IBM Data Set Commander for z/OS

User's Guide

Version 8 Release 1 Modification 3

SC19-4207-03

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Note
Before using this information and the product it supports, be sure to read the general information under "Notices" on page 375.

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| This edition applies to Version 8 Release 1 Modification Level 3 of IBM Data Set Commander (program number 5635-ISP and to all subsequent releases and modifications until otherwise indicated in new editions.

IBM welcomes your comments. For information on how to send comments, see "How to send your comments to IBM" on page xv.

This publication is available on the Web at
https://www-01.ibm.com/support/docview.wss?uid=ibm10732197

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About this manual

This guide gives you an overview of the features and capabilities of Data Set Commander. The reference section provides the command information you need to implement Data Set Commander.

Assumptions

This guide assumes that you are familiar with the basic ISPF functions. Subjects that are discussed in an ISPF manual are explained briefly in this guide. For detailed information about ISPF, see the appropriate IBM® documentation.

Summary of changes, fourth edition (SC19-4207-03)

This version of the book contains minor clarifications and corrections, and also the following significant changes relative to the previous edition.

- New EDIT/VIEW/BROWSE commands:
  - "CREATE subcommand" on page 74
  - "GENCOMP subcommand" on page 77
  - "REPLACE subcommand" on page 81
  - "SAVEAS subcommand" on page 83

  For more information about the updated EDIT/VIEW/BROWSE commands, see Chapter 6, "EDIT/VIEW/BROWSE commands," on page 73.
- New MSL commands:
  - "FILter0 command" on page 128
  - "GENLOST command" on page 139
  - "GENShow command" on page 141

  For more information about the updated MSL commands, see Chapter 9, "MSL commands," on page 103.
- New OLIST commands:
  - "END command" on page 217
  - "LOSTGen line command" on page 244
  - "QUIT command" on page 251
  - "RIGHT command" on page 255
  - "SET command" on page 256
  - "%*exec* line command" on page 207
  - "/X line command" on page 266
  - "?*cmd* line command" on page 206

  For more information about the updated OLIST commands, see Chapter 10, "OLIST commands," on page 199.
- For better illustration of the updated DSC command FindText, a new appendix with scenario examples is added. See Appendix O, "Searching with command FindText," on page 367.
- New command shortcuts:
  - DSCDFLT
  - ISPL

  - ISTA
  - OLCL
  - OLPDS
  - OLPDSEL
  - OLPDSL

  For more information about the new command shortcuts, see Chapter 5, "Command shortcuts," on page 69.
- Refreshed chapter Chapter 14, "Batch utility IQIBUTIL," on page 285 for multiple new features. For more information about the new features, see DSC Batch Utility enhancements.
- Updated product name Db2 in the documentation to reflect current offerings.

For detailed information about what's new in this edition, see "What's new in version 8.1.3" on page 3.

Summary of changes, third edition (SC19-3848-02)

This edition accounts for changes introduced by APAR OA45866. These changes, marked with a vertical change bar in the left margin, include:
- "Filtering SMF records" on page 98
- "DSC Monitor activity statistics" on page 99
- New EXEC parameter options (see "EXEC parameter options" on page 100)

The text has also been corrected for minor editorial errors. These are not flagged.

Summary of changes, second edition (SC19-3848-01)

This edition accounts for changes introduced by APAR OA45103. These changes include:
- New IQIBUTIL special control statements:
  - "LISTDIR" on page 307
  - "MAPPDS" on page 309
  - "RECOVGEN" on page 312
- The ALLGEN|NOGEN option, now available on several IQIBUTIL special control statements.
- Four more IQIBUTIL examples:
  - "Example 15: List ISPF Statistics of All Source Members Updated by one Programmer in Last 3 Months" on page 326
  - "Example 16: List Locations of the Data Extents of All Existing and Deleted Members in a PDS library" on page 326
  - "Example 17: Copy and Replace Selected Members of a PDSE Data Set along with all their aliases as well as their previous versions" on page 327
  - "Example 18: Restore most recent previous version of selected members in a PDSE library" on page 327

The text has also been corrected for minor editorial errors.

Summary of changes, first edition (SC19-3848-00)

Extensive additions, as outlined in "What's new in version 8.1.3" on page 3.

Organization of this guide

This guide is divided into the following chapters:

- "About this manual" on page xi provides information about the guide, such as the text conventions and how to read syntax diagrams.
- Chapter 1, "An overview of the Data Set Commander," on page 1 describes the features and capabilities of Data Set Commander and introduces the new features in the current version.
- Chapter 2, "Using the DSC interactive component," on page 11 explains how to use Data Set Commander.
- The next seven chapters provide information about using commands in Data Set Commander:

  Chapter 3, "An introduction to commands," on page 49 provides a general description to the detailed information about commands that follows.

  Chapter 4, "General commands," on page 53 explains the use of the general commands (commands that are generally available anywhere within Data Set Commander).

  Chapter 5, "Command shortcuts," on page 69 tells you about the command shortcuts that you can use in Data Set Commander.

  Chapter 6, "EDIT/VIEW/BROWSE commands," on page 73 lists the commands that are available from EDIT, VIEW, and BROWSE panels—though some are only applicable to EDIT and VIEW panels.

  Chapter 9, "MSL commands," on page 103 lists the commands that are available when an MSL is displayed.

  Chapter 10, "OLIST commands," on page 199 lists the commands that are available when an OLIST is displayed.

  Chapter 11, "TSO command shell," on page 269 explains how to use the TSO Command Shell to enter TSO commands, CLISTs, REXX EXECs, and ISPEXECs from within ISPF.
- Chapter 12, "Browsing, viewing, and restoring deleted members of a PDS using the MAP list," on page 273 explains how you can use the MAP list with members of a PDS.
- Chapter 13, "Panel Extension Language," on page 277 describes the Panel Extension Language, which adds functionality to the ISPF panel language.
- The appendixes start with Appendix A, "Documenting a DSC failure for IBM level 2 support," on page 331, and continue through to Appendix M, "Persistent Table Library," on page 361. They cover a variety of topics, including describing the options to customize Data Set Commander for your particular environment, and using Data Set Commander while running other applications.

Other information resources

In addition to this guide, you can use the online tutorials, Help panels, Assist windows, and the structured Action Bar.

To invoke the Data Set Commander tutorial, enter `DSCHELP` or `DSC` on any ISPF panel.

To display all Data Set Commander command shortcuts, enter `DSC?` on any ISPF panel.

To invoke the Online Help, press the HELP key (usually PF1) on any Data Set Commander panel.

To display the ASSIST window, which is available in both the Member Selection List (MSL) and Object List (OLIST), type `ASSIST` or `A` on the command line of the Data Set Commander Member List.

Text conventions in this guide

This guide uses the following conventions:

Bolded Phrase
This shows the name of a field on a panel.

UPPERCASE
This shows the text that you enter as a main command or line command, for example, `CUT`, `PASTE`. In a syntax diagram, UPPERCASE items are commands or keywords.

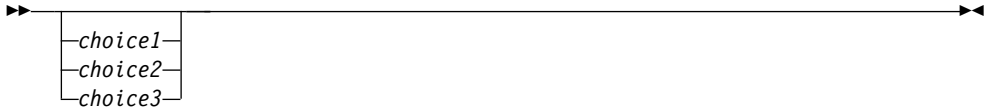
lowercase
This shows variable that you must substitute with an appropriate value. The meaning of a variable displayed in a Syntax section is given in the Operands section.

How to read a syntax diagram

The format of the syntax diagram is as follows:

- Text in UPPER CASE (such as "BROWSE") must be entered exactly as shown.
- Text in mixed UPPER and lower case (such as "FILter") indicates a command or operand that can be abbreviated. The UPPER CASE text is required, and the lower case text is optional. (For example, "FILter" can be entered as "FIL", "FILT", "FILTE", and "FILTER", but not as "FI", since the "L" is required.)
- Text in *italics* (such as *DSNpatt*), possibly containing hyphens (such as *member_name*), represents information you enter. What you should enter is explained under the syntax diagram.
- A common element of a syntax diagram is a vertical stack of choices:

  In this case you must enter one of these choices; CHOICE1, CHOICE2 or CHOICE3.
- A variation of this choice stack is when several elements are listed vertically below a horizontal line, like this:



  In this case, you can choose one element, but the choice is optional—you don't have to choose any element.
- A further variation is when several elements are listed vertically, below a horizontal line, and one element is above the horizontal line, such as:

In this case you can choose one element, but if you choose none, then the default option, which is the option above the line (CHOICE1), is the value used. You can supply the default value if you wish.

- The final variation on the choice stack is when there is a return loop:

In this case you can choose more than one element. So, for example, you could choose CHOICE1 and CHOICE2, or CHOICE3 and CHOICE1 (the order isn't important), or just CHOICE2. The item in the return loop is the delimiter used to separate out the choices. If there is a limit to the number of choices you can make, this is noted in the diagram or with the associated description of the operands.

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Chapter 1. An overview of the Data Set Commander

This chapter presents a general description of Data Set Commander. It discusses the features, functions, and facilities that Data Set Commander provides to enhance ISPF.

What is Data Set Commander

Data Set Commander is a package that provides enhanced productivity and automated functionality to z/OS® based data set operations. It includes four main components:

1. An interactive menu driven front end to ISPF. (This front end was formerly known as ISPF Productivity Tool, or IPT.)
2. A batch utility for replacing IEBCOPY with enhanced partitioned data set manipulation functions.
3. A Monitor started task for automating the refreshing of z/OS LLA managed directory entries.
4. A facility to filter out the SMF records of irrelevant data sets and write SMF type 42 records for copying members into PDS libraries via the DSC batch utility.

Features and benefits

Here are the features and benefits of the different components of DSC.

The menu-driven interactive front end to ISPF

The front end provides the Member List, OLIST and DLIST. The resulting member, data set, and object lists become powerful platforms where you can perform many tasks without navigating to other utilities.

DSC extends the ISPF Action Bar with options that provide access to new functionality so you do not have to learn new commands or syntax.

DSC provides extensive search capabilities that are fast and intuitive. You can easily search for volumes, data sets, members, and text within members. DSC also furnishes automatic drill-down system navigation to pinpoint volumes, data sets, and members.

In addition to the ISPF point-and-shoot capabilities, DSC has facilities that prompt actions upon cursor selection:

- Hotbars (user-defined fields that execute commands)
- Field-sensitive areas in MSLs and OLISTs
- Automatic recognition of a data set name on any ISPF panel as a parameter to BROWSE, EDIT, VIEW, or parameters within any TSO command

DSC provides integrated and enhanced SCLM support within the standard member and data set lists. SCLM is a source library management component of ISPF that provides change control, multiple source versions, auditing, a built-in make facility, and automatic check-in/sign-out using standard libraries (PDS, PDSE).

All DSC functions are totally integrated. DSC can perform almost any activity within ISPF, or internally invoke the function that can perform the task. All DSC functionality is available without a need to modify any ISPF Primary Option Menu.

If you decide to modify the ISPF Primary Option Menu (see "Sample modified main menu panel" in the *DSC Installation Guide*), it is changed only slightly, as shown in this example:

```
                          ISPF Primary Option Menu        IBM DSC VERSION 8.1
 Option ===>

0  Settings      Terminal and user parameters            User ID . : INTT125
1  Browse        Display source data or listings         Time. . . : 15:55
2  Edit          Create or change source data            Terminal. : 3290A
V  View          Display/change source data              Screen. . : 1
3  Utilities     Perform utility functions               Language. : ENGLISH
4  Foreground    Interactive language processing         Appl ID . : ISR
5  Batch         Submit job for language processing      TSO logon : SPFEIBM8
6  Command       Enter TSO or Workstation commands       TSO prefix: INTT125
7  Dialog Test   Perform dialog testing                  System ID : SP23
9  IBM Products  IBM program development products        MVS acct. : IS100
10 SCLM          SW Configuration Library Manager        Release . : ISPF 7.1
11 Workplace     ISPF Object/Action Workplace
12 z/OS System   z/OS system programmer applications
13 z/OS User     z/OS user applications
O  Olist         DSC Object/Data set list

     Enter X to Terminate using log/list defaults
     BRowse EDit VIew OList TSO DSC DSC? are available from any panel
```

Figure 1. The Primary Option menu

The main menu does not look much different. If you are already familiar with ISPF, you can become productive immediately.

When you start using the enhanced features of DSC to perform standard BROWSE, EDIT, VIEW functions, as well as most of the ISPF capabilities, you will find almost every ISPF capability has been enhanced and new capabilities added.

Batch utility replacing IEBCOPY

The ISPF IEBCOPY is restricted to copying members, with limited support for wild cards, and a strict syntax. The replacement batch utility supports patterns for names, and many more activities, such as DELETE, RENAME, and RECOVER. As well, the syntax is much less strict. This means you can do much more using the batch utility, using a wider range of name patterns.

DSC Monitor

z/OS provides the LLA (Library Lookaside Facility) to cache in memory directory entries of selected libraries. The cache can then be refreshed through manual console commands. The refresh is restricted to refreshing every entry for the members within the libraries.

The DSC Monitor provides an alternative way of managing this cache:

- The updating of the cache can be managed through the DSC Monitor menu user interface.
- Monitoring options can be at group, library or member level (so it is possible to control the monitoring of an individual member).

- Monitoring can also be controlled for individual nodes in a sysplex,.
- Updating of the cache is automatic, in response to member update events (such as change or delete).

  A forced automatic update ensures that in a busy environment overlooked events cause no damage.

The DSC Monitor makes it possible to refresh the LLA cache in a timely, controlled, and efficient fashion.

Accessibility

Accessibility features help a user who has a physical disability, such as restricted mobility or limited vision, to use software products successfully. The major accessibility features in Data Set Commander enable users to:

- 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 using only the keyboard.

You can perform most tasks that are required to set up and run Data Set Commander by using a 3270 emulator that is logged on to TSO.

IBM Personal Communications for Windows provides 3270 emulation with accessibility features for people with disabilities. You can use this product to provide the accessibility features you need.

What's new in version 8.1.3

New product mission and architecture

- Provide enhanced productivity and automated functionality to z/OS based data set operations.
- Include three main components:
  - Interactive menu driven front end to ISPF (formerly known as IPT).
  - Batch utility for replacing IEBCOPY with enhanced partitioned data set manipulation functions.
  - A Monitor started task for automating the refreshing of z/OS LLA-managed directory entries. This component includes the facility for filtering out the SMF records of irrelevant data sets.

New product name updates

- The former ISPF Productivity Tool is renamed to Data Set Commander.
- All display panels contain a -DSC- (instead of -IPT-) in the upper left corner.
- Product name DB2 is updated to Db2.

New product registration

- DSC might be included in the "IBM PD SOLTN PAC" solution package with a product ID 5655-PDS.

DSC Automatic LLA Refresh Monitor (IQIMONTR)

This is a brand new component of the product. It runs as a started task, from an APF-authorized library, in one or more selected z/OS images of a SYSPLEX. It

listens for updated to LLA-managed libraries and automatically refreshes the pertinent LLA directory entries across all monitored nodes of the SYSPLEX.

DSC Monitor supports a comprehensive set of operator console commands, providing complete control of its performance settings and operations.

SMF Record Filtering Facility is an independent feature of the DSC Monitor for bypassing the recording of SMF record types 14, 15 (DFSMS CLOSE SVC), type 17 (SCRATCH data set), type 18 (RENAME data set), type 42 (DFSMS Partitioned Data Set directory update), type 62 (VSAM OPEN), and type 64 (VSAM CLOSE) pertaining to data set names that match a set of customer defined selection and exclusion statements.

Copy PDS Audit Trail Facility is an independent feature of the DSC Monitor for generating SMF record type 42 while copying partitioned data set members via the DSC Batch Utility.

Note: IEBCOPY utility does not generate such SMF records.

DSC Monitor Menu Driven Control Center

This is a brand new application of the DSC interactive component. It provides a complete menu driven operator interface to the operation of all DSC Monitor nodes in a SYSPLEX.

DSC Batch Utility enhancements

- Support z/OS PDSE member generations. Commands are provided to copy, move, delete, rename, and recover member generations.
- Support the load module member BIND data-time stamp for directory listing, as well as filtering and copying by AGE of the load module.
- Support the pre-selection of partitioned members by USERID and AGE before applying the optional SELECT and EXCLUDE statements.
- Support the reformatting of partitioned member records that are copied into a library with a different record format.
- Support option "replace Older" for replacing only the older versions of the member with the same name.
- Support commands MOVEGRP and DELGRP for moving and deleting the selected members, along with all their member generations and aliases.
- Support command TITLECOPY for copying the selected DSC-managed member titles from one partitioned data set to another.
- Support option "STAMP" of command RENAME for carrying the member title to the renamed member, along with updating its "Modification Date-Time" stamp.
- Support command "SET MAXRC" for resetting the utility maximum return code.
- Dynamic optimization of below 16 MB storage utilization.

OLIST enhancements

- Support for z/OS PDSE member generations.
- Improved sharing of a permanent OLIST library among multiple concurrent DSC sessions.
- Support the reformatting of sequential data set records that are copied into a data set with a different record format.
- Support the generation data set group GDG FIFO order option.
- Enhanced support of data set names that contain system symbols.
- Support the enhanced FINDTEXT functionality: concurrently searching for records that match a set of search criteria.
  - A search criterion consists of the following types of search strings:

TARGET
A target search string or a search string pattern mask that is included in a record.
WITH An optional target search string that is included in a record.
WITHOUT
An optional target search string that is excluded in a record.

- Option REPORT is provided for a display of all matched records in an EDIT session with all available standard EDIT functionality for browsing, modifying, and storing all or selected sections of the report.

MSL enhancements

- Support z/OS PDSE member generations. Commands are provided to display, edit, browse, copy, move, delete, recover, and compare member generations.
- Special member list display modes for ISPF extended statistics, PDSE member generations, and DSC-managed member titles.
- Enhanced support of data set names that contain system symbols.
- Support load module member BIND data-time stamp for directory listing, as well as filtering and copying by AGE of the load module.
- Support UTF-8 and ASCII data encoding.
- Support the reformatting of partitioned member records that are copied into a library with a different record format.
- Support option "replace Older" for replacing only the older versions of the member with the same name.
- Support option "STAMP" of command RENAME, for carrying the member title to the renamed member, along with updating its "Modification Date-Time" stamp.
- The updated member titles are automatically saved.
- Support the display of the AMBLIST report within an EDIT session by using the MSL "LMAP" main command and "L" line command against a load-module member. Full EDIT functionality, which includes commands FIND, CHANGE, CUT, PASTE, CREATE, and REPLACE, is provided for the whole or selected sections of the report.
- When the Browse, Edit, or View session is invoked against a data set or member that cannot be handled by standard ISPF BROWSE/EDIT functions (for example, the spanned record format), MSL automatically attempts to invoke the designated VSAM handler (for example, IBM File Manager).
- Support the enhanced FINDTEXT functionality: concurrently searching for records that match a set of search criteria.
  - A search criterion consists of the following types of search strings:
    TARGET
    A target search string or a search string pattern mask that is included in a record.
    WITH An optional target search string that is included in a record.
    WITHOUT
    An optional target search string that is excluded in a record.
  - Option REPORT is provided for a display of all matched records in an EDIT session with all available standard EDIT functionality for browsing, modifying, and storing all or selected sections of the report.
- Support ISPF EDIT "Regular Expression" search strings by using the MSL command GLOBAL.

Command shortcuts

- New command shortcuts:
  DSCDFLT
  Restores all the default options according to the current customized member IQIDFLTS of the DSC target library SIQIPLIB.

DSCMON
Starts the DSC LLA Monitor control center application.
ISPLIT
Starts a new named ISPF split screen, and activates the ISPF "SWAPBAR".
ISTART
Modifies, executes, or modifies and executes the ISPF "ZSTART" command stack.
OLPDS
Displays a temporary object list of all the PDS data set names that match a given pattern mask.
OLPDSE
Displays a temporary object list of all the PDSE data set names that match a given pattern mask.
OLPDSEL
Displays a temporary object list of all the PDSE load-module library names that match a given pattern mask.
OLPDSL
Displays a temporary object list of all the PDS load-module library names that match a given pattern mask.

- Command shortcut ISET provides detailed displays of all user-controlled default settings.
- All IPTxxxx command shortcuts from IPT V7.1 are still supported, as well as their corresponding DSCxxxx names.

DSC Online Assist updates

- To display the latest information about all supported DSC commands for OLIST, MSL, and EDIT, use main command A in OLIST, MSL, or EDIT panels accordingly.
- To display the latest information about the Batch Utility, execute DSC Batch Utility IQIBUTIL with option "PARM=HELP".

DSC active status profile variable

Applications that need to verify whether DSC is active might now check whether profile variable IQIDSCON or IQIIPTON is present and contains a value "YES".

IQIWIZRD customization wizard updates

- Specify RACF resource name and default operator authorization for using the DSC Monitor Control Center application.
- Enable or disable support for PDSE version 2 member generations. This site-wide option might be overridden, either way, by each user.
- Set default operator authority for the DSC Monitor Control Center.
- Initialize the user-controlled default options in the customer's DSC environment.

z/OS level support and ISPF compatibility

Data Set Commander Version 8 is tested and certified to run on z/OS V2.3. It requires a minimum of z/OS V1.13.

Rolled-up maintenance

All required, accumulated maintenance has been "sourced" and included in this release.

DSC web link

http://www.ibm.com/software/products/us/en/data-set-commander

What's new in version 7.1

Here are the changes to IPT (ISPF Productivity Tool - the name of the product before Data Set Commander).

OLIST enhancements

- New support for an optional “PUBLIC” OLIST library for storing site-wide common Object Lists. A public OLIST may only be modified by an authorized IPT administrator and cannot be overridden by an unauthorized user.
- New support for an optional “READ-ONLY” OLIST library for storing site-wide common Object Lists. A read-only OLIST may only be modified by an authorized IPT administrator but it may be customized by a user and stored as a private permanent OLIST.
- Permanent OLIST library management has been enhanced to include and synchronize all user accessible OLISTs by priority of: PUBLIC, PRIVATE, and READ-ONLY libraries. The display of all “Permanent Object Lists” (“O*”) supports all user accessible OLISTs and enables the user to update OLIST descriptions, define new “Dynamic OLIST” entries, import permanent OLISTs, and rename or delete private OLISTs.
- New line command “CLONE” (or “CLON”) provides a comprehensive menu for cloning any given NON-VSAM data set (see “CLONe command” on page 211).
- New dynamic OLIST object type “DD=<ddname>” can be specified in an OLIST. When selected it displays an object list of all data sets allocated to <ddname> or of all currently allocated data sets (if blank).
- “COPY” line command supports sequential data sets of different attributes (see “COpy line command” on page 213).
- New main command “FILLCLAS” (or “FC”) is an alias name of “FILLVOL” (“FV”). It checks the existence and attributes of each object of a given OLIST and updates all CLASS and VOLUME fields (see “FILLCLAS command” on page 220).
- New main command “LISTCLON” (or “LISTCL”) populates an OLIST with clone data set names matching a given pattern (see “LISTCLon main command” on page 233).
- New main command “LISTNVS” (or “LISTN”) populates an OLIST with NON-VSAM data set names matching a given pattern (see “LISTNvs main command” on page 237).
- New main command “SHOWARCH” (or “SHOWARC”) is an alias name of “SHOWMIG” (“SHOWM”). It controls the hiding (exclusion) of migrated dataset objects (see “SHOWARCh command” on page 257).
- “FREE” line command has been enhanced to allow for compress, release of data set free space, as well as consolidation of consecutive space extents (see “FREe command” on page 228).
- Executed CLIST and REXX EXECs can optionally receive a VOLSER parameter (in addition to the OBJECT NAME), based on an IPT site-wide customization.
- SHOWCMD ON status marker “*SHOW*” or SHOWCMD OFF status marker “*EXEC*” is included in each OLIST display to assist in CLIST execution.

MSL enhancements

- Enhanced main entry panel (main options 1, 2, V) now supports an extended “ISPF Project” field. When IPT SCLM support is enabled, a new field for an "SCLM alternate project" is also included.

- ISPF Extended Statistics are now fully supported by IPT even in a z/OS V1R10 and older versions. The “STATS” (or “Z”) command can create or update a member's ISPF Statistics in “standard” and “extended” format.
- New line command “I” displays in detail the “standard” and “extended” ISPF statistics for a non-load-module member. It displays a load-module map for load-module member (like “L” line command) (see “I line command” on page 147).
- New main command “CLONE” (or “CLON”) provides a comprehensive menu for cloning any library in the currently displayed member list concatenation (see “CLONe command” on page 113).
- Main commands “COPY” and “MOVE” (line commands “C” and “M”) can copy-merge multiple selected members into a sequential data set.
- Support for TSO commands and CLISTs has been enhanced to provide an easy to use interface for executing TSO functions via the line command as well as main command fields.
- New main command “UTIL” directly invokes the ISPF Utility Selection Panel from the member list display (see “UTILity command” on page 187).
- New main command “SHOWCMD” (or “SHOWC”) controls the prompt display of a TSO command (or CLIST) before execution (see “SHOWcmd command” on page 173).
- Executed CLIST and REXX EXECs can optionally receive a VOLSER parameter (in addition to the OBJECT NAME), based on an IPT site-wide customization.
- SHOWCMD ON status marker “*SHOW*” or SHOWCMD OFF status marker “*EXEC*” is included in each OLIST display to assist in CLIST execution.
- Member tagging has been revamped and significantly enhanced. Members may be easily tagged via the “+” line command or the TAG (also “+”) main command.
- Most member related main and line commands come with a “tagged variation”, that operates only on members with tags matching a given tag pattern.
- A new comprehensive member title management facility has been created. It enables the user to enter new member titles with optional user keys, and then modify or remove them. A new main command “SHOWTITL” (or “SHOWT”) controls the member list title display mode.
- New line commands “(” and “)”, prompt the user with an entry panel for displaying or updating the member title and user key (see “(command” on page 109 and “) command” on page 109).
- A new main command “TITLE” (or “TITL”) provides the user complete control over the library member title list. It can STORE, EMPTY, REFRESH, IMPORT, and MIGRATE the member title list (see “TITLe command” on page 183).
- A new main command “FILTTITL” (or “FIL(”) can filter the member list by a given pattern of a member title.
- A new main command “FINDTITL” (or “F(”) can locate the next occurrence of a member title matching a given pattern (see “FINDTITl command” on page 136).
- A new main command “SORTTITL” (or “SORT(”) can sort members in ascending or descending order of member title (see “SORTTITl command” on page 176).
- A new main command “FILTUKEY” (or “FIL)”) can filter the member list by a given pattern of member user keys (see “FILTUKEY command” on page 130).
- A new main command “FINDUKEY” (or “F)”) can locate the next occurrence of a member user key matching a given pattern (see “FINDUKEY command” on page 138).
- A new main command “SORTUKEY” (or “SORT)”) can sort members in ascending or descending order of member user keys (see “SORTUKEY command” on page 176).
- The “FIND” command has been enhanced to search for member names by pattern (see “Find command” on page 131).

