY group (*gggggggg*), but that group name is not defined in the ATY options data set.

The requested group name is obtained either from the JCL parm statement, or if the IMSID (*iiii*) is present in the message, from the Default ATY Group obtained from the IMSID record in the ATY options data set.

System action

If the ATY command driver is running as a batch job, the job ends with the abend code specified in either the global or job record in the ATY options data set.

If the ATY command driver is called by the callable API (ATYCAPI0), the call to the API fails with a non-zero return and reason code.

User response

Ensure that the correct ATY group name is specified in either the JCL parm statement, or in the IMSID record **Default ATY Group** field in the ATY options data set.

ATY6017E EMPTY ATY GROUP RECORD - GROUP=*gggggggg*

Explanation

A request was made to issue a command to a ATY group (*gggggggg*), but the group record in the ATY options data set contained no IMS names.

System action

If the ATY command driver is running as a batch job, the job ends with the abend code specified in either the global, or job, record in the ATY options data set. If the ATY command driver is called by the callable API

(ATYCAPI0), the call to the API fails with a non-zero return and reason code.

User response

Ensure the group record in the ATY options data set contains the wanted IMS system names.

ATY6019W IMSID=*iiii* IN GROUP=*gggggggg* BUT NOT IN OPTIONS DS

Explanation

An IMSID was defined in ATY group (*gggggggg*) but there is no IMSID record in the ATY options data set for MS *iiii*.

System action

IMS (*iiii*) is removed from the ATY group, and processing continues.

User response

Either remove the undefined IMS name from the ATY group entry, or create a valid IMS ATY entry for *iiii*.

ATY6020E GLOBAL OPTIONS RECORD IS MISSING

Explanation

The ATY options data set did not contain the global record.

System action

If the ATY command driver is running as a batch job, the job ends with the abend code specified in either the global, or job, record in the ATY options data set. If the ATY command driver is called by the callable API (ATYCAPI0), the call to the API fails with a non-zero return and reason code.

User response

Ensure that the ATY options data set has been properly populated.

ATY6022W ABOVE OPTION UNKNOWN

Explanation

Input that is read from ATYOPTS dd statement contained an invalid keyword. The keyword is identified in the preceding ATY6024I message.

System action

The unknown keyword is bypassed, and processing continues.

User response

Ensure that the ATY options data set has been properly populated.

ATY6023W ATY GROUP TRUNCATED TO 8 CHARACTERS

Explanation

The ATY Group name, obtained either from the PARM statement, or read from ATYOPTS dd statement, was more than 8 characters in length. The ATY Group specification is listed in a prior ATY6024I message.

System action

The ATY Group name is truncated to 8 characters and processing continues.

User response

Correct the ATY Group name specification before you run the ATY job.

ATY6024I //ATYOPTS OR CCFOPTS: *xxxxx*

Explanation

This message lists a parameter, or ATYOPTS or CCFOPTS input keyword, that is incorrectly specified. The specific error is displayed in a subsequent ATY message.

System action

The action that is taken is determined by the subsequent ATY message.

User response

Take action that is based on the subsequent ATY message.

ATY6025I JOB RECORD FOUND

Explanation

A job options record in the VSAM options data set matched the job name.

System action

IMS Administration Tool runtime options are obtained from the matching job options record in the VSAM options data set.

User response

None. This message is informational.

ATY6026I JOB RECORD FOUND - MASK=*xxxxxxxx*

Explanation

A job options record in the VSAM options data set containing masks matched the job name. The name of job options record is displayed in the MASK=*xxxxxxxx* field.

System action

IMS Administration Tool runtime options are obtained from the matching job options record in the VSAM options data set.

User response

None. This message is informational.

ATY6027W ATYOPTS OR CCFOPTS "GROUP=" SPECIFICATION IGNORED

Explanation

A Job name record in the VSAM options data set containing wildcard matched the JES2 job name.

System action

IMS command processing runtime options are obtained from the matching Job name record in the VSAM options data set.

User response

None. This message is informational.

ATY6028W ATYOPTS OR CCFOPTS "IMSID=" SPECIFICATION IGNORED

Explanation

Because both GROUP and IMSID statements are specified on the EXEC parameter, IMS Administration Tool ignored the IMSID statement.

System action

Processing continues.

User response

None. This message is informational.

ATY6029W IMSID TRUNCATED TO 4 CHARACTERS

Explanation

The IMSID, obtained either from the PARM statement or read from ATYOPTS dd statement, was more than 4 characters in length.

The IMSID specification is listed in a prior ATY6024I message.

System action

The IMSID is truncated to 4 characters and processing continues.

User response

Correct the IMSID specification before you run the ATY job.

ATY6032W DBRC=IGNORE IN EFFECT BECAUSE RECONS ARE NOT SHARED

Explanation

DBRC was selected. However this value was overridden by the options module because the Group record does not have the shared RECON flag set to "Y".

System action

DBRC value is set to IGNORE.

User response

None.

ATY6033W DBRC BYPASSED - SYSPRINT/ SYSIN DDNAMES SELECTED

Explanation

Either SYSPRINT or SYSIN is selected as the DD name. The DBRC option is set to IGNORE.

System action

DBRC value is set to IGNORE.

User response

None.

ATY6034W **DBRC FAILURE OPTION IS DISABLED BECAUSE SYSPRINT OR SYSIN DD IS SPECIFIED INCORRECTLY.**

Explanation

In the IMS command global options or job options, ABEND, Return Code, or Issue WTOR is set for the failure option for DBRC. However, the DBRC process does not work correctly because the SYSIN and SYSPRINT used for DBRC processing in the job are incorrect. The failure option value for DBRC is ignored.

System action

Processing continues.

The failure option for DBRC is set to NODBRC.

User response

Remove the SYSIN DD or SYSPRINT DD statement from the JCL.

ATY6035W **DBRC BYPASSED - RESLIB IS NOT IN STEPLIB**

Explanation

IMS RESLIB is not in the standard MVS load library search order. The DBRC option is set to IGNORE.

System action

DBRC value is set to IGNORE.

User response

None.

ATY6036W **ATYOPTS OR CCFOPTS "GROUP=" ALREADY SPECIFIED**

Explanation

A GROUP= statement has already been specified.

System action

The new specification attempt is ignored.

User response

None.

ATY6037W **ATYOPTS OR CCFOPTS "IMSID=" ALREADY SPECIFIED**

Explanation

An IMSID= statement has already been specified.

System action

The new specification attempt is ignored.

User response

None.

ATY6038E **NO VALID IMSID/GROUP SPECIFIED**

Explanation

An IMSID/GROUP was not specified as required.

System action

User abend is issued.

User response

Provide a valid IMSID/GROUP.

ATY6039E **SETRC= VALUE MUST BE NUMERIC BETWEEN 0-4095**

Explanation

The SETRC= value must be a numeric value between 0 and 4095.

System action

Processing continues with the default value from the options module.

User response

Provide a valid SETRC= value.

ATY6040E **ABEND= VALUE MUST BE NUMERIC BETWEEN 0-4095**

Explanation

The ABEND= value must be a numeric value between 0 and 4095.

System action

Processing continues with the default value from the options module.

User response

Provide a valid ABEND= value.

ATY6041E **RETRYATT= VALUE MUST BE NUMERIC BETWEEN 1-99**

Explanation

The RETRYATT = value must be a numeric value between 1 and 99.

System action

Processing continues with the default value from the options module.

User response

Provide a valid RETRYATT = value.

ATY6042E **RETRYSEC= VALUE MUST BE NUMERIC BETWEEN 1-999**

Explanation

The RETRYSEC= value must be a numeric value between 1 and 999.

System action

Processing continues with the default value from the options module.

User response

Provide a valid RETRYSEC= value.

ATY6043E **DFS0488I= VALUES (UP TO 20 2-DIGIT PAIRS) MUST BE NUMERIC**

Explanation

The DFS0488I= values must be up to 20 two digit pairs.

System action

Processing continues with the default values from the options module.

User response

Provide valid DFS0488I= values.

ATY6044E **TIMEOUT= VALUE MUST BE NUMERIC BETWEEN 1-1440**

Explanation

The TIMEOUT= value must be a numeric value between 1-1440.

System action

Processing continues with the default values from the options module.

User response

Provide a valid TIMEOUT== value.

ATY6101I **GLOBAL OPTIONS RECORD MAINTENANCE COMPLETE**

Explanation

The IMS Administration Tool user interface function that maintains the global record in the options data set completed successfully.

System action

The user interface continues.

User response

N/A

ATY6102E **ATY VSAM OPTIONS DATA SET NOT FOUND**

Explanation

The IMS Administration Tool user interface that maintains the options data set was not able to locate the data set specified on the IMS Administration Tool Primary Options Menu.

System action

The user interface continues.

User response

Correct the data set name, or allocate and initialize the specified name as required. If you are creating a new data set, use the IMS Administration Tool options data set initialization utility (ATYUODI0).

ATY6103E **ATYVSAM SVC99 RC=*rc* FOR *dsn***

Explanation

The IMS Administration Tool user interface encountered an error while attempting to dynamically allocate the options data set specified on the IMS Administration Tool Primary Options Menu.

System action

The user interface continues.

User response

Correct the condition based on any other accompanying message that might have been displayed, or check the dynamic allocation messages for more information.

ATY6104E ATYVSAM OPEN ERROR REASON=*rsn*

Explanation

An error occurred attempting to open the options data set. The error might be due to the options data set not being properly initialized. Additional message might be displayed on the z/OS Syslog.

System action

The user interface continues.

User response

Make sure the options data set has been properly initialized using the IMS Administration Tool options data set initialization utility (ATYUODI0).

ATY6105E ATYVSAM EMPTY KSDS INIT FAILURE

Explanation

The options data set has not been properly initialized.

System action

The user interface continues.

User response

Make sure the options data set has been properly initialized using the IMS Administration Tool options data set initialization utility (ATYUODI0).

ATY6106I ATYVSAM EMPTY KSDS INIT SUCCESSFUL

Explanation

The options data set has been initialized.

System action

The user interface continues.

User response

N/A

ATY6107I NO CHANGES MADE TO GLOBAL OPTIONS

Explanation

The options data set global record update screen was used, but no changes were made to the global record.

System action

The user interface continues.

User response

N/A

ATY6108I GLOBAL OPTIONS RECORD SAVED

Explanation

The options data set global record has been successfully updated.

System action

The user interface continues.

User response

N/A

ATY6109E ATYVSAM UPDATE ERROR

Explanation

The IMS Administration Tool user interface function encountered an unexpected error while attempting to update the global record in the options data set.

System action

The user interface continues.

User response

Take any required action based on accompanying messages, or contact IBM Software Support.

ATY6110E ATYVSAM OPEN ERROR REASON=*rsn*

Explanation

The IMS Administration Tool user interface function was unable to open the options data set that was specified on the IMS Administration Tool Primary Options Menu.

System action

The user interface continues.

User response

Make sure the options data set has been properly initialized using the IMS Administration Tool options data set initialization utility (ATYUODI0).

ATY6111E **ATYVSAM PUT ERROR RC=*rc* REASON=*rsn***

Explanation

The IMS Administration Tool user interface function was unable to update the global record in the options data set.

System action

The user interface continues.

User response

Take any corrective action required based on the VSAM return information displayed in the text of the message.

ATY6112E **ATYVSAM GET ERROR RC=*rc* REASON=*rsn***

Explanation

The IMS Administration Tool user interface function was unable to retrieve the global record from the options data set.

System action

The user interface continues.

User response

Take any corrective action required based on the VSAM return information displayed in the message text.

ATY6115E **YOU NEED RACF AUTHORIZATION FOR THIS FUNCTION - R15=*r*15 RET=*rc* RSN=*rsn***

Explanation

The attempted operation was protected in the RACF FACILITY class. The RACF user ID that is attempting to perform this function does not have proper security authorization.

System action

The update process is disallowed.

User response

Contact your security department to obtain proper authorization.

ATY6151I **ATY IMS COMMAND PROCESSING COMPLETE**

Explanation

IMS command processing function completed successfully.

System action

Processing continues.

User response

None. This message is informational.

ATY6152E **ATY OPTIONS DATA SET NOT FOUND**

Explanation

The IMS Administration Tool user interface function that issues IMS commands was not able to locate the data set specified on the IMS Administration Tool Primary Options Menu.

System action

The user interface continues.

User response

Correct the data set name, or allocate and initialize the specified name as required. If you are creating a new data set, use the IMS Administration Tool options data set initialization utility (ATYUODI0).

ATY6153E **ATYVSAM DYNALLOC RC=*rc* FOR *dsn***

Explanation

The IMS Administration Tool user interface function encountered an error while attempting to dynamically allocate the options data set specified on the IMS Administration Tool Primary Options Menu.

System action

The user interface continues.

User response

Correct the condition based on any other accompanying messages that might have also been displayed, or check the dynamic allocation messages for more information about the error.

ATY6154E ATYVSAM OPEN ERROR REASON=*rsn*

Explanation

The user interface function was unable to open the options data set that was specified on the IMS Administration Tool Primary Options Menu.

System action

The user interface continues.

User response

Make sure the options data set has been properly initialized using the IMS Administration Tool options data set initialization utility (ATYUODI0).

ATY6160E NO GLOBAL OPTIONS RECORD FOUND

Explanation

The IMS Administration Tool user interface function was unable to retrieve the global record from the options data set.

System action

The user interface continues.

User response

Make sure the options data set has been properly initialized using the IMS Administration Tool options data set initialization utility (ATYUODI0).

ATY6162E COMMAND NOT KNOWN

Explanation

The IMS Administration Tool user interface function did not recognize the command/option entered at the ISPF command prompt.

System action

The user interface continues.

User response

Correct or remove the entry as required.

ATY6163E GROUP NOT DEFINED IN ATY OPTIONS DATA SET

Explanation

IMS Administration Tool could not locate the IMS command group record in the VSAM options data set that matched the group name specified in the command panel.

System action

Processing continues.

User response

Register the command group or remove the command group as required.

ATY6164W NO IMS RECORDS FOUND IN ATY OPTIONS FILE

Explanation

The IMS Administration Tool user interface function did not locate any IMS records in the options data set.

System action

The user interface continues.

User response

If the options data set was initialized, complete the customization for your environment by adding the appropriate IMS records before trying to use this panel to issue IMS commands.

ATY6167E YOU NEED RACF AUTHORIZATION FOR THIS FUNCTION - R15=*r*15 RET=*rc* RSN=*rsn*

Explanation

The attempted operation is protected in the RACF FACILITY class. The RACF user ID that is attempting to perform this function does not have proper security authorization.

System action

The update process is disallowed.

User response

Contact your security department to obtain proper authorization.

ATY6168E **OPEN ERROR FOR /DSN= DATA SET**

Explanation

A /DSN command was entered, but failed because an error occurred attempting to open the specified data set. Additional message might be displayed on the z/OS Syslog.

System action

The command is bypassed.

User response

Correct the problem with the data set and retry the operation.

ATY6169E **DATA SET NAME SPECIFIED FOR /DSN= NOT FOUND**

Explanation

The name specified in the /DSN= field is not defined for this system.

System action

The command is bypassed.

User response

Correct the name specified in the /DSN= field and retry the operation.

ATY6170E **MEMBER NAME SPECIFIED FOR /DSN= NOT FOUND**

Explanation

The PDS member name in the /DSN= field is not present in the specified data set.

System action

The command is bypassed.

User response

Specify a valid member name in the /DSN= field and retry the command.

ATY6171E **DYNALLOC ERROR FOR DSNAME SPECIFIED FOR /DSN= RC=*rc* RSN=*rsn***

Explanation

A dynamic allocation error occurred for the data set specified in the /DSN= field.