- The “SAVE” command has been enhanced to provide the option of storing or printing a member list with all associated titles and user keys (see “SAVE command” on page 167).
- The “FILTER” command has been enhanced to support all variations of the following relation operators: EQUAL, GREATER-THAN, LESS-THAN, BEGIN-WITH, END-WITH, CONTAINED-IN, MATCHING-PATTERN, plus an optional NOT operator for all of supported relations (see “FILter command” on page 126).
- The new “HIDE” main command has been added to support an identical syntax as “FILTER” and assume an implied “NOT” of the specified relation (see “HIDe command” on page 144).
- The “UNFILTER” main command has been enhanced to support a history of all active filtering commands (see “UNFilter command” on page 186).
- Revamped MSL online Assist facility which includes all updates to prior and new commands.
- Member lists can be fully displayed in a maximum screen size of 102 rows by 80 columns.

EDIT/VIEW enhancements

- New main command “CLONE” (or “CLON”) provides a comprehensive menu for cloning the currently being edited member library or sequential data set.

Object name Point-and-Shoot enhancements

- IPT Object name Point-and-Shoot facility supports name strings that contain TSO variable &SYSUID as well as z/OS System Symbols.

Command shortcuts

- New command shortcut “INAME” sets up a permanent screen name to current ISPF split and displays the ISPF “SWAPBAR”.
- New command shortcut “OLCL” (or “OLCLONE”) displays a temporary object list of all clone data sets, matching a given pattern.
- Command shortcut “OLDD” (or “OLDDNAM”) displays a temporary object list of all data sets currently allocated to your TSO session in ascending order of DD names.
- New command shortcut “OLN” (or “OLNVSAM”) displays a temporary object list of all NON-VSAM data sets, matching a given pattern.

IPT SET user default updates

- Option to prefer native (generic) data set name patterns instead of the more limited DSLIST pattern convention.
- Include or remove the optional TSO command parameter in OLIST display.

IQIWIZRD Customization Wizard updates

- Specify site-wide names of OLIST PUBLIC and READ-ONLY libraries.
- Specify site-wide clone data set name suffix (default “.CLONE”)
- Specify site-wide member name (default “Z999TITL”) of partitioned library member title list.
- Provide values for PEL supported dialog variables: UDLG1 UDLG2 UDLG3 UDLG4 .

IPT Panel Extension Language (PEL)

The IPT Panel Extension Language (PEL) is now available for selected application panels. It provides support for improved productivity and control over panel definitions by allowing the panel developer to use:

- Common panel sections can be shared across multiple panels via the include panel member facility (like a COBOL COPY statement).
- Multiple panel versions can be dynamically generated based upon environmental conditions (via special IF/ELSE statements). With this facility, panels can be created with different lines used for different versions of ISPF, different groups of users, different logon procedures, different programs, and more.
- Ability to create panels that co-exist in multiple ISPF environments. Panel sections that are dependent on specific ISPF versions, may be dynamically enabled or disabled based on the current ISPF version.
- Ability to control user application panels based on the customized values of up to four user-defined dialog variables: UDLG1 UDLG2 UDLG3 UDLG4.

IPT Active Status Profile Variable

- Applications that need to verify whether IPT is active may now check whether profile variable IQIIPTON is present and contains a value "yes".

IPT batch utility

This is a brand new component of IPT. It is implemented as a seamlessly integrated front end to IBM's IEBCOPY utility. In addition to supporting all IEBCOPY standard functionality, it includes the following major enhancements:

- Less restrictive control statement syntax.
- Support dynamic allocation of input and output data sets via new keywords INDSN, INVOL, OUTDSN, OUTVOL.
- Support selection and exclusion of members matching patterns with wild cards characters “*” (any string) and “%” (any single character).
- Support emptying a partitioned library via EMPTY control statement.
- Support deleting members by a DELETE control statement followed by any number of SELECT and EXCLUDE statements including member name patterns.
- Support renaming of members via the RENAME control statement followed by a number of SELECT statements including member name patterns. .
- Support aliasing of members via the ALIAS control statement followed by a number of SELECT statements including member name patterns. .
- Support user-defined member title management (see IPT MSL support above).

z/OS level support/ISPF compatibility

IPT has been tested and certified to run on z/OS Version 1 Release 13 and the corresponding release of ISPF (internally numbered 6.3). Requires a minimum of z/OS Version 1 Release 9.

- Full support for z/OS Extended Volume Architecture (EAV).
- Full support for ISPF Extended Statistics member directory entries.

Rolled-up maintenance

All required, accumulated maintenance has been “sourced” and included in this release.

Chapter 2. Using the DSC interactive component

This chapter describes the features and functionality of the interactive component of DSC, and explains how to implement its fields, tool bars, and options.

Object orientation

By extending the data-set objects used by ISPF to other object classes, Data Set Commander lets you specify the object to be processed and the action that is performed (such as EDIT or BROWSE). The facility appropriate to the object class for the action you have requested is invoked automatically. With this object-oriented metaphor, you need not be concerned with object classes and the corresponding utility for each. Data Set Commander relates objects to applications similarly to the way a PC performs OLE (Object Linking and Embedding).

OLE is the process by which a specified object (for example, a VSAM file) is internally registered to a method (for example, FileManager) that performs a task the user requests. Usually, it is sufficient to "click" on the object to take the appropriate action. It is up to the system to resolve the class of object, the desired action, and what program or product should perform the requested function. Consider the following example:

1. You are using OLIST to display a list of files. The OLIST default command is B (for browse). The OLE registration performed during Data Set Commander installation indicates that your site has IBM's FileManager VSAM browser/editor.
2. Use your mouse to click (point-and-shoot) on the line showing the name of a VSAM file.
3. Enter one of the commands: EDIT, VIEW, BROWSE, or program a PF key to represent the command. Data Set Commander automatically recognizes that the data set is a VSAM file and invokes the FileManager browser.

Under Data Set Commander, the same actions for a VSAM file in OLIST can be performed in DSLIST. DSLIST does not support all objects, for example, Db2 or PC file names, whereas OLIST supports all objects.

Data Set Commander attempts to classify objects automatically. For example, it recognizes that a data set is a VSAM file rather than a PDSE library. Some object types cannot be automatically recognized, so Data Set Commander uses a special prefix character to designate the object class. In the case of Db2, table names are prefixed by a hyphen. The special prefix character is not considered part of the object name.

The following objects are supported by every Data Set Commander function:

Table 1. Objects supported by Data Set Commander

Object class	Object identification	Supported product	Example
Sequential, PDS data sets	Standard data set syntax	None needed, built in support using standard ISPF facilities.	ACCOUNTS.PAYABLE.COBOL PAYROL.NORTEAST.TRANS

Table 1. Objects supported by Data Set Commander (continued)

Object class	Object identification	Supported product	Example
VSAM files	Standard data set syntax	FileMgr, FileAid, Data-Xpert, MacKinney VSAM utility, and other 3rd party products, a sample browser, and installation written interfaces.	ACCOUNTS.MASTER.DATA
Panvalet or Librarian files	Standard data set syntax	Panvalet-ISPF, Librarian ELIPS, and installation written interfaces.	TAXES.MASTER.SOURCE
Db2 tables	A leading hyphen (not part of the table name)	RC-UPDATE, PRO-EDIT, PRO-ALTER, CDB-EDIT, FileAid-Db2, and installation written interfaces	-ACCOUNTS_PAYABLE.NORTH
BOOK data sets	Standard data set syntax	IBM BookManager® READ/MVS	PP.DB2V710.DSNAGH10.BOOK
SHELF data sets	Standard data set syntax	IBM BookManager READ/MVS	PP.PLI.V1R1M1.IBM3SH03.BKSHELF
ZONE data sets	Standard data set syntax	Requires IBM SMP/E	SUPPORT.TECH24.IBM.GLOBAL.CSI
DD names	@DD. Followed by a DDNAME	Depends on allocated DD name object class.	@DD.STEPLIB @DD.ISPPLIB.#2
SCLM hierarchies	Leading less-than sign	None needed, built in support.	<PROJECT.DEVGROUP.TYPE
DSLIST or OLIST entries	Data set level with wildcards (“%” or “*” included in the name)	None needed, built in support.	SYS1.*LIB CICS.A%C.COBOL
z/OS UNIX System Services files	Name starting with any of the following characters: slash(/) or dot(.) or tilde(~)	Utilizing z/OS native Unix Services under z/OS v1.9 and above. Utilizing OpenEdition services under z/OS v1.8 and below.	/samples/comics.lst
OpenEdition files	Leading right parenthesis (not part of the name)	Utilizing z/OS native Unix Services under z/OS v1.9 and above. Utilizing OpenEdition services under z/OS v1.8 and below.	)root/TEST/ACCOUNTS-PAY/AP.C
PC file names	Name enclosed in double quotation marks	Requires ISPF Workstation connection.	C:\WINDOWS\SYSTEM\SPFE5.TXT
User defined	Indicated by greater-than sign	User-defined process.	>MY-OBJECT_is/HERE

Using these objects is similar to specifying a standard data set. For example, to BROWSE the Member List of the library allocated to the second concatenation of the STEPLIB DD, enter the following command (on any ISPF panel):

```
BROWSE @DD.STEPLIB.#2
```

Note: A common example of combined object support is to specify a volume pattern (or a data set name pattern) in option 2 (EDIT) to obtain a data set list matching the specified volume pattern. Then, select a data set from the data set list. If it is a VSAM file, for example, Data Set Commander places you in the VSAM editor. You have now used both the volume pattern object and a VSAM object, without having to navigate out of the EDIT panel to DSLIST or to your VSAM editor utility.

Extended point-and-shoot

Data Set Commander extends the point-and-shoot capabilities of ISPF to allow more cursor activated functions. Like ISPF's point-and-shoot, you can use the cursor to click on fields, press the Enter key, and have Data Set Commander take the appropriate action. If you use an emulation program, for example, IBM Personal Communications, you can use the mouse to both position the cursor on a field and send the Enter key. With a workstation and mouse, the Data Set Commander extended point-and-shoot capability makes ISPF behave more like a PC.

In addition to the ISPF point-and-shoot fields, Data Set Commander supports three new point-and-shoot facilities:

Hotbars
: User-definable point-and-shoot fields that appear on selected panels. These fields provide an easy way to enter frequently used commands without having to dedicate a PF key for that purpose. You can reveal or hide the Hotbar line.

Point-and-shoot parameters
: Any data set name (or member name) included on any ISPF panel is automatically available as a point-and-shoot field for the BROWSE, EDIT, VIEW, and TSO commands.

  In addition you may also point-and-shoot from any panel by invoking the following command shortcuts: OL, OLB, OLBK, OLBO, OLDD, OLE, OLG, OLI, OLM, OLPDSE, OLP, OLSH, OLT, OLV, OLVS, OLZ, EX1, EX2, EX3, EX4, EX5, EX6, EX7, EX8, EX9. This facility makes it easy to use displayed information as input parameters for common functions.

Action fields
: These fields are similar to the ISPF point-and-shoot fields, but are not marked by special highlighting. (If the action fields were highlighted, most of the panel is covered by highlighting.) The action fields appear on MSLs and OLISTs.

The following sections describe each of these facilities.

Hotbars

The hotbar is an optional line you can define to contain commands for each panel. Hotbars can be activated on the Member list, Object list, and BROWSE, EDIT, VIEW Entry Panels. The hotbar includes the `Hotbar:` tag on the left, followed by up to eight commands.

How to activate and deactivate hotbars

From any command line (except when you are in OLIST or MSL), enter DSC SET, or the shortcut ISET. When you are in OLIST or MSL, enter SET. The Setting IBMDSC Defaults panel is displayed.

Select the **INTERFACE** option. The User Interface Options panel is displayed:

```
-DSC- ---------------------User Interface Options-----------------------------
COMMAND ===>

    +---------------------------------------------------------------------+
    | Note: Changes specified on this screen may not affect all of the    |
    |       panels that are currently displayed in nested applications.   |
    +---------------------------------------------------------------------+

Verify or specify the following options: (Enter Y for Yes, N for No):

  Activate HOTBARS                      ===> Y

  Activate Action Bars                  ===> Y
    If Action Bars are active:
      Display Action Bars in Browse, Edit, View    ===> Y
      Display Action Bars in Member Selection List ===> Y
      Display Action Bars in the object list       ===> Y
      Display Action Bars in DSLIST                ===> N

 Press ENTER for options menu, END to exit, CANCEL for installation defaults.
```

Figure 2. Activating hotbars through the User Interface Options panel

To the right of **Activate HOTBARS**, type Y, and press Enter. Now, on each of your panels, the hotbar is available.

To deactivate hotbars, repeat this procedure, but set the **Activate HOTBARS** field to N.

How to define the commands on hotbars

Once the hotbar is activated, it appears under the COMMAND line.

If commands are not defined on the hotbar, the **Hotbar:** tag changes to **Hotbar?**.

```
-DSC- OLIST (B) ----------- Objects List ---------------------- Row 1 to 3 of 3
Command    ===>                                                SCROLL ===> PAGE
Hotbar?
Open list  ===> MYLIST   (or BLANK for reference list)
```

The hotbar line still occupies a panel line. If you do not plan to use the hotbar, you can deactivate it and gain the extra panel line (see "How to activate and deactivate hotbars").

```
-DSC- OLIST (B) ----------- Objects List ---------------------- Row 1 to 3 of 3
Command    ===>                                                SCROLL ===> PAGE
Open list  ===> MYLIST   (or BLANK for reference list)
```

The setting for the hotbars is global. If you have a hotbar displayed in the OLIST, then you also have one displayed in the MSL.

To define the hotbar commands, click the **Hotbar:** or **Hotbar?** tag or place your cursor under the tag and press Enter. The tag changes to **HOTBAR=**. You can enter up to eight commands.

```
-DSC- OLIST (B) ----------- Objects List -------------- Define HOTBAR commands
Command    ===>                                          SCROLL ===> CSR
HOTBAR= VALIDATE FILLVOL_ UPDATE__ RFIND___ CANCEL__ SAVE____ ________ ________
Open list  ===> MYLIST   (or BLANK for reference list)
```

You can enter any valid command on the Hotbar. Data Set Commander lets you enter an invalid command on the hotbar, but when you invoke the invalid command from the hotbar, nothing happens. No error message is issued.

The underscores show the positions of the eight command fields. You can press the Tab key to move the cursor from one field to another.

To replace a command with another, overtype the original command.

Suggested hotbar settings

The following figures show the commonly used hotbar commands for the OLIST, the MSL, and the EDIT, VIEW and BROWSE Entry panels. You may want to define your own hotbars in the same manner.

OLIST hotbar commands:

```
-DSC- OLIST (B) ----------- Objects List ---------------------- Row 1 to 3 of 3
Command    ===>                                                SCROLL ===> CSR
Hotbar: OPRINT   REFRESH  CLRVOL   FILLVOL  UTIL     UPDATE   CUT      FLIP
Open list  ===> MYLIST   (or BLANK for reference list)
```

MSL hotbar commands:

```
-DSC--BROWSE L1---- SYS1.MACLIB ----------------------------ROW 00001 OF 01757
COMMAND  ===>                                                SCROLL ===> PAGE
HOTBAR: REFRESH  FLIP     GLOBAL   INFO     COMPRESS EXPDIR   TAILOR   TOTALS

   NAME    RENAME   LIB VV.MM CREATED     CHANGED      SIZE  INIT   MOD USERID
```

BROWSE, EDIT and VIEW Entry panels:

```
-DSC--L1 - - - ------ VIEW - ENTRY PANEL -------------------------------------
COMMAND ===>
HOTBAR: @H       @L       SORT CHA TAILOR   COMPRESS EXPDIR   INFO     SET
```

Point-and-shoot parameters

Data Set Commander supports the following ISPF point-and-shoot fields:

- Action bars
- Menu options
- Other panel defined point-and-shoot fields

The following OLIST panel illustrates some of the extended point-and-shoot fields:

```
  File  Edit  Find  Display  Populate  Settings  Menu  Util  Test  Help  Exit  1
-------------------------------------------------------------------------------
-DSC- OLIST (B) ----------- LEVEL SYS*PLIB* ---------- "A" will display assist
Command    ===>                                          SCROLL ===> CSR
Hotbar: OPRINT   REFRESH  CLRVOL   FILLVOL  UTIL     UPDATE   CUT      FLIP    2
                                                        *TEMPORARY LIST*
TSO PARMS  ===>
Command   Member   Numbr Data Set Names / Objects                      Class  3
--------- -------- ----- ------------------------------------------- -------
                      1 'SYS1.ADFQPLIB'
                      2 'SYS1.ADGTPLIB'
                      3 'SYS1.AICEPLIB'   4
                      4 'SYS1.APLIB'
                      5 'SYS1.ASAMPLIB'
                      6 'SYS1.CIPLIB'
                      7 'SYS1.DFQPLIB'
                      8 'SYS1.DGTPLIB'
                      9 'SYS1.SAMPLIB'
                       ---------------- END OF LIST ----------------
```

Figure 3. OLIST extended point-and-shoot fields

1 Action bar
2 Hotbar
3 Column headings (typical action fields)
4 Data set/Object (typical point and shoot parameter). Applies to all items in the list.

Many ISPF panels contain data set names. Data Set Commander automatically treats these as input parameters to the BROWSE, EDIT, and VIEW commands. Additionally, the Data Set Commander TSO shell lets you use a slash as a symbolic placeholder for a Point-and-Shoot Parameter within the parameter buffer of a TSO command.

For example, when you BROWSE JCL using a spool viewer (SDSF, IOF, or a similar product), you may want to inspect a data set referred to in the JCL. You can type `BROWSE` on the command line, place the cursor on the data set name on the spool viewer panel, and press the Enter key. If you predefine a PF key as BROWSE, EDIT, or VIEW, you can place the cursor on the data set name and press the PF key directly.

The point-and-shoot parameters can be of any supported object class. For example, you can point at a VSAM data set and invoke the VSAM editor on top of the spool browser.

The Data Set Commander TSO shell substitutes a slash in the TSO command buffer with the name of a data set you pointed to. This is similar to how BROWSE, EDIT, and VIEW accept point-and-shoot parameters. For example, you can enter `TSO LISTDS / LABEL` on the command line to display the VTOC entry for a cataloged data set, place the cursor on a data set and press the Enter key. If you place the cursor on a data set named 'JONES.TEST.JCL', Data Set Commander issues the command `LISTDS 'JONES.TEST.JCL' LABEL`.

Data Set Commander determines the name of the data set that you point to in this fashion:

1. Unquoted data set names are always interpreted as if the name is prefixed by your current TSO prefix.

   For example, if the TSO prefix is your user-id is “INTT125”, then if you enter `BR TEST.DATA` it is interpreted as “BR 'INTT125.TEST.DATA'”.

2. If the unquoted name is up to eight characters in length without any dots (that is, levels) it is always interpreted as a library member name.

   The member name is expected to come from the current library if MSL is in control, or from the most recently accessed library as saved in the user's ISPF profile.
3. If the name is quoted it's always a data set name.

These rules apply when you do a point-and-shoot to EDIT/BROWSE/VIEW, which are MSL controlled.

If you point-and-shoot to an OLIST shortcut such as OL, OLM, OLG, or OLI, the name is always (quoted or unquoted) interpreted as a “data set level”, which is any data set name that is identical to this name or matches the pattern of "level.* ". For example, the command `OL INTT125.TEST` displays a temporary OLIST with names like:

```
INTT125.TEST            <-- The identical name
INTT125.TEST.A          <-- Pattern matches
INTT125.TEST.XYZ
INTT125.TEST.ABC.XYZ
```

In the case of OLIST shortcuts (but not for MSL shortcuts) you may also point-and-shoot strings that contain wild-cards “*” and “%”.

Occasionally, Data Set Commander is not able to match a data set to the pointed string, or you aren't pointing to a data set. In these cases BROWSE, EDIT, and VIEW display a prompt panel, and the TSO shell leaves the slash unsubstituted.

You may want to specify the TSO command with a leading question mark when using the TSO shell. This is an indication that you want to see the substituted command buffer before executing the command. You may change the command before issuing it, or press the END key to discard the command.

Adding point-and-shoot commands

The Data Set Commander TSO shell allows point-and-shoot substitution to occur within entered commands. For example, you may enter `TSO LISTDS / LABEL` on the command line, and place the cursor on a data set name that appears. If the cursor was positioned over 'SYS1.LINKLIB', Data Set Commander issues the command `LISTDS 'SYS1.LINKLIB' LABEL`.

Using this capability, you can define your own point-and-shoot command. For example, if you create a CLIST (or REXX exec) that accepts a data set as a parameter, you can define it in the ISPF command table (to be called by the Data Set Commander TSO shell). For example, if your command is COMPILE, the ISPF command table definition (as entered in option 3.9) is:

Verb	**T**	**Action**
Verb	T	Action
COMPILE	5	`SELECT SUSPEND PGM(IQITSO) PARM(-,%COMPILE /)`

You could then enter `COMPILE` on the command line, move the cursor on top of a data set name, and press the Enter key. If you define PF23 as `COMPILE`, you only have to position the cursor on the data set name and press PF23.

If you do not point to the data set name, Data Set Commander passes the slash instead. Your CLIST or REXX exec should inspect the passed parameter, and if it is a slash, issue an error message or prompt the user for input.

Note: Each user may specify such TSO commands or CLIST executions in his private Data Set Commander TSO shell permanent command table. Such commands may be used for point-and-shoot by specifying a main command `TSO <n>` (where <n> is the permanent command sequence number) or any of the command shortcuts EX1 to EX9.

Action fields

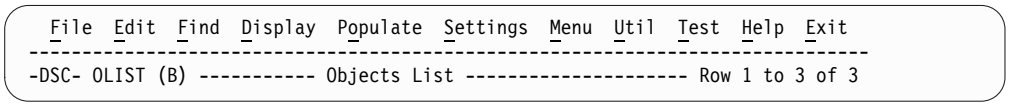
Action fields are similar to the ISPF point-and-shoot fields, although Data Set Commander does not highlight these fields to avoid panel clutter. For more information see "The point-and-shoot interface of OLIST" on page 23 and "The point-and-shoot interface of MSL" on page 26.

Function-oriented action bar

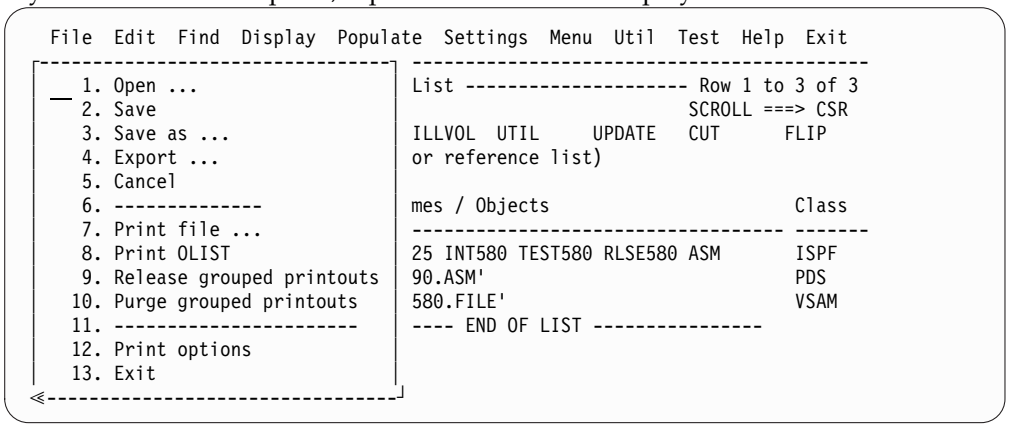
The action bar (shown below) is the area at the top of an ISPF panel that contains actions available on that panel. ISPF Productivity Tool enhances the ISPF action bar by including additional pull-down options. If you are a more experienced user, you can hide the action bar to conserve panel space.

For the major ISPF functions, action bars are organized to look like Windows. The action bar reflects commands for the specific panel you are looking at. For example, the action bar on an OLIST panel looks like this:

Figure 4. The action bar on the OLIST

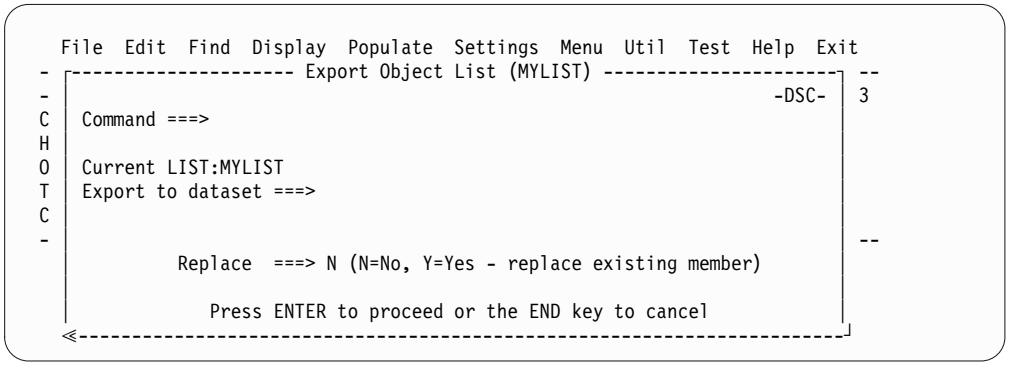


If you select the File option, a pull-down menu is displayed:



When you choose a pull-down item with an ellipsis (**...**), a pop-up window is displayed. For example, selecting **Export...** displays the Export OLIST pop-up window:

Figure 5. An example pop-up window



The pop-up window prompts you to enter required information and to confirm any requested action.

The Data Set Commander Action Bar and the pop-up windows let you access advanced functions without having to learn command names or parameters.

The object list (OLIST)

OLIST is the Data Set Commander object list. It is similar to DSLIST (option 3.4), but with support for additional types of objects (not just plain data sets) as well as additional commands to act upon each object. In its simplest form, OLIST contains only data sets, and is used instead of DSLIST to gain access to new commands.

OLISTs have two main types, temporary OLISTs and permanent OLISTs.

Temporary OLISTs are invoked from the DSLIST Entry Panel (where you can select between DSLIST and OLIST), or when you specify a data set with wildcards when you invoke BROWSE, EDIT, or VIEW.

If you enter OLIST with no parameters, the last permanent OLIST that you invoked is displayed.

Similar to DSLIST, the list of data sets is built ad-hoc to match a generic data set specification (DSNAME with wildcards). This list is created from the catalog, a disk volume, or other sources.

Permanent OLISTs differ from temporary OLISTs in the following ways:

- They are given a name and an optional description.
- They are automatically saved across sessions.
- They can be recalled at any time from any panel.

You invoke this type of OLIST:

- From the DSLIST Entry Panel.
- From a special option on the main menu.
- By entering the OLIST command on the command line of any panel.

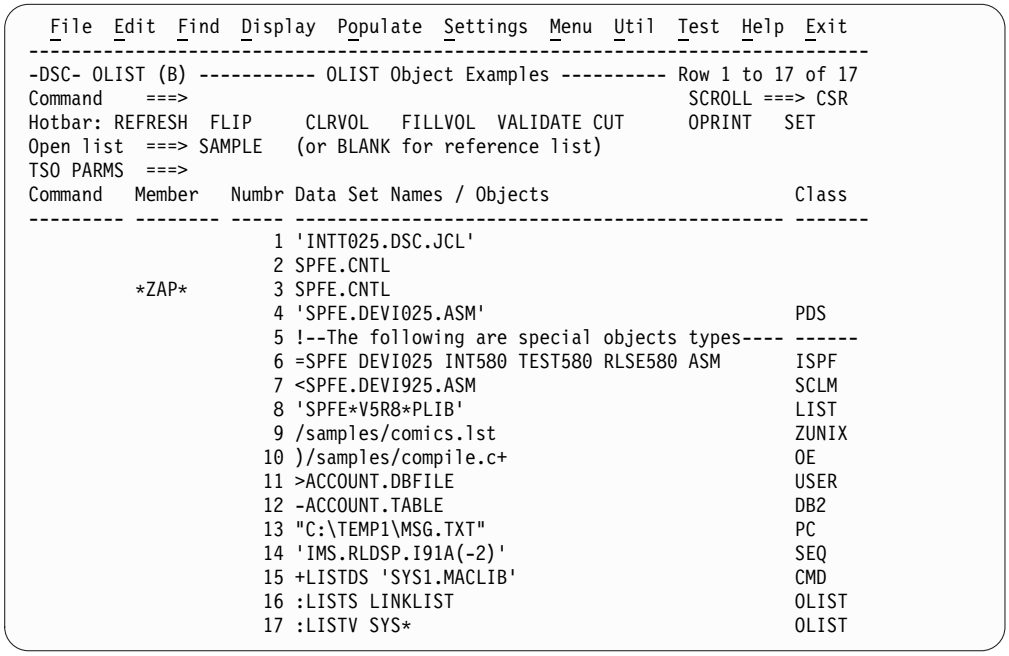
You can maintain as many OLISTs as you wish, switch among OLISTs instantly, and configure OLISTs to be shared among multiple users. You typically use different OLISTs for different projects or products you maintain and support. As

you can place different object classes in OLISTs, you will find it useful to recall an OLIST you have not accessed in some time and see every object you need for a particular project.

Note: All of the above OLIST functionality can be invoked from any panel via the OLIST main command and its various special command shortcuts: O*, O/, OH, OL, OL*, OL/, OLDD, OLB, OLBK, OLC, OLE, OLPDSE, OLG, OLH, OLI, OLM, OLP, OLS, OLSH, OLT, OLV, OLVS, OLZ.

A typical OLIST panel is illustrated below:

Figure 6. An OLIST panel



Both permanent and temporary OLISTs provide powerful features:

- You can populate the OLIST from the catalog, disk volume, allocated data sets, migrated data sets, GDG data sets, system lists, and multiple volumes.
- You can type in object names.
- Every object class visible in OLISTs is supported by Data Set Commander. In native ISPF DSLIST, some object classes are not shown (for example, PC file names), and of the shown objects classes, some are not supported (for example, VSAM files).
- The multiple object class support Data Set Commander provides lets you keep the names of objects in the OLIST and perform actions on these objects. The multiple object class support makes it convenient to organize work around projects and use OLIST as the launch pad for your work.
- OLISTs can be annotated with comments for reference purposes.
- OLISTs can be edited in full-screen. Every change you make on the panel is preserved, and you can even invoke the ISPF editor to edit the OLIST.
- Information contained in OLISTs can be exported to other data sets. OLISTs support the enhanced CUT and PASTE capabilities to allow passing information across OLISTs and into an edited file.

- OLISTs provide powerful search capabilities. You can search for data sets across multiple disks, for members across multiple libraries, and for text within data sets.
- An OLIST can include the same data set name more than once, each with a different member name, member name pattern, or volume. Typically, these are used to provide different views or ways of accessing the same object.
- OLISTs support system managed storage (SMS). SMS may dynamically move data sets across volumes since permanent OLISTs are preserved across sessions. OLISTs provide convenient ways to clear and refill the volume associated with a data set. A special command synchronizes information in the OLIST against the catalog.
- OLISTs can contain entries with generic data set names (names with wildcards). You can issue the DSLIST command separately on each entry. As permanent OLISTs are preserved across sessions, these entries provide a convenient method to invoke DSLIST on commonly used levels. You can also drill down to these generic names, getting a real-time OLIST view.
- OLISTs support fully qualified z/OS UNIX file names of up to 1023 characters. The file name is displayed in a shortened form, appended by a "+". However, if you select this file, the full name may be specified in the z/OS UNIX Object Name Verification panel.
- OLISTs provide an enhanced user interface which features:
  - An Action Bar that is organized to provide easy access to powerful commands.
  - The OLIST entries are numbered to allow selection of objects by numbers or by point-and-shoot.
  - OLIST lines that can be excluded without showing separator lines.
  - Many useful Action Fields (point-and shoot extensions).

Managing OLISTs

To manage your OLISTs at the main command line, enter `OLIST *` or its shortcut `O*`.

The Permanent Object Lists panel is displayed:

Figure 7. The Permanent Object Lists panel

```
 -DSC-                    Permanent Object Lists             Row 1 to 15 of 15
 Command    ===>                                              Scroll ===> CSR

 Your default OLIST is: DSCPUB
  PUBLIC OLIST library: 'SPIFFY.PUBLIC.OLIST'
 PRIVATE OLIST library: 'INTT125.PLIST.LIBRARY'
READONLY OLIST library: 'SPIFFY.READONLY.OLIST'

Main commands:S=Select, L=Locate OLIST, FLip, REFresh, SORT, VALIDATE the list
Line commands:D=Delete, DYN=Dynamic OLIST, IMP=Import, N=Next default, R=Rename
Create a new OLIST by typing over an existing name.
CMD NAME       DESCRIPTION                      STATUS  CREATED  UPDATED
--- --------   -------------------------------- ------- -------- --------------
___ BOOKS      *** public BOOKS                 PUBLIC* 13/04/20 13/04/20 09:55
___ DEMO                                        PRIVATE 13/07/11 13/07/11 20:52
___ DSC                                         RD-ONLY 13/11/30 13/11/30 12:07
___ DSCPUB     === DSC support ===              PUBLIC* 13/11/26 13/11/26 19:48
___ DYNAMIC    *** DYNAMIC OLIST ************** PRIVATE 03/10/10 09/05/10 13:01
___ IEBCOPY                                     PRIVATE 12/11/05 12/11/05 20:27
___ IPTPUB                                      PUBLIC* 13/04/20 13/04/20 15:25
___ IPTRD                                       PRIVATE 13/07/11 13/07/11 21:13
___ IPT6       *** IPT V6 development           RD-ONLY 13/04/20 13/04/20 09:57
___ ISPF       ----- ISPF related -----         PUBLIC* 13/03/16 13/03/16 13:26
___ MYDEV                                       RD-ONLY 12/10/02 12/10/02 12:44
___ MYLIST     *** IPT READONLY OLIST ********* RD-ONLY 12/09/15 12/09/15 15:48
___ SAMPLE                                      PRIVATE 12/10/22 12/10/22 20:52
___ SAMPLEOL   *** IPT SAMPLE OBJECTS ********* PUBLIC* 12/05/06 12/05/06 21:45
___ SAMPLIST   *** IPT SAMPLE OBJECTS ********* PUBLIC* 12/09/19 12/09/19 08:31
----------------------- End Of List ----------------------------------------
```

This panel is where you can manage your OLISTs. The Main Line and Line command options available to you are displayed in the panel.

The description value is the value displayed as the heading (title) when you display an individual OLIST. You can include DBCS character strings in this description.

The VALIDATE command lets you automatically organize the list by removing any OLISTs from the reference list that have not been saved. When you enter VALIDATE (with no parameter), the next panel displayed is the list of updated OLISTs, showing only the OLISTs that have been saved:

```
 -DSC-                    Permanent Object Lists              OLISTs validated
Command    ===>                                               Scroll ===> CSR

 Your default OLIST is: DSCPUB
  PUBLIC OLIST library: 'SPIFFY.PUBLIC.OLIST'
 PRIVATE OLIST library: 'INTT125.PLIST.LIBRARY'
READONLY OLIST library: 'SPIFFY.READONLY.OLIST'

Main commands:S=Select, L=Locate OLIST, FLip, REFresh, SORT, VALIDATE the list
Line commands:D=Delete, DYN=Dynamic OLIST, IMP=Import, N=Next default, R=Rename
Create a new OLIST by typing over an existing name.
CMD NAME       DESCRIPTION                      STATUS  CREATED  UPDATED
--- --------   -------------------------------- ------- -------- --------------
___ BOOKS      *** public BOOKS                 PUBLIC* 13/04/20 13/04/20 09:55
___ DEMO                                        PRIVATE 13/07/11 13/07/11 20:52
___ DSC                                         RD-ONLY 13/11/30 13/11/30 12:07
___ DSCPUB     === DSC support ===              PUBLIC* 13/11/26 13/11/26 19:48
___ DYNAMIC    *** DYNAMIC OLIST ************** PRIVATE 03/10/10 09/05/10 13:01
___ IPTPUB                                      PUBLIC* 13/04/20 13/04/20 15:25
___ IPTRD                                       PRIVATE 13/07/11 13/07/11 21:13
___ IPT6       *** IPT V6 development           RD-ONLY 13/04/20 13/04/20 09:57
___ ISPF       ----- ISPF related -----         PUBLIC* 13/03/16 13/03/16 13:26
___ MYDEV                                       RD-ONLY 12/10/02 12/10/02 12:44
___ MYLIST     *** IPT READONLY OLIST ********* RD-ONLY 12/09/15 12/09/15 15:48
___ SAMPLE                                      PRIVATE 12/10/22 12/10/22 20:52
___ SAMPLEOL   *** IPT SAMPLE OBJECTS ********* PUBLIC* 12/05/06 12/05/06 21:45
___ SAMPLIST   *** IPT SAMPLE OBJECTS ********* PUBLIC* 12/09/19 12/09/19 08:31
___
----------------------- End Of List ----------------------------------------
```

Additional objects supported by OLIST

OLISTs support all the object classes supported by Data Set Commander. In addition to the objects listed in Table 1 on page 11, OLIST supports the following:

Object class	Object identification	Example
Comments	Leading exclamation mark	`! This is a comment`

Dynamic OLIST (Invokes a nested OLIST)	Leading LISTx command	`:LISTC sys1.*mac*`
		`:LISTV VOL001 ACCOUNTS.*COBOL*`
		`:LISTA ISPPLIB`
		`:LISTS LINKLIST`
		`:LISTS LPALIB`

ISPF hierarchies	Leading equal sign	`=PROJECT GROUP1 GROUP2 GROUP3 TYPE`

Immediate TSO commands	Leading plus sign	`+LISTDS 'USER12.TEST.DATA' LABEL`
		`+RECEIVE`
		`+ISPEXEC SELECT PGM(MYPROG) PARM(A)`
		`+%MYTEST DSN(/)`

Prompt TSO commands	Leading question mark	`?LISTDS 'USER12.TEST.DATA' LABEL`
		`?RECEIVE`
		`?ISPEXEC SELECT PGM(MYPROG) PARM(A)`
		`?%MYTEST DSN(/)`

The point-and-shoot interface of OLIST

OLISTs support the extended point-and-shoot interface: action bars, hotbar, and action fields. The following panel illustrates a typical OLIST, with cursor-sensitive input fields bolded. The list of fields under the screen describes what happens when each field is clicked.

```
  File  Edit  Find  Display  Populate  Settings  Menu  Util  Test  Help  Exit
-------------------------------------------------------------------------------
-DSC- OLIST (B) ----------- My Special List ---------- "A" will display assist   A B
Command    ===>                                            SCROLL ===> CSR    C
Hotbar: OPRINT   REFRESH  CLRVOL   FILLVOL  UTIL     UPDATE   CUT      FLIP      D E
Open list  ===> MYLIST   (or BLANK for reference list)
TSO PARMS  ===>
Command   Member   Numbr Data Set Names / Objects                      Class    FG
--------- -------- ----- ------------------------------------------- -------
                      1 !------------------ Personal libraries ------- ------
                      2 'INTT125.CLIST'
                      3 'INTT125.CNTL.JCL'
                      4 !------------------ CICS support ------------- ------
                      5 'CICS*V310*'                                   LIST
                      6 'CICS*V330*'                                   LIST     H
                      7 'CICS*V410*'                                   LIST
                      8 !------------------ SPIFFY support ----------- ------
                      9 =SPFE DEVI825 INT580 TEST580 RLSE580 ASM       ISPF
                     10 'SPFE*CSI'                                     LIST
                     11 <IQI.DEVI125.ASM                               SCLM
                       ---------------- END OF LIST ----------------
```

Figure 8. Cursor-sensitive areas on the OLIST

OLIST (B) A
: Changes the current default cyclically through B for Browse, E for Edit, and V for View.

---------- My Special List ---------- B
: Displays a pop-up window where you can change the OLIST description. The description is saved across sessions.

Command C
: Displays the OLIST Command Assistance panel, which shows you the list of available commands. From this list you can display the details for an individual command.

Hotbar: D
: Edits the hotbar. In edit mode, you can enter any main command as a hotbar command.

OPRINT REFRESH CLRVOL FILLVOL UTIL UPDATE CUT FLIP E
: These are the current hotbar commands. Clicking a command performs it.

Data Set Names / Objects F
: Sorts all data set names or objects in ascending order.

Class G
: Toggles the column contents to show either the Volume or the Class.

'CICS*V330*' H
: Selects the data set or object, using the default action (BROWSE, EDIT, or VIEW) selected. Applicable to each list item.

View main and line commands (Assist)

You can display the available OLIST main and line commands by clicking the "Command" Action Field or by entering the ASSIST command (`Assist` or `A`). The following is an OLIST panel with the commands displayed:

```
-DSC-                    OLIST Command Assistance
Cmd ===>

   For more details, point cursor at selected command and press ENTER
   Enter END or CANCEL to exit
   While reviewing an ASSIST example you may enter an OLIST command,
     press ENTER , and be prompted with command over the OLIST display.

------------------------ MAIN Commands --------------------------------
ASSIST   #f-#l    CANCEL   CLEARVOL CMDPARMS CUT      DEFAULT  END
EXCLUDE  EXPORT   FILLCLAS FILLVOL  FILTER   FIND     FINDTEXT FLIP
LEVEL    LISTALOC LISTBASE LISTBOOK LISTCAT  LISTCLON LISTGDG  LISTHIST
LISTMIGR LISTMULT LISTNVS  LISTPAGE LISTPDSE LISTSHLF LISTSMP  LISTSYS
LISTTAPE LISTVSAM LISTVTOC LOCATE   MEMFIND  OPEN     OPRINT   PASTE
POPULATE QUIT     REFRESH  RELEASE  RESET    RFIND    RIGHT    SAVE
SET      SHOWARCH SHOWCMD  SHOWMIG  SHOWTYPE SHOWVOL  SORT     TITLE
UPDATE   UTIL     VALIDATE

------------------------ LINE Commands --------------------------------
/        /D  /DD  /I       /R       /X  /XX  =        ?<Cmd>   %<Exec>
ALLOCATE BF       BROWSE   CATALOG  CLONE    COMPRESS COPY     COPYALL
DELETE   DSLIST   EDIT     EF       EMPTY    EXPDIR   FREE     HDELETE
HLIST    INFO     LISTBASE LISTBOOK LISTCAT  LISTGDG  LISTMIGR LISTSHLF
LISTSMP  LISTTAPE LISTVTOC LOSTGEN  MAPPDS   MOVE     MOVEALL  OLIST
PRINT    RENAME   SELECT   SUBMIT   UNCATALO VF       VIEW     XFER
<other>
```

Figure 9. OLIST Command Assistance panel

The enhanced Member Selection List (MSL)

When you work with standard (PDS and PDSE) libraries, Data Set Commander provides a Member Selection List (MSL) that supports nearly every function on one or more selected members. You no longer need to navigate from panel to panel of ISPF to accomplish a variety of tasks on a single library. MSL is automatically invoked by BROWSE, EDIT, VIEW, DSLIST, and OLIST. MSL is an enhanced version of ISPF's Member List and supports the commands supported by different ISPF Member List utilities.

MSL provides several useful features:

- Tailor the display. Several commands let you tailor the Member List. When you tailor the MSL, it includes only the members you want in the order you want them. For example, you can:
  - FILTER on one or several ISPF statistic fields (including load module statistics) using wildcards.
  - EXCLUDE members by member name.
  - FLIP between the excluded and included member display.
  - Use GLOBAL FIND to exclude members that do not contain the searched text.
  - Tag members, and use the tagging for filtering.
  - SORT on one or several ISPF statistic fields (including load module attributes) in either ascending or descending order, using patterns.
- Combine multiple utilities into a single common interface Member List. Whether the Member List is started by BROWSE, EDIT, or VIEW, all of the MSL commands are available (BROWSE, COPY, DELETE, EDIT, MOVE, RENAME, VIEW, STATS-RESET, SUBMIT, and TSO commands, among others).
- Text searching capabilities. You can locate members by context and perform global find operations. The results can be used to locate members, to filter the Member List for only members containing specific text, and to display found text along the member names.

- GLOBAL EDIT. MSL also provides built-in GLOBAL EDIT which supports multiple commands using standard edit syntax. You can even create complex macros. Changes can be performed automatically, or you can request a prompt panel before changes are saved. Using the concatenation hierarchy, you can SAVE changes in a separate library, leaving the original members intact.
- Provides immediate access to other libraries via library switching from within the Member List. You can change to another library by changing the first, middle, or last qualifier (level) of the library. You can switch to another volume, or pick a library from the list of the recently referenced data sets.
- Preview windows display member contents within a window on the Member List. You can preview specific members or automatically preview located members or members containing searches for text.
- Provide integrated SCLM support (automatic check-out, lock management, promotion, and other SCLM functions).
- Reduce the number of I/O operations. Many built-in functions substitute utilities that require invocation of separate utilities.
- Issue multiple line commands and commands on multiple members using extended patterns. For example, you can move all members ending in ACCT to library 2 by issuing the main command `M *ACCT 2`.

View main and line commands (Assist)

You can display the available MSL main and line commands by entering the ASSIST command (`Assist` or `A`):

```
-DSC-                    MSL Command Assistance
Cmd ===>

   For more details, point cursor at selected command and press ENTER
   Enter END or CANCEL to exit
   While reviewing an ASSIST example you may enter an MSL command,
     press ENTER , and be prompted with command over the MSL display.

------------------------ MAIN Commands ---------------------------------
ASSIST   ALIAS    CLONE    COMPRESS CONFIRM  COPY     COPYALL  COPYTAG
DEFAULT  DELETE   DELETTAG DSNAME   EMPTY    EXCLUDE  EXIT     EXPDIR
FILTER   FILTER0  FILTTAG  FILTTITL FILTUKEY FINDNAME FINDTAG  FINDTEXT
FINDTXTG FINDTITL FINDUKEY FLIP     GENLOST  GENRECOV GENSHOW  GLOBAL
GLOBLTAG HIDE     HIDETAG  HIDETITL HIDEUKEY INFO     INFOTAG  LIB
LMAP     LOCATE   LOCATTAG MAPPDS   MOVE     MOVEALL  MOVETAG  PRINTMEM
PRINTTAG PROJECT  QUIT     REFRESH  RELEASE  RENAME   RESET    RFIND
SAVE     SCLM     SCLMPARM SET      SELECT   SELECTAG SHOWCMD  SHOWTITL
SORT     SORTTAG  SORTTITL SORTUKEY SSI      STATS    STATSTAG SUBMIT
SUBMTTAG TAG      TAILOR   TITLE    TOTALS   TYPE     UNFILTER USAGE
UTIL     WHERE    WSPATH   XFER     %exec    %+ exec  !tso cmd !+ cmd
linecmnd MSLcmd+  MSLcmd(  MSLcmd)
------------------------ LINE Commands ---------------------------------
A alias  B browse C copy   D delete E edit   F xfer   G genrec H where
I info   J submit K sclm   L lmap   M move   P print  R rename S select
T tso    V view   W window X exclud Z stats  = repeat + tag    ( title
) userky % exec   ! tso    * gensho
```

Figure 10. MSL Command Assistance panel

The point-and-shoot interface of MSL

The following figure shows a typical MSL panel. The list after the screen describes what happens when the corresponding cursor-sensitive field is clicked:

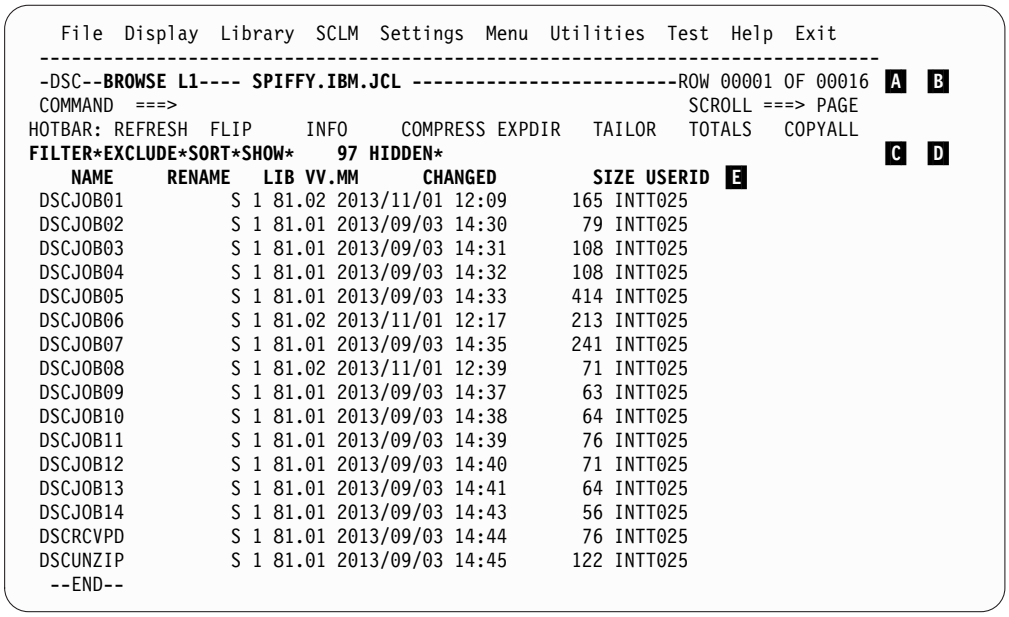


Figure 11. Cursor-sensitive areas on the MSL

BROWSE L1 A
: Changes the current default cyclically through BROWSE, EDIT, and VIEW. The "L1" shows the nesting level.

---- SPIFFY.IBM.JCL ---------- B
: Displays a nested OLIST History display, where you can review or process recently accessed data sets. When you exit this temporary OLIST (PF3), you return to the MSL.

FILTER*EXCLUDE*SORT*SHOW* C
: Tailoring messages. Shows the conditions that have been applied to the MSL member list. By clicking a condition, you remove it. For example, if you click *FILTER*, you remove the filter applied to the MSL.

97 HIDDEN D
: The number of members not currently in the displayed list. (This field is for information only. No action happens if you click it.)

NAME RENAME LIB VV.MM CHANGED SIZE USERID E
: Clicking a column heading sorts the list by the values in that column, and adds "*SORT*" to the tailoring messages. The current sort column heading is highlighted. To sort in the default order (NAME), click the NAME field, or click the *SORT* tailoring message.

Drill-down navigation

Data Set Commander lets you access resources without having to know the exact name of those resources. For example, in the BROWSE, EDIT, and VIEW prompt panels, instead of entering the data set name, you can enter a generic name (a name with wildcards). Data Set Commander automatically opens a temporary OLIST where you can select the data set to process.

Similarly, on the same panel that you can specify a VOLSER, you can specify wildcards. Data Set Commander displays a Volume Selection List and let you select the volume to use.