System action

The command is bypassed.

User response

Correct the error that caused the dynamic allocation failure and retry the operation.

ATY6174I **CLEAR IMS COMMAND AREA TO SEE LIST OF RECENT COMMANDS**

Explanation

To view a list of recent IMS commands entered from this IMS Administration Tool user interface, clear the IMS command line and press enter.

System action

The user interface continues.

User response

N/A

ATY6175E **ATYPROC COMMAND LIST NOT FOUND**

Explanation

The command list specified on a /ATYPROC command was not found.

System action

The user interface continues.

User response

Correct the name of the command list and retry the command.

ATY6176E **ATYPROC COMMAND LIST NOT SPECIFIED**

Explanation

The /ATYPROC command requires a member name to be specified.

System action

The user interface continues.

User response

Specify a valid member name and retry the command.

ATY6177E /DSN= LIBRARY MEMBER NOT FOUND

Explanation

The PDS member name in the /DSN= field is not present in the specified data set.

System action

The command is bypassed.

User response

Specify a valid member name in the /DSN= field and retry the command.

ATY6179E ATYPROC DD STATEMENT NOT ALLOCATED

Explanation

The /ATYPROC command was attempted, but there is not a ATYPROC DDNAME allocated to the TSO session.

System action

The user interface continues.

User response

Allocate DDNAME ATYPROC and retry the command.

ATY6180E ATYPROC LIBRARY PROCESSING ERROR

Explanation

While using the IMS Administration Tool user interface function, an unexpected error occurred processing a /ATYPROC command.

System action

The user interface continues.

User response

Check for any messages in the syslog for the TSO user's address space and make any required corrections.

ATY6181E ATYPROC MEMBER NOT FOUND

Explanation

While using the IMS Administration Tool ISPF component IMS command screen, the user entered a /ATYPROC member command in the IMS command input area but the member name was not found in the PDS allocated to the ATYPROC DDNAME statement.

System action

The IMS Administration Tool ISPF terminates its processing of the /ATYPROC command.

User response

The user can check the directory of the PDS for a list of valid member names to enter.

ATY6182E ATYPROC MEMBER PROCESSING ERROR

Explanation

While using the IMS Administration Tool ISPF component IMS command screen, an unexpected error occurred processing a /ATYPROC command.

System action

The IMS Administration Tool ISPF terminates its processing of a /ATYPROC or /DSN= command.

User response

Check for any messages in the syslog for the TSO user's address space and make any required corrections.

ATY6183E /DSN= DATA SET DOES NOT CONTAIN ANY INPUT

Explanation

An empty data set was specified on the /DSN= command.

System action

The command is bypassed.

User response

Correct the input and retry the command.

ATY6184E ATYPROC MEMBER DOES NOT CONTAIN ANY INPUT

Explanation

An empty member was specified on the /ATYPROC command.

System action

The command is bypassed.

User response

Correct the input and retry the command.

ATY6185E ALL ATY GROUP MEMBERS NOT USING IMS OM

Explanation

IMS Administration Tool user interface user is attempting to issue IMS commands to a IMS Administration Tool Group where at least one IMS member is not using the IMS Operations Manager.

System action

The IMS command is not issued.

User response

Either change all IMS Administration Tool Group members to use IMS Operations Manager, or make sure no members in the IMS Administration Tool Group are using IMS Operations Manager.

ATY6186E ATY GROUP MEMBERS NOT USING SAME IMSPLEX NAME

Explanation

IMS Administration Tool user interface user is attempting to issue IMS commands to a IMS Administration Tool Group where at least one IMS member is not using the same IMSPLEX name as the other IMS members in the IMS Administration Tool Group.

System action

The IMS command is not issued.

User response

Correct the IMSPLEX name using the IMS System Information panel.

ATY6187E NO IMS SYSTEMS DEFINED FOR THIS ATY GROUP

Explanation

IMS Administration Tool user interface user is attempting to issue IMS commands to a IMS Administration Tool Group but the IMS Administration Tool Group has no IMS members defined for it.

System action

The IMS command is not issued.

User response

Add IMS members to the IMS Administration Tool Group or change the IMS Administration Tool Group on the IMS Command panel.

ATY6188E IMSID *ims* IS DEFINED IN ATY GROUP BUT DOES NOT EXIST

Explanation

IMS Administration Tool user interface user is attempting to issue IMS commands to a IMS Administration Tool Group but the named IMSID (*ims*) has not been defined using the IMS System Information panel.

System action

The IMS command is not issued.

User response

Add the IMSID using the IMS System Information panel, or remove the IMSID from the IMS Administration Tool Group using the IMS Administration Tool Group IMSID List panel.

ATY6190E USE OF GROUP/IMSID NOT AUTHORIZED

Explanation

Use of the IMS Administration Tool Group or the IMS subsystem is not authorized.

System action

The command is not run.

User response

See your Security Administrator.

ATY6202E ATY VSAM OPTIONS DATA SET NOT FOUND

Explanation

The IMS Administration Tool user interface function that maintains the job records was unable to locate the data set specified on the IMS Administration Tool Primary Options Menu.

System action

The user interface continues.

User response

Correct the data set name, or allocate and initialize the specified name as required. If you are creating a new data set, use the IMS Administration Tool options data set initialization utility (ATYUODI0).

ATY6203E ATYVSAM SVC99 RC=*rc* FOR *dsn*

Explanation

The IMS Administration Tool user interface encountered an error while attempting to dynamically allocate the options data set specified on the IMS Administration Tool Primary Options Menu.

System action

The user interface continues.

User response

Correct the condition based on any other accompanying message that might have been displayed, or check the dynamic allocation messages for more information.

ATY6204E ATYVSAM OPEN ERROR REASON=*rsn*

Explanation

An error occurred attempting to open the options data set. The error might be due to the options data set not being properly initialized. Additional message information might be displayed on the z/OS Syslog.

System action

The user interface continues.

User response

Make sure the options data set has been properly initialized using the IMS Administration Tool options data set initialization utility (ATYUODI0).

ATY6205E ATYVSAM EMPTY KSDS INIT FAILURE

Explanation

The options data set has not been properly initialized.

System action

The user interface continues.

User response

Make sure the options data set has been properly initialized using the IMS Administration Tool options data set initialization utility (ATYUODI0).

ATY6206I ATYVSAM EMPTY KSDS INIT SUCCESSFUL

Explanation

The options data set has been initialized.

System action

The user interface continues.

User response

N/A

ATY6207I JOB RECORD MAINTENANCE COMPLETE

Explanation

The options data set job record update has completed.

System action

The user interface continues.

User response

N/A

ATY6209E ATYVSAM UPDATE ERROR

Explanation

The IMS Administration Tool user interface function encountered an unexpected error while attempting to update a job record in the options data set.

System action

The user interface continues.

User response

Take any required action based on accompanying messages or contact IBM Software Support.

ATY6210E ATYVSAM OPEN ERROR REASON=*rsn*

Explanation

The IMS Administration Tool user interface function was unable to open the options data set that was specified on the IMS Administration Tool Primary Options Menu.

System action

The user interface continues.

User response

Make sure the options data set has been properly initialized using the IMS Administration Tool options data set initialization utility (ATYUODI0).

ATY6211E ATYVSAM PUT ERROR RC=*rc* REASON=*rsn*

Explanation

The IMS Administration Tool user interface function was unable to update a job record in the options data set.

System action

The user interface continues.

User response

Take any corrective action required based on the VSAM return information displayed in the text of the message.

ATY6212E ATYVSAM GET ERROR RC=*rc* REASON=*rsn*

Explanation

The IMS Administration Tool user interface function was unable to retrieve a job record from the options data set.

System action

The user interface continues.

User response

Take any corrective action required based on the VSAM return information displayed in the message text.

ATY6213E JOBNAME CANNOT CONTAIN IMBEDDED SPACES

Explanation

The value specified in the Jobname/JobMask field is invalid.

System action

Updates are bypassed.

User response

Correct the name in the Jobname/JobMask field and retry the update.

ATY6215E JOBNAME MUST BE ALPHANUMERIC

Explanation

Invalid characters have been specified in the Jobname/JobMask field.

System action

Updates are bypassed.

User response

Correct the name in the Jobname/JobMask field and retry the update.

ATY6216E JOBNAME 1ST CHAR MUST BE ALPHABETIC OR $/#/@

Explanation

An invalid name has been specified in the Jobname/JobMask field.

System action

Updates are bypassed.

User response

Change the first character of the Jobname/JobMask field to one of the listed values.

ATY6217E YOU NEED RACF AUTHORIZATION FOR THIS FUNCTION - R15=*r*15 RET=*rc* RSN=*rsn*

Explanation

The attempted operation was protected in the RACF FACILITY class. The RACF user ID that is attempting to perform this function does not have proper security authorization.

System action

The update process is disallowed.

User response

Contact your security department to obtain proper authorization.

ATY6218I LOCATE FAILED - END OF JOB LIST REACHED

Explanation

IMS Administration Tool user interface user has entered a locate command for a jobname from the Job List panel, but no matches were found for the entered name.

System action

The Job List panel is displayed again.

User response

Specify another locate command if necessary.

ATY6301I ATY VSAM OPTIONS DATA SET NOT FOUND

Explanation

The IMS Administration Tool user interface function that maintains the IMS records was unable to locate the data set specified on the IMS Administration Tool Primary Options Menu.

System action

The user interface continues.

User response

Correct the data set name, or allocate and initialize the specified name as required. If you are creating a new data set, use the IMS Administration Tool options data set initialization utility (ATYUODI0).

ATY6303E ATYVSAM SVC99 RC=*rc* FOR *dsn*

Explanation

The IMS Administration Tool user interface encountered an error while attempting to dynamically allocate the options data set specified on the IMS Administration Tool Primary Options Menu.

System action

The user interface continues.

User response

Correct the condition based on any other accompanying message that might have been displayed, or check the dynamic allocation messages for more information.

ATY6304E ATYVSAM OPEN ERROR REASON=*rsn*

Explanation

An error occurred attempting to open the options data set. The error might be due to the options data set not being properly initialized. Additional message information might be displayed on the z/OS Syslog.

System action

The user interface continues.

User response

Make sure the options data set has been properly initialized using the IMS Administration Tool options data set initialization utility (ATYUODI0).

ATY6305E ATYVSAM EMPTY KSDS INIT FAILURE

Explanation

The options data set has not been properly initialized.

System action

The user interface continues.

User response

Make sure the options data set has been properly initialized using the IMS Administration Tool options data set initialization utility (ATYUODI0).

ATY6306I ATYVSAM EMPTY KSDS INIT SUCCESSFUL

Explanation

The options data set has been initialized.

System action

The user interface continues.

User response

N/A

ATY6307I IMS RECORD MAINTENANCE COMPLETE

Explanation

The options data set IMS record update has completed.

System action

The user interface continues.

User response

N/A

ATY6308I IMS SYSTEM RECORD SAVED

Explanation

The options data set IMS record has been successfully updated.

System action

The user interface continues.

User response

N/A

ATY6309E ATYVSAM UPDATE ERROR

Explanation

The IMS Administration Tool user interface function encountered an unexpected error while attempting to update an IMS record in the options data set.

System action

The user interface continues.

User response

Take any required action based on accompanying messages or contact IBM Software Support.

ATY6310E ATYVSAM OPEN ERROR REASON=*rsn*

Explanation

The IMS Administration Tool user interface function was unable to open the options data set that was specified on the IMS Administration Tool Primary Options Menu.

System action

The user interface continues.

User response

Make sure the options data set has been properly initialized using the IMS Administration Tool options data set initialization utility (ATYUODI0).

ATY6311E ATYVSAM PUT ERROR RC=*rc* REASON=*rsn*

Explanation

The IMS Administration Tool user interface function was unable to update an IMS record in the options data set.

System action

The user interface continues.

User response

Take any corrective action required based on the VSAM return information displayed in the text of the message.

ATY6312E ATYVSAM GET ERROR RC=*rc* REASON=*rsn*

Explanation

The IMS Administration Tool user interface function was unable to retrieve an IMS record from the options data set.

System action

The user interface continues.

User response

Take any corrective action required based on the VSAM return information displayed in the message text.

ATY6313E IMSID CANNOT BE LEFT BLANK

Explanation

The IMSID field must be specified.

System action

Updates are bypassed.

User response

Enter an IMSID value and retry the update.

ATY6314I NO IMS RECORDS FOUND

Explanation

This informational message indicates that this is the first IMS record being added to the options data set.

System action

The user interface continues.

User response

Enter the required IMS information.

ATY6315E YOU NEED RACF AUTHORIZATION FOR THIS FUNCTION - R15=*r*15 RET=*rc* RSN=*rsn*

Explanation

The attempted operation was protected in the RACF FACILITY class. The RACF user ID that is attempting to perform this function does not have proper security authorization.

System action

The update process is disallowed.

User response

Contact your security department to obtain proper authorization.

ATY6316I LOCATE FAILED - END OF IMS SYSTEM LIST REACHED

Explanation

IMS Administration Tool user interface user has entered a locate command for an IMS system from the IMS System List panel, but no matches were found for the entered name.

System action

The IMS System List panel is displayed again.

User response

Specify another locate command if necessary.

ATY6317E INVALID VALUE IN COMMAND ROUTING TECHNIQUE

Explanation

The value specified for the Command Routing Technique is not one of the listed values.

System action

Updates are bypassed.

User response

Change the value in the Command Routing Technique field to one of the listed values and try the operation again.

ATY6318E RESTRICTED VALUE IN USER DFSAOE00 NAME

Explanation

The value specified for User DFSAOE00 Name is not allowed by IMS Administration Tool.

System action

Updates are bypassed.

User response

Change the value in the User DFSAOE00 Name to one allowed by IMS Administration Tool and retry the operation.

ATY6401I ATY IMSPLEX MAINTENANCE COMPLETE

Explanation

The IMS Administration Tool user interface function that maintains the IMS Administration Tool group records in the options data set completed successfully.

System action

The user interface continues.

User response

N/A

ATY6402E ATY VSAM OPTIONS DATA SET NOT FOUND *dsn*

Explanation

The IMS Administration Tool user interface function that maintains the IMS Administration Tool group records was unable to locate the data set specified on the IMS Administration Tool Primary Options Menu.

System action

The user interface continues.

User response

Correct the data set name, or allocate and initialize the specified name as required. If you are creating a new data set, use the IMS Administration Tool options data set initialization utility (ATYUODI0).

ATY6403E ATYVSAM SVC99 RC=*rc* FOR

Explanation

The IMS Administration Tool user interface encountered an error while attempting to dynamically allocate the options data set specified on the IMS Administration Tool Primary Options Menu.

System action

The user interface continues.

User response

Correct the condition based on any other accompanying message that might have been displayed, or check the dynamic allocation messages for more information.

ATY6404E ATYVSAM OPEN ERROR REASON=*rsn*

Explanation

An error occurred attempting to open the options data set. The error might be due to the options data set not being properly initialized. Additional message information might be displayed on the z/OS Syslog.

System action

The user interface continues.

User response

Make sure the options data set has been properly initialized using the IMS Administration Tool options data set initialization utility (ATYUODI0).

ATY6405E ATYVSAM EMPTY KSDS INIT FAILURE

Explanation

The options data set has not been properly initialized.

System action

The user interface continues.

User response

Make sure the options data set has been properly initialized using the IMS Administration Tool options data set initialization utility (ATYUODI0).

ATY6406I ATYVSAM EMPTY KSDS INIT SUCCESSFUL

Explanation

The options data set has been initialized.

System action

The user interface continues.

User response

N/A

ATY6407I ATY IMSPLEX RECORD MAINTENANCE COMPLETE

Explanation

The options data set IMS Administration Tool group record update has completed.

System action

The user interface continues.

User response

N/A

ATY6408I ATY IMSPLEX RECORD SAVED

Explanation

The options data set IMS Administration Tool group record has been successfully updated.

System action

The user interface continues.

User response

N/A

ATY6409E ATYVSAM UPDATE ERROR

Explanation

The IMS Administration Tool user interface function encountered an unexpected error while attempting to update a IMS Administration Tool group record in the options data set.

System action

The user interface continues.

User response

Take any required action based on accompanying messages or contact IBM Software Support.

ATY6410E ATYVSAM OPEN ERROR REASON=*rsn*

Explanation

The IMS Administration Tool user interface function was unable to open the options data set that was specified on the IMS Administration Tool Primary Options Menu.

System action

The user interface continues.

User response

Make sure the options data set has been properly initialized using the IMS Administration Tool options data set initialization utility (ATYUODI0).

ATY6411E ATYVSAM PUT ERROR RC=*rc* REASON=*rsn*

Explanation

The IMS Administration Tool user interface function was unable to update a IMS Administration Tool group record in the options data set.

System action

The user interface continues.

User response

Take any corrective action required based on the VSAM return information displayed in the text of the message.

ATY6412E ATYVSAM GET ERROR RC=*rc* REASON=*rsn*

Explanation

The IMS Administration Tool user interface function was unable to retrieve a IMS Administration Tool group record from the options data set.

System action

The user interface continues.

User response

Take any corrective action required based on the VSAM return information displayed in the message text.

ATY6413E IMSPLEX CANNOT BE LEFT BLANK

Explanation

The IMS Administration Tool group field must be specified.

System action

Updates are bypassed.

User response

Enter a IMS Administration Tool group name and retry the update.

ATY6414I NO ATY IMSPLEX RECORDS FOUND

Explanation

This informational message indicates that this is the first IMS Administration Tool group record being added to the options data set.

System action

The user interface continues.

User response

Enter the required IMS Administration Tool group information.

ATY6415E YOU NEED RACF AUTHORIZATION FOR THIS FUNCTION - R15=*r*15 RET=*rc* RSN=*rsn*

Explanation

The attempted operation was protected in the RACF FACILITY class. The RACF user ID that is attempting to perform this function does not have proper security authorization.

System action

The update process is disallowed.

User response

Contact your security department to obtain proper authorization.

ATY6416I LOCATE FAILED - END OF ATY GROUP LIST REACHED

Explanation

IMS Administration Tool user interface user has entered a locate command for an IMS Administration Tool Group from the IMS Administration Tool Group List panel, but no matches were found for the entered name.

System action

The IMS Administration Tool Group List panel is displayed again.

User response

Specify another locate command if necessary.

ATY6501I ATY STORE/FORWARD EDIT COMPLETE

Explanation

The IMS Administration Tool user interface function has completed its editing of the store/forward data set.

System action

The user interface continues.

User response

N/A

ATY6502E ATY STORE/FORWARD DATA SET NOT FOUND

Explanation

The data set specified for store/forward is not defined on this system.

System action

The user interface continues.

User response

Correct the name of the store/forward data set and retry the operation.

ATY6503E ATYSFVSM SVC99 RC=*rc* FOR *dsn*

Explanation

The IMS Administration Tool user interface encountered an error while attempting to dynamically allocate the store/forward data set.

System action

The user interface continues.

User response

Correct the condition based on any other accompanying message that might have been displayed, or check the dynamic allocation messages for more information.

ATY6504E ATY STORE/FORWARD DATA SET IN USE

Explanation

The store/forward data set is in use by another job or user.

System action

The user interface continues.

User response

Try the operation after the other job or user completes the processing of the store/forward data set.

ATY6505I NO CHANGES TO ATY STORE/ FORWARD DATASET

Explanation

The edit session of the store/forward data set completed, but there were no updates made to the data set.

System action

The user interface continues.

User response

N/A

ATY6506I STORE/FORWARD BROWSE SUCCESSFUL

Explanation

The browse session of the store/forward data set completed.

System action

The user interface continues.

User response

N/A

ATY6507I STORE/FORWARD EDIT SUCCESSFUL

Explanation

The edit of the store/forward data set successfully completed.

System action

The user interface continues.

User response

N/A

ATY6508E YOU NEED RACF AUTHORIZATION FOR THIS FUNCTION - R15=*r*15 RET=*rc* RSN=*rsn*

Explanation

The attempted operation was protected in the RACF FACILITY class. The RACF user ID that is attempting to perform this function does not have proper security authorization.

System action

The update process is disallowed.

User response

Contact your security department to obtain proper authorization.

ATY6601W WILDCARD TABLE INITIALIZATION FAILED

Explanation

An error occurred attempting to build the wildcard table.

System action

Skips the command and continues from the next command.

User response

If any other error messages are issued before this message, follow the user response for those messages. If no error messages are issued before this message, contact IBM Software Support.

ATY6602I NO NAMES MATCH WILDCARD MASK

Explanation

No names matched the wildcard pattern specified in the command.

System action

Processing continues.

User response

N/A

ATY6603I *table* WILDCARD TABLE OBTAINED FROM *ims*

Explanation

The wildcard table has been obtained by issuing a /DIS x ALL command to the displayed IMS (*ims*) region.

System action

Processing continues.

User response

N/A

ATY6701I ATY LOG VIEW COMPLETE

Explanation

The IMS Administration Tool user interface function for browsing the Message Log has successfully completed.

System action

The user interface continues.

User response

N/A

ATY6702E **ATY VSAM OPTIONS DATA SET NOT [SPECIFIED | FOUND]**

Explanation

The VSAM options data set is not specified in the ATY#OPTS module.

System action

The user interface continues.

User response

Create the VSAM options data set, specify the data set name to the ATY#OPTS module, and register the *loadlib* data set to the SYSLOAD variable. Instructions are provided in "Configuring VSAM options data set" on page 32.

ATY6703E **ATYVSAM SVC99 R15=*r*15 RC=*rc* FOR *dsn***

Explanation

The IMS Administration Tool user interface encountered an error while attempting to dynamically allocate the options data set specified on the IMS Administration Tool Primary Options Menu.

System action

The user interface continues.

User response

Correct the condition based on any other accompanying message that might have been displayed, or check the dynamic allocation messages for more information.

ATY6704E **ATYVSAM OPEN ERROR REASON=*rsn***

Explanation

An error occurred attempting to open the options data set. The error might be due to the options data set not being properly initialized. Additional message information might be displayed on the z/OS Syslog.

System action

The user interface continues.

User response

Make sure the options data set has been properly initialized using the IMS Administration Tool options data set initialization utility (ATYUODI0).

ATY6708E **ATY LOGSTREAM CONNECT ERROR - RET=*rc* RSN=*rsn* LSN=*lsn***

Explanation

An error was encountered attempting to connect to the specified log stream (*lsn*) using service IXGCONN REQUEST=CONNECT.

System action

The user interface continues.

User response

Review the IXGCONN return and reason codes contained in *rc* and *rsn*, respectively. Correct the problem and retry the operation.

ATY6709E **ATY LOGSTREAM NAME NOT DEFINED IN THE LOGR POLICY - LSN=*lsn***

Explanation

An error was encountered attempting to connect to the specified log stream (*lsn*) using service IXGCONN REQUEST=CONNECT.

System action

The user interface continues.

User response

Ensure the Message Log customization procedure of this manual has completed successfully.

ATY6711E **ATY LOGSTREAM BROWSE START ERROR - RET=*rc* RSN=*rsn* - LSN=*lsn***

Explanation

An error was encountered attempting to read the log stream using service IXGBRWSE REQUEST=START.

System action

The user interface continues.

User response

Review the IXGBRWSE return and reason codes contained in *rc* and *rsn*, respectively. Correct the problem and retry the operation.

ATY6711I NO RECORDS RETURNED FOR THIS SEARCH

Explanation

No records in the Message Log log stream matched the specified search criteria.

System action

The user interface continues.

User response

Adjust the search criteria and retry the operation.

ATY6714I NO IMS SYSTEM RECORDS FOUND

Explanation

There were no IMS records in the options data set.

System action

The user interface continues.

User response

IMS Administration Tool customization is not complete until there are IMS definitions in the options data set. Add IMS definitions to the options data set and retry the operation.

ATY6715E YOU NEED RACF AUTHORIZATION FOR THIS FUNCTION - R15=r15 RET=*rc* RSN=*rsn*

Explanation

The attempted operation was protected in the RACF FACILITY class. The RACF user ID that is attempting to perform this function does not have proper security authorization.

System action

The update process is disallowed.

User response

Contact your security department to obtain proper authorization.

ATY6900E ATY REMOTE BMP ABEND=S*code1* U*code2*

Explanation

The IMS Administration Tool remote STC BMP ended abnormally with either a system (code1) or user (code2) abend.

System action

Processing is aborted.

User response

Correct the reason for the abnormal termination and rerun the job.

ATY7001E INVALID NUMBER OF PARAMETERS

Explanation

A IMS Administration Tool internal error occurred.

System action

The job ends abnormally with completion code U4083.

User response

Contact IBM Software Support.

ATY7002E SCD ADDRESS REQUIRED

Explanation

A IMS Administration Tool internal error occurred.

System action

The job ends abnormally with completion code U4083.

User response

Contact IBM Software Support.

ATY7003E INVALID SCD ADDRESS PASSED

Explanation

A IMS Administration Tool internal error occurred.

System action

The job ends abnormally with completion code U4083.

User response

Contact IBM Software Support.

ATY7101E ATYSTFWD DDNAME MISSING

Explanation

Store/forward data set initialization failed due to missing DDNAME ATYSTFWD.

System action

The job ends with a completion code of 16.

User response

Add the required DDNAME and rerun the job.

ATY7102E 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 ends abnormally.

User response

Correct any errors. If the problem persists, contact IBM Software Support.

ATY7103E 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 ends abnormally.

User response

Correct any errors and rerun the job. If the problem persists, contact IBM Software Support.

ATY7104W COMMAND STORE/FORWARD DATA SET ALREADY INITIALIZED

Explanation

An attempt was made to initialization the store/forward data set, but the data set has already been initialized.

System action

The job ends with a completion code of 4.

User response

N/A

ATY7105E ATYVSAM INIT ERROR

Explanation

An error was encountered attempting to write the header record to the store/forward data set.

System action

The job ends abnormally.

User response

Correct any errors and rerun the job. If the problem persists, contact IBM Software Support.

ATY7106I COMMAND STORE/FORWARD DATA SET INITIALIZATION SUCCESSFUL

Explanation

The store/forward data has been successfully initialized.

System action

Processing continues.

User response

N/A

ATY7201I EITHER MSG DISP OR AOITOKEN REQUIRED

Explanation

One or both of the listed values must be specified.

System action

Updates bypassed.

User response

Correct the information on the screen and retry the operation.

ATY7202E ATY VSAM OPTIONS DATA SET NOT FOUND

Explanation

The IMS Administration Tool user interface function that maintains the MSG records was unable to locate the data set specified on the IMS Administration Tool Primary Options Menu.

System action

The user interface continues.

User response

Correct the data set name, or allocate and initialize the specified name as required. If you are creating a new data set, use the IMS Administration Tool options data set initialization utility (ATYUODI0).

ATY7203E ATYVSAM SVC99 RC=*rc* FOR *dsn*

Explanation

The IMS Administration Tool user interface encountered an error while attempting to dynamically allocate the options data set specified on the IMS Administration Tool Primary Options Menu.

System action

The user interface continues.

User response

Correct the condition based on any other accompanying message that might have been displayed, or check the dynamic allocation messages for more information.

ATY7204E ATYVSAM OPEN ERROR REASON=*rsn*

Explanation

An error occurred attempting to open the options data set. The error might be due to the options data set not being properly initialized. Additional message information might be displayed on the z/OS Syslog.

System action

The user interface continues.

User response

Make sure the options data set has been properly initialized using the IMS Administration Tool options data set initialization utility (ATYUODI0).

ATY7205I MSG DISPOSITION RECORD MAINTENANCE COMPLETE

Explanation

The options data set MSG table record update has completed.

System action

The user interface continues.

User response

N/A

ATY7206I MSG DISPOSITION RECORD SAVED

Explanation

The options data set MSG table record has been successfully updated.

System action

The user interface continues.

User response

N/A

ATY7207E ATYVSAM OPEN ERROR REASON=*rsn*

Explanation

An error occurred attempting to open the options data set. The error might be due to the options data set not being properly initialized. Additional message information might be displayed on the z/OS Syslog.

System action

The user interface continues.

User response

Make sure the options data set has been properly initialized using the IMS Administration Tool options data set initialization utility (ATYUODI0).

ATY7208E ATYVSAM PUT ERROR RC=*rc* REASON=*rsn*

Explanation

The IMS Administration Tool user interface function was unable to update a MSG table record in the options data set.

System action

The user interface continues.

User response

Take any corrective action required based on the VSAM return information displayed in the text of the message.

ATY7209E **ATYVSAM GET ERROR RC=*rc* REASON=*rsn***

Explanation

The IMS Administration Tool user interface function was unable to retrieve a MSG table record in the options data set.

System action

The user interface continues.

User response

Take any corrective action required based on the VSAM return information displayed in the text of the message.

ATY7210I **NO MSG DISPOSITION RECORDS FOUND**

Explanation

The IMS Administration Tool user interface function did not locate any MSG table records in the options data set.

System action

The user interface continues.

User response

Complete the required fields and press enter.

ATY7211E **YOU NEED RACF AUTHORIZATION FOR THIS FUNCTION - R15=r15 RET=*rc* RSN=*rsn***

Explanation

The attempted operation was protected in the RACF FACILITY class. The RACF user ID that is attempting to perform this function does not have proper security authorization.

System action

The update process is disallowed.

User response

Contact your security department to obtain proper authorization.

ATY7212I **LOCATE FAILED - END OF MESSAGE DISPOSITION LIST REACHED**

Explanation

IMS Administration Tool user interface user has entered a locate command for a msgtable from the Message Disposition List panel, but no matches were found for the entered name.

System action

The Message Disposition List panel is displayed again.

User response

Specify another locate command if necessary.

ATY7301E **ATYLSCD RECEIVED AN INCORRECT NUMBER OF PARAMETERS**

Explanation

A IMS Administration Tool internal error has occurred.

System action

The job ends abnormally with completion code U4083.

User response

Contact IBM Software Support.

ATY7401E **CSLSCREG FAILED FOR: CSLplex RC=*rc* RSN=*rsn***

Explanation

An error was encountered attempting to connect to the Common Service Layer PLEX plex. The return and reason codes are contained in *rc* and *rsn*, respectively.

System action

The job terminates with the user-defined return code or user-defined abend code.

User response

Find the return (*rc*) and reason (*rsn*) code for CSLSCREG in the *IMS Common Service Layer Guide and Reference*.

ATY7402E CSLSCQRY FAILED, RC=*rc* RSN=*rsn*

Explanation

An error was encountered attempting to query the Common Service Layer PLEX plex. The return and reason codes are contained in *rc* and *rsn*, respectively.

System action

The job terminates with the user-defined return code or user-defined abend code.

User response

Find the return (*rc*) and reason (*rsn*) code for CSLSCREG in the *IMS Common Service Layer Guide and Reference*.

ATY7403E NO DATA RETURNED FROM CSLSCQRY

Explanation

The CSLSCQRY did not return any data.

System action

The job terminates with the user-defined return code or user-defined abend code.

User response

Contact IBM Software Support.