You can specify a DSN pattern in OLIST that displays the Volume Selection List. A DSN pattern specified with a volume pattern entry (a data set that has a wildcard in it), opens a temporary OLIST with all data sets matching the DSN pattern which resides on the volumes that match the volume pattern.

You can specify volume patterns in the DSLIST (option 3.4) Entry Panel. As DSLIST provides volume-specific functions (like VTOC display), being able to choose a volume from a list is a great convenience.

The ability to specify wildcards on both the data set and the volume fields provides the means to search for a data set. If you are uncertain of the exact data set name or where it resides, you can enter an asterisk followed by a part of the name and another asterisk. In the volume field, you can enter an asterisk. Data Set Commander searches for all data sets matching the pattern on all the disks accessible to you depending on existing security settings.

Enhanced Data Set List (DSLIST)

Data Set Commander enhances the DSLIST (option 3.4) to provide access to the standard DSLIST display as well as the OLISTs and other enhancements.

New options on the DSLIST entry panel

The DSLIST entry panel is shown here:

```
  Menu  Reflist  Refmode  Special-lists  Utilities  Settings  Test  Help  Exit
-DSC- ------------------------ Data Set List Utility ------------------------
Command ===>
   DS - Display dataset list                P  - Print data set list
blank - Temporary Object List               PV - Print VTOC information
   PL - Permanent Object List               V  - Display VTOC information
  GDG - Display Generation Datasets         XV - Extended VTOC & space summary
  SET - Set DSLIST defaults                 SP - Special data set lists

Enter an option or select it by placing cursor on the option code
Specify parameters below:
   Object List   ===> ________            (* for selection list, = for MYLIST)
   Dsname Level  ===> ____________________________________________ More? ===> N
   Volume Serial ===> ______              (Leave BLANK for catalog scan,
                                          volser or pattern for VTOC scan)
Data set list options:
   Initial View  ===> 1 :  1. Volume  2. Space   3. Attrib   4. Total
   Enter "/" to select option:
   / Confirm Data Set Delete      / Additional Dataset Qualifiers
   / Display Catalog Name         7 Display Total Tracks
When the data set list is displayed, enter the "/" line command for a list of
the available line commands. TSO commands, CLISTs, or REXX execs are supported.
```

Figure 12. DSLIST entry panel

There are several enhancements:

- An XV (Extended VTOC & space summary) command displays detailed information about a volume, along with a space usage graphical bar. You can type over the volume serial to switch to another volume, and immediately see the graphical bar and the detailed information change.
- The GDG (Display Generation Data sets) command opens a temporary OLIST listing all the existing generations of a GDG base, showing both the relative generation number and the physical data set name. You can use all the OLIST commands on these data sets, including pattern matching. See Appendix C, “Patterns,” on page 341 for instructions on how to apply pattern matching.

- The More? prompt following the Dsname Level input field opens a pop-up window allowing you to specify multiple DSNAME levels and VOLSERs. Data Set Commander responds by opening a temporary OLIST containing the data sets that match the multiple criteria you specify. It is typically used to create a list of different catalog levels.
- The Action Bar contains a new option: Special-lists. When selected, Data Set Commander presents options that let you open OLISTs containing data sets from special sources, like the allocated data sets, the migrated data sets, and other sources.
- Extended VTOC Display & Space Summary

The XV command displays extended VTOC information. If you specify all volumes by entering "*" for volume serial, a Space Summary Volume Selection list is displayed:

You can use pattern matching wild cards to narrow down the initial list.

```
-DSC-          SPACE SUMMARY VOLUME SELECTION LIST                  Expedited
Command ===>                                                 SCROLL ===> CSR
******* SPACE SUMMARY INFO SUPPRESSED DUE TO NUMBER OF VOLUMES
Main commands: DOWN, END, L=Locate, S=Select, UP, SORT V|T|%|F|L|S|D|A
Line commands: TP=OLIST, DS=DSLIST, S=VTOC information, V=VTOC summary, =
  Level  ==>                                                (TP, DS commands)
  Prefix ==>

                  %... ...FREE SPACE... .LARGEST EXTENT. *=EAV
CMD VOLUME TYPE    FREE     CYLS    TRKS     CYLS    TRKS SMS DYN ATTRIBUTES
    ABRBKP 3390                                                  PRIV SHAR
    ABR001 3390                                                  PRIV SHAR
    ABR002 3390                                                  PRIV SHAR
    ADMIN1 3390                                                  PRIV SHAR
    AUCS01 3390                                                  PRIV SHAR
    AUCS02 3390                                                  PRIV SHAR
    AUCS03 3390                                                  PRIV SHAR
    AUCS04 3390                                                  PRIV SHAR
    AUCT01 3390                                                  PRIV SHAR
    AUCT02 3390                                                  PRIV SHAR
    AUCT03 3390                                                  PRIV SHAR
    AUCT04 3390                                                  PRIV SHAR
    AUCT05 3390                                                  PRIV SHAR
    AUCT06 3390                                                  PRIV SHAR
    AUCT07 3390                                                  PRIV SHAR
    AUCT08 3390                                                  PRIV SHAR
    AUCT09 3390                                                  PRIV SHAR
    AUCT10 3390                                                  PRIV SHAR
    AUCT11 3390                                                  PRIV SHAR
    AUCT12 3390                                                  PRIV SHAR
    AUCT13 3390                                                  PRIV SHAR
```

Figure 13. Volume Selection List

Space Summary Volume Selection List

If you use the XV command and use a pattern to specify a volume (VOLSER with wildcards), Data Set Commander displays a Space Summary Volume Selection List:

Space Summary Volume Selection List

```
-DSC-          SPACE SUMMARY VOLUME SELECTION LIST          Row 1 to 12 of 12
Command ===>                                                 SCROLL ===> CSR

Main commands: DOWN, END, L=Locate, S=Select, UP, SORT V|T|%|F|L|S|D|A
Line commands: TP=OLIST, DS=DSLIST, S=VTOC information, V=VTOC summary, =
  Level  ==>                                                (TP, DS commands)
  Prefix ==>

                  %... ...FREE SPACE... .LARGEST EXTENT. *=EAV
CMD VOLUME TYPE    FREE     CYLS    TRKS     CYLS    TRKS SMS DYN ATTRIBUTES
    SCLM0A 3390      51     5045   76139     1024   15360   Y      PRIV SHAR
    SCLM01 3390      44     1413   21805      467    7005   Y      PRIV SHAR
    SCLM02 3390      33     1089   16712      527    7905   Y      PRIV SHAR
    SCLM03 3390      47     1552   23329      416    6240   Y      PRIV SHAR
    SCLM04 3390      46     1477   22952      551    8265   Y      PRIV SHAR
    SCLM05 3390      41     1353   20541      359    5409   Y      PRIV SHAR
    SCLM06 3390      45     1480   22407      536    8040   Y      PRIV SHAR
    SCLM07 3390      33     1073   16669      171    2565   Y      PRIV SHAR
    SCLM08 3390      36     1207   18277      340    5100   Y      PRIV SHAR
    SCLM09 3390      30      987   15078      182    2742   Y      PRIV SHAR
    SCLM10 3390      34     1088   16920      259    3885   Y      PRIV SHAR
    SCLM11 3390      36     1189   17894      732   10980   Y      PRIV SHAR
****************************** Bottom of data ********************************
```

Figure 14. Space Summary Volume Selection List

You can select specific volumes for extended VTOC information (using the S line command), open a DSLIST (the DS line command) or open a temporary OLIST (the TP line command) of data sets matching the data set level appearing on top of the panel for the selected volume.

The Space Summary Volume Selection List is a convenient platform to open data set lists (DSLIST or OLIST) for similar levels on different volumes.

If you specify a particular volume by entering a volume name at Volume Serial (VOLSER) or by Point-and-Shoot from the Space Summary Volume Selection list, the Extended VTOC Information for Volume Admin panel is displayed:

```
-DSC- EXTENDED VTOC INFORMATION FOR VOLUME SUPPTB -----------------------------
COMMAND ===>

VOLUME  ===> SUPPTB (Change for another volume)

   +---- VOLUME DATA ----+----- VTOC DATA -----+----- FREE SPACE DATA ----+
   | TRACKS:       50070 | TRACKS:          90 |          TRACKS     CYLS |
   | %USED:           48 | %USED:            0 | SIZE:     26025     1733 |
   | TRKS/CYLS:       15 | FREE DSCBS:    4478 | LARGEST:  25290     1686 |
   | UNIT TYPE:     3390 |                     |                          |
   | CYLINDERS:     3338 | VTOC EXTENTS:     1 | EXTENTS:     12          |
   | TRACK LEN:    58786 | DSCBS/TRK:       50 |                          |
   | UCB ADDR.:     8538 | INDEX VTOC:  ACTIVE |                          |
   | SHARED:         YES | VIRs:           308 |                          |
   | ATTRIBUTES: PRIVATE |                     |                          |
   | OPEN FILES:       0 |                     |                          |
   | DEFRAG IX:       16 |                     |                          |
   | SMS:    INIT STATUS |                     |                          |
   +---------------------+---------------------+--------------------------+
    SPACE: ....v....10...v....20...v....30...v....40...v....50...v....60%
    USAGE: ------------------------------------------------> 48%

Press ENTER to refresh, END key to exit.
```

Figure 15. Extended VTOC Information for Volume Admin panel

You can type over the volume name to select a different volume.

The GDG display

Data Set Commander treats a Generation Data Group (GDG) the same as any other data set (for example, VSAM or LLIB) so you can use any Data Set Commander capability, including all OLIST and MSL capabilities and pattern matching. See Appendix C, "Patterns," on page 341 for instructions on how to apply pattern matching.

The special lists

When you select the **Special-lists** option on the Action Bar Data Set Commander provides a pull-down menu with the following options:

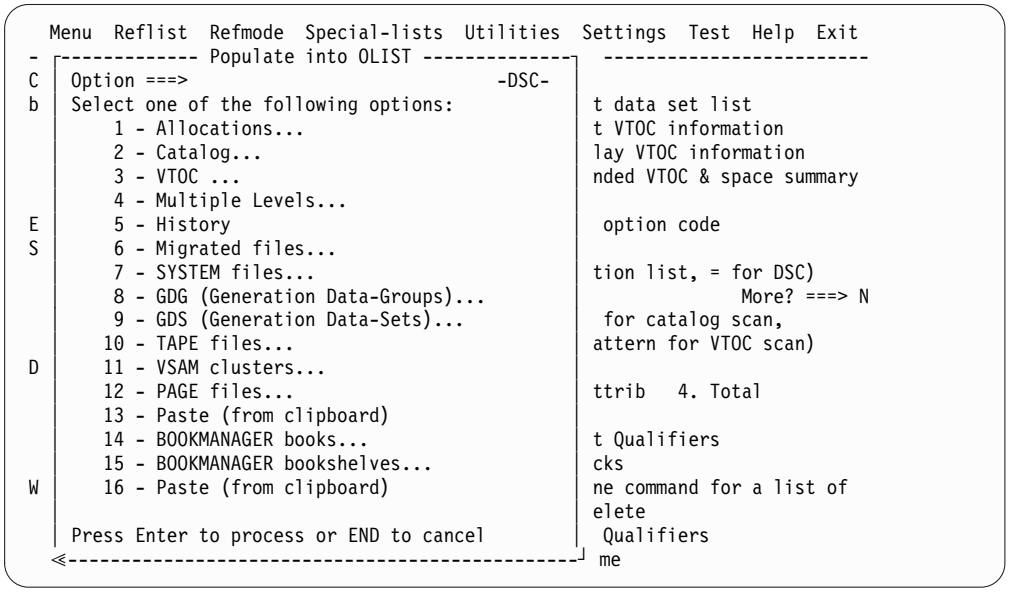


Figure 16. Special Lists pull-down menu

The available choices provide access to OLISTs populated from different sources. These lists are often used to diagnose problems and to find accessed resources. For example, on the OLIST created from data sets allocated to the ISPPLIB DDNAME (the ISPF panel library), you can issue the MEMFIND command to find where ISPF locates a panel within the concatenated list. Similarly, you can create an OLIST of migrated data sets of a specific volume pattern, cut the list, start an edit session, paste the data set names into the edit area, and create JCL to recall all of them at once. If you disable the DSLIST Action Bar, Data Set Commander places the special list options on the panel as additional commands.

Customizable user interface

You can customize the Data Set Commander user interface to fit your needs. For example, you can hide the Action Bar to gain two more lines to display information. You can also hide the Hotbar line to gain another line. On Data Set Commander panels, you can choose leader dots or arrows as the standard prefix for input fields. You can select the leading character in the Member Selection List line command area, along with other interface options.

To use the SET command from any command line (except when you are in OLIST or MSL), enter `DSC SET`, shortcut `ISET`. In OLIST or MSL, enter `SET`. The SETTING DSC DEFAULTS panel is displayed.

Options you set via the SET commands are remembered across sessions. When you invoke the SET command the following panel is displayed:

```
-DSC- --------------------Setting IBMDSC Defaults-----------------------------
COMMAND ===>
Select options by number, name, with cursor selection, or with line commands:
Web link: http://www.ibm.com/software/products/us/en/data-set-commander
 IBMDSC is running under ISPF version 7.1

_  A - ALL       - Select all the below displayed options
_  M - MSL       - Member Selection List options
_  O - OLIST     - Object list options
_  G - GLOBAL    - Global edit and Findtext options
_  P - PRINT     - Print options
_  D - DSLIST    - DSLIST options
_  T - TSO       - TSO shell options
_  E - EDIT      - Edit, Browse and View options
_  I - INTERFACE - Specify user interface options
_  S - SCLM      - SCLM options
_  N - DIAGNOSE  - Diagnose ISPF errors
_  L - LIBRARY   - Persistent table library options
_  B - BOOKMGR   - BookManager interface options

  Make your selection and press the ENTER key or press the END key to exit
```

Figure 17. Setting IBMDSC Defaults panel

You can select any of the options, or the ALL option to inspect all options. As an example, the following panel is displayed when you select the INTERFACE options:

Figure 18. User Interface Options

```
-DSC- ---------------------User Interface Options-----------------------------
COMMAND ===>

    +---------------------------------------------------------------------+
    | Note: Changes specified on this screen may not affect all of the    |
    |       panels that are currently displayed in nested applications.   |
    +---------------------------------------------------------------------+

Verify or specify the following options: (Enter Y for Yes, N for No):

  Activate HOTBARS                      ===> Y

  Activate Action Bars                  ===> Y
    If Action Bars are active:
      Display Action Bars in Browse, Edit, View    ===> Y
      Display Action Bars in Member Selection List ===> Y
      Display Action Bars in the object list       ===> Y
      Display Action Bars in DSLIST                ===> Y

 Press ENTER for options menu, END to exit, CANCEL for installation defaults.
```

Refer to Appendix B, "Controlling Data Set Commander processing (the SET command)," on page 333 for more details about the Data Set Commander Set options.

The enhanced handling of BROWSE, EDIT, and VIEW commands

You can invoke the BROWSE, EDIT, and VIEW commands (or their shortcuts BR, ED and VI) at any time, from any panel. If you are already in MSL BROWSE, EDIT, and VIEW, these commands initiate a nested level indicated in the left-hand corner of the top line of the panel. When you finish the current level, you are returned to the previous level, exactly where you were, so that you never lose your place in your work.

You can define PF keys as BROWSE, EDIT, or VIEW because they are general commands that are invoked by pressing the key. If the cursor is on the command line, the appropriate Entry Panel is displayed.

The BROWSE, EDIT, and VIEW commands accept the name of the data set or object to process, bypassing the Entry Panel.

Using the Point-and-Shoot Interface, you can place the cursor on the name of an object anywhere on any panel, and invoke BROWSE, EDIT, or VIEW on the object simply by pressing the PF key you have defined. This lets you “zoom in” on an object and “zoom out” again at will. For example, if you're browsing a member containing JCL that references a data set by name, you can edit that data set by moving the cursor to that name and pressing a PF key defined as EDIT.

BROWSE, EDIT, and VIEW accept different Data Set Commander objects. For example, by entering EDIT 'TEST.*.COBOL', you display an OLIST for data sets that match the specified pattern (with EDIT being the default action for the OLIST). Similarly, you can enter BROWSE 'TAXES.TEST.MASTER' (which we assume here to be a VSAM file) and have your VSAM file editor process the selected file automatically.

The BROWSE, EDIT, and VIEW enhanced Entry Panels are similar in design. An enhanced VIEW Entry Panel is shown below:

```
  Menu  Reflist  Refmode  Utilities  SCLM  Settings  Test  Help  Exit
--------------------------------------------------------------------------------
-DSC--L1              VIEW - ENTRY PANEL
COMMAND ===>
HOTBAR: TAILOR    SORT CHA


ISPF Project  ==> SPIFFY.V810
     Group    ==> ________  ==> ________  ==> ________  ==> ________
     Type     ==> ________
     Member   ==> ________ (Blank or pattern for selection list)
     MemGen   ==> ____ (Blank or PDSE member relative generation number)
Other data set, VSAM file, or z/OS UNIX file:
@H for History-List or @L for 'SPIFFY.IBM.JCL'
Name/Pattern  ==> ____________________________________________________          +
Volume serial ==> ________ (Optional VOLSER or pattern for selection list)
Password      ==> ________ (If password protected)
Default func. ==> V        (B=Browse, V=View, E=Edit, BF, EF, VF, or ?)
Do TAILOR     ==> N        (Y=Yes, N=no, D=define commands)
EDIT/VIEW parameters:
Initial Macro ==> ____________ Confirm Cancel/Move/Replace     ==> N (Y,N)
Profile Name  ==> ____________ Action Bar in Edit/View         ==> N (Y,N)
Format  Name  ==> ____________ Highlight coloring in Edit/View ==> Y (Y,N)
Record Length ==> ____________ Exclusive access of viewed file ==> Y (Y,N)
Preserve VB record length ==> N  Mixed Mode (NLS DBCS char. set) ==> N (Y,N)
```

Figure 19. Enhanced VIEW Entry Panel

And here is an enhanced Browse panel:

```
  Menu  Reflist  Refmode  Utilities  SCLM  Settings  Test  Help  Exit
-------------------------------------------------------------------------------
-DSC--L1              BROWSE - ENTRY PANEL
COMMAND ===>
HOTBAR: TAILOR   SORT CHA


ISPF Project  ==> SPIFFY.V810
     Group    ==> DEV      ==> INT      ==> TEST     ==> RELEASE
     Type     ==> ASM
     Member   ==>          (Blank or pattern for selection list)
     MemGen   ==>     (Blank or PDSE member relative generation number)
Other data set, VSAM file, or z/OS UNIX file:
@H for History-List or @L for 'SPIFFY.IBM.JCL'
Name/Pattern  ==> 'SYS*PARM*'                                              +
Volume serial ==> CSYS*    (Optional VOLSER or pattern for selection list)
Password      ==>          (If password protected)
Default func. ==> B        (B=Browse, V=View, E=Edit, BF, EF, VF, or ?)
Do TAILOR     ==> N        (Y=Yes, N=no, D=define commands)
EDIT/VIEW parameters:
Initial Macro ==>               Confirm Cancel/Move/Replace     ==> N (Y,N)
Profile Name  ==>               Action Bar in Edit/View         ==> N (Y,N)
Format  Name  ==>               Highlight coloring in Edit/View ==> Y (Y,N)
Record Length ==>               Exclusive access of viewed file ==> Y (Y,N)
Preserve VB record length ==> N  Mixed Mode (NLS DBCS char. set) ==> N (Y,N)
```

Figure 20. Enhanced BROWSE Entry Panel

There are several enhancements on this panel:

- The Project field may contain multiple high-level qualifiers.
- MemGen may contain a PDSE member relative generation number
- Specify data sets and other objects in the fields under the **Other data set**, ... line. You can use @L for the last referenced data set, or @H for a list of referenced data sets. Note: you may point-and-shoot the displayed @H and @L fields.
- Specify wildcards in the **Volume serial**c field. Data Set Commander displays a Volume Selection List where you can select the volume to access.

Shared and exclusive VIEW

The ISPF VIEW function provides edit-like capabilities without the ability to SAVE the member. As you view a file, other users can also access the file, and modify it. The viewed version may not reflect the updated file. In Data Set Commander you now have two options: Shared VIEW and exclusive VIEW.

Shared View is ISPF's basic View function. It allows several users to work with the same file at the same time. Shared View does not ENQ on the file being viewed. Though this View disables the SAVE command, a user can still save via the REPLACE command by using the same name of the member being viewed as a parameter to the REPLACE command. The viewed member may not reflect the real member since other users may edit and change it while it is being viewed.

Shared VIEW does not pull down members edited from the ISPF concatenation list (PROJECT, GROUP, TYPE) in the same way EDIT does. If a member exists in the second library in the concatenated member list (indicated by 2 under the LIB column), it is viewed under LIB 2 while in EDIT it is ENQed and saved under the first library in the concatenation (LIB 1).

Exclusive VIEW does not allow other users to either EDIT or use exclusive VIEW on the viewed file (shared VIEW and BROWSE are still permitted). Exclusive

VIEW also has a controlled save capability. When you use controlled save, a prompt panel is displayed, prompting you to override the default mode of discarding changes. Exclusive VIEW provides functionality similar to shared VIEW, but with enhanced integrity.

Your installation may configure Data Set Commander to support both VIEW modes, or enforce one of the two VIEW modes.

BROWSE, EDIT, and VIEW enhancements

Data Set Commander enhances EDIT and VIEW with several functions. For example, Data Set Commander automatically recognizes out-of-space conditions when trying to SAVE a member. Data Set Commander displays a confirmation panel, and upon approval proceeds to expand the library directory or compress the library as appropriate. Additionally, Data Set Commander detects redundant SAVE requests and bypass them.

Data Set Commander also enhances several EDIT and VIEW commands.

Note: If you want to invoke the alternate application for BROWSE, EDIT, or VIEW that was specified during setup, use BF, EF, or VF (instead of B, E, or V).

Enhanced CUT and PASTE

When customizing Data Set Commander, you can specify whether you want Data Set Commander CUT/PASTE or ISPF CUT/PASTE. The Data Set Commander CUT and PASTE commands provide these additional benefits:

- Supports up to 200 CUT/PASTE clipboards. Clipboards can be named or numbered. These clipboards can be edited, browsed, copied, saved, restored, and renamed.
- Ability to CUT excluded and non-excluded lines. You can CUT context-sensitive lines by combining the EXCLUDE and FIND commands with the CUT command.
- Both CUT and PASTE commands support the STAtus keyword to display the list of all existing clipboards. You may use this display to select a new or existing clipboard to CUT into or from which to PASTE.
- You can paste lines from different sources:
  - Previously cut lines.
  - Lines from another member.
  - Captured output of TSO commands.
  - Member names of a specified directory.
  - Contents of a previously cut OLIST.
- Before pasting, you can display the lines to be pasted, and select the lines you want to process. For example, when pasting the contents of another member, you can first display the lines of that member and select which lines you want to paste. This is more convenient than the regular COPY command where you have to remember line numbers.

You can paste lines from the different sources of CUT directly to the printer.

STATUS command

The STATUS command, available in EDIT and VIEW, provides information about the member directory entry and whether the member was saved. The information is displayed as message lines in the edit workspace.

If the member is numbered and has ISPF statistics, STATUS can display the lines changed at a particular modification level. Data Set Commander also provides SCLM statistics and accounting information for SCLM- controlled members.

Enhanced FIND and CHANGE support

RFIND and RCHANGE are remembered across different libraries and across BROWSE, EDIT, and VIEW. For integrity, the first time RCHANGE is performed in a member, Data Set Commander places the command on the command line to allow rejection, modification, or execution of the change command.

Data Set Commander propagates the text search command issued within the MSL into the BROWSE, EDIT, and VIEW. For example, after the following command within MSL:

```
FINDTEXT 'DATE'
```

The RFIND command in BROWSE positions the cursor on the first “DATE” string.

Data set history facility (@H)

When an input field requires a data set name, you can call up a panel displaying a selection list of the last 100 data sets you referenced. To do this, enter the symbol @H in place of the data set name. @H is similar to the ISPF REFLIST function, but provides these advantages:

- Simpler access. Enter @H instead of the data set and select the data set to use from the history list. There is no need for Action Bar or command input.
- The list is automatically stored in reversed-access order so that recently referenced data sets are on top. The date and access time are shown.
- You can type over a data set to change your selection, or add or change member names.
- The list preserves member names specified along with data set names.
- You can open an OLIST containing the history list by entering the command:

  ```
  OLIST @H
  ```

  or shortcuts `OH` and `OLH`.