ATY7404E INVALID DATA RETURNED FROM CSLSCQRY

Explanation

ATY could not identify the data returned from the CSLSCQRY call.

System action

The job terminates with the user-defined return code or user-defined abend code.

User response

Contact IBM Software Support.

ATY7405E NO ENTRIES IN IMS OM GROUP

Explanation

IMS Administration Tool was able to connect to the Common Service Layer group, but there were no IMS systems connected.

System action

The job terminates with the user-defined return code or user-defined abend code.

User response

Wait for IMS regions to join the Operations Manager group and run the job again.

ATY7406E OPERATIONS MANAGER NOT ACTIVE IN GROUP: CSLplex

Explanation

IMS Administration Tool was able to connect to the Common Service Layer group, but the Operations Manager task was not active in the group.

System action

The job terminates with the user-defined return code or user-defined abend code.

User response

Wait for an Operations Manager task to join the group and run the job again.

ATY7407W IMS MEMBER *ims* FOUND IN CSL GROUP BUT NOT IN ATY GROUP

Explanation

IMS region *ims* was found in the Common Service Layer group, but it was not defined as being a part of the IMS Administration Tool group. Commands might get routed to this IMS.

System action

Processing continues.

User response

If *ims* should be part of the IMS Administration Tool group, use the IMS Administration Tool user interface to add it to the IMS Administration Tool group.

ATY7408W **ATY GROUP MEMBER *ims* NOT ACTIVE IN CSL GROUP**

Explanation

A member of a IMS Administration Tool group (*ims*) was not active in the Common Service Layer group.

System action

The action taken is determined by the setting for ROUTING errors.

User response

If ROUTING=IGNORE was specified and command store/forward is active, ensure the REDO BMP runs immediately at *ims* start up.

ATY7409E **IMS *ims* NOT FOUND IN ATY GROUP**

Explanation

IMS region *ims* was found in the Common Service Layer group, but it was not defined as being a part of the IMS Administration Tool group. Commands might get routed to this IMS.

System action

Processing continues.

User response

If *ims* should be part of the IMS Administration Tool group, use the IMS Administration Tool user interface to add it to the IMS Administration Tool group.

ATY7410E **MEMBER *ims* IS NOT ACTIVE IN CSL GROUP**

Explanation

A member of a IMS Administration Tool group (*ims*) was not active in the Common Service Layer group.

System action

The action taken is determined by the setting for ROUTING errors.

User response

If ROUTING=IGNORE was specified and command store/forward is active, ensure the REDO BMP runs immediately at *ims* start up.

ATY7411E **NO ACTIVE IMS SYSTEMS IN CSL GROUP**

Explanation

IMS Administration Tool was able to connect to the Common Service Layer group, but there were no active IMS regions in the group.

System action

The job terminates with the user-defined return code or user-defined abend code.

User response

Wait for the IMS regions to join the group and run the job again.

ATY7412E **DATAGRP NOT DEFINED, JOB TERMINATING DUE TO ERR488= SPECIFICATION**

Explanation

DATAGRPEXP=Y is in effect, but IMS Administration Tool could not obtain a list of database names from DBRC. This might be due to the DATAGRP not being defined, or the wrong set of RECON data sets in the STEPLIB concatenation.

System action

The job terminates with a user-defined return code or user-defined abend code.

User response

Turn off DATAGRPEXP, define the DATAGRP to DBRC, or add the correct RECON data sets to the STEPLIB concatenation, and run the job again.

ATY7413I **COMMAND BEING ROUTED TO *type* = *name* {PLEX = *plexname*}**

Explanation

The following command is routed to Operations Manager for processing.

The destination is designated by *name* and the *type* is either a Group name or a specific IMSID.

If the Group members are in an IMSplex, then the IMSplex name is shown.

System action:
Processing continues.

User response:
N/A

ATY7414E **/MOD PREPARE FAILED, CSLOMCMD RC=*rc* RSN=*rsn***

Explanation

An error was encountered processing a /MOD PREPARE command using the CSLOMCMD call. The return and reason codes are contained in *rc* and *rsn*, respectively.

System action

Depending on the MODFAIL setting, the job terminates with a user-defined return code or user-defined abend code.

User response

The return and reason codes can be found in the *IMS Common Service Layer Guide and Reference*. Correct the reason for the failure and run the job again.

ATY7415I **DATAGRP NOT DEFINED, BYPASSING COMMAND DUE TO ERR488= SPECIFICATION**

Explanation

DATAGRPEXP=Y is in effect, but IMS Administration Tool could not obtain a list of database names from DBRC. This might be due to the DATAGRP not being defined, or the wrong set of RECON data sets in the STEPLIB concatenation.

System action

The command is passed unchanged to IMS.

User response

Turn off DATAGRPEXP, define the DATAGRP to DBRC, or add the correct RECON data sets to the STEPLIB concatenation, and run the job again.

ATY7416E **CSLOMCMD COMMAND ISSUED RC=*rc* RSN=*rsn***

Explanation

An error was encountered while attempting a command using the CSLOMCMD call. The return and reason codes are contained in *rc* and *rsn*, respectively.

System action

Depending on the MODFAIL setting, the job terminates with a user-defined return code or user-defined abend code.

User response

The return and reason codes can be found in the *IMS Common Service Layer Guide and Reference*. Correct the reason for the failure and run the job again.

ATY7417W **CSLOMCMD COMMAND ISSUED RC=*rc* RSN=*rsn***

Explanation

An error was encountered while attempting a command using the CSLOMCMD call. The return and reason codes are contained in *rc* and *rsn*, respectively.

System action

Depending on the MODFAIL setting, the job terminates with a user-defined return code or user-defined abend code.

User response

The return and reason codes can be found in the *IMS Common Service Layer Guide and Reference*. Correct the reason for the failure and run the job again.

ATY7418I **ONLINE CHANGE FUNCTION SUCCESSFUL**

Explanation

/ATYMOD processing successfully completed.

System action

Processing continues.

User response

N/A

ATY7419E **"NO WORK PENDING" NOT RECEIVED, ABORT STARTED**

Explanation

After successfully issuing a /MOD PREPARE command to all IMS regions, the /DIS MODIFY ALL did not receive the `NO WORK PENDING` message for all systems.

System action

If /ATYMOD processing is failing, IMS Administration Tool issues /MOD ABORT to all IMS regions. After the abort processing completes, depending on the MODFAIL setting, the job terminates with a user-defined return code or user-defined abend code.

User response

Determine the reason why the NO WORK PENDING message was not received, correct the condition preventing the online change, and run the job again.

ATY7420E ***ddn*** **LIBRARY NOT SWAPPED ON** ***ims***

Explanation

A IMS Administration Tool internal error occurred. After what was believed to be a successful online change, there are libraries that did not change DDNAME suffixes.

System action

Depending on the MODFAIL setting, the job terminates with a user-defined return code or user-defined abend code.

User response

Contact IBM Software Support.

ATY7421E **MAX RETRIES REACHED, ABORT PROCESS STARTED**

Explanation

The /ATYMOD process did not receive the NO WORK PENDING display from all systems even after the maximum number of retry attempts.

System action

/MOD ABORT processing is started. The job terminates with the user-defined return code or user-defined abend code.

User response

Correct the problem that was preventing the NO WORK PENDING display and run the job again.

ATY7422W **CSLOMCMD COMMAND ISSUED RC=*rc* RSN=*rsn***

Explanation

An error was encountered while attempting a command using the CSLOMCMD call. The return and reason codes are contained in *rc* and *rsn*, respectively.

System action

Depending on the MODFAIL setting, the job terminates with a user-defined return code or user-defined abend code.

User response

The return and reason codes can be found in the *IMS Common Service Layer Guide and Reference*. Correct the reason for the failure and run the job again.

ATY7423E **ONLINE CHANGE FAILED, /MOD REVERSE BEING INITIATED**

Explanation

A /MOD COMMIT failed on an IMS system after a /MOD COMMIT was successful on one or more IMS systems. Because MODREVERSE=Y is in effect, IMS Administration Tool attempts to restore the IMS systems where the /MOD COMMIT was successful to pre-online change state.

System action

After MODREVERSE processing completes, and dependent upon the MODFAIL setting, the job terminates with a user-defined return code or user-defined abend code.

User response

Ensure all IMS systems were returned to pre-online change state, correct the condition that caused the /MOD COMMIT to fail, and run the job again.

ATY7424E **ONLINE CHANGE FAILED, TERMINATING**

Explanation

A severe error occurred during /ATYMOD processing. Prior messages describe the condition that caused the online change failure.

System action

Depending on the MODFAIL setting, the job terminates with a user-defined return code or user-defined abend code.

User response

Follow user response for previously displayed messages.

ATY7425E **ONLINE CHANGE FAILED, IMS SYSTEM(S) NOT ACTIVE**

Explanation

A /ATYMOD predefined procedure determines that all members of a IMS Administration Tool group are not active in the Common Service Layer group.

System action

Depending upon the MODFAIL setting, the job terminates with a user-defined return code or user-defined abend code.

User response

Wait for all members of the IMS Administration Tool group to become active and run the job again.

ATY7426W CSLOMCMD RECEIVED RC=*rc* RSN=*rsn*

Explanation

An error was encountered while attempting a command using the CSLOMCMD call. The return and reason codes are contained in *rc* and *rsn*, respectively.

System action

Depending on the MODFAIL setting, the job terminates with a user-defined return code or user-defined abend code.

User response

The return and reason codes can be found in the *IMS Common Service Layer Guide and Reference*. Correct the reason for the failure and run the job again.

ATY7427W MAX RETRIES REACHED

Explanation

A database command has been attempted the number of times specified in RETRYATT and there are still databases not in the required state.

System action

The action taken is determined by the setting for ERR488 errors.

User response

Review the conditions that caused the database command to be unsuccessful and take appropriate action.

ATY7428E JOB TERMINATING DUE TO ERR488 SPECIFICATION

Explanation

A database command has been attempted the number of times specified in RETRYATT and there are still databases not in the required state.

System action

The job terminates due to the setting for ERR488 errors.

User response

Review the conditions that caused the database command to be unsuccessful and take appropriate action.

ATY7429I COMMAND BYPASSED DUE TO OPERATOR RESPONSE

Explanation

A database command has been attempted the number of times specified in RETRYATT and there are still databases not in the required state. Error option ERR488=WTOR is in effect and the operator replied S to skip the failed command.

System action

Processing continues.

User response

Review the conditions that caused the database command to be unsuccessful and take appropriate action.

ATY7430W COMMAND BYPASSED DUE TO ERR488=IGNORE SPECIFICATION

Explanation

A database command has been attempted the number of times specified in RETRYATT and there are still databases not in the required state. The command is bypassed due to error option ERR488=IGNORE being in effect.

System action

Processing continues.

User response

Review the conditions that caused the database command to be unsuccessful and take appropriate action.

ATY7431I **COMMAND BEING ATTEMPTED AGAIN DUE TO OPERATOR RESPONSE**

Explanation

A database command has been attempted the number of times specified in RETRYATT and there are still databases not in the required state. Error option ERR488=WTOR is in effect and the operator replied R to retry the command.

System action

The command is tried again.

User response

N/A

ATY7432E **TASK TERMINATING DUE TO ROUTING= SPECIFICATION**

Explanation

A command has been attempted the number of times specified in RETRYATT and still did not process successfully on all systems.

System action

The job terminates due to the setting for ROUTING errors.

User response

Review the conditions that caused the command to be unsuccessful and take appropriate action.

ATY7433I **UNAVAILABLE IMS BYPASSED DUE TO ROUTING=IGNORE SPECIFICATION**

Explanation

A command has been attempted the number of times specified in RETRYATT and still did not process successfully on all systems.

System action

If command store/forward is active, the command is written to the store/forward data set. The job continues processing.

User response

Review the conditions that caused the command to be unsuccessful and take appropriate action. If the command is written to the store/forward data set, ensure the REDO BMP runs when the failed IMS is restarted.

ATY7434I **ROUTING=IGNORE ESTABLISHED DUE TO OPERATOR RESPONSE**

Explanation

After a command failed due to a routing error, an operator replied S to skip routing errors. For this and all subsequent commands, routing errors are skipped.

System action

Processing continues.

User response

N/A

ATY7435I **IMS AVAILABILITY RE-VERIFIED DUE TO OPERATOR RESPONSE**

Explanation

A command failed due to a routing error and an operator replied R to retry the failed command.

System action

The command is tried again.

User response

N/A

ATY7436I **REQUESTED IMS IS NOT ACTIVE IN THE CSL GROUP**

Explanation

A command is being routed to a specific IMS system, but that system is not active in the Common Service Layer group.

System action

Processing continues.

User response

N/A

ATY7437E **ERROR ATTEMPTING DBRC VALIDATION, VALIDATION BYPASSED**

Explanation

An error described by a prior message was encountered during DBRC validation.

System action

DBRC validation is not performed and the job proceeds as determined by the prior error condition.

User response

Follow the User Response described in prior error message.

ATY7438E **DB OPEN FOR SSID= *ssid* ACC= *access* DBD= *database* AREA= *area***

Explanation

An IMS /DBD or /DBR command was issued and DBRC validation was requested, but one or more databases are registered in the RECON as being open with an UPDATE intent.

- SSID= shows the subsystem that is using AREA
- ACC= shows the processing intent
- DBD= shows the database
- AREA= shows the AREA name

System action

The action taken is determined by the setting for DBRC errors.

User response

Review prior messages and determine if the command needs to be reissued.

ATY7439E **DATABASE STILL AUTHORIZED IN DBRC, DBD: *dbd***

Explanation

An IMS /DBD or /DBR command was issued and DBRC validation was requested, however, one or more databases are still registered in the RECON as being open with UPDATE intent.

System action

The action taken is determined by the setting for DBRC errors.

User response

Review prior messages and determine if command needs to be reissued.

ATY7440E **DATABASE STILL AUTHORIZED IN DBRC, DBD: *dbd* AREA *area***

Explanation

An IMS /DBD or /DBR command was issued and DBRC validation was requested, however, one or more areas are still registered in the RECON as being open with UPDATE intent.

System action

The action taken is determined by the setting for DBRC errors.

User response

Review prior messages and determine if command needs to be reissued.

ATY7441I **NO DATABASES OPEN WITH UPDATE INTENT**

Explanation

DBRC shows that all database commands executed successfully.

System action

The job step continues processing.

User response

N/A

ATY7442I **DBRC VALIDATION SUCCESSFUL**

Explanation

DBRC validation successfully completed.

System action

Processing continues.

User response

N/A

ATY7443W **COMMAND BYPASSED DUE TO OPERATOR RESPONSE**

Explanation

A database failed DBRC validation, the error option DBRC=WTOR is in effect, and the operator replied R to retry the command.

System action

The command is tried again.

User response

N/A

ATY7444E DBRC MODULE DFSURX00 NOT FOUND, BYPASSING DBRC PROCESSING

Explanation

DBRC has been requested for either DB verification, or to set ACCESS, but the DBRC load module is not found.

System action

The action taken is determined by the DRBC= option.

User response

If DBRC usage is required, add IMS SDFSRESL to the STEPLIB. If DBRC usage is not required, set options DBRC=NODBRC.

ATY7445W CSLOMCMD RECEIVED RC=*rc* RSN=*rsn*

Explanation

An error was encountered while attempting a command using the CSLOMCMD call. The return and reason codes are contained in *rc* and *rsn*, respectively.

System action

Depending on the MODFAIL setting, the job terminates with a user-defined return code or user-defined abend code.

User response

The return and reason codes can be found in the *IMS Common Service Layer Guide and Reference*. Correct the reason for the failure and run the job again.

ATY7446W CSLOMCMD RECEIVED RC=*rc* RSN=*rsn*

Explanation

An error was encountered while attempting a command using the CSLOMCMD call. The return and reason codes are contained in *rc* and *rsn*, respectively.

System action

Depending on the MODFAIL setting, the job terminates with a user-defined return code or user-defined abend code.

User response

The return and reason codes can be found in the *IMS Common Service Layer Guide and Reference*. Correct the reason for the failure and rerun the job.

ATY7447I FOLLOWING COMMAND SAVED IN STORE/FORWARD FOR IMS: *ims*

Explanation

The following command encountered routing errors on IMS (*ims*) and is saved in the store/forward data set for subsequent processing.

System action

The failed command is written to the store/forward data set and processing continues.

User response

None. This message is informational.

ATY7448E CSLOMCMD RECEIVED RC= *return code* RSN= *reason code*

Explanation

An error was encountered while attempting a command using the CSLOMCMD call.

The return and reason codes are contained in *rc* and *rsn*, respectively.

System action

Depending on the MODFAIL setting, the job terminates with a user-defined return code or user-defined abend code.

User response

The return and reason codes can be found in the *IMS Common Service Layer Guide and Reference*. Correct the reason for the failure and run the job again.

ATY7449W MAX RETRY ATTEMPTS REACHED

Explanation

A command has been attempted the number of times specified in RETRYATT and did not complete successfully on all systems.

System action

The action taken is dependent on the options in effect for the job.

User response

Review the conditions that caused the command to be unsuccessful and take appropriate action.

ATY7450W END OF TABLE ENCOUNTERED BUILDING DBRC DB TABLE

Explanation

Option DBACCESS=DBRC was requested, but more databases than expected were found when processing the output of a LIST.DB command. The remaining databases are not added to the DBRC table.

System action

The job step continues.

User response

The maximum size of the table might need to be increased. Contact IBM Software Support for information.

ATY7451E MODBLKS READ ROUTINE FAILED

Explanation

Option DBACCESS=GEN was requested, but an error was encountered attempting to read the MODBLKS data set.

System action

The job terminates based upon the setting for GENERAL errors. If GENERAL=SETRC, the job terminates using the value set in SETRC. Otherwise, the job terminates using the user-defined abend code.

User response

Using the IMS Administration Tool user interface, ensure the IMS System Information in the IMS record is defined correctly.

ATY7452W RETRY NOT ATTEMPTED FOR IMS: *ims* - NOT IN CSL GROUP

Explanation

A prior execution of a command failed on *ims*. While attempting a command retry, the system determined that the command should be skipped because *ims* is not active in the Common Service Layer group.

System action

Command is bypassed and processing continues.

User response

None. This message is informational.

ATY7453W OPERATIONS MANAGER DETERMINED COMMAND CONTAINED INVALID KEYWORD

Explanation

IMS Administration Tool batch processor received return code x'02000008' and reason code x'00002004' on a CSLOMCMD call. The return and reason code indicate that IMS Operations Manager determined the keyword specified in the command is invalid.

System action

The action taken depends upon the setting for GENERAL errors. The following error settings and actions are possible:

WTOR
Message ATY7460A will be issued to the z/OS syslog. IMS Administration Tool batch processing will proceed based upon the operator response to the WTOR.

SETRC
Terminate the job step using the user-defined return code.

ABEND
Terminate the job step using the user-defined abend code.

IGNORE
This record is skipped and processing continues as if no error were encountered.

User response

Correct the command and run the job again.

ATY7454I COMMAND SKIPPED DUE TO GENERAL ERROR SPECIFICATION

Explanation

An error as described in a prior IMS Administration Tool message was encountered, but IMS Administration Tool was instructed to skip the error based upon the GENERAL=IGNORE specification.

System action

Processing continues as if no error was encountered.

Programmer response

Correct the condition described in the prior IMS Administration Tool messages and run the job again.

ATY7455I **IMS OPERATIONS MANAGER DETERMINED COMMAND IS INVALID**

Explanation

IMS Administration Tool batch processor received return code x'02000008' and reason code x'00002004' on a CSLOMCMD call. The return and reason code indicate that IMS Operations Manager determined the keyword specified in the command is invalid.

System action

The action taken depends upon the setting for GENERAL errors. The following error settings and actions are possible:

WTOR
Message ATY7460A will be issued to the z/OS syslog. IMS Administration Tool batch processing will proceed based upon the operator response to the WTOR.

SETRC
Terminate the job step using the user-defined return code.

ABEND
Terminate the job step using the user-defined abend code.

IGNORE
This record is skipped and processing continues as if no error were encountered.

User response

Correct the command and run the job again.

ATY7456I **NO MODBLKS DDNAME, DRD ASSUMED FOR *imsid***

Explanation

IMS Administration Tool assumes that dynamic resource definition (DRD) is used in the indicated IMS.

System action

Processing continues.

User response

None. This message is informational.

ATY7460A **REPLY "T" TO TERMINATE JOB OR "S" TO SKIP COMMAND**

Explanation

This is a WTOR message waiting for operator's response.

This message is issued along with message ATY7453W, which indicates that the keyword specified in the command is invalid.

System action

IMS command processing batch job waits for the operator's response. Takes either of the following actions upon a response:

T
Terminates the job.

S
Skips the command and continues processing.

User response

Enter "T" or "S" to WTOR.

After the job ends, correct the command and rerun the job.

ATY7461E **DATA BASE COMMAND UNSUCCESSFUL**

Explanation

A database command did not execute successfully. This message is accompanied by additional messages.

System action

Processing continues.

User response

Review the accompanying messages.

ATY7462E **IMS NOT AVAILABLE FOR COMMAND:**

Explanation

This message precedes message ATY7497I and identifies a command that failed due to a routing error when ROUTING=WTOR is in effect.

System action

Processing continues.

User response

N/A

ATY7497I ***cmd***

Explanation

This message follows one of several previously issued messages that describe the error encountered. This message displays the command that encountered the error.

System action

Processing continues.

User response

N/A

ATY7499I **ONE OR MORE DATA BASES STILL HELD IN DBRC**

Explanation

DBRC validation has been requested, however, one or more databases are still registered in the RECON and open with update intent. This message is accompanied by ATY7460A.

System action

Processing continues.

User response

N/A

ATY7500I **ATY OPTIONS DATASET INITIALIZATION SUCCESSFUL**

Explanation

The options data set utility successfully completed.

System action

Processing continues.

User response

None. This message is informational.

ATY7501W **ATY OPTIONS DATASET ALREADY INITIALIZED**

Explanation

An attempt was made to initialize the options data set that was previously initialized.

System action

The job ends with a completion code of 4.

User response

None. This message is informational.

ATY7502E **ATYODSET DDNAME MISSING**

Explanation

The options data set DDNAME, ATYODSET, was not specified in the JCL for this job.

System action

The job ends with a completion code of 16.

User response

Correct the JCL and run the job again.

ATY8001W **LOAD FAILED FOR ATY#OPTS**

Explanation

IMS Administration Tool could not obtain the VSAM options data set because it failed to load the ATY#OPTS member.

System action

IMS Administration Tool processes IMS commands and responses. However, it cannot perform the error-handling that is defined in message disposition tables and it cannot write log records to the log stream.

User response

Ensure the proper ATY#OPTS member is present in the STEPLIB of the IMS control region.

ATY8002W **DYNALLOC FAILED FOR ATYOPTS, RC=*rc*, RSN=*rsn***

Explanation

An error was encountered while attempting to dynamically allocate the options data set specified.

System action

The message disposition tables are not loaded or refreshed.

User response

Ensure the proper ATY#OPTS member resides in the IMS control region.

ATY8003W READ FAILED FOR ATYOPTS OR CCFOPTS, RPLFDBK=*rplfdbk*

Explanation

An error was encountered reading the VSAM options data set. The RPLFDBK is displayed as *rplfdbk*. IMS Administration Tool cannot obtain records from the VSAM options data set.

System action

IMS Administration Tool processes IMS commands and responses. However, it cannot perform the error-handling that is defined in message disposition tables and it cannot write log records to the log stream.

User response

The RPLFDBK field shows the RPL feedback word from the VSAM GET MACRO. Refer to the topic "Record management return and reason codes" in *z/OS DFSMS Macro Instructions for Data Sets*.

Correct the error caused by the non-zero return code and run the job again.

If the problem persists, contact IBM Software Support.

ATY8004W READ FAILED FOR ATYOPTS OR CCFOPTS, RPLFDBK=*rplfdbk*

Explanation

An error was encountered reading the VSAM options data set. The RPLFDBK is displayed as *rplfdbk*. IMS Administration Tool cannot obtain or refresh the message disposition tables.

System action

IMS Administration Tool processes IMS commands and responses. However, it cannot perform the error-handling that is defined in message disposition tables.

User response

The RPLFDBK field shows the RPL feedback word from the VSAM GET MACRO. Refer to the topic "Record management return and reason codes" in *z/OS DFSMS Macro Instructions for Data Sets*.

Correct the error caused by the non-zero return code and run the job again.

If the problem persists, contact IBM Software Support.

ATY8005W READ FAILED FOR ATYOPTS OR CCFOPTS, RPLFDBK=*rplfdbk*

Explanation

An error was encountered reading the VSAM options data set. The RPLFDBK is displayed as *rplfdbk*. IMS Administration Tool cannot obtain or refresh the message disposition tables.

System action

IMS Administration Tool processes IMS commands and responses. However, it cannot perform the error-handling that is defined in message disposition tables.

User response

The RPLFDBK field shows the RPL feedback word from the VSAM GET MACRO. Refer to the topic "Record management return and reason codes" in *z/OS DFSMS Macro Instructions for Data Sets*.

Correct the error caused by the non-zero return code and run the job again.

If the problem persists, contact IBM Software Support.

ATY8101I ATYLOGR INITIALIZATION COMPLETE

Explanation

The log stream used by IMS Administration Tool for its Message Log has successfully completed initialization. The IMS Administration Tool AOI exit now writes messages to the Message Log.

System action

Processing continues.

User response

N/A

ATY8102I BAD RETURN CODE FROM NAME/TOKEN SERVICE = *rc*

Explanation

An error was encountered trying to create a z/OS name token entry.

System action

Processing continues, but the IMS Administration Tool Message Log is not available for this IMS.

User response

Contact IBM Software Support.

ATY8103I **IXG*xxxxx* REQUEST=*xxxxxxx* ERROR *rc* / *rsn***

Explanation

An error was encountered attempting to connect, disconnect, or write to the log stream used for IMS Administration Tool Message Log processing using service IXGCONN or IXGWRITE.

System action

Processing continues, but the IMS Administration Tool Message Log is not available for this IMS.

User response

Review the IXGCONN or IXGWRITE return and reason codes contained in *rc* and *rsn*, respectively. Correct the problem and restart IMS.

ATY8104W **EXIT *dfsaoe01* NOT LOADED, NO USER AOI EXIT**

Explanation

The IMS Administration Tool AOI exit (DFSAOE00) has attempted to load a user version of the AOI exit (*dfsaoe01*) but none was found. This is an error only if there should be a user version of the AOI exit. The default name for a user AOI exit is DFSAOE01, but this can be overridden in the IMS record in the options data set.

System action

Processing continues, but IMS Administration Tool does not pass messages to a user AOI exit (DFSAOE00). If AOI exit DFSAOUE0 is present, IMS Administration Tool continues to pass messages to it.

User response

If a user AOI exit is required, either rename the module to DFSAOE01 or update the IMS record in the options data set to reflect the correct exit name, and restart IMS.

ATY8105I **EXIT *exit-name* SUCCESSFULLY LOADED**

Explanation

The AO exit routine was loaded successfully.

System action

Processing continues.

User response

None. This message is informational.

ATY8106I **ATY USING MAXBUFSIZE *xxxxx* LOGSTREAM *log_stream***

Explanation

This information message display the name of the log stream (*log_stream*) used by IMS Administration Tool for the Message Log.

System action

Processing continues.

User response

None. This message is informational.

ATY8107E **IXGWRITE ERROR RC=*rc* RSN=*rsn***

Explanation

An error was encountered attempting to write a message to the log stream used for the IMS Administration Tool message log.

System action

Processing continues.

User response

Review the IXGWRITE return and reason codes contained in *rc* and *rsn*, respectively.

Take corrective action based upon the meaning of the return and reason codes.

ATY8108I **ATYAOE00 ANCHOR ESTABLISHED AT *xxxxxxxx***

Explanation

The ATYAOE00 exit initialization completed.

System action

Processing continues.

User response

None. This message is informational.

ATY8109I LOGSTREAM NAME NOT SPECIFIED, ATY MESSAGE LOGGING NOT ACTIVE

Explanation

The log stream name is not specified in the IMS record in the options data set. IMS Administration Tool Message Log is not active for this execution of IMS.

System action

Processing continues but the IMS Administration Tool Message Log is not active.

User response

If IMS Administration Tool Message Log processing is required, use the IMS Administration Tool user interface to specify the name of the log stream in the IMS record, and restart IMS.

ATY8110E ATYAOE00 INITIALIZATION FAILURE

Explanation

The AO exit routine of IMS Administration Tool failed in the initialization process.

System action

IMS Administration Tool stops processing IMS commands for the IMS.

User response

Ensure that the AO exit routine is configured correctly for the IMS. For more information, see "Implementing IMS AO exit routines" on page 38.

ATY8111E ATY NOT SUPPORTED FOR THIS IMS VERSION

Explanation

IMS Administration Tool supports IMS 13 and later. The IMS Administration Tool ATYAOE00 exit routine identified that this IMS is non supported version.

System action

The ATYAOE00 exit routine does not process IMS Administration Tool functions for this IMS.

User response

Configure IMS Administration in an IMS whose version/release is supported by IMS Administration Tool.

ATY8112I *function* REQUEST FAILED- COMMAND IN PROGRESS

Explanation

The requested function, which is one of refresh, connect, or disconnect, cannot be processed because another command is in progress.

System action

Skips the command and continues processing the next command.

User response

Enter the command again after the command that is currently being processed is completed.

ATY8113I *function* REQUEST FAILED- ALREADY *function*

Explanation

The requested function, which is either connect or disconnect, cannot be processed because the function has already been executed.

System action

Skips the command and continues processing the next command.

User response

None. This message is informational.

ATY8114I - MVS ATTCH FAILED ATTEMPTING ATYREFRESH OR CCFREFRESH RC=*xx*

Explanation

A /LOG ATYREFRESH or CCFREFRESH command was entered. However, the IMS Administration Tool message disposition table could not be refreshed because the ATTACHX macro ended with the indicated return code.

System action

IMS Administration Tool processes IMS commands and responses. However, it cannot perform the error-handling that is defined in message disposition tables.

User response

Contact IBM Software Support.

ATY8202I ARCHIVE STARTED FOR LSN=*lsn*

Explanation

The IMS Administration Tool Message Log archive utility has started processing log stream (*lsn*).

System action

Processing continues.

User response

N/A

ATY8203E ERROR OPENING DD SYSIN

Explanation

An error was encountered attempting to open DDNAME SYSIN. Additional messages might be displayed on the z/OS Syslog.

System action

The job ends with a completion code of 12.

User response

Add DDNAME SYSIN and run the job again.

ATY8204E ERROR OPENING DD SYSPRINT

Explanation

An error was encountered attempting to open DDNAME SYSPRINT. Additional messages might be displayed on the z/OS Syslog.

System action

The job is terminated with completion code 12.

User response

Add DDNAME SYSPRINT and run the job again.

ATY8205E ERROR OPENING DD LOGOUT

Explanation

An error was encountered attempting to open DDNAME LOGOUT. Additional messages might be displayed on the z/OS Syslog.