  Thereafter, you can issue all the OLIST commands on the data sets listed.
- Directly invoke BROWSE, EDIT, or VIEW with the @H parameter, requesting display of the reference list rather than the standard Entry Panel.
- On any panel, directly specify the last data set referenced (that is, the first item on the Data Set History List) using the symbol @L (for “last”). You can use this symbol in any input field requiring a data set name, or in a command, like this:

  ```
  EDIT @L
  ```

You enter the @H symbol like this:

```
-DSC-                          Data Set Utility
Option ===>

    A Allocate new data set                C Catalog data set
    R Rename entire data set               U Uncatalog data set
    D Delete entire data set               S Short data set information
blank Data set information                 V VSAM Utilities

ISPF Library:
   Project  . . INTT125          Enter "/" to select option
   Group  . . . ________         /  Confirm Data Set Delete
   Type . . . . ________

Other Partitioned, Sequential, VSAM Data Set or @H (history list):
   Data Set Name . . . @H_____________________________________________
   Volume Serial . . . ________  (If not cataloged, required for option "C")

Data Set Password  . . _________ (If password protected)
```

Figure 21. Entering @H on a Data Set Name field

By default, the items are listed in descending access order. If a pattern or a member name was specified, that information is included in the item.

```
-DSC- ------------------------ DATA SET HISTORY ------------ Row 1 to 23 of 55
COMMAND ===>                                                  SCROLL ===> CSR

 To select a data set place the cursor on selected line and press ENTER or
 use the S line command. You can overtype a line to alter your selection.
 Use Find <string> (case sensitive) and RFind to search for an object name.
 Press the END key to exit without selection.

      DATA SET NAME                                            ACCESSED
  -   ------------------------------------------------------ --------------
      'IMS.V9RQ.OLP14'                                      08:59 07/02/05
      'IMS.V8R1.OLS04'                                      08:59 07/02/05
      'IMS.V8R1.OLP04'                                      08:59 07/02/05
      'IMS.V9R1.OLS04'                                      08:59 07/02/05
      'IMS.V9R1.OLP04'                                      08:59 07/02/05
      'IMS.V8RX.OLS04'                                      08:59 07/02/05
      'IMS.V8RS.OLS04'                                      08:59 07/02/05
      'IMS.V8RC.OLS04'                                      08:59 07/02/05
      'IMS.V8RC.OLP04'                                      08:59 07/02/05
      'IMS.V8RQ.OLS14'                                      08:59 07/02/05
      'IMS.V8RQ.OLP14'                                      08:59 07/02/05
      'IMS.V8RP.OLS14'                                      08:59 07/02/05
      'IMS.V8RP.OLP14'                                      08:59 07/02/05
      'IMS.VARG.OLS04'                                      08:59 07/02/05
      'IMS.VARG.OLP04'                                      08:59 07/02/05
      'IMS.V410.GENLIBA'                                    08:59 07/02/05
      'SYS1.AIATMAC'                                        08:59 07/02/05
      'SYS1.AHASMAC'                                        08:59 07/02/05
      'SYS1.AERBMAC1'                                       08:59 07/02/05
      'SYS1.ADFMAC1'                                        08:59 07/02/05
      'SYS1.ACUNMAC'                                        08:59 07/02/05
      'SYS1.ABDTMAC'                                        08:59 07/02/05
      'SYS1.AADFMAC1'                                       08:59 07/02/05
```

Figure 22. The Data Set History panel

To select an item, type S next to it and press Enter, or simply put your cursor on the item and press Enter. Processing continues exactly as if you had typed the information in the input field.

You can also modify the name of the data set while selecting it, changing the entire data set name, or possibly adding or changing the member name.

You can use the Find and RFind commands to search for an object name.

If you know the name of the last accessed data set, you can use @L instead of @H to select the last referenced data set, bypassing the history selection list.

Access data sets by DD name

In a way similar to how you select a data set from the history list by using the @H symbol, you can specify a data set by an allocated DD name. For example, on the ISPF library utility (option 3.1), you can specify the data set as the current ISPPLIB like this:

```
  Menu  RefList  Utilities  Help
──────────────────────────────────────────────────────────────────────────────
                              Library Utility
Option ===>

blank Display member list      I Data set information          B Browse member
    C Compress data set        S Short data set information    D Delete member
    X Print index listing      E Edit member                   R Rename member
    L Print entire data set    V View member                   P Print member

                                   Enter "/" to select option
ISPF Library:                      /  Confirm Member Delete
   Project . . . INTT125              Enhanced Member List
   Group . . . .          . . .          . . .          . . .
   Type  . . . .
   Member  . . .             (If B, D, E, P, R, V, or blank selected)
   New name  . .             (If R selected)

Other Partitioned or Sequential Data Set:
   Data Set Name . . . @DD.ISPPLIB
```

Specify a particular entry in the concatenation, like this:

```
Other Partitioned or Sequential Data Set:
   Data Set Name . . . @DD.ISPPLIB.#2
```

With the Data Set Commander general commands BROWSE, EDIT, and VIEW, you can specify a member, like this:

```
BROWSE @DD.JCLLIB(JCL01)
```

or a pattern, like this:

```
VIEW @DD.ACCTIN.#3(PAY*)
```

Enhanced TSO command support

Data Set Commander provides enhanced support of TSO commands (including a TSO Command Shell), the ability to repeat a previously executed command, and the ability to use point-and-shoot with TSO commands. Your installation can activate the Data Set Commander TSO shell instead of or along with the ISPF command shell. For simplicity, the discussion in this section assumes that the Data Set Commander TSO shell replaces the ISPF command shell.

Accessing the Data Set Commander TSO shell

To access the TSO shell, use option 6 (COMMAND) from the ISPF main menu or enter “TSO” on the command line. The displayed panel has two areas:

- The command area where you enter your commands.

- The history command list area which lists up to 999 commands issued, or the permanent command list area which allows up to 999 entered commands. You can use the permanent area for any command that is frequently issued.

The history and permanent lists are numbered. Instead of entering a command, you can enter its number on the command area. All history command lists and permanent command lists can be edited, browsed, saved, and restored from a persistent table library.

Recalling a command

To recall a command, enter a question mark followed by its number, or place the cursor on a line and click "ENTER" to bring up that command to the main Command. You can also edit that command from the main Command before you execute it. Once the command is edited, the new command is listed in the Command History List.

Note: Main command "TSO =" or shortcut "EX=" can be entered from any panel to display the Data Set Commander TSO Shell command history list with the most recently executed TSO command recalled to the main command line.

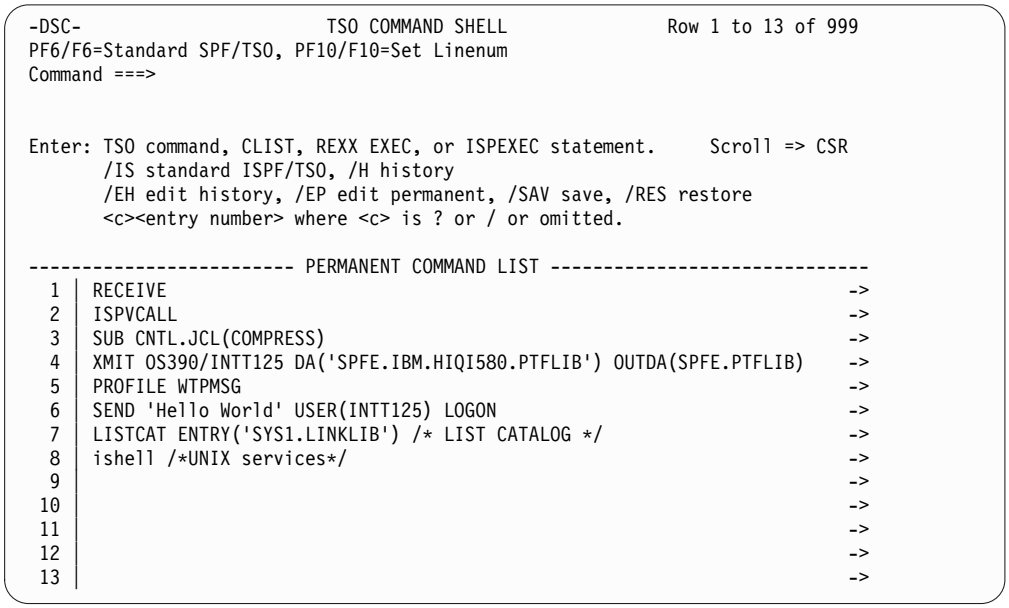
Capabilities of the Data Set Commander TSO shell

The Data Set Commander TSO shell offers these advantages:

- Support for ISPEXEC dialog manager commands. Data Set Commander executes these commands, and display dialog error messages if any are produced.
- Control over the location of the output line of TSO commands.
- The ability to substitute a data set pointed to by the cursor into the command buffer. (See "Point-and-shoot parameters" on page 15.)

The TSO Command Shell panel looks like this:

Figure 23. The TSO Command Shell panel



If you choose to show History Command List by entering /H on the command line, TSO Command Shell panel is displayed as follows:

```
-DSC-                       TSO COMMAND SHELL                 Row 1 to 3 of 3
PF6/F6=Standard SPF/TSO, PF10/F10=Set Linenum
Command ===>


Enter: TSO command, CLIST, REXX EXEC, or ISPEXEC statement.     Scroll => CSR
       /IS standard ISPF/TSO, /P permanent
       /EH edit history, /EP edit permanent, /SAV save, /RES restore
       <c><entry number> where <c> is ? or / or omitted.

-------------------------  HISTORY COMMAND LIST  ------------------------------
  1 | LISTCAT ENTRY('SYS1.LINKLIB')                                        ->
  2 | ISHELL                                                               ->
  3 |                                                                      ->
-------------------------- END OF COMMAND LIST ---------------------------
```

The TSO Command Shell allows you to reissue any of the commands on the list from any panel by number.

Data Set Commander also provides special point-and-shoot support for TSO commands and CLISTs. When entering such a command, you can designate the data set name with a slash (“/”) and point to the data set name with your cursor. For example, on any ISPF panel with the cursor on the name ACCOUNTS.A.REPORT, the command `TSO ALLOC FILE(A) DA(/) OLD` is equivalent to `TSO ALLOC FILE(A) DA('ACCOUNTS.A.REPORT') OLD`

If you are not pointing to a data set name, Data Set Commander passes the slash to the command.

The Data Set Commander print engine

Data Set Commander provides many ways to print members, data sets, text within the edit workspace, or the OLIST itself. This section describes how to print items with Data Set Commander, how to control the output destination, how to group different print requests together, and how to get the results faster.

Whatever you print through a Data Set Commander function can be directed to the ISPF list data set (as ISPF normally does), or to the Data Set Commander print engine. The Data Set Commander print engine is significantly faster than ISPF's printing function, and it bypasses the ISPF list data set (writing directly to the spool).

Print items from Data Set Commander

From OLIST and MSL, print data sets and members using the P line command. To print several members at a time, you can tailor the Member List (use the FILTER, EXCLUDE, and FLIP commands) and invoke the P line command, followed by a pattern defining the members to print (an asterisk prints every member in the tailored list).

The CUT PRINT command in EDIT and VIEW lets you print selected lines from the edit workspace even without saving these lines. You can use the PASTE command to capture and print other information (for example, the captured output of TSO commands, Member List directories, and selected lines from another member).

The list of data sets in an OLIST and the list of members in MSL can also be printed. The File pull-down option on the MSL and OLIST Action Bars contains the appropriate PRINT options.

Using the print engine

The Data Set Commander print engine prints directly into the system spool without an intermediate data set. Data Set Commander provides several parameters that control how the printout is spooled: class, destination, form, FCB, and others. You can specify how many copies to create, and whether to keep it in the hold queue (for future release, rerouting, or cancellation).

The Data Set Commander print engine lets you chose between accumulating all print requests as a single printout, or print each request separately.

To control the print options, use the SET command (in MSL or OLIST). When you select the print option, the following panel is displayed:

```
-DSC- -------------------------Print options-------------------------------------
COMMAND ===>

  Suppress page formatting    ===> N (N=No, Y=Yes - file is already formatted)
  Print changed lines in bold ===> N (N=No, Y=Yes)
  Highlight program elements  ===> Y (N=No, Y=Yes - emphasize recognized items)
  Process mode                ===> G (I=print immediately)
                                     (G=Group requests for later printing)
                                     (L=print direct to the ISPF LIST data set)
  For process modes I and G:

    DESTINATION ID     ===>                 (Node-id<.User-id>)
    CLASS              ===> A       (or Sysout class)
    WRITER name        ===>         (Output WRITER)
    Number of copies   ===> 1       (How many?)
    Lines per page     ===> 60      (page size)
    Keep in HOLD queue ===> N       (Y=Yes, N=No)
    FORM number        ===>
    FCB name           ===>

  NOTE: Under process modes I and G, your USERID will be on the separator page.

 Press ENTER or END to exit. Enter CANCEL for installation defaults.
```

Figure 24. Print options panel

Accumulating different print requests is called “grouping”. Grouped output is automatically released for printing when your ISPF session terminates (or is canceled), when you issue the RELEASE command (in MSL or OLIST), or when you set new print options that are incompatible with the existing print options (for example, change destinations). To purge grouped print requests before they are released, enter `RELEASE PURGE`

Grouped printing is a convenient method of producing printouts that contain members from different data sets, edited lines (see CUT PRINT), and data set lists (print the OLIST).

Special formatting of source data

Data Set Commander can provide special formatting that highlights specific elements within printed members. Automatic highlighting is provided for JCL and COBOL members.

For members with ISPF statistics, you can request that Data Set Commander highlight lines modified in the last modification level.

ISPF dialog development enhancements

Data Set Commander enhances the process of developing ISPF dialogs. With Data Set Commander, ISPF dialog developers can:

- Refresh specific panels before display without having to run in Dialog Test mode. Avoiding Dialog Test mode significantly improves the performance of ISPF.
- Display panels from within the member list.
- Invoke dialog services from within the member list. Feedback messages provide dialog error information on the screen.
- Invoke dialog services from the Data Set Commander TSO shell and invoke dialog services from any panel.
- Place dialog services calls within the OLIST.
- Enforce the display of panel identifiers throughout the ISPF session (on all split screens).

To refresh specific panels, select the TEST option on the MSL or OLIST Action Bar, or enter DSC DTEST on any ISPF panel. A pop-up window provides you with the ability to specify the panel name to refresh, or a prefix of panels to refresh throughout the current ISPF session. Data Set Commander continuously refreshes the specified panels only on the current session. Once the ISPF session is terminated, change the panel refreshing option and standard panel processing resumes.

```
  Dialog-Test  Redisplay  System-Info  Exit
-DSC----------------------- PANEL TESTING OPTIONS -----------------------------
COMMAND ===>

Specify options below and press the ENTER key to accept, END key to cancel:
Diagnose panel processing errors ===> N (Y=Yes, N=No)
Diagnose SELECT service   errors ===> N (Y=Yes, N=No)
Display panel identifier         ===> N (Y=Yes, N=No)

Panel refreshing options:
Unless you run in Dialog Test, ISPF will remember previously displayed
panels, ignoring panel changes made after the panels are displayed.
To avoid running in Dialog Test (an inefficient mode), you can request
that specific panel or panels be refreshed:
  Refresh name or prefix         ===>          (BLANK, panel name, or prefix*)
  Refresh next displayed panel   ===> N        (N=No, Y=Yes)

DSC panels (prefix "IQI") must also be released from the cache.
  Release all DSC panels         ===> N        (N=No, Y=Yes)
```

Figure 25. Panel Testing Options panel

When editing a panel, it is convenient to place it in “refresh” mode as explained above. During editing, you can save the panel and use the TSO shell to display it. For example, if you are editing the member “ACCTMAIN”, and the member is accessible through ISPPLIB, you can issue the command “TSO ISPEXEC DISPLAY PANEL(ACCTMAIN)” to display the panel. You can even put the command in the permanent list (for example, entry number 10), and thereafter type TSO 10.

SCLM integration

Data Set Commander provides integrated and enhanced SCLM support. SCLM, a free component of ISPF, is IBM's strategic library manager and software change management product. SCLM uses standard libraries (PDS, PDSE) and provides automatic check-out, a built-in make facility, maintenance of multiple versions, auditing, and control. Data Set Commander and SCLM provides the easiest and best method to implement a change management system using standard libraries and standard ISPF facilities.

Without Data Set Commander, SCLM forces you into a separate option on the main menu (the SCLM option). This deprives programmers of many useful ISPF utilities and functions.

Data Set Commander provides integrated SCLM support to the standard DSLIST, MSL, and OLIST. The benefits of SCLM are added to all the existing ISPF and Data Set Commander functions.

Data Set Commander also provides additional SCLM benefits:

- Automatic association between SCLM libraries and parameters required to use these libraries (for example, alternate project ID, parser language, authorization codes, change codes).
- Automatic lock management when members are selected for editing.
- Special identifier within the Member List for parsed and unparsed members.
- Special commands to lock, parse, unlock, promote, and build members directly from the Member List.
- Better error handling. Messages are placed near the member name, hierarchy validation allows temporary overrides, and the ability to leave members in suspended state (uncompleted unparsed members)

Calling Data Set Commander functions from applications

Data Set Commander provides several interfaces that make it easy to take advantage of its facilities in installation-developed applications.

Calling OLIST from an application

You can invoke OLIST from an application or CLIST. You can invoke the OLIST selection list, a new or existing permanent OLIST, or a temporary OLIST, with the default process (Edit, Browse, or View) of your choice. For example, to invoke a temporary OLIST of all data sets matching the level USER2.TEST, you can issue a command like this:

```
ISPEXEC SELECT PGM(IQIPLST) PARM('USE2.TEST.*') NEWAPPL(ISR) PASSLIB
```

The parameters passed to the IQIPLST program are the same parameters you can pass to the OLIST general command. For example, to obtain a temporary OLIST with the libraries allocated to STEPLIB you can enter the command:

```
OLIST @DD STEPLIB
```

Similarly you can invoke the same OLIST from a REXX exec with the statement:

```
ISPEXEC SELECT PGM(IQIPLST) PARM('@DD STEPLIB')
NEWAPPL(ISR) PASSLIB
```

The following are acceptable OLIST parameters:

Parameter	Explanation
=	Invoke the default (last) referenced permanent OLIST
*	Display the OLIST reference list

DSNpatt,VOLpatt	Opens a temporary list showing cataloged data sets matching the specified DSN pattern (with wildcards). If a volume pattern is specified, only data sets cataloged to the specified volumes are listed.
	
	Examples:
	`OLIST TAXES.YEAREND.*`
	`OLIST SYS1.*,SYSR01`
	`OLIST SYS1.*,*`

Name	Invoke a previously saved OLIST. OLIST names follow the naming conventions of member names.
@DD,ddname @LISTA,ddname	Opens a temporary OLIST displaying allocated data sets. If a ddname is specified, only libraries allocated to the specified DD statement are listed.
@H	Opens a temporary OLIST showing the history list (the list of last 100 data sets referenced by the user).

@LISTB,DSNpatt	Opens a temporary list of generation data sets of generation group names matching the GDG base pattern.
	
	Examples:
	`OLIST @LISTB,GB*`
	`OLIST @LISTGRP,GB*`

@LISTC,DSNpatt	Opens a temporary list of cataloged entries (objects). Example: `OLIST @LISTC,SYS*`

@LISTF,DSNpatt	Opens a temporary OLIST displaying IBM BookManager Book-Shelf files by DSN pattern.
	Note: The .BKSHELF implied suffix does not have to be included in the pattern.
	
	Examples:
	`OLIST  @LISTF,PP`
	`OLIST  @LISTF,PP*DB2`

@LISTG,DSNpatt
@LISTGDG,DSNpatt
	Opens a temporary list of Generation-Data-Sets by DSN pattern.
	
	Examples:
	`OLIST @LISTG,S*`
	`OLIST @LISTGDG,S*`

@LISTK,DSNpatt	Opens a temporary OLIST displaying IBM BookManager Book files by DSN pattern.
	Note: The .BOOK implied suffix does not have to be included in the pattern.
	
	Examples:
	`OLIST  @LISTK,PP`
	`OLIST  @LISTK,PP*IMS`

Parameter	Explanation

@LISTM,DSNpatt
@LISTARC,DSNpatt
	Opens a temporary OLIST with the list of migrated (or archived) data sets matching the specified volume pattern. Both commands are similar and are offered for installations with HSM, ASM2, or DMS systems.
	
	Examples:
	`OLIST @LISTM,SYS1.A*LIB`
	`OLIST @LISTARC,SYS2.*`

@LISTP,DSNpatt	Opens a temporary list of all Page-Space files by DSN pattern
	
	Examples:
	`OLIST @LISTP,*`
	`OLIST @LISTPAG,*`

@LISTS,keyword,value	Opens a temporary OLIST displaying system data sets depending on the parameters.
	
	Examples:
	`OLIST @LISTS,ALL`
	`OLIST @LISTS,APF`
	`OLIST @LISTS,LINK`
	`OLIST @LISTS,LINK,ALL`
	`OLIST @LISTS,LINK,CURR`
	`OLIST @LISTS,LINK,IPL`
	`OLIST @LISTS,LINK,J=PROD*`
	`OLIST @LISTS,LINK,L=MRO*`
	`OLIST @LISTS,LINK,U=INT*`
	`OLIST @LISTS,LINK,S=JES*`
	`OLIST @LISTS,LPA`
	`OLIST @LISTS,PARMLIB`

@LISTT,DSNpatt	Opens a temporary list of Tape Files by DSN pattern. Requires a volume pattern and the first character cannot be a wildcard.
	
	Examples:
	`OLIST @LISTT,I*`
	`OLIST @LISTT,MYTAPE*`

@LISTV,VOLpatt,DSNpatt	Opens a temporary list of files (including uncataloged) by VOLSER pattern and DSN pattern. You must supply a volume serial or pattern. Example: `OLIST @LISTV,USER*,I*SPF*`

@LISTW,DSNpatt
@LISTVS,DSNpatt
	Opens a temporary OLIST of VSAM Clusters by DSN pattern.
	
	Example:
	`OLIST @LISTW,VS*`
	`OLIST @LISTVS,MYVSAM*FILE%1`

@LISTZ,DSNpatt	Opens a temporary OLIST displaying SMP/E Zone VSAM clusters by DSN pattern.
	Note: The .CSI implied suffix does not have to be included in the pattern.
	
	Example:
	`OLIST  @LISTZ,SYS`
	`OLIST  @LISTZ,FMN*V6`

Calling MSL from an application

You can invoke the Data Set Commander enhanced Member Selection List (or EDIT, BROWSE, or VIEW) from an application or CLIST. The Data Set Commander interface supports CUT and PASTE, provides the enhanced Member Selection List services, and provides transparent access to PANVALET libraries, LIBRARIAN libraries, DSLIST, VSAM editors or browsers, and Db2 editors or browsers. For example, to view member A1 in the library MY.DATA, you can issue the CLIST command

```
ISPEXEC SELECT PGM(IQIMSL) PARM(V,MY.DATA(A1)) NEWAPPL(ISR) PASSLIB
```

The IQIMSL parameters are similar to the parameters specified with the BROWSE, EDIT, and VIEW general commands. The parameters (which should be separated with commas) are:

The default action (V for view, B for browse, E for edit).

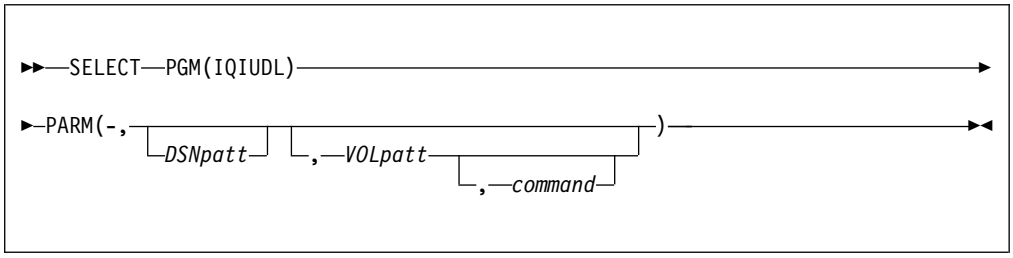
The second is the object name (data set name). If none is specified, Data Set Commander performs a cursor position check and uses the data set name pointed by the cursor (point-and-shoot). To prevent a point-and-shoot call, specify "<PROMPT>" instead of the object name (in this case Data Set Commander displays a browse/EDIT and VIEW prompt screen).

The third parameter is optional and is the volume (for data set objects). If the parameter is omitted, the catalog is used. If a volume pattern is specified, a volume selection is displayed before processing continues.

The last parameter is optional and is intended for invoking applications, and can be specified as Y or N. If "Y" is specified, Data Set Commander returns to the calling application with return code of 8 if errors occurred (for example, the data set was not found). Otherwise, Data Set Commander displays a prompt screen with an error message, providing the user with the opportunity to change some options and retry.

Calling DSLIST (ISPF Option 3.4) from an application

With Data Set Commander installed, you can invoke DSLIST for a particular data set level (as accepted by DSLIST). The format of the call is:



DSNpatt
A data set name pattern.

VOLpatt
A volume serial pattern.

command
Specify the command for the output desired:

V VTOC summary information.
P Print the selected data set.
PV Print VTOC summary information.
XV Extended VTOC information.

For example, to display all data sets starting with 'SYS1' on all volumes, you can issue a command like this (from a program or CLIST):

```
ISPEXEC SELECT PGM(IQIUDL) PARM(-,'SYS1') NEWAPPL(ISR) PASSLIB
```

To restrict the DSLIST to the volume CICS01, you can issue the command like this:

```
ISPEXEC SELECT PGM(IQIUDL) PARM(-,*,CICS01) NEWAPPL(ISR) PASSLIB
```

To display all cataloged data sets starting with your TSO prefix (or user-id), which are matching a data set name pattern (without quotes) and reside on volumes matching a volume serial pattern, issue a command like this:

```
ISPEXEC SELECT PGM(IQIUDL) PARM(-,TEST*COBOL,DEV*) NEWAPPL(ISR) PASSLIB
```

To display all volumes matching a volume serial pattern for a DSC extended volume list you can issue the command:

```
ISPEXEC SELECT PGM(IQIUDL) PARM(-,,SYS*,XV) NEWAPPL(ISR) PASSLIB
```

Calling DSLIST (ISPF Option 3.4) from an application

Chapter 3. An introduction to commands

This chapter provides an introduction to commands and how they are used in Data Set Commander.

General commands

Enter general commands in the command field of any panel. General commands invoke a new function, while the previous function is waiting in the background. When the new function terminates, the previous one resumes control. Any combination of the general commands BROWSE, EDIT, and VIEW can be nested in this way up to nine levels deep (per split). All other general commands can be invoked an unlimited number of times. ISPF provides several general commands (such as HELP, KEYS, and LIST). Data Set Commander adds several more general commands (EDIT, BROWSE, VIEW, OLIST, TSO, DSC, and QUIT).

To avoid conflict with other commands with the same name, you may change each of those command verbs with the Data Set Commander customization wizard IQIWIZRD (see "The customization wizard IQIWIZRD" in the *DSC Installation Guide*).

Command shortcuts

These are an additional set of 52 commands that can be entered as main commands from any panel. The shortcut names are intended to be easily remembered (intuitively) and to provide a quick way to invoke most of Data Set Commander functions on the spot without a need to go through another split with more menus.

To avoid conflicts with other commands with the same name, each of the Data Set Commander command shortcut verbs can be either disabled or modified to a different name by modifying the Data Set Commander SIQITLIB member IQICMNDS.