System action

The job is terminated with a completion code of 12.

User response

Add DDNAME LOGOUT and run the job again.

ATY8206I ATY LOGGER ARCHIVE COMPLETE

Explanation

The IMS Administration Tool Message Log archive utility successfully completed.

System action

Processing continues.

User response

None. This message is informational.

ATY8207I NO LOG RECORDS TO ARCHIVE

Explanation

There were no records in the IMS Administration Tool Message Log that met the specified search criteria.

System action

Processing continues.

User response

None. This message is informational.

ATY8208E ERROR ON *service* / *request* RC=*rc*, RSN=*rsn*

Explanation

An error was encountered attempting a z/OS logger service (*service*). The return and reason codes are contained in *rc* and *rsn*, respectively.

System action

The job ends with a completion code of 12.

User response

Examine the return and reason codes for the failed service, take corrective action, and run the job again.

ATY8209E ISGENQ ERROR, RC=*XXXXXXXX*, RSN=*XXXXXXXX*

Explanation

An internal error occurred.

System action

Processing continues but the following functions are unavailable:

- IMS command processing function
- Writing log records to the log stream
- Archiving log data

User response

Contact IBM Software Support.

ATY8250E INPUT PARM MUST START IN COL 1 OR 2

Explanation

A record read from DDNAME SYSIN did not contain recognizable data. ATYARCH0 expects control cards to start in column 1 or 2.

System action

The job ends with a completion code of 12.

User response

Correct the control card and run the job again.

ATY8251E PREVIOUS RECORD CONTAINS INVALID DATA

Explanation

An error was encountered editing a previous input record.

System action

This job ends with a completion code of 12.

User response

Correct the control card and run the job again.

ATY8252E VALID LSN= PARAMETER NOT SPECIFIED

Explanation

The IMS Administration Tool Message Log archive utility completed reading all control cards, but the required log stream name data was not specified.

System action

The job ends with a return code of 12.

User response

Add a log stream name control card and run the job again.

ATY8253E RECS= CANNOT BE SPECIFIED WITH DATE OR HOURS=

Explanation

The IMS Administration Tool Message Log archive utility encountered conflicting control cards. If specifying the number of records (RECS=) to offload, the DATE and HOURS= parameters are invalid.

System action

The job ends with a completion code of 12.

User response

Correct the control cards and run the job again.

ATY8254E COLUMN 72 NOT BLANK

Explanation

The IMS Administration Tool Message Log archive utility does not support data in column 72.

System action

The job ends with completion code of 12.

User response

Correct the control cards and run the job again.

ATY8255E LSN= PARAMETER SPECIFIED MORE THAN ONCE

Explanation

The LSN= control card was specified more than once in DDNAME SYSIN.

System action

The job ends with completion code of 12.

User response

Correct the control cards and run the job again.

ATY8256E VALUE NOT SPECIFIED FOR LSN= PARM

Explanation

The LSN= parameter did not contain a log stream name.

System action

The job ends with completion code of 12.

User response

Correct the control cards and run the job again.

ATY8257E HOURS= VALUE SPECIFIED MORE THAN ONCE

Explanation

The HOURS= control card was specified mote than once in DDNAME SYSIN.

System action

The job ends with completion code of 12.

User response

Correct the control cards and run the job again.

ATY8258E HOURS= MUST BE A 1 OR 2 CHARACTER NUMERIC VALUE

Explanation

A non-numeric value has been specified for the HOURS= parameter. Valid values are 01 – 24.

System action

The job ends with completion code of 12.

User response

Correct the control cards and run the job again.

ATY8259E HOURS= MUST BE IN THE RANGE OF 1 - 24

Explanation

An invalid value was specified for the HOURS= parameter. Valid values are 01 – 24.

System action

The job ends with a completion code of 12.

User response

Correct the control cards and run the job again.

ATY8260E RECS= ALREADY SPECIFIED

Explanation

The RECS= control card was specified more than once in DDNAME SYSIN.

System action

The job ends with a completion code of 12.

User response

Correct the control cards and run the job again.

ATY8261E RECS= MUST BE A 1 - 6 CHARACTER NUMERIC VALUE

Explanation

A non-numeric value was specified in the RECS= parameter. Valid values are 1-999999.

System action

The job ends with a completion code of 12.

User response

Correct the control cards and run the job again.

ATY8262E RECS= MUST BE IN THE RANGE OF 1 - 999999

Explanation

An invalid value was specified in the RECS= parameter. Valid values are 1-999999.

System action

The job ends with a completion code of 12.

User response

Correct the control cards and run the job again.

ATY8263E "ALL" PARAMETER NOT VALID WITH RECS=, HOURS= OR DATE

Explanation

An invalid control card combination has been encountered. The ALL parameter is not valid with any other DUMP amounts.

System action

The job ends with a completion code of 12.

User response

Correct the control cards and run the job again.

ATY8264I DUMP TYPE NOT SPECIFIED, DEFAULT OF DUMP BY DATE USED

Explanation

None of the dump amount options were specified in the control cards read from DDNAME SYSIN. The default dump amount of DATE is used.

System action

Processing continues.

User response

None. This message is informational.

ATY8265E LOGSTREAM NAME (LSN=) MORE THAN 26 BYTES

Explanation

The log stream name specified as the ATYLOGR= parameter in the IMS PROCLIB member ATYPARMS is longer than the maximum allowed. The maximum length of a log stream name is 26 bytes.

System action

Processing continues, but without writing log records.

User response

Correct the log stream name in the ATYLOGR= control card and restart the IMS Operations Manager.

ATY8266E PARM CONFLICT - "MAX" NOT ALLOWED WHEN OTHER PARMS ARE SPECIFIED

Explanation

A control card conflict has been detected. When control card MAX is specified, no other control cards that define the amount of data to be archived are allowed.

System action

The archive utility ends with a return code of 12.

User response

Correct the control card conflict and run the job again.

ATY8267E FORMAT= ALREADY SPECIFIED

Explanation

The FORMAT= control statement was specified more than once in the SYSIN DD data set.

System action

The job ends with a completion code of 12.

User response

Delete unnecessary FORMAT= statements and run the job again.

ATY8268E FORMAT= VALUE MUST BE A OR C

Explanation

An incorrect value is specified to FORMAT=.

System action

The job ends with a completion code of 12.

User response

Specify A or C to FORMAT= and run the job again.

ATY8269E FILTER= ALREADY SPECIFIED

Explanation

The FILTER control statement is specified more than once in the SYSIN DD data set.

System action

The job ends with a completion code of 12.

User response

Delete unnecessary FILTER control statements and run the job again.

ATY8270E FILTER= VALUE MUST BE A, C, OR X

Explanation

An incorrect value is specified for the FILTER keyword.

System action

The job ends with a completion code of 12.

User response

Specify A, C, or X for the FILTER keyword and run the job again.

ATY8272E CCFLOG= ALREADY SPECIFIED

Explanation

The CCFLOG control statement is specified more than once in the SYSIN DD data set.

System action

The job ends with a completion code of 12.

User response

Delete unnecessary CCFLOG control statements and run the job again.

ATY8273E CCFLOG= VALUE MUST BE Y OR N

Explanation

An incorrect value is specified for the CCFLOG keyword.

System action

The job ends with a completion code of 12.

User response

Specify Y or N for the CCFLOG keyword and run the job again.

ATY8301I ATYREFRESH OR CCFREFRESH COMPLETE

Explanation

A /LOG ATYREFRESH or CCFREFRESH command was entered and the IMS Administration Tool message disposition table refresh completed successfully.

System action

Processing continues.

User response

None. This message is informational.

ATY8302E ATY LOGGER CONNECT FAILED, RC=*rsn*, RSN=*rsn*

Explanation

An error occurred attempting to connect the IMS Administration Tool Message Log log stream. The IXGCONN return and reason codes are contained in *rc* and *rsn*, respectively.

System action

Processing continues.

User response

Review the IXGCONN return and reason codes contained in *rc* and *rsn*, respectively. Correct the problem and restart IMS.

ATY8403I ATY LOGSTREAM DISCONNECTED

Explanation

IMS Administration Tool disconnected the log stream successfully.

System action

Processing continues.

User response

None. This message is informational.

ATY8404E ATYLOGC0 CALLED WITHOUT FUNCTION REQUEST

Explanation

An error occurred while connecting or disconnecting the log stream.

System action

Processing continues without writing log records.

User response

Ensure that the log stream name is specified correctly in the ATYLOGR= parameter in the IMS PROCLIB member ATYPARMS. If it is incorrect, correct it and restart the IMS Operations Manager.

If the log stream is correct and the problem persists, contact to IBM Software Support.

ATY8405W ATY LOGGING INACTIVE

Explanation

IMS Administration Tool cannot write log records because the log stream is inactive. The reason of the error is reported in the prior ATY error messages.

System action

Processing continues without writing log records.

User response

Follow the actions documented in the prior error messages. If the problem persists, contact IBM Software Support.

ATY8406I ATY LOGSTREAM IS READY.

Explanation

IMS Administration Tool message log initialization completed successfully.

System action

Processing continues.

User response

None. This message is informational.

ATY8407I RECEIVED RC=*xxxx* RSN=*yyyy* FROM THE IXGWRITE MACRO. ATY IS WAITING FOR THE LOGSTREAM TO BE READY.

Explanation

IMS Administration Tool received the indicated return code and reason code from the IXGWRITE macro. IMS Administration Tool is waiting for the log stream to be ready.

System action

Processing continues.

User response

None. This message is informational.

See the *z/OS MVS Programming: Assembler Services Reference* for the return and reason codes from the IXGWRITE macro.

ATY8408I ATY WAITED *n* OF 30 SECONDS

Explanation

IMS Administration Tool is waiting for the completion of log stream formatting for *n* seconds of 30 seconds.

To complete log stream formatting, IMS Administration Tool is waiting for the "LOGGING STARTED" message to be written to the log stream.

System action

Processing continues.

User response

None. This message is informational.

ATY8409I WAIT TIME EXPIRED FOR THE ATY LOGSTREAM.

Explanation

This message is issued after messages ATY8407I and ATY8408I. IMS Administration Tool was waiting for the log stream to be ready, but the wait time has expired.

System action

Skips writing the log record, and continues writing the next log records.

User response

None. This message is informational.

ATY8501I Auto backup started for *imsid* using *dai_xcf_name*. Check the backup in the Backup List later.

Explanation

Because automatic backup is enabled, IMS Administration Tool is creating a backup of the IMS directory used by the indicated IMS ID (*imsid*). *dai_xcf_name* is the XCF group name that is used to communicate with the IMS Tools Base Distributed Access Infrastructure (DAI) server.

System action

Processing continues.

User response

Ensure that the backup is created successfully by reviewing the backup list.

ATY8502W IMS Administration Tool loadlib is not found in STEPLIB.

Explanation

The load module library of IMS Administration Tool is not found in the STEPLIB concatenation of the OM region JCL.

System action

Processing continues. Even if automatic backup is enabled, backup is not created.

User response

If you want to enable automatic backup, add the IMS Administration Tool load module library to the STEPLIB concatenation of the OM region JCL. The load module library is SATYLOAD, or COMBLOAD if you made a combined library with IMS Tools Setup.

If you do not want to enable automatic backup, you can ignore this message.

ATY8503W **Initialization of an internal common service failed.**

Explanation

An error occurred while initializing an internal common service.

System action

Automatic backup is not performed.

User response

This is an internal error. Contact IBM Software Support.

ATY8504W **LOAD failed for *pgm-name*. CC=*compcode*, RSN=*rsn***

Explanation

An error occurred while issuing the LOAD macro. *pgm-name* is the name of the program that could not be loaded. *compcode* and *rsn* are the completion code and the reason code from the LOAD macro.

System action

Automatic backup is not performed.

User response

If you want to enable automatic backup, contact IBM Software Support. Otherwise, you can ignore this message.

ATY8505W **ISGENQ failed. RC=*rc* RSN=*rsn***

Explanation

An error occurred while issuing the ISGENQ macro. *rc* and *rsn* are the return code and reason code from the ISGENQ macro.

System action

Automatic backup is not performed.

User response

If you want to enable automatic backup, contact IBM Software Support. Otherwise, you can ignore this message.

ATY8506W **Dynamic allocation failed for DD=*ddname*. RC=*rc* RSN=*rsn***

Explanation

Dynamic allocation for the indicated DD (*ddname*) failed. *rc* and *rsn* are the return code and the reason code from SVC 99.

System action

Automatic backup is not performed.

User response

If you want to enable automatic backup, contact IBM Software Support. Otherwise, you can ignore this message.

ATY8507W **OPEN failed for DD=*ddname*. RC=*rc***

Explanation

Failed to open the data set specified by the indicated DD (*ddname*). *rc* is the return code from the OPEN macro.

System action

Automatic backup is not performed.

User response

Contact IBM Software Support.

ATY8508W **PUT failed for DD=*ddname*. RC=*rc***

Explanation

The PUT macro failed to write data to the data set specified by the indicated DD (*ddname*). *rc* is the return code from the PUT macro.

System action

Automatic backup is not performed.

User response

Contact IBM Software Support.

ATY8509W **Auto backup invocation failed with RC=*rc***

Explanation

An error occurred while starting the automatic backup. *rc* is the return code from the automatic backup.

System action

Automatic backup is not performed.

User response

Contact IBM Software Support.

ATY8510W **ATTACHX failed for *pgm-name*. RC=*rc***

Explanation

An error occurred while issuing the ATTACHX macro. *pgm-name* is the program that called the ATTACHX macro. *rc* is the return code from the ATTACHX macro.

System action

Automatic backup is not performed.

User response

Contact IBM Software Support.

ATY8511W ***vsammac* failed for DD=*ddname*. RC=*rc* RSN=*rsn***

Explanation

An error occurred while issuing the VSAM macro (*vsammac*). *ddname* is the DD name. *rc* and *rsn* are the return code and the reason code from the VSAM macro.

System action

Automatic backup is not performed.

User response

Contact IBM Software Support.

ATY9521W **NO RECORDS RETURNED**

Explanation

There were no records in the store/forward data set for the specified IMS.

System action

The IMS Administration Tool user interface continues.

User response

None. This message is informational.

ATY9999E **DECIMAL POINT MUST BE . OR ,**
NON-NUMERIC IN LINES/PAGE
NON-NUMERIC IN MAX CHAR FIELD
NON-NUMERIC IN MAX NUMERIC FIELD
NON-NUMERIC IN MAX SELECT LINES

Explanation

Detected syntax errors while processing SQL in the IMS SPUFI function.

System action

Skips the SQL statement and continues processing.

User response

Correct the syntax error in the SQL statement.

Messages (ATYA - ATYZ)

IMS Administration Tool issues messages that can help you understand the status of the infrastructure and help you resolve errors.

Message format

ATYA- ATYZ messages adhere to the following format:

```
ATY[E|J|T|Z]nnnx
```

Where:

ATY[E|J|T]
Indicates that the messages are related to IMS SPUFI.

- Message numbers that begin with ATYE communicate information about the TSO attachment facility.
- Message numbers that begin with ATYJ communicate information about the IMS SPUFI processing when the language environment of the application program that runs IMS SPUFI is Java.
- Message numbers that begin with ATYT communicate information about the service controller.

ATYZ
Indicates that the messages are related to IMS Administration Tool product configuration.

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.

ATYE601I SQLIMS STATEMENTS ASSUMED TO BE BETWEEN COLUMNS *nn* AND *nn*

Explanation

This message indicates which record columns in the input data set are scanned for SQLIMS statements.

For data sets of type COBOL, columns 8 through 72 are scanned.

For STANDARD data set types, if the LRECL is 79, then columns 1 through 71 are scanned. If the LRECL is 80, then columns 1 through 72 are scanned.

System action:
This message is written to the SPUFI output data set along with other summary messages.

User response

None. This message is informational.

ATYE610I NUMBER OF ROWS DISPLAYED IS *nn*

Explanation

Running of an SQLIMS SELECT statement causes one or more rows of data to be displayed.

This message appears in the output data set following the returned data for a SELECT.

It gives a count (*nn*) for the number of rows displayed.

System action:
Input data set processing is completed, and this message is included in the ISPUFI output.

User response

None. This message is informational.

ATYE611I **COLUMN HEADER *name* FOR COLUMN NUMBER *nn* WAS TRUNCATED**

Explanation

An SQLIMS SELECT statement was run, but the specified column name, identified by *nn* in the message, was truncated.

This truncation occurred either because the column name was longer than the remaining record width, or because the name was longer than the user-specified maximum field length.

System action:
Input data set processing is completed, and this message is included in the ISPUFI output.

User response

If the truncation is caused by insufficient record width, use a larger LRECL for the output data set, or specify fewer data columns to be returned on the SELECT statement.

If the truncation is caused by the user-specified maximum field length setting, use a larger value for this setting.

ATYE612I **DATA FOR COLUMN HEADER *name* FOR COLUMN NUMBER *nn* WAS TRUNCATED**

Explanation

An SQLIMS SELECT statement was run, but data for the specified column name, identified by *nn* in the message, was truncated.

This truncation occurred either because the data was longer than the remaining record width, or because the data was longer than the user-specified maximum field length.

System action:
Input data set processing is completed, and this message is included in the ISPUFI output.

User response

If the truncation is caused by insufficient record width, use a larger LRECL for the output data set, or specify fewer data columns to be returned on the SELECT statement.

If the truncation is caused by the user-specified maximum field length setting, use a larger value for this setting.

ATYE616I **STATEMENT EXECUTION WAS SUCCESSFUL, SQLIMSCODE IS *sqlims-code***

Explanation

This message is written to the output data set following the successful execution of an SQLIMS statement from the input data set.

The *sqlims-code* value specifies the SQLIMS return code for the statement.

System action:
Input data set processing is completed, and this message is included in the ISPUFI output.

User response

None. This message is informational.

Problem determination:
SQLIMS codes

ATYE620I **NUMBER OF SQLIMS STATEMENTS PROCESSED IS *nn***

Explanation

This message is written to the output data set after processing all SQLIMS statements in the current input data set.

The term *nn* is a count of the number of SQLIMS statements processed.

System action:
Input data set processing is completed, and this message is included in the ISPUFI output.

User response

None. This message is informational.

ATYE621I **NUMBER OF INPUT RECORDS READ IS *nn***

Explanation

This message is written to the output data set after processing all SQLIMS statements in the current input data set.

The term *nn* is a count of the total number of records read from the input data set.

System action:
Input data set processing is completed, and this message is included in the ISPUFI output.

User response

None. This message is informational.

ATYE622I **NUMBER OF OUTPUT RECORDS WRITTEN IS *nn***

Explanation

This message is written to the output data set after processing all SQLIMS statements in the current input data set.

The term *nn* is a count of the total number of records written to the input data set.

System action:
Input data set processing is completed, and this message is included in the ISPUFI output.

User response

None. This message is informational.

ATYE626I **MAXIMUM OUTPUT LINES FOR SELECT STATEMENT REACHED (*number*), PROCESSING FOR CURRENT SELECT STATEMENT TERMINATED**

Explanation

The maximum number of output lines to be displayed for a SELECT statement was reached. Processing of the current SELECT statement is terminated.

The maximum number to display is specified by the ISPUFI user on the CURRENT ISPUFI DEFAULTS panel.

This message appears in the ISPUFI output file.

System action:
Processing of subsequent SQLIMS statements in the input file continues.

User response:
If the number of lines displayed is insufficient, you can increase the maximum number of lines to be displayed for SELECT statements on the CURRENT ISPUFI DEFAULTS panel and re-run the SELECT statement.

ATYE700W **SQLIMS STATEMENTS SKIPPED DUE TO PREVIOUS ERROR.**

Explanation

One or more errors were detected in SQLIMS statements.

System action

Processing continues, but SQLIMS statements are ignored.

User response

Follow User Response for the previous error message.

ATYE999W **INVALID DECIMAL DATA IN 1 OR MORE COLUMNS**

Explanation

Detected packed decimal or zoned decimal data with incorrect values in one or more columns. This data is in the records obtained by running a SQLIMS SELECT statement.

System action

Processing continues. The result of the SQLIMS statement is stored in the ISPUFI output. The first few bytes of data is stored in hexadecimal format.

User response

Review the columns that contain the data in the database selected by the SQLIMS statement. If necessary, consider changing the data.

ATYJ001I **USS FILE *filename* FOUND.**

Explanation

IMS Administration Tool found the indicated z/OS UNIX file in the z/OS UNIX file system.

System action

Processing continues.

User response

None. This message is informational.

ATYJ090E **USS FILE *filename* NOT FOUND.**

Explanation

The indicated z/OS UNIX file, which is specified in the DFSJVMMS member of the IMS PROCLIB data set, is not found in the z/OS UNIX file system.

System action

Ends the processing for the indicated z/OS UNIX file.

User response

Ensure that the DFSJVMMS member of the IMS PROCLIB data set contains the correct file path for the z/OS UNIX file. Retry the operation.

ATYJ200I **NUMBER OF ROWS DISPLAYED IS *number***

Explanation

Running of a SELECT statement causes one or more rows of data to be displayed.

This message appears in the output data set following the returned data for a SELECT.

It gives a count (*number*) for the number of rows displayed.

System action

Input data set processing is completed, and this message is included in the ISPUFI output.

User response

None. This message is informational.

ATYJ201I **NUMBER OF ROWS UPDATED/ INSERTED/DELETED IS *number***

Explanation

Running of an INSERT, UPDATE, or DELETE statement causes one or more rows of data to be inserted, updated, or deleted.

This message appears in the output data set following the returned data for a SQL statement.

It gives a count (*number*) for the number of rows processed.

System action

Input data set processing is completed, and this message is included in the ISPUFI output.

User response

None. This message is informational.

ATYJ202I **COLUMN HEADER *column_name* FOR COLUMN NUMBER *number* WAS TRUNCATED.**

Explanation

A SELECT statement was run, but the specified column name, identified by *number* in the message, was truncated.

This truncation occurred either because the column name was longer than the remaining record width, or because the name was longer than the user-specified maximum field length.

System action

Input data set processing is completed, and this message is included in the ISPUFI output.

User response

If the truncation is caused by insufficient record width, use a larger LRECL for the output data set, or specify fewer data columns to be returned on the SELECT statement.

If the truncation is caused by the user-specified maximum field length setting, use a larger value for this setting.

ATYJ203I **DATA FOR COLUMN HEADER *column_name* FOR COLUMN NUMBER *number* WAS TRUNCATED.**

Explanation

A SELECT statement was run, but data for the specified column name, identified by *number* in the message, was truncated.

This truncation occurred either because the data was longer than the remaining record width, or because the data was longer than the user-specified maximum field length.

System action

Input data set processing is completed, and this message is included in the ISPUFI output.

User response

If the truncation is caused by insufficient record width, use a larger LRECL for the output data set, or specify fewer data columns to be returned on the SELECT statement.

If the truncation is caused by the user-specified maximum field length setting, use a larger value for this setting.

ATYJ204I **MAXIMUM OUTPUT LINES FOR SELECT STATEMENT REACHED *number***

Explanation

The maximum number of output lines to be displayed for a SELECT statement was reached. Processing of the current SELECT statement is terminated.

The maximum number to display is specified by the ISPUFI user on the Set IMS SPUFI Options panel of the ISPF interface.

This message appears in the ISPUFI output file.

System action

Processing of subsequent SQL statements in the input file continues.

User response

If the number of lines displayed is insufficient, you can increase the maximum number of lines to be displayed for SELECT statements on the Set IMS SPUFI Options panel of the ISPF interface and re-run the SELECT statement.

ATYJ210I STATEMENT EXECUTION WAS SUCCESSFUL.

Explanation

This message is written to the output data set following the successful execution of an SQL statement from the input data set.

System action

Input data set processing is completed, and this message is included in the ISPUFI output.

User response

None. This message is informational.

ATYJ211W STATEMENT EXECUTION FAILED.

Explanation

This message is written to the output data set following the failed execution of an SQL statement from the input data set.

System action

Input data set processing is completed, and this message is included in the ISPUFI output.

User response

Follow User Response for the previous error message.

ATYJ212W SQL STATEMENTS SKIPPED DUE TO PREVIOUS ERROR.

Explanation

One or more errors were detected in SQL statements.

System action

Processing continues, but SQL statements are ignored.

User response

Follow User Response for the previous error message.

ATYJ213W USER TYPE CONVERTER FOR COLUMN HEADER *column_name* FOR COLUMN NUMBER *number* WAS NOT FOUND. *description*

Explanation

A SELECT statement was run, but the specified column name, identified by *number* in the message, was filled with blank characters because the specified user type converter was not found. *description* provides information about the user type converter.

System action

Input data set processing is completed, and this message is included in the ISPUFI output.

User response

Use the information provided in this message (*description*) and correct the error. After ensuring that the IMS system is configured correctly to use the user type converter in the JBP region, retry the operation.

ATYJ214W DATA CONVERSION FAILED IN 1 OR MORE COLUMNS

Explanation

Failed to convert some portions of data using the converter that is defined to the DBD. The data conversion failed in one or more columns due to inconsistency between the type definition and data format. This data is in the records obtained by running a SELECT statement.

System action

Processing continues. The result of the SQL statement is stored in the IMS SPUFI output. The failed data is stored as "NULL".

User response

To identify the failed data, select COBOL for the language environment and rerun the SELECT statement. When COBOL is selected, the original data in the database is displayed in hexadecimal format. Use the hexadecimal data to identify the failed data. After you identify the failed data, ensure that the data

is correct; if not, modify the data so that the type definition and data format match.

ATYJ220I NUMBER OF SQL STATEMENTS PROCESSED IS *number*

Explanation

This message is written to the output data set after processing all SQL statements in the current input data set.

The term *number* is a count of the number of SQL statements processed.

System action

Input data set processing is completed, and this message is included in the ISPUFI output.

User response

None. This message is informational.

ATYJ221I NUMBER OF INPUT RECORDS READ IS *number*

Explanation

This message is written to the output data set after processing all SQL statements in the current input data set.

The term *number* is a count of the total number of records read from the input data set.

System action

Input data set processing is completed, and this message is included in the ISPUFI output.

User response

None. This message is informational.

ATYJ222I NUMBER OF OUTPUT RECORDS WRITTEN IS *number*

Explanation

This message is written to the output data set after processing all SQL statements in the current input data set.

The term *number* is a count of the total number of records written to the input data set.

System action

Input data set processing is completed, and this message is included in the ISPUFI output.

User response

None. This message is informational.

ATYJ290E AN EXCEPTION OCCURRED. *description*

Explanation

An exception occurred while executing the Java program. *description* provides details about the exception.

System action

Stops the SQL processing and ignores all subsequent SQL statements.

User response

Use the information provided in this message (*description*) and correct the error. Retry the operation.

ATYJ291E COBOL SQL STATEMENT *statement* IS NOT SUPPORTED.

Explanation

The indicated SQL statement, which is for COBOL, is not supported.

System action

Stops the SQL processing and ignores all subsequent SQL statements.

User response

Remove the SQL statements for COBOL.

ATYJ291E DDL SQL STATEMENT *statement* IS NOT SUPPORTED.

Explanation

The indicated SQL statement, which is for DDL, is not supported.

System action

Stops the SQL processing and ignores all subsequent SQL statements.

User response

Remove the SQL statements for DDL.

ATYJ293E ILLEGAL SYMBOL *symbol* WAS USED.

Explanation

An illegal symbol (*symbol*) is detected in the SQL statements.

System action

Stops the SQL processing and ignores all subsequent SQL statements.

User response

Correct the symbol and retry the operation.

ATYJ294E FAILED TO RUN JVM IN JBP REGION.

Explanation

To execute Java programs in the JBP region, JVM (Java Virtual Machine) must be started. JVM failed to start in the JBP region.

System action

Processing ends without running the Java program.

User response

Ensure that the IMS system is configured correctly to start the JBP region and that the following IMS Administration Tool resources are configured correctly. For more information, see "Setting up a Java environment for IMS SPUFI JBP" on page 41.

- The Jar file provided by IMS Administration Tool is copied to the correct location (ATYJCOPY sample JCL).
- Required variables, such as ATYJPRE1 and ATYJPRE*x*, are registered to the IMS Tools Knowledge Base repository (ATYJPREF sample JCL).

After ensuring that all the resources are configured correctly, retry the operation.

ATYT408I SQLIMSCODE = -*xxx*, *explanation*

Explanation

This message contains an SQLIMS return code and a brief explanation, with text inserted from the SQLIMSERRM field.

The SQLIMS return code is negative, indicating that an error has occurred.

For more information about this SQLIMS return code, see *IMS Messages and Codes* (Volume 4), "IMS Component Codes".

System programmer response

Determine the cause for the SQLIMS error by using information about that specific SQLIMSCODE.

Correct the error and rerun the application program or SQLIMS statement.

Problem determination

Collect the following diagnostic items:

- Console output from the system on which the job was run, and a listing of the SYSLOG data set for the period of time spanning the failure
- Dynamic dump, taken to SYS1.DUMP*xx* data set
- Listing of SYS1.LOGREC data set, obtained by running IFCEREP1
- Listing of the results produced by the SQLIMS statements
- Source listing of the failing application program

ATYT415I SQLIMSERRP = *xxxx*, SQLIMS PROCEDURE DETECTING ERROR

Explanation

The name of the procedure detecting the error is provided in the SQLIMSERRP.

System programmer response

(The SQLIMS procedure detecting the error might be of help in diagnosing an error or warning).

Correct the error if there is one noted in other messages. Rerun the program or SQLIMS statement.

ATYT416I NUMBER OF ROWS UPDATED/ INSERTED/DELETED *nn*

Explanation

Number of rows inserted, updated, or deleted following an INSERT, UPDATE, or DELETE statement.

System action

Processing continues.

ATYT417I SQLIMSWARN*n-n* SQLIMS WARNINGS

Explanation

At least one of the 11 warning values is not the expected value (a blank).

A non-blank value in one of the 11 warning fields has the following meaning:

SQLWARN0
Any other warning code is set.

SQLWARN1
String truncation.

SQLWARN2
Reserved.

SQLWARN3
The number of result columns is larger than the number of host variables.

SQLWARN4
No WHERE clause on UPDATE or DELETE.

SQLWARN5
Not a valid SQL statement in IMS.

SQLWARN6
A field is not initialized with the proper format for the INSERT statement because the field overlays with another field that is of a different type.

ZONEDDECIMAL and PACKEDDECIMAL fields are initialized during the processing of an INSERT statement.

If the field is overlaid by another field and the field cannot be initialized, W is set for the statement during the EXECUTE call.

SQLWARN7
Reserved.

SQLWARN8
Reserved.

SQLWARN9
Reserved.

SQLWARNA
Reserved.

User response

The SQLIMS warning information might be of help in diagnosing an error or in indicating the results of successful execution.

If this warning should occur, correct the error and rerun the program or SQLIMS statement.

See the topic "SQL communication area (SQLIMSCA)" in *IMS Application Programming APIs*.

ATYT418I **SQLIMSSTATE = *sqlimsstate*, SQLIMSSTATE RETURN CODE**

Explanation

The SQLIMSSTATE is a return code that indicates the outcome of the most recently executed SQLIMS statement.