Thus, most OLIST-related shortcuts start with "OL" and the rest of the name is usually a single character related to class of objects. For example, "OLM" invokes the "OLIST Migrated data sets" function, while "OLT" invokes the "OLIST Tape data sets" function. Main command "DSC?" can be entered from any panel to display all active command shortcuts.

A predefined set of command shortcuts (in member IQIDCMDS of SIQITLIB), may be disabled or enabled from any panel via command `DSC CMDS` (shortcut DSCCMD).

Edit, View, and Browse commands

You can enter these commands in BROWSE, EDIT, or VIEW in addition to those provided by ISPF. The new EDIT and VIEW commands are COMPRESS, EXPDIR, CUT, PASTE, QUIT, and STATUS. The SAVE command is listed and enhanced. The newly supported BROWSE commands are CANCEL and SUBMIT.

MSL commands

MSL commands are commands that can be entered only while a member selection list is on display. There are two types of MSL commands: MSL Main commands and MSL Line commands.

Unless otherwise indicated, all MSL commands can be entered as both main commands and line commands. When entered as a line command,

use its one-letter form. (For example, COPY must be entered as `C` when used as a line command.) However, only commands whose syntax show the optional operand pattern can be entered using a pattern, and only when entered as a main command.

OLIST commands
OLIST commands can be entered only while a permanent or temporary OLIST is on display.

There are three types of OLIST commands:

OLIST main commands
OLIST main commands can be entered only on the command line of an OLIST.

OLIST line commands
OLIST line commands can be entered in the command field of the OLIST. (OLIST line commands can be entered on the command line followed by an item number.) OLIST line commands act on the items named.

OLIST editing line commands
OLIST editing line commands can only be entered in the command field of the OLIST. OLIST editing line commands act on the lines of the OLIST, not the items named in the OLIST. Editing line commands begin with a slash ("/"), but are alphabetized without regard to the slash.

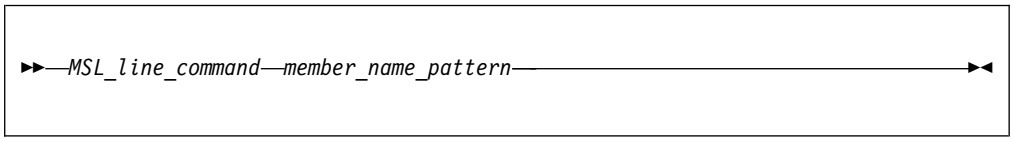
Commands available in the Data Set Commander EDIT session of an OLIST (invoked using the OLIST main command UPDATE) are not listed separately, since they are the standard EDIT commands as enhanced by Data Set Commander.

The commands are organized by categories of General, EDIT and VIEW, MSL, and OLIST in alphabetical order. Leading non-alphabetic characters (such as the "/" in "/D") are ignored. Commands consisting only of non-alphabetic characters (such "=") are listed before alphabetic commands.

Group commands

Group commands are OLIST and MSL line commands that you enter on the command line, with a supplied pattern. The effect of a group command is to apply the command against each item, as if you had applied the line command against each individual line. So a group command is a powerful shortcut.

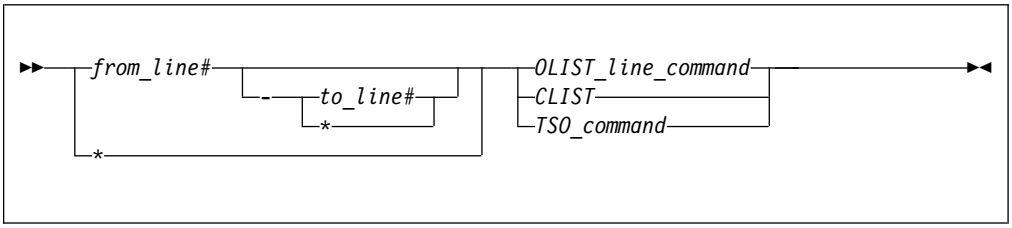
The syntax of the MSL group commands is:



You must supply the *member_name-pattern* (or a specific member name).

If you supply a pattern, the pattern only applies to displayed member names. You may wish to use the FILTER and X commands to get a target group of members, and then supply the pattern "*", to execute the line command on all displayed members.

The syntax of the OLIST group commands is:



If you provide a "*" with a *from line number*, then it means until the last row. If you provide a "*" by itself, then it means all.

Chapter 4. General commands

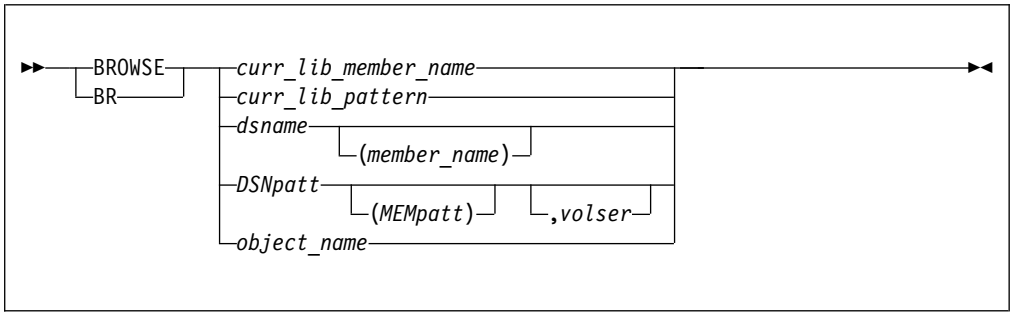
Main command	Line command	Remarks
BROWSE	N/A	The “BROWSE command” invokes a new nested “BROWSE” session, or opens a new MSL with the default meaning of SELECT and S set to BROWSE.
EDIT	N/A	The “EDIT command” on page 55 invokes a new nested “EDIT” session, or opens a new MSL with the default meaning of SELECT and S set to EDIT.
DSC	N/A	The “DSC command” on page 56 controls your DSC environment.
OLIST	N/A	The “OLIST command” on page 61 invokes an Objects List, or a list of referenced Objects Lists.
QUIT	N/A	The “QUIT command” on page 64 terminates processing of pending members under MSL and pending objects under OLIST.
TSO	N/A	The “TSO command” on page 65 can be used to execute ISPEXEC statements and invoke the TSO Command Shell.
VIEW	N/A	The “VIEW command” on page 67 invokes a new nested “VIEW” session, or opens a new MSL with the default meaning of SELECT and S set to VIEW.

BROWSE command

The BROWSE command invokes a new nested BROWSE session, or opens a new MSL with the default meaning of SELECT and S set to BROWSE. BROWSE is used to display sequential data sets and members of libraries (partitioned data sets). Data cannot be changed. Note that VIEW provides the same functionality, but with the power of EDIT.

Depending on how Data Set Commander is installed at your site, BROWSE may also process VSAM files, Librarian or Panvalet files, Db2 tables, and installation-defined objects.

Syntax



Operands

curr_lib_member_name
The name of a member in the current library, or the last library processed (or, if the screen has been split, the last library processed in this split).

curr_lib_pattern
A member name pattern using the wildcard characters "%" and "*" to match the name or names of one or more members in the current library, or in the last library processed (or, if the screen has been split, the last library processed in this split).

dsname
The name of the dataset you wish to browse.

member_name
The name of a member in the library specified.

DSNpatt
A data set name pattern using the wildcard characters "%" and "*" to match the name or names of one or more data sets in the library specified.

MEMpatt
A member name pattern using the wildcard characters "%" and "*" to match the name or names of one or more members in the library specified.

volser The volume serial you wish to browse.

object_name
The name of a DSC supported object, such as a Db2 object (if supported) or UNIX file; see Table 1 on page 11.

Usage notes

If the data set specified is a library and you have not specified a particular member (that is, you have specified only the library name, or have specified a pattern), a member selection list is displayed.

An unqualified two-level data set name must be entered with a leading period to distinguish it from a member name. (If your TSO profile is set to NOPREFIX, a name entered with a leading period refers to a single-level data set name.)

Note: BROWSE can be abbreviated to BR (as a command shortcut), subject to change by the local Data Set Commander admin. The MSL line command B, which can be entered as a main command, invokes a BROWSE session on one or more members in the current library.

Examples

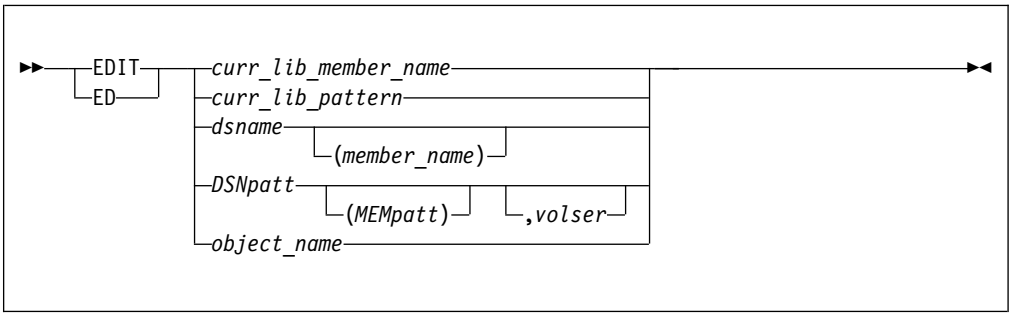
```
BROWSE
BROWSE PAYROLM
BROWSE PAY*
BROWSE 'PAYROLL.JONES.COBOL'
BROWSE 'PAYROLL.JONES.COBOL',PROD02
BROWSE 'PAYROLL.JONES.COBOL(PAYROLM)'
BROWSE 'PAYROLL.JONES.COBOL(PAY*)'
BROWSE DEV.COBOL(PAY*)
BROWSE .TESTLIST
```

EDIT command

The EDIT command invokes a new nested EDIT session, or opens a new MSL with the default meaning of SELECT and S set to EDIT.

Depending on how Data Set Commander is installed at your site, EDIT may also process VSAM files, Librarian or Panvalet files, Db2 tables, and installation-defined objects.

Syntax



Operands

curr_lib_member_name
The name of a member in the current library, or the last library processed (or, if the screen has been split, the last library processed in this split).

curr_lib_pattern
A member name pattern using the wildcard characters "%" and "*" to match the name or names of one or more members in the current library, or in the last library processed (or, if the screen has been split, the last library processed in this split).

dsname
The name of the dataset you wish to edit.

member_name
The name of a member in the library specified.

DSNpatt
A data set name pattern using the wildcard characters "%" and "*" to match the name or names of one or more data sets in the library specified.

MEMpatt
A member name pattern using the wildcard characters "%" and "*" to match the name or names of one or more members in the library specified.

volser The volume serial holding the data sets you wish to edit.

object_name
The name of a DSC supported object, such as a Db2 object (if supported) or UNIX file; see Table 1 on page 11.

Usage notes

If the data set specified is a library and you have not specified a particular member (that is, you have specified only the library name, or have specified a pattern), a member selection list is displayed. An unqualified two-level data set name must be entered with a leading period to distinguish it from a member name. (If your TSO profile is set to NOPREFIX, a name entered with a leading period refers to a single-level data set name.)

Note: EDIT can be abbreviated to ED (as a command shortcut), subject to change by the local Data Set Commander admin. The MSL line command E, which can be entered as a main command, invokes an EDIT session on one or more members in the current library.

Note: EDIT can be abbreviated to ED (as a command shortcut), subject to change by the local Data Set Commander admin. The MSL line command E, which can be entered as a main command, invokes an EDIT session on one or more members in the current library.

Examples

```
EDIT
EDIT ACCTMAIN
EDIT ACCT*
EDIT 'PAYROLL.JONES.PANELS'
EDIT 'PAYROLL.JONES.PANELS',PROD02
EDIT 'PAYROLL.JONES.PANELS(INPUT1)'
EDIT 'PAYROLL.JONES.PANELS(INPUT*)'
EDIT JONES.PANELS(INPUT1)
EDIT DEV.COBOL(PAY*)
EDIT .TESTLIST
```

DSC command

The DSC command provides online Help, and control over your DSC environment.

Syntax

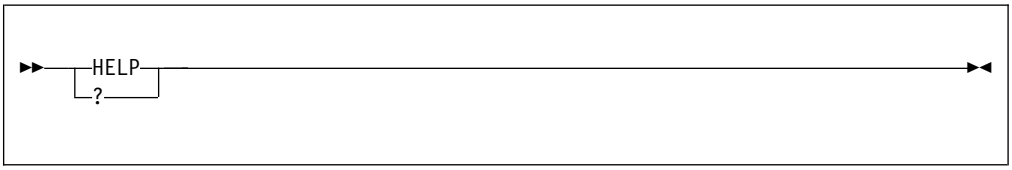
Operands

The available options are:
- "HELP" on page 57
- "CMDS" on page 57
- "OFF" on page 57
- "ON" on page 57
- "DTEST" on page 58

HELP

The HELP parameter displays the online help and tutorial.

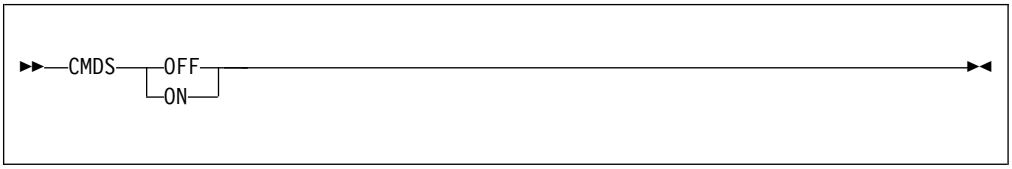
Syntax



CMDS

The CMDS parameter manages shortcut keys.

Syntax



Operands

OFF Nominated (member IQIDCMDS of SIQITLIB library) shortcuts are disabled.

ON All shortcuts are enabled.

If no parameter is supplied, DSC displays the list of command shortcuts. If a shortcut has been disabled, this is indicated in the Description column.

OFF

The OFF parameter disables all DSC functionality by passing complete control to ISPF without any DSC intervention.

Syntax

ON

The ON parameter reactivates DSC by restoring all DSC intercept points into ISPF.

Syntax

DTEST

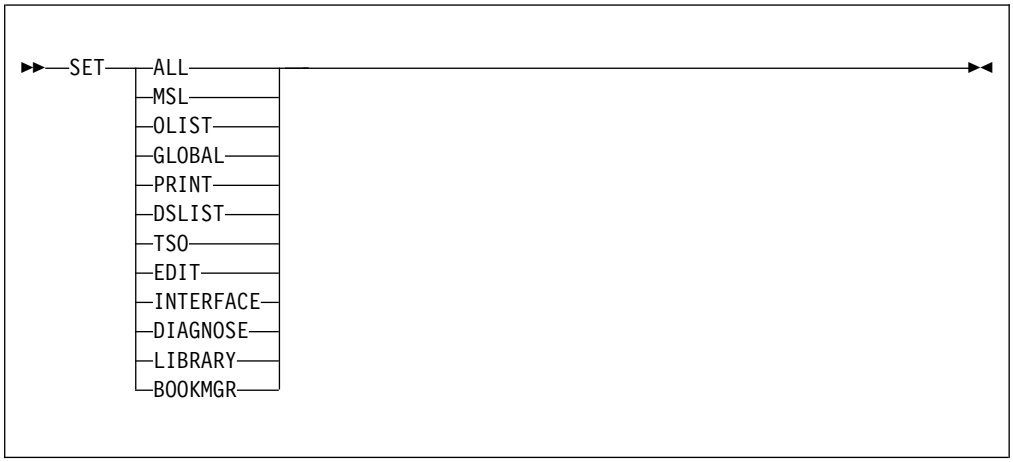
The DTEST parameter displays the Panel Testing Options panel. For more information about this panel, see "ISPF dialog development enhancements" on page 42.

Syntax

SET

The SET parameter manages the setting of DSC default values.

Syntax



Operands

ALL The panels for all of the other options are displayed in order.

MSL The Member Selection List options panel is displayed.

OLIST
The Object list options panel is displayed.

GLOBAL
Global edit and Findtext options panel is displayed.

PRINT
The Print options panel is displayed.

DSLIST
The DSLIST options panel is displayed.

TSO The TSO shell options panel is displayed.

EDIT The Edit, Browse and View options panel is displayed.

INTERFACE
The panel where you specify user interface options is displayed.

DIAGNOSE
The panel where you specify options for control of ISPF error diagnosis is displayed.

LIBRARY
The panel where you set persistent table library options is displayed.

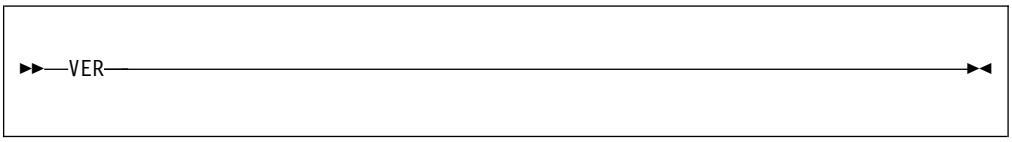
BOOKMGR
The panel where you set BookManager interface options is displayed.

If no parameter is entered, the Defaults panel is displayed, and from this you can select the panels that you want to display.

VER

The VER parameter displays the Module List panel. This list provides information about each DSC module, including the level and the date.

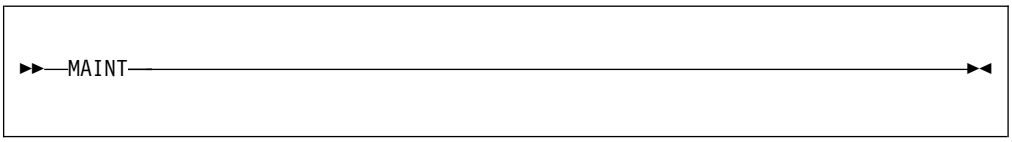
Syntax



MAINT

The MAINT parameter creates a maintenance report, which is placed in a data set member. You can then read or print this report.

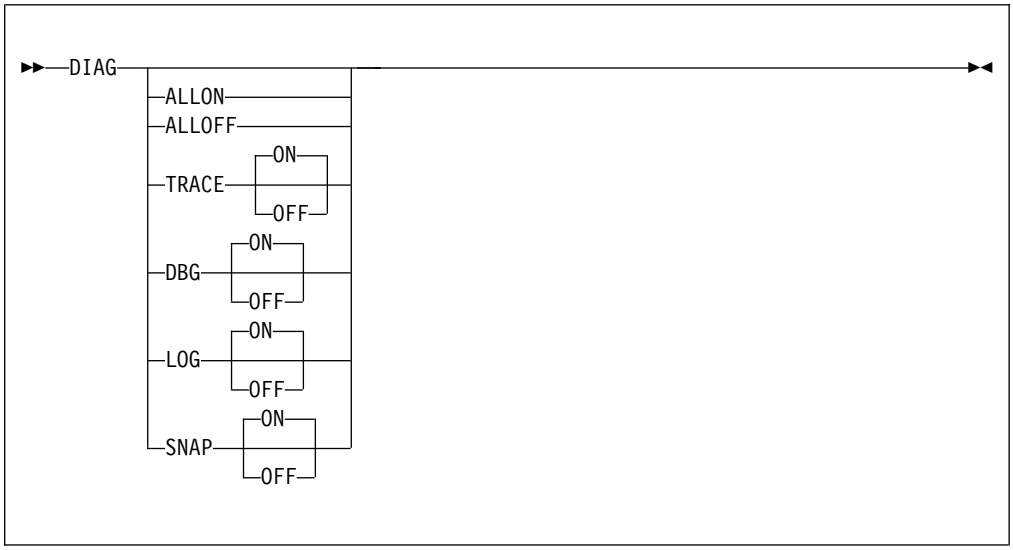
Syntax



DIAG

The DIAG parameter controls the setting of different diagnostic flags.

Syntax



Operands

ALLON
All of the diagnostic options are set on.

ALLOFF
All of the diagnostic options are set off.

TRACE
The trace option is set on or off. When the trace option is on, the incore trace commences.

Note: When you set TRACE ON, DSC automatically sets LOG ON. You dump the trace using the SNAP option.

DBG The debug option is set on or off. When the debug option is on it sets optional additional diagnostics.

LOG The log option is set on or off. LOG ON dynamically allocates DD(IQILOGPR) sysout data set for outputting DSC log messages.

SNAP The snap option is set on or off. SNAP ON dynamically allocates DD(IQITRSNP) sysout data set for outputting various core dumps.

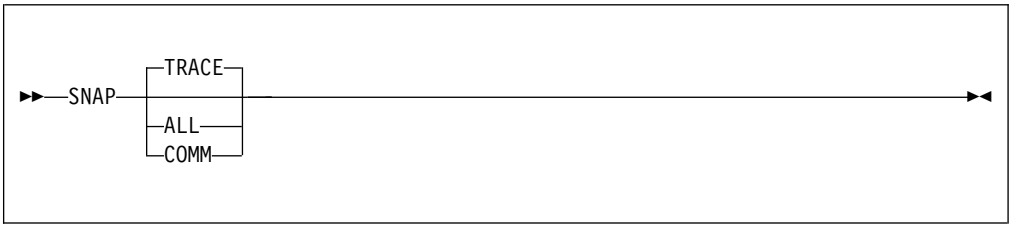
When you enter SNAP OFF or LOG OFF, you may lose ongoing log messages and some intermediate snaps (depending on the scenario). However, the in-core (wraparound) trace table normally contains all pertinent entries. so when you enter `ISNAP` (shortcut for `DSC SNAP`), if DD(IQITRSNP) is not present, it is dynamically allocated and the whole trace-table dumped out to it.

For more information, see Appendix A, “Documenting a DSC failure for IBM level 2 support,” on page 331.

SNAP

The SNAP parameter creates a snapshot of DSC, which is used for diagnosing problems.

Syntax



Operands

TRACE
Dump out the in-core trace table and the DSC COMMAREA (the main control block area).

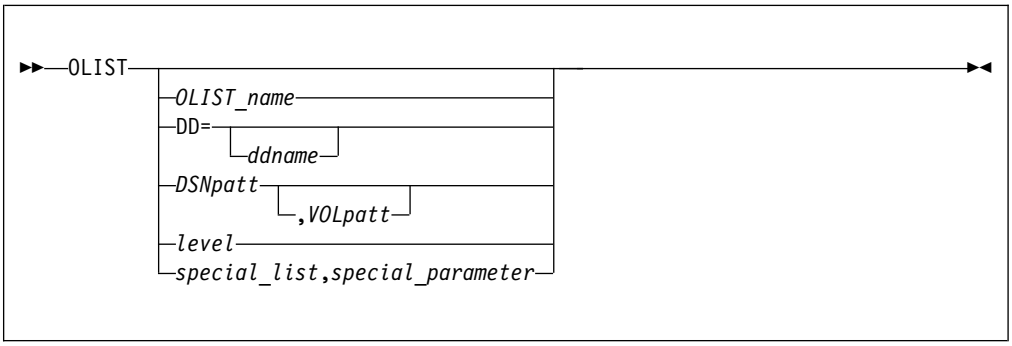
ALL Dump out the entire TSO session address-space (or region).

COMM
Dump out only the DSC COMMAREA (the main control block area).

OLIST command

The OLIST command invokes an Objects List, or a list of referenced objects lists.

Syntax



Operands

OLIST_name
The name of an OLIST to be displayed or created. The name of an OLIST can be from one to eight characters; it must conform to the syntax of a member name.

DD=*ddname*
When *ddname* is specified, it displays an object list of all data sets allocated to that ddname. If not specified, all currently allocated data sets are displayed.

DSNpatt
A data set name using the wildcard characters "%" and "*".

VOLpatt
A volume name using the wildcard characters "%" and "*".

level The level qualifiers for the data set names. For example, for a fully-qualified data set name of `ACCOUNTS.PAYABLE.COBOL`, the level could be `ACCOUNTS.PAYABLE` or `ACCOUNTS`.

special_list
One of the @LISTxxx options. See examples in the table in the *Usage Notes*.

special_parameter
The parameter relevant to the special list option.

Usage notes

Processing depends on the form of the command, as shown below. (In this table, *newlist* is an OLIST that does not already exist, *oldlist* is an OLIST that already exists. *VOLpatt* and *DSNpatt* are as defined above.)

Form of Command	Processing
OLIST	Invoke the default (last) referenced permanent OLIST.
OLIST *	Displays the list of permanent objects lists.
OLIST *oldlist*	The OLIST "oldlist" is displayed.
OLIST *newlist*	A new OLIST with the name "newlist" is created. "newlist" is checked to see if it matches a first-level qualifier. If so, the OLIST is filled with all catalog entries that have "newlist" as their first-level qualifier. If not, the OLIST is prefilled with the names of the ISPF libraries on the EDIT entry panel and DSLIST entry panel.
OLIST /	Opens a temporary OLIST and immediately executes the POPULATE command to prompt for sources of names to go into this list.
OLIST *DSNpatt*	A temporary OLIST is displayed listing all data sets in the catalog matching pattern "DSNpatt".
OLIST *DSNpatt*,*VOLpatt*	Invoke a temporary list showing cataloged data sets matching the specified DSN pattern (with wildcards). If a volume pattern is specified, only data sets cataloged to the specified volumes are listed.
OLIST @DD,*ddname*	Invoke a temporary OLIST displaying allocated data sets. If a *ddname* is specified, only libraries allocated to the specified ddname are listed.
OLIST DD=	Open a temporary OLIST with all currently allocated data sets.
OLIST DD=*ddname*	Open a temporary OLIST with all data sets allocated to that *ddname*.
OLIST @H	Display a temporary OLIST showing the history list (the list of last 100 data sets referenced by the user).
OLIST @LISTB,*DSNpatt*	Opens a temporary OLIST showing cataloged data sets matching the specified data set name pattern that are Generation Data Groups.
OLIST @LISTE,*DSNpatt*	Opens a temporary OLIST showing cataloged data sets matching the specified data set name pattern that are PDSE libraries.
OLIST @LISTF,*DSNpatt*	Opens a temporary OLIST showing cataloged IBM BookManager Book-Shelf files matching the specified *DSNpatt*. (.BKSHELF may be omitted from *DSNpatt*.)