The running of every SQLIMS statement sets SQLIMSSTATE to a five-digit code in the range of 00000 to 65535.

This has no effect on the existing use of any other field in the SQLIMSCA.

User response:
The reason the build phase failed is identified by the reason code, which is described in *IMS Messages and Codes* (Volume 4), "IMS Component Codes - SQL Codes".

ATYZ001E **Tools Base modules can not be loaded. RC=*rc* RSN=*rsn*.**

Explanation

Failed to load the modules of IMS Tools Base.

System action

The process terminates.

User response

Contact IBM Software Support.

ATYZ002E **DAI SSI Environment is not active. RC = *&atyrc*. SSIRC = *&atyssirc*. SSIRN = *&atyssirn*.**

Explanation

The DAI SSI environment is not active.

System action

The process terminates.

User response

If the cause of the error cannot be determined, contact IBM Software Support.

ATYZ003E **ISPF VDEFINE failed at initialization. RC = *&atyrc*.**

Explanation

ISPF VDEFINE failed at initialization.

System action

The process terminates.

User response

If the cause of the error cannot be determined, contact IBM Software Support.

ATYZ004E **XCF Group query failed. RC = *&ATYRC*. SSIRC = *&ATYSSIRC*. SSIRN = *&ATYSSIRN*.**

Explanation

XCF group query failed.

System action

The process terminates.

User response

If the cause of the error cannot be determined, contact IBM Software Support.

ATYZ005E **DAI XCF group with AII prefix is not found. RC = *&ATYRC*. SSIRC = *&ATYSSIRC*. SSIRN = *&ATYSSIRN*.**

Explanation

DAI XCF group with AII prefix is not found.

System action

The process terminates.

User response

If the cause of the error cannot be determined, contact IBM Software Support.

ATYZ006E **Free Query XCF group storage failed. RC = *&ATYRC*. SSIRC = *&ATYSSIRC*. SSIRN = *&ATYSSIRN*.**

Explanation

Failed to free the Query XCF group storage.

System action

The process terminates.

User response

If the cause of the error cannot be determined, contact IBM Software Support.

ATYZ007E **DAI XCF group *&atyxcf.* is not active. Please select one XCF from the XCF Group list.**

Explanation

The DAI XCF group is not active.

System action

The process terminates.

User response

If the cause of the error cannot be determined, contact IBM Software Support.

ATYZ008E **Join XCF group failed. RC = *&ATYRC*. SSIRC = *&ATYSSIRC*. SSIRN = *&ATYSSIRN*.**

Explanation

Failed to join the XCF group.

System action

The process terminates.

User response

If the cause of the error cannot be determined, contact IBM Software Support.

ATYZ009E **Find DAI TAS XCF member failed. RC = *&ATYRC*. SSIRC = *&ATYSSIRC*. SSIRN = *&ATYSSIRN*.**

Explanation

Failed to find the DAI TAS XCF member.

System action

The process terminates.

User response

If the cause of the error cannot be determined, contact IBM Software Support.

ATYZ010E **Tools Access Server (TAS) is not up.**

Explanation

The Tools Access Server (TAS) is not started.

System action

The process terminates.

User response

If the cause of the error cannot be determined, contact IBM Software Support.

ATYZ011E **Free Storage Procedure "QRYTAS" failed. RC = *&ATYRC*. SSIRC = *&ATYSSIRC*. SSIRN = *&ATYSSIRN*.**

Explanation

Free Storage Procedure "QRYTAS" failed.

System action

The process terminates.

User response

If the cause of the error cannot be determined, contact IBM Software Support.

ATYZ013E **Receive response failed. GetAWE failed. RC = *&ATYRC*. SSIRC = *&ATYSSIRC*. SSIRN = *&ATYSSIRN*. Check if Tool Base is active.**

Explanation

Receive response failed. GetAWE failed.

System action

The process terminates.

User response

If the cause of the error cannot be determined, contact IBM Software Support.

ATYZ014E **Receive response failed. Unexpected AWE function type. RC = *&ATYRC*. SSIRC = *&ATYSSIRC*. SSIRN = *&ATYSSIRN*. DataH1 = *&ATYDataH1*.**

Explanation

Receive response failed. Unexpected AWE function type.

System action

The process terminates.

User response

If the cause of the error cannot be determined, contact IBM Software Support.

ATYZ015E **Invalid response received. RC = *&ATYRC*. SSIRC = *&ATYSSIRC*. SSIRN = *&ATYSSIRN*.**

Explanation

Invalid response received.

System action

The process terminates.

User response

If the cause of the error cannot be determined, contact IBM Software Support.

ATYZ016E **Message verification failed. RC = *&ATYRC*. SSIRC = *&ATYSSIRC*. SSIRN = *&ATYSSIRN*.**

Explanation

Message verification failed.

System action

The process terminates.

User response

If the cause of the error cannot be determined, contact IBM Software Support.

ATYZ017E **Response from XCF group exit received. RC = *&ATYRC*. SSIRC = *&ATYSSIRC*. SSIRN = *&ATYSSIRN*.**

Explanation

Received a response from the XCF group exit.

System action

The process terminates.

User response

If the cause of the error cannot be determined, contact IBM Software Support.

ATYZ018E **Tools Access Server(TAS) is not responding. Check console log for TAS status. Exit the application and try again later.**

Explanation

The Tools Access Server (TAS) is not responding.

System action

The process terminates.

User response

If the cause of the error cannot be determined, contact IBM Software Support.

ATYZ019E **DAI Server detected an error. RC = *&ATYRC*. SSIRC = *&ATYSSIRC*. SSIRN = *&ATYSSIRN*.**

Explanation

The DAI server detected an error.

System action

The process terminates.

User response

If the cause of the error cannot be determined, contact IBM Software Support.

ATYZ020E ***&usrtxt01***

Explanation

Self-explanatory.

System action

The process terminates.

User response

If the cause of the error cannot be determined, contact IBM Software Support.

ATYZ023E **Default ITKB name is not found. Check with System Administrator.**

Explanation

The IMS Tools Knowledge Base server is not configured correctly for IMS Administration Tool.

System action

The process terminates.

User response

Ensure that the expected IMS Tools Knowledge Base repository server is configured correctly and active.

ATYZ024E **Can not connect to DAI server. Check DAI server availability.**

Explanation

The DAI server is not configured correctly for IMS Administration Tool.

System action

The process terminates.

User response

Ensure that the expected DAI server is configured correctly and active.

ATYZ025E **Unauthorized to access IMS Administration Tool. Check with System Administrator.**

Explanation

Error in the RACROUTE call issued by IMS Administration Tool. The user attempt to use the IMS commands function has been denied due to the access authority reason.

System action

IMS Administration Tool terminates.

User response

Ensure that the access authority is granted to the user.

ATYZ026E **Tools Base product version is not V1.6.0 or higher. Check with System Administrator.**

Explanation

IMS Tools Base is not at the required maintenance level.

System action

IMS Administration Tool terminates.

User response

Ensure that the IMS Tools Base product version is updated to the recent version.

ATYZ028E **Product High Level Qualifier not specified**

Explanation

Product high-level qualifier is not specified.

System action

IMS Administration Tool terminates.

User response

Ensure that the correct product high-level qualifier is specified.

ATYZ029E **Tools Base DAI (SAIILINK) data set name is not specified**

Explanation

IMS Tools Base DAI (SAIILINK) data set name is not specified.

System action

IMS Administration Tool terminates.

User response

Ensure that the correct IMS Tools Base DAI (SAIILINK) data set name is specified.

ATYZ032E **Exec data set *&ATYEXEC* not found**

Explanation

EXEC library data set name (SATYCEXE) is not found.

System action

IMS Administration Tool terminates.

User response

Ensure that the correct EXEC library data set name (SATYCEXE) is specified.

ATYZ034E **Loadlib data set *&ATYLLIB* not found**

Explanation

LOADLIB library data set name (SATYLOAD) is not found.

System action

IMS Administration Tool terminates.

User response

Ensure that the correct LOADLIB library data set name (SATYLOAD) is specified.

ATYZ035E **ISPF message data set *&ATYMLIB* not found**

Explanation

ISPMLIB library data set name (SATYMENU) is not found.

System action

IMS Administration Tool terminates.

User response

Ensure that the correct ISPMLIB library data set name (SATYMENU) is specified.

ATYZ036E **ISPF panel data set *&ATYPLIB* not found**

Explanation

ISPPLIB library data set name (SATYPENU) is not found.

System action

IMS Administration Tool terminates.

User response

Ensure that the correct ISPPLIB library data set name (SATYPENU) is specified.

ATYZ038E **ISPF table data set *&ATYTLIB* not found**

Explanation

ISPTLIB library data set name (SATYTENU) is not found.

System action

IMS Administration Tool terminates.

User response

Ensure that the correct ISPTLIB library data set name (SATYTENU) is specified.

ATYZ039E **Loadlib data set *&TEMPLLIB* not found**

Explanation

IMS Tools Base DAI (SAIILINK) data set name is not specified.

System action

IMS Administration Tool terminates.

User response

Ensure that the correct IMS Tools Base DAI (SAIILINK) data set name is specified.

ATYZ040E **IMS Administration Tool library version is inconsistent with ISPF panel version. Check with System Administrator. Current Administration Tool library data sets are "*&ATYLLIB*".**

Explanation

The version of IMS Administration Tool library is inconsistent with the version of the ISPF panels.

System action

The process terminates.

User response

Ensure that the IMS Administration Tool product version is updated to the recent version.

ATYZ041E **Administration Tool is not registered in product registration. Review the IMS Tools SETUP CUSTJCL or the ATYITKB member in Admin Tool SATYSAMP for product registration.**

Explanation

IMS Administration Tool is not registered in product registration.

System action

The process terminates.

User response

Review the IMS Tools SETUP CUSTJCL or the ATYITKB member in the IMS Administration Tool sample library (SATYSAMP) for product registration.

ATYZ042E **Admin Tool load library (SATYLOAD) data set does not exist. Review the IMS Tools SETUP CUSTJCL or the ATYITKB member in Admin Tool SATYSAMP for product registration.**

Explanation

The load library data set (SATYLOAD) of IMS Administration Tool does not exist.

System action

The process terminates.

User response

Review the IMS Tools SETUP CUSTJCL or the ATYITKB member in the IMS Administration Tool sample library (SATYSAMP) for product registration.

ATYZ043E **Some crucial Admin Tool members are not found in the Admin Tool load library (SATYLOAD). The SATYLOAD data set might not be correct. Review the IMS Tools SETUP CUSTJCL or the ATYITKB member in Admin Tool SATYSAMP for product registration.**

Explanation

Some crucial members of IMS Administration Tool are not found in the IMS Administration Tool load library (SATYLOAD).

System action

The process terminates.

User response

Review the IMS Tools SETUP CUSTJCL or the ATYITKB member in the IMS Administration Tool sample library (SATYSAMP) for product registration.

ATYZ044I **SYSLOAD dataset does not exist and has been ignored.**

Explanation

SYSLOAD data set does not exist.

System action

The process continues.

User response

Under DDNAME Variable Management in Update Product Registry, ensure that the data set specified for the SYSLOAD variable is correct.

ATYZ045E **IMS Administration Tool library version is inconsistent with ISPF panel version. Check with System Administrator. The version of the load module library *atylib* is lower than the version of the *hlq* library.**

Explanation

The version of IMS Administration Tool load module library is lower than the version of IMS Administration Tool ISPF library. *atylib* is either SATYLOAD or COMBLOAD, and *hlq* is the high-level qualifier of the library that contains ISPF panels and execution files.

System action

The process terminates.

User response

Apply the latest maintenance updates (PTFs) to SATYLOAD or COMBLOAD library and retry the operation.

Abend codes

This reference section provides detailed information about IMS Administration Tool abend codes.

For each abend code, the following information is provided where applicable:

Explanation:
The Explanation section explains what the abend code means, why it occurred, and what its variable entry fields are (if any)

System Action:
The System Action section explains what the system does next

User Response:
The User Response section describes whether a response is necessary, what the appropriate response is, and how the response affects the system or program

1000

Explanation

An internal ATY error occurred.

System action

The job step ends abnormally with a U1000 completion code.

User response

Contact IBM Software Support.

1066

Explanation

An error occurred attempting to open the ATYIOPTS data set.

System action

IMS SPUFI processing ends with a U1066 abend.

User response

Find the preceding message that describes the reason for the abend, correct the condition, and retry the IMS SPUFI function.

1067

Explanation

The user ID is not authorized by System Authorization Facility (SAF) for executing IMS Administration Tool functions.

System action

IMS SPUFI processing ends with a U1067 abend.

User response

Permit read access of FACILITY class ATYADMIN.ACCESS to the target user ID and retry the IMS SPUFI function.

2000

Explanation

An internal ATY error occurred.

System action

The job step ends abnormally with a U2000 completion code.

User response

Contact IBM Software Support.

4044

Explanation

An error occurred attempting to register to the IMS SCI address space.

System action

ATY processing ends with a U4044 abend.

User response

Ensure that the SCI address space is available, and the SDFSERESL is included in the ATY job, or ISPF task.

4070

Explanation

An unexpected condition occurred for which the IMS Administration Tool options in effect requested an abnormal termination.

This abend code is used when the user-defined abend has not been specified, or is specified as 0000.

System action

The job step ends abnormally with a U4070 completion code.

User response

Find the preceding message that describes the reason for the abend, correct the condition, and run the command again.

4080

Explanation

An unexpected error occurred during DBRC processing.

System action

The job step ends abnormally with a U4080.

User response

As a workaround, turn off all DBRC options in effect, run the command again, and contact IBM Software Support.

4081

Explanation

An error occurred while reading the DBRC listing. An unrecognized value was found in the number of authorized subsystems field.

System action

The job step ends abnormally with a U4081.

User response

As a workaround, turn off all DBRC options in effect, run the command again, and contact IBM Software Support.

4083

Explanation

An internal IMS Administration Tool error occurred.

System action

The job step ends abnormally with a U4083 completion code.

User response

Contact IBM Software Support.

4095

Explanation

An internal IMS Administration Tool error occurred.

System action

The job step ends abnormally with a U4095 completion code.

User response

Contact IBM Software Support.

Chapter 39. Gathering diagnostic information

Before you report a problem with IMS Administration Tool to IBM Software Support, you need to gather the appropriate diagnostic information.

For each IMS Administration Tool problem, be prepared to provide the following information:

- 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
- A copy of the *userid*.ADFYTRACE trace data set captured at the time of the failure

Problem Type 1: IMS Administration Tool appears to have incorrectly processed

Provide the following types of data:

- The entire job output including JCL, control cards, allocation messaging, and reports
- Output from any diagnostic report (if it is requested)
- Any other material that indicates a discrepancy between results that were expected and the results that were created
- An IDCAMS print of the ATY OPTIONS data set

Problem Type 2: IMS Administration Tool abends

Provide the following types of data:

- The entire failing job output, including SYSUDUMP output, JCL, control cards, allocation messaging, and reports
- Output from any diagnostic report (if it is requested)
- A console hardcopy of events that might indicate the reason for the product failure
- Screen prints or line commands that demonstrate the product failure
- Special DUMP or TRACE information might be requested in some instances
- An IDCAMS print of the ATY OPTIONS data set

Additional information:

For online abends, provide the following information

- A screen shot of the panel that you were using when the abend occurred
- The job log from the TSO session that encountered the abend
- 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 any data sets that were used during the processing

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Index

E

I

J

L

M

N

O

P

Q

R

S

T

U

V

Product Number: 5655-CAT

SC27-9011-30