Form of Command	Processing
OLIST @LISTGDG,*DSNpatt*	Opens a temporary list of generation data sets whose GDG base name is matching the specified pattern. The OLIST shows both the exact data set name as it appears in the VTOC and the relative generation number from the catalog.
OLIST @LISTI,*DSNpatt*,*VOLpatt*	A combination of OLIST *DSNpatt*,*VOLpatt*, followed by "* INFO". Invoke a temporary list showing cataloged data sets matching the specified data set name pattern. If a volume pattern is specified, only data sets cataloged to the specified volumes are listed. Then issues an OLIST INFO command on each data set to display the attributes of the data set. Issue a QUIT at any point to stop further attribute displays.
OLIST @LISTK,*DSNpatt*	Opens a temporary OLIST showing cataloged IBM BookManager Book files matching the specified *DSNpatt*. (.BOOK may be omitted from *DSNpatt*.)
OLIST @LISTM,*DSNpatt* OLIST @LISTARC,*DSNpatt*	Opens a temporary OLIST with the list of migrated (or archived) data sets matching the specified data set name pattern. Both commands are similar and are offered for installations with HSM, ASM2, or DMS systems.
OLIST @LISTP,*DSNpatt*	Opens a temporary OLIST showing cataloged data sets matching the specified volume pattern that are system page-space data sets.
OLIST @LISTS,*listtype*	Opens a temporary OLIST displaying system data sets. The *listtype* parameter may be used to restrict the display to one of the four list types available: LPALIB, LINKLIST, APFLIST, and PARMLIB. If *listtype* is omitted, a menu of choices is displayed.
OLIST @LISTT,*DSNpatt*	Opens a temporary OLIST showing cataloged data sets matching the specified data set name pattern that are Tape data sets.
OLIST @LISTV,*VOLpatt*,*DSNpatt*	Opens a temporary OLIST based on the VTOC entries matching the specified volume pattern and the specified DSN pattern. Wildcards are allowed in both patterns, practically offering a data-set search capability
OLIST @LISTVS,*DSNpatt*	Opens a temporary OLIST showing cataloged data sets matching the specified data set name pattern that are VSAM clusters.
OLIST @LISTZ,*DSNpatt*	Opens a temporary OLIST showing SMP/E Zone clusters matching the specified *DSNpatt*. (.CSI may be omitted from *DSNpatt*.)

Your default OLIST is the last permanent OLIST displayed. The first time you invoke OLIST, or if you have deleted the OLIST last used as the default, your default is an OLIST with the name set to your USERID. Processing is the same as if you specified the name explicitly. Your USERID is checked to see if it matches a first-level qualifier. If so, the OLIST is filled with all catalog entries that have your USERID as their first-level qualifier. If not, the OLIST is prefilled with the names of the ISPF libraries on your BROWSE, EDIT, and VIEW, and DSLIST Entry Panels.

You can also explicitly set the OLIST that is displayed when OLIST is next invoked without any specifications. To do so, enter the line command NXT on the OLIST selection list panel.

To display a temporary OLIST of all data sets in the catalog matching a first-level qualifier, rather than to display an existing OLIST of the same name or to create a new (permanent) OLIST of that name, enter it with a period, like this:

```
OLIST ACCOUNTS.
```

rather than

```
OLIST ACCOUNTS
```

Examples

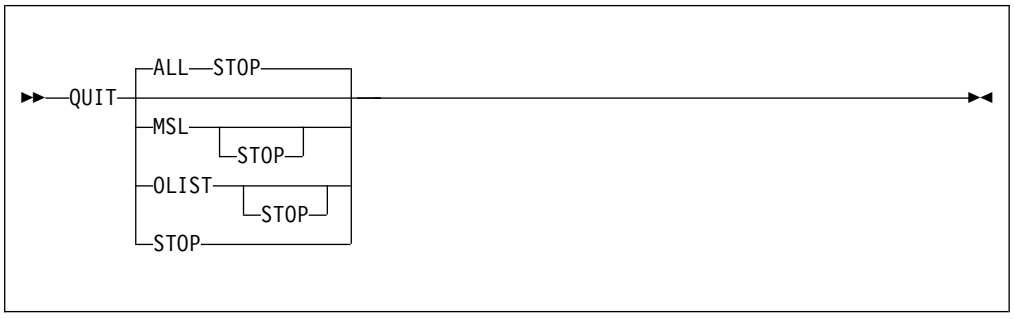
```
OLIST
OLIST *
OLIST LEDGER1
OLIST ACCOUNTS.%PAY*.COB*
OLIST TAXES*YEAREND*
OLIST SYS1.*,SYSR01
OLIST SYS1.*,*
OLIST @LISTV,SYS*,SYS1*MACLIB
OLIST @LISTM,SYS1.A*LIB
OLIST @LISTARC,SYS2.*
OLIST @LISTGDG,ACCOUNTS.TRANSACT
OLIST @LISTS,LPALIB
OLIST @LISTS,APFLIST
OLIST @LISTS,LINKLIST
OLIST @LISTS,PARMLIB
OLIST @LISTS,ALL
```

QUIT command

The QUIT command is used to terminate processing of pending members under MSL and pending objects under OLIST.

Pending members are members that have not yet been processed by GLOBAL, by an MSL line command entered as a main command with a pattern, or by MSL when multiple line commands have been entered. Pending objects are OLIST entries that have not yet been processed by an OLIST line command entered as a main command with a range of OLIST entries.

Syntax



Operands

ALL Request to abort all nested MSL and OLIST processing

MSL Request to abort all nested MSL processing

OLIST
Request to abort all nested OLIST processing

STOP Request to stop any aborting of nested MSL and OLIST processing.

Note: QUIT entered during GLOBAL command activity stops at the current member.

Usage notes

QUIT is a main command only. It cannot be used as a line command.

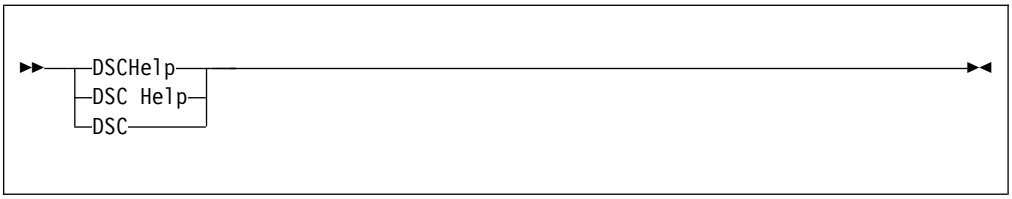
Examples

```
QUIT
QUIT OLIST
QUIT STOP
```

DSCHelp command

If Help is invoked while in an OLIST or MSL, the Help is Data Set Commander specific. However, when invoked outside of OLIST or MSL, the standard ISPF help is invoked. To display Data Set Commander Help, you must enter `DSCHelp`, `DSC Help`, or `DSC`.

Syntax



Operands

DSCHelp has no operands.

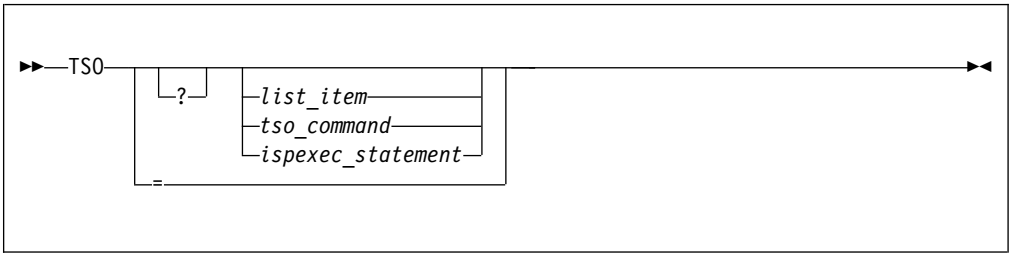
Examples

```
DSCHelp
DSC
```

TSO command

As well as processing TSO commands, CLISTS, and REXX EXECs as under native ISPF, the TSO general command can be used to execute ISPEXEC statements and to invoke the TSO Command Shell.

Syntax



Operands

? Display the TSO Command Shell panel and the default command list (History or Permanent, as set by DSC SET). If there is a following *list_item* (with no intervening space), then the command line displays the command from that line, ready for review and editing before execution. If there is a following *tso_command* or *ispexec_statement*, then it is displayed on the command line, ready for review, modification, and execution. If there is no *list_item*, then the command line is blank.

= Display the TSO Command Shell panel, with the History command list, and the most recently executed TSO command in the command line (so that it can be reviewed and modified before you execute it). Since the line displayed is always the most recently executed TSO command, you do not enter a parameter after "=". In effect, "TSO =" is the same as "TSO ?1".

list_item
This is an integer, referring to a line in the TSO Command Shell list. When you enter this integer, you re-execute (or display) this command.

tso_command
A TSO command, CLIST, or REXX EXEC to execute (or display).

ispexec_statement
An ISPEXEC statement to execute (or display).

Usage notes

When TSO is entered without any operands, the TSO Command Shell panel is displayed, showing either a command history list or a permanent command list, depending on the user default option setting for TSO shell.

When TSO is entered with an operand but not the question mark, then the specified command is executed immediately.

When TSO is entered with just a question mark (and no command operand), the TSO Command Shell panel is displayed. If a question mark is entered with another operand, the specified command is displayed on the command line of the TSO Command Shell panel. The other operand must follow the question mark without any intervening spaces. An integer indicates a command on the permanent list of the TSO Command Shell panel. A slash ("/") within the command string indicates the data set name the cursor is on.

Examples

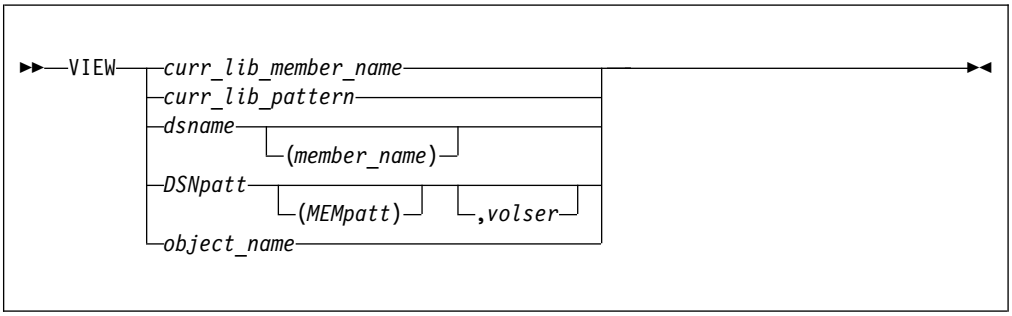
```
TSO
TSO =
TSO ?
TSO ?3
TSO ?DOWNLOAD 'PAYROLL.JONES.CNTL(ACCT1)'
TSO ALLOC FILE(A) DA('ACCT.TEST') OLD
TSO ALLOC FILE(A) DA(/) OLD
TSO DOWNLOAD 'PAYROLL.JONES.CNTL(ACCT1)'
TSO ISPEXEC SELECT PANEL(MY@PRIM)
```

VIEW command

The VIEW command invokes a new nested VIEW session, or opens a new MSL with the default meaning of SELECT and S set to VIEW. The VIEW command is used to display sequential data sets and members of partitioned data sets. The displayed data can be changed, but not saved, unless specifically authorized on a confirmation panel. VIEW provides a BROWSE-like facility with the power of EDIT. VIEW cannot display load module format data sets, but automatically invokes BROWSE to do so.

Depending on how Data Set Commander is installed at your site, VIEW may also process VSAM files, Librarian or Panvalet files, Db2 tables, and installation-defined objects.

Syntax



Operands

curr_lib_member_name
The name of a member in the current library, or the last library processed (or, if the screen has been split, the last library processed in this split).

curr_lib_pattern
A member name pattern using the wildcard characters "%" and "*" to match the name or names of one or more members in the current library, or in the last library processed (or, if the screen has been split, the last library processed in this split).

dsname
The name of the dataset you wish to view.

member_name
The name of a member in the library specified.

DSNpatt
A data set name pattern using the wildcard characters "%" and "*" to match the name or names of one or more data sets in the library specified.

MEMpatt
A member name pattern using the wildcard characters "%" and "*" to match the name or names of one or more members in the library specified.

volser The volume serial holding the members you wish to view.

object_name
The name of a DSC supported object, such as a Db2 object (if supported) or UNIX file; see Table 1 on page 11.

Usage notes

If the data set specified is a library and you have not specified a particular member (that is, you have specified only the library name, or have specified a pattern), a member selection list is displayed.

An unqualified two-level data set name must be entered with a leading period to distinguish it from a member name. (If your TSO profile is set to NOPREFIX, a name entered with a leading period refers to a single-level data set name.)

Note: VIEW can be abbreviated to VI (as a command shortcut), subject to change by the local Data Set Commander admin. The MSL line command V, which can be entered as a main command, invokes a VIEW session on one or more members in the current library.

Examples

```
VIEW
VIEW ACCTSTAT
VIEW ACCT*
VIEW 'PAYROLL.PROD.COBOL'
VIEW 'PAYROLL.PROD.COBOL',PROD02
VIEW 'PAYROLL.PROD.COBOL(ACCT1)'
VIEW 'PAYROLL.PROD.COBOL(ACCT*)'
VIEW DEV.COBOL(PAY*)
VIEW .TESTLIST
```

Chapter 5. Command shortcuts

The shortcuts make it easy for you to enter Data Set Commander commands. You don't have to type the full command, you can enter just the shortcut. To display all of the command shortcuts, enter `DSC?`.

This table shows the command shortcuts available in Data Set Commander, and the associated command and operands.

Shortcut	Command	Operands	Remarks
BF	BFILE	'<DSNpatt>(<MEMpatt>)'	Invokes a new "BROWSE VSAM" session, or open a new MSL with the default meaning of SELECT and S set to BFILE.
BR	BROWSE	'<DSNpatt>(<MEMpatt>)'	Invokes a new "BROWSE" session, or open a new MSL with the default meaning of SELECT and S set to BROWSE.
DSC	DSCHELP	N/A	Displays Data Set Commander online HELP.
DSC?	DSC?????	N/A	Displays all active Data Set Commander command shortcuts.
DSCCMD	DSCCMDS	OFF|ON	Disables or enables shortcuts.
DSCDFLT	DSCDFLTS	N/A	Restores DSC default options.
DSCDT	DSCDTEST		Displays dialog test options.
DSCMON			Data Set Commander monitor task control
DSCOF	DSCOFF	N/A	Temporarily disables Data Set Commander functionality.
DSCON	DSCON	N/A	Enables Data Set Commander functionality previously disabled with the DSCOFF command.
DSCNEW	DSCNEWS	N/A	Displays "What's New" information for all current versions of DSC.
ED	EDIT	'<DSNpatt>(<MEMpatt>)'	Invokes a new "EDIT" session, or open a new MSL with the default meaning of SELECT and S set to EDIT.
EF	EFILE	'<DSNpatt>(<MEMpatt>)'	Invokes a new "EDIT VSAM" session, or open a new MSL with the default meaning of SELECT and S set to EFILE.
EX?	EX??????	N/A	Displays TSO Shell permanent command list.
EX=	EX=	N/A	Displays TSO Shell most recently executed command.
EX1	EX1	N/A	Executes TSO Shell permanent command number 1.
EX2	EX2	N/A	Executes TSO Shell permanent command number 2.
EX3	EX3	N/A	Executes TSO Shell permanent command number 3.
EX4	EX4	N/A	Executes TSO Shell permanent command number 4.

Command shortcuts

Shortcut	Command	Operands	Remarks
EX5	EX5	N/A	Executes TSO Shell permanent command number 5.
EX6	EX6	N/A	Executes TSO Shell permanent command number 6.
EX7	EX7	N/A	Executes TSO Shell permanent command number 7.
EX8	EX8	N/A	Executes TSO Shell permanent command number 8.
EX9	EX9	N/A	Executes TSO Shell permanent command number 9.
IDIAG	IDIAG	<parm1>, <parm2>	Invokes Data Set Commander diagnostics.
IMAINT	IMAINT	N/A	Writes out Data Set Commander maintenance report to DD(IQILOGPR).
INAM	INAME	<name>|OFF|ON	DSC set screen name
IPT	IPTHELP	N/A	Displays Data Set Commander help.
IPT?	IPT?????	N/A	Displays Data Set Commander shortcuts.
IPTCMD	IPTCMDS	OFF|ON	Disables or enable shortcuts.
IPTDT	IPTDTEST DIALOG TEST		
IPTNEW	IPTNEWS		Data Set Commander news.
IPTOF	IPTOFF		Disables Data Set Commander.
IPTON			Enables Data Set Commander.
ISET	ISET	N/A	Displays Setting Data Set Commander Defaults menu.
ISNAP	ISNAP	<parm1>	Writes out a memory dump to DD(IQITRSNP).
ISPL	ISPLIT	<name>	Starts a screen split with a new name.
ISTA	ISTART	N/A	Modifies and executes the ISPF ZSTART variable command stack.
IVER	IVERSION	N/A	Displays Data Set Commander maintenance report.
IVSM	IVSML	N/A	Data Set Commander virtual storage management display.
O*	O*	N/A	Displays a list of all permanent OLISTs.
O/	O/	N/A	Populates a new temporary OLIST.
OH	OHIST		Populates a new temporary OLIST with most recently accessed data set names.
OL	OL	<parm1>, <parm2>	Invokes OLIST function with any of supported parameters.
OL*	OL*	N/A	Displays a list of all permanent OLISTs.
OL/	OL/	N/A	Populates a new temporary OLIST.
OLB	OLBASE	<DSNpatt>	Populates a new temporary OLIST with generation- data-group base names.
OLBK		<DSNpatt>	Listcat BookManager Books.
OLBO	OLBOOK	<DSNpatt>	Listcat BookManager Books.

Shortcut	Command	Operands	Remarks
OLC	OLCAT	<DSNpatt>	Populates a new temporary OLIST with cataloged data set names matching multiple patterns.
OLCL	OLCLONE	<DSNpatt>, <VOLpatt>	Populates a new temporary OLIST with the cataloged data set names of CLONEd data sets that match a pattern.
OLDA	OLDASD	<VOL_pat>	Lists online DASD volumes by pattern, similar to the “XV” option of the DSLIST main command.
OLDD	OLDDNAME	<DD_name>	Populates a new temporary OLIST with data set names allocated to a DD.
OLE	OLE	<DSNpatt>	Populates a new temporary OLIST with cataloged data set names of PDSE libraries matching a pattern.
OLG	OLGDG	<DSNpatt>	Populates a new temporary OLIST with generation- data-group data set names showing their relative generation numbers.
OLH	OLHIST		Populates a new temporary OLIST with most recently accessed data set names.
OLI	OLINFO	<DSNpatt>, <VOLpatt>	Populates a new temporary OLIST with cataloged data set names matching specified pattern and issue OLIST “INFO” command on every entry.
OLIS	OLIST	<parm1>, <parm2>	Invokes OLIST function with any of supported parameters.
OLM	OLMIG	<DSNpatt>	Populates a new temporary OLIST with cataloged data set names of migrated (archived) data sets matching a pattern.
OLN	OLNVSAM	<DSNpat>,<VOLpat>	LISTCAT non-VSAM
OLP	OLPAGE	<DSNpatt>	Populates a new temporary OLIST with cataloged data set names of page-space data sets matching a pattern.
OLPDS	OLPDS	<DSNpatt>	Populates a new temporary OLIST with the cataloged data set names of PDS libraries that match a pattern.
OLPDSE	OLPDSE	<DSNpatt>	Populates a new temporary OLIST with cataloged data set names of PDSE libraries matching a pattern.
OLPDSEL	OLPDSEL	<DSNpatt>	Populates a new temporary OLIST with the cataloged data set names of PDSE load libraries that match a pattern.
OLPDSL	OLPDSL	<DSNpatt>	Populates a new temporary OLIST with the cataloged data set names of PDS load libraries that match a pattern.
OLS	OLSYS	<SYS_type>	Populates a new temporary OLIST with system data sets of a given type.
OLSH	OLSHELF	<DSNpatt>	Listcat BookManager Shelves.
OLT	OLTAPE	<DSNpatt>	Populates a new temporary OLIST with cataloged data set names residing on tapes that are matching a pattern.
OLV	OLVTOC	<VOLpatt>, <DSNpatt>	Populates a new temporary OLIST with data set names residing on volumes matching a pattern with names matching a pattern.

Command shortcuts

Shortcut	Command	Operands	Remarks
OLVS	OLVSAM	<DSNpatt>	Populates a new temporary OLIST with VSAM cluster names matching a pattern.
OLZ	OLZONE	<DSNpatt>	Listcat SMP/E Zones.
PLIST	PLIST	<parm1>,<parm2>	Invokes OLIST function with any of supported parameters.
VF	VFILE	'<DSNpatt>(<MEMpatt>)'	Invokes a new "VIEW VSAM" session, or open a new MSL with the default meaning of SELECT and S set to VFILE.
VI	VIEW	'<DSNpatt>(<MEMpatt>)'	Invokes a new "VIEW" session, or open a new MSL with the default meaning of SELECT and S set to VIEW.

Note: Shortcuts may be enabled or disabled universally. For more information see "Data Set Commander command shortcuts" in the *DSC Installation Guide*.

Chapter 6. EDIT/VIEW/BROWSE commands

Table 2. EDIT/VIEW/BROWSE commands

Main Command	Line Command	Remarks
COMPRESS	N/A	The “COMPRESS subcommand” is used to compress the library currently in EDIT or VIEW. This is not to be confused with the MSL COMPRESS command, which is used to compress any PDS library in the hierarchy.
CREATE	N/A	The “CREATE subcommand” on page 74 is used to add a member to the corresponding partitioned data set library.
CUT	N/A	The “CUT subcommand” on page 75 lets you copy or move lines from the currently edited member to clipboard.
EXPDIR	N/A	The “EXPDIR subcommand” on page 77 is used to expand the directory of the PDS library being edited, thereby allowing more members.
GENCOMP	N/A	The “GENCOMP subcommand” on page 77 is used to compare the member that you currently edit with a target member in a target data set.
PASTE	N/A	The “PASTE subcommand” on page 78 can insert lines that were previously cut into a member, or to the printer or the ISPF LIST data set.
REPLACE	N/A	The “REPLACE subcommand” on page 81 is used to replace the content of an existing member in the corresponding partitioned data set library. If the member doesn't exist, a new member is created.
SAVE	N/A	The “SAVE subcommand” on page 82 saves a member or file, but only when it has been changed.
SAVEAS	N/A	The “SAVEAS subcommand” on page 83 is used to add a member to the partitioned data set library that is being edited. If the member exists, the content of the member is replaced.
STATUS	N/A	The “STATUS subcommand” on page 84 enters information about the current member as NOTE lines at the top of the current display.
SUBMIT	N/A	THe “SUBMIT subcommand” on page 85 submits the current member, data set, or specified member in the same library as a batch job.

COMPRESS subcommand

The COMPRESS command is used to compress the PDS library currently in EDIT or VIEW. It is to be distinguished from the MSL COMPRESS command, which is used to compress any PDS library in the hierarchy.

Syntax

Operands

COMPRESS has no operands.

Usage notes

- This command is applicable only to PDS libraries.
- DSC performs its own integrity checks and resource serialization to allow the COMPRESS command to execute on the ISPF-shared libraries. However, your installation might disable this function.

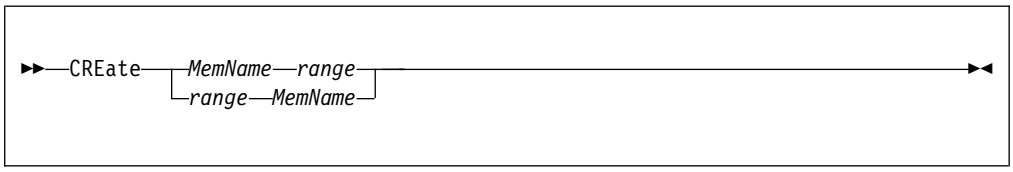
Examples

COMPR Compresses the first concatenated or only library.

CREATE subcommand

The CREATE command is used to add a member to the corresponding partitioned data set library. If the member exists, an error message is displayed.

Syntax



Operands

MemName
A valid member name.

range Specifies the lines to be used to create a member. See the following table for all the valid values.

Table 3. Valid values of operand range

Value	Definition	Explanation
*	An asterisk mark.	Indicates all the existing lines. **Note:** This is the default value.
Line1 Line2	A pair of numbers or labels, which are separated by at least one blank.	Indicates a range of lines: line Line1 - line Line2.

Table 3. Valid values of operand range (continued)

Value	Definition	Explanation
`Line1 *`	A number or label, and an asterisk mark, which are separated by at least one blank.	Indicates a range of lines: from line Line1 to the last line.

Usage notes

This command is implemented as an EDIT MACRO, which can be disabled by using the `ISET ED` command shortcut.

Examples

`CRE NEWMEM`
Creates a member that is called NEWMEM with all the existing lines.

`CRE 12 99 NEWMEM`
Creates a member that is called NEWMEM with line 12 - line 99.

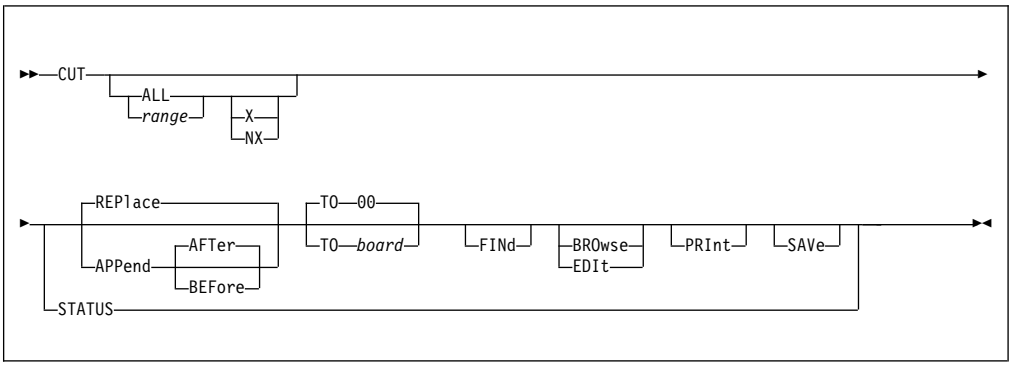
`CRE NEWMEM 7`
Creates a member that is called NEWMEM with only line 7.

`CRE NEWMEM 7 *`
Creates a member that is called NEWMEM from line 7 to the last line.

CUT subcommand

The CUT command lets you copy or move lines from the currently edited member to one of the clipboards for later pasting or for immediate printing.

Syntax



Operands

ALL Indicates that the entire edited file is to be cut.

range When entered, is a pair of operands, separated by at least one blank, specifying either the EDIT labels of the first and last lines to be cut or the first and last relative line numbers. If omitted, you can specify the range via the C, CC, M or MM line commands.

X Indicates that only excluded (non-displayed) lines are to be cut.

NX Indicates that only displayed (non-excluded) lines are to be cut.

Note: If both X and NX are omitted, both excluded and non-excluded lines are cut.

REPlace
The cut lines replace the contents of the clipboard. (This is the default.)

APPend
The cut lines are added to the clipboard at the end or the beginning, as indicated:

AFTer The cut lines are placed at the end of the clipboard, after any lines already present. This is the default location if APPEND is specified.

BEFore
The cut lines are placed at the beginning of the clipboard, before any lines already present.

FINd Displays a prompt panel on which to specify a string to be found. Only lines containing the specified string are cut.

BROwse
Displays the contents of the clipboard mentioned in the CUT operation.

EDIt Displays an EDIT panel for the contents of the clipboard mentioned in the CUT operation.

TO *board*
Indicates that the cut lines are to be sent to a clipboard. *board* specifies the clipboard the cut lines are to be placed in. *board* can be a number (00 to 99) or a name (of up to eight characters). If *board* is not provided, lines are sent clipboard 00.

PRINt When specified, the contents of the clipboard are also printed.

STAtus
Displays a list of the current active clipboards. From this list select the target clipboard to receive the entries you are cutting.

SAVe The specified clipboard is made a permanent clipboard. Permanent clipboards are marked in the ACTIVE CLIPBOARD panel with a "*" leftmost against each clipboard name. The contents of permanent clipboards are retained over sessions.

Usage notes

If CUT is entered with any syntax error, the CUT Assistance panel is displayed.

If CUT is entered without any parameters, and you have specified a range with CC or MM, then it means "CUT TO 00". If you have not specified a range, CUT by itself is an error.

Examples

CUT 1 3 TO JOB SAV
Copies line 1 - line 3 into the clipboard that is named JOB, and makes the clipboard permanent. If clipboard JOB is not empty before you execute this command, the original content is replaced.

CUT ALL FIN EDI APPEND

1. Displays a prompt panel, on which you can specify a string to be found from all lines.

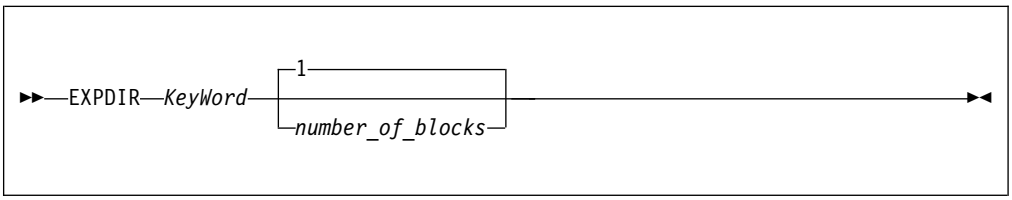
2. Copies the lines that contain the specified string into clipboard 0. If clipboard 0 is not empty before you execute this command, the copied lines are placed at the end of the clipboard after the original lines.
3. Displays an editable panel for the content of clipboard 0.

CUT STA
Displays a list of the current active clipboards, and copies lines into the one that you select from the list.

EXPDIR subcommand

The EXPDIR command is used to expand the directory of the PDS library being edited, thereby allowing it to contain more members. It is to be distinguished from the MSL EXPDIR command, which is used to expand any PDS library in the hierarchy.

Syntax



Operands

KeyWord
The value of this operand can be BLOCKS, BLKS, or B.

number_of_blocks
The number of blocks by which the directory is to be expanded. If no number is specified, the default is 1.

Usage notes

- The EXPDIR command is applicable only to PDS libraries.
- One block is enough for 5 members with ISPF statistics or 20 members without statistics.

Examples

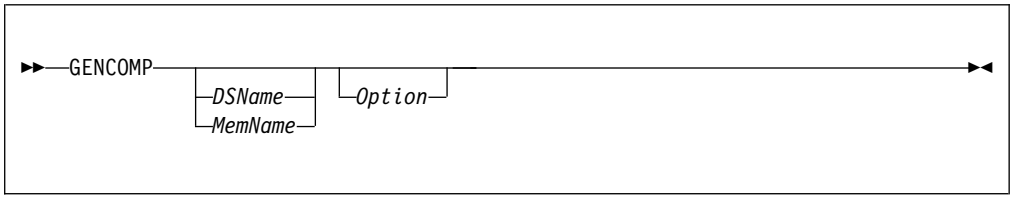
EXPDIR Expands the current directory by one block.

EXPDIR BLKS 3
Expands the current directory by three blocks.

GENCOMP subcommand

The GENCOMP command is used to compare the member that you currently edit with a target member in a target data set.

Syntax



Operands

DSName
The name of the target data set, where a member that the currently edited member is to be compared with. Omitting this parameter indicates the current data set you are in.

MemName
The name of the target member that the currently edited member is to be compared with. If this parameter is omitted, the member generation that you edit is to be compared with generation zero of the same member.

Option Indicates that all matching lines in the compared member are hidden from display. The value of this parameter can be one of the following keywords:

- EXCLUDE
- HIDE
- X

Usage notes

- Alias of command GENCOMP: DSCGCOM.
- Command GENCOMP is implemented as an EDIT macro.

Examples

GENCOMP OLDMEM01
Compare the currently edited member with member OLDMEM01 from the same library.

GENCOMP 'DSC.BKUP(ANNA)'
Compare the currently edited member with member ANNA from library DSC.BKUP.

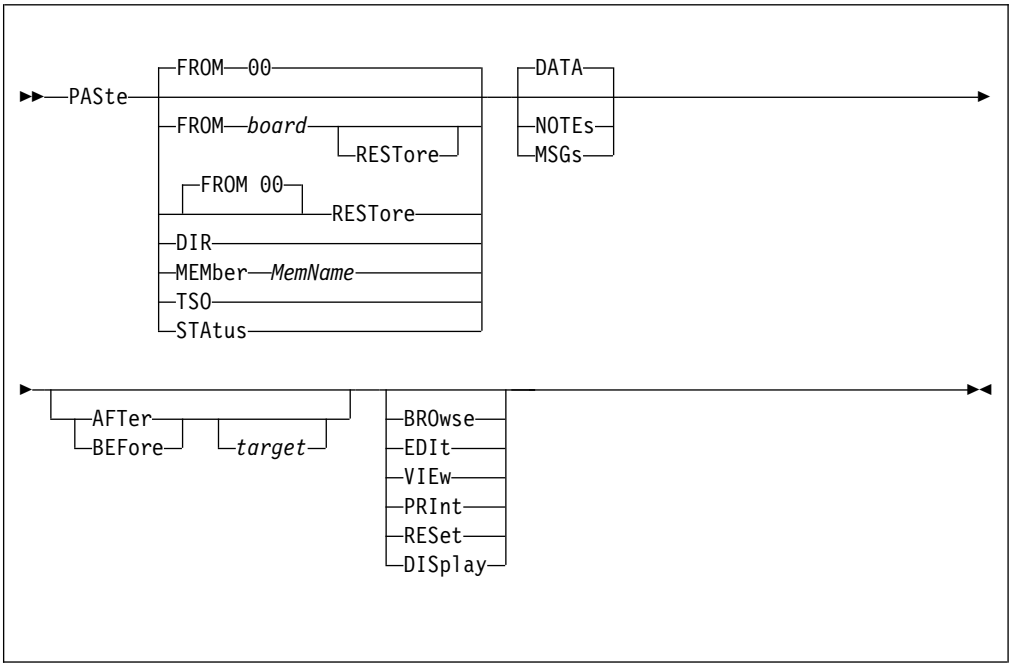
GENCOMP * X
Compare the currently edited member generation with generation zero of the same member, and exclude all matching lines from display.

DSCGCOM
Compare the currently edited member generation with generation zero of the same member.

PASTE subcommand

The PASTE command can insert lines that were previously cut into a member, or to the printer or the ISPF LIST data set. In addition, a directory list, the output of a TSO command or another member may also be pasted, the contents of a clipboard may be displayed, or the status and contents of all active clipboards may be displayed.

Syntax



Operands

FROM *board*
Specifies the clipboard *board*, numbered 00 through 99, or a name (up to eight characters) from which the cut lines are to be retrieved from. If the FROM operand is not supplied, "FROM 00" is the default. (This is the default location into which CUT lines are placed.)

MEMber
When specified, indicates that the pasted lines should be retrieved from another member in the current PDS.

MemName
The name of the member to be pasted.

DIR When specified, displays a panel asking for the name of the library whose directory is to be pasted.

TSO When specified, displays a TSO prompt panel, allowing you to enter the TSO command whose output should be pasted.

STAtus
When specified, displays a list of the currently active clipboards, from which you can select one to paste from, or to display. You can also cancel the PASTE command from this panel.

AFTer When specified, indicates that the pasted lines are placed after the indicated line. Instead of specifying the AFTER operand, you can also mark a line with the A EDIT line command.

BEFore
When specified, indicates that the pasted lines are placed before the indicated line. Instead of specifying the BEFORE operand, you can also mark a line with the B EDIT line command.

target The line at which the pasted lines should be placed. It might be specified as an EDIT statement label, a relative line number, or one of the following synonyms for ISPF EDIT labels:

EDIT Label	Synonym
.ZF	TOP
.ZL	BOTtom
.ZCSR	CURsor

Note: If you do not specify a target in the PASTE command, and no line is marked by the A or B EDIT line command, the pasted lines are placed after the line that the cursor points at; however, if the cursor points at a line that is not editable, the pasted lines are placed after the first editable line.

DATA Indicates that the lines be pasted as normal text lines. This is the default.

NOTEs
Indicates that the lines be pasted as temporary =NOTE= lines.

MSGs Indicates that the lines be pasted as temporary ==MSG>> lines.

BROwse
The clipboard you are pasting from is shown in a browse panel. When you press End, the clipboard is inserted at the target position.

EDIt The clipboard you are pasting from is shown in an edit panel. You can now edit the contents of the clipboard. When you press End, the clipboard is inserted at the target position. Furthermore, the changes that you made editing the clipboard you are pasting from remain in this clipboard. These changes are only made permanent if you save the clipboard.

VIEw The clipboard you are pasting from is shown in a view panel. You can now select lines from the clipboard, using C or CC line commands. When you press Enter, the lines you have selected from the clipboard are inserted at the target position. If you make no selection, all the lines are inserted.

PRInt When entered, indicates that the specified data is printed to the printer, or to the ISPF LIST data set, as specified on the SET panel.

DISplay
Please use the VIEw option, which does the same thing. DISplay is available in this version of Data Set Commander for backward compatibility.

RESet Indicates that the current NOTE and MSG lines are to be deleted from the display before the paste operation is performed.

RESTore
Restore from disk a persistent clipboard before pasting it. If you have changed a persistent clipboard as part of your current session, and not yet explicitly saved it, you can use RESTore to change the clipboard back to the value it had at the start of the session. If you have not nominated a clipboard, the default clipboard (00) is restored. So `PASTE REST` means first restore clipboard 00 from disk, and then paste it.

Usage notes

- This command is implemented as an EDIT MACRO, which can be disabled by using the `ISET ED` command shortcut.

- The default of operand AFTER or BEFORE can be changed by using the `ISET ED` command shortcut.

Examples

PASTE Copies all lines from clipboard 0 into the target area.

PAS FROM 7 EDI

1. Displays an editable panel for the content of clipboard 7.
2. Copies the resulting lines from clipboard 7 into the target area.

PAS MEM SAMPLE
Copies all the lines of member SAMPLE into the target area.

PAS DIR BRO

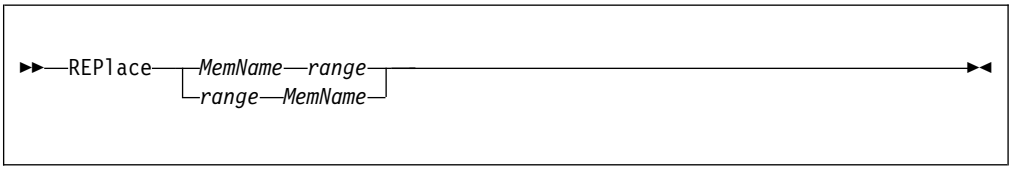
1. Displays a panel, on which you can specify the name of a library.
2. Displays a panel for the content of the directory of the library that you specify, and copies the directory into the target area.

PAS STA
Displays a list of the current active clipboards, and copies the lines of a clipboard into the target area after you select one from the list.

REPLACE subcommand

The REPLACE command is used to replace the content of an existing member in the corresponding partitioned data set library. If the member doesn't exist, a new member is created.

Syntax



Operands

MemName
A valid member name.

range Specifies the lines to be used to replace the content of the existing member or to create a member. See the following table for all the valid values.

Table 4. Valid values of operand range

Value	Definition	Explanation
*	An asterisk mark.	Indicates all the existing lines. **Note:** This is the default value.
`Line1 Line2`	A pair of numbers or labels, which are separated by at least one blank.	Indicates a range of lines: line Line1 - line Line2.

Table 4. Valid values of operand range (continued)

Value	Definition	Explanation
`Line1 *`	A number or label, and an asterisk mark, which are separated by at least one blank.	Indicates a range of lines: from line Line1 to the last line.

Usage notes

This command is implemented as an EDIT MACRO, which can be disabled by using the `ISET ED` command shortcut.

Examples

`REP MEM`
Replaces the content of member MEM with all the existing lines. If member MEM doesn't exist, a member that is called MEM is created with the lines.

`REP MEM .A .B`
Replaces the content of member MEM with a range of lines from the line labeled .A to line labeled .B. If member MEM doesn't exist, a member that is called MEM is created with the lines.

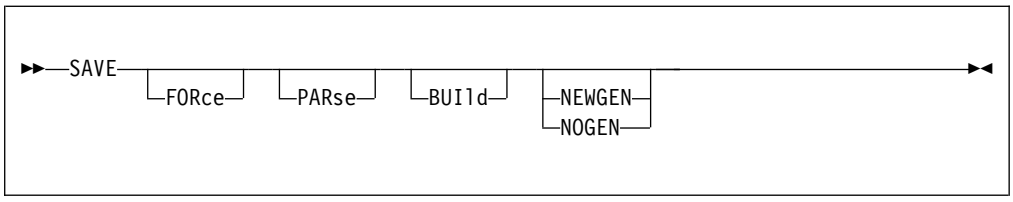
`REP 7 MEM`
Replaces the content of member MEM with only line 7. If member MEM doesn't exist, a member that is called MEM is created with the line.

`REP 7 * MEM`
Replaces the content of member MEM from line 7 to the last line. If member MEM doesn't exist, a member that is called MEM is created with the lines.

SAVE subcommand

The SAVE command has been modified to save a member (or file) only when it has been changed. You may, however, want to force a SAVE (for example, to place the member in a lower-level library). A keyword has been added to allow you to force a SAVE to be done even if the member or file has not been changed.

Syntax



Operands

FORce
Indicates that the member (or file) is to be saved, even if it hasn't been changed since the last time it was saved.

PARse For SCLM controlled editing, parse a member for statistical and dependency information.

BUIld For SCLM controlled editing, build a member. Implies FORce and PARse.

NEWGEN
Saves the member in a new generation. The new generation becomes the current generation, which is also known as generation zero. The original generation that you edit is left unchanged.

Note: This keyword is applicable only when you edit a member in a PDSE version two data set that is configured for member generations.

NOGEN
Saves the member to the same generation that is being edited. If you edit a generation that is not generation zero, this is the default behavior for saving.

Note: This keyword is applicable only when you edit a member in a PDSE version two data set that is configured for member generations.

Usage notes

If you issue the SAVE command under VIEW, a confirmation panel is displayed. You can confirm or cancel the requested save operation.

If there is not enough room in the library or the directory to save the member, Data Set Commander offers to compress the library or expand the directory (as appropriate) before attempting to perform the save operation.

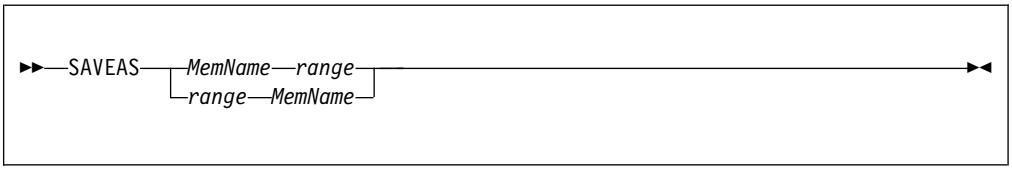
Examples

```
SAVE
SAVE FORCE
SAVE FOR
SAVE BUILD
save PROMOTE
```

SAVEAS subcommand

The SAVEAS command is used to add a member to the partitioned data set library that is being edited. If the member exists, the content of the member is replaced with the lines.

Syntax



Operands

MemName
A valid member name.

range Specifies the lines to be used to create a member or to replace the content of the existing member. See the following table for all the valid values.

Table 5. Valid values of operand range

Value	Definition	Explanation
*	An asterisk mark.	Indicates all the existing lines. **Note:** This is the default value.
`Line1 Line2`	A pair of numbers or labels, which are separated by at least one blank.	Indicates a range of lines: line Line1 - line Line2.
`Line1 *`	A number or label, and an asterisk mark, which are separated by at least one blank.	Indicates a range of lines: from line Line1 to the last line.

Usage notes

This command is implemented as an EDIT MACRO, which can be disabled by using the `ISET ED` command shortcut.

Examples

`SAVEAS MEM`
Creates a member that is called MEM with all the existing lines. If member MEM exists, the content of the member is replaced with the lines.

`SAVEAS MEM .A .B`
Creates a member that is called MEM with a range of lines from the line labeled .A to line labeled .b. If member MEM exists, the content of the member is replaced with the lines.

`SAVEAS 7 MEM`
Creates a member that is called MEM with only line 7. If member MEM exists, the content of the member is replaced with the line.

`SAVEAS 7 * MEM`
Creates a member that is called MEM from line 7 to the last line. If member MEM exists, the content of the member is replaced with the lines.

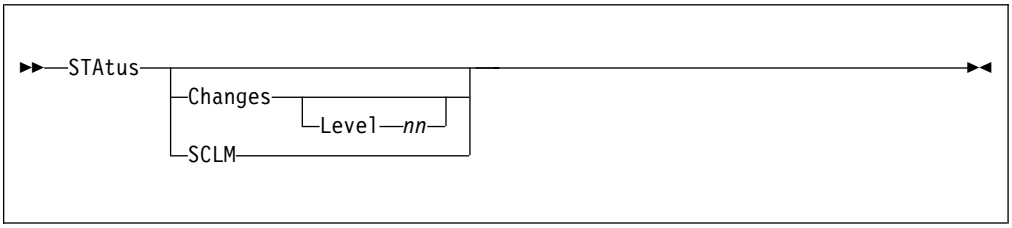
STATUS subcommand

The STATUS command enters information about the current member as NOTE lines at the top of the current display. In addition, if requested, only lines changed in the current or a specified modification level are displayed (others are excluded).

The information displayed includes:

- The member name.
- The record format and size.
- Whether anything in the member was changed since the last time the member was saved, and if so, how many lines have changed.
- The current directory entry of the member.

Syntax



Operands

Changes
If specified, indicates that only lines changed in the current modification level (the default) or the specified modification level are to be displayed. All other lines are to be excluded.

Level If specified, indicates the modification level of which changed lines are to be displayed. The default is the current modification level.

nn Indicates the modification level of which changed lines are to be displayed.

SCLM For SCLM controlled edit, displays the SCLM accounting and referenced members.

Usage notes

- The STATUS command is implemented as an EDIT MACRO, which can be disabled by using the `ISET ED` command shortcut.
- The LEVEL parameter requires ISPF statistics.

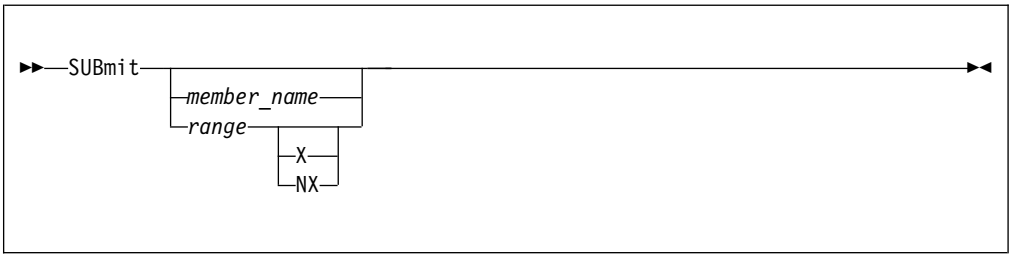
Examples

```
STATUS
STATUS CHANGES
STATUS C LEVEL 2
STATUS CHA LEV 2
STA C L 2
```

SUBMIT subcommand

The SUBMIT command submits the current member or data set or a specified member in the same library as a batch job.

Syntax



Operands

member_name
The name of a member in the current library. If no *member_name* is specified, the current member or data set is submitted.

range An EDIT label range.

X Indicates that only the excluded (non-displayed) lines are to be submitted.

NX Indicates that only the non-excluded (displayed) lines are to be submitted.

Note: If both X and NX are omitted, both the excluded and non-excluded lines are to be submitted.

Usage notes

- This command is implemented as an EDIT MACRO, which can be disabled by using the `ISET ED` command shortcut.
- The submitted data is expected to be a valid JCL job.

Examples

`SUBMIT` Submits all the edited lines.

`SUBMIT JOB3`
Submits the member that is named JOB3.

`SUB 1 10 NX`
Submits all the non-excluded (displayed) lines from line 1 - line 10.

Chapter 7. PDSE member generations support

z/OS v2.1 includes support for PDSE member generations where DFSMS is able to retain a certain number of old versions, called generations, of PDSE members until certain criteria are met. When this (optional) feature is used, older generations (versions) of members are saved inside the same PDSE data set.

This achieves two main objectives:
- Allows you to reverse recent changes to a member and restore an older version of the member.
- Allows you to retain an older level of a member for archival or similar reasons.

DSC MSL provides comprehensive support for PDSE member generations by enhancing the member selection display to include the display of member generations as well as providing the functionality to browse, edit, view, delete, recover, copy, move, and print selected or all member generations.

These MSL main commands support member generations:

```
COPY   COPYTAG   DELETE    DELETETAG   GENRECOV
INFO   MOVE      MOVETAG   PRINTMEM    PRINTATG
SAVE   SET M     SET E     SELECT      SELECTAG
```

These MSL line commands support member generations:

```
B   C   D   E   G   I   M   P   S   V   X
```

As delivered by IBM, DSC is configured with PDSE member generations support disabled. This means that when running in a z/OS v2.1 system with PDSE member generations support a user is not able to display nor manipulate member generations.

There are two new customization options available:
- Via the IQIWIZRD customization
- Using the ISET command shortcut

Via the IQIWIZRD customization

```
------------------------ IBMDSC - Customization Wizard ------------------
Command ===>

Specify the default for BROWSE/EDIT/VIEW main menu display of
reserved name @H :
Display OLIST of History-List                ===> Y (Y=Yes, N=No)
Prompt with FIND command after a Global FIND  ===> Y (Y=Yes, N=No)
Insert VOLSER in MSL invoked CLISTs           ===> N (Y=Yes, N=No)
Support PDSE member generations (z/OS V2.1)   ===> N (Y=Yes, N=No)
Default SAVE NEWGEN (PDSE member generation)  ===> N (Y=Yes, N=No)

Specify the default User Interface options for CUT and PASTE
command handling :
  Cut and Paste Options   ===> 1   (1, 2)
  (1) DSC CUT/PASTE   CUT/PASTE commands are DSC's for all applications
                              (ISPF, SDSF, OMVS, etc.)
  (2) ISPF CUT/PASTE  CUT/PASTE commands are ISPF's for all applications

Specify the site-wide member name for storing library member titles:
  Member title list name  ===> Z999TITL
```

Using the ISET command shortcut

To enable member generations support specify “Y” for **Support PDSE member generations** in the MSL options setting panel (command "ISET M").

```
-DSC- -----------------Member Selection List options--------------------------
COMMAND ===>

Automatic preview (with LOCATE/FIND)         ==> Y (Y=Yes, N=No)
Replace existing members (COPY/MOVE)         ==> N (Y=Yes, N=No, O=Older)
Member list line command pad character       ==>   (Blank,Dot,Quote,Underscore)
Main menu option 1 default process           ==> B (B=Browse, V=View)
Main menu option 1,2 @H display              ==> Y (Y=Olist, N=No)
Default cursor position                      ==> M (M=Main, L=Line cmd)
Include member names in dataset history      ==> N (Y=Yes, N=No)
Prompt with FIND command after a Global FIND ==> Y (Y=Yes, N=No)
Support PDSE member generations (z/OS V2.1)  ==> N (Y=Yes, N=No)
Support IEBCOPY member name convention       ==> Y (Y=Yes, N=No)
Accept non standard (printable) member names ==> N (Y=Yes, N=No)
Double-Byte-Character-Set (DBCS) support     ==> N (Y=Yes, N=No)
  If DBCS supported, use case-sensitive search strings    ==> N

Commands executed by TAILOR command:
  ==> REF;SORT CHA;FIL CHA Q

 Press ENTER or END to exit. Enter CANCEL for installation defaults.
```

To set the “NEWGEN” option as a default option of ISPF EDIT SAVE command, specify “Y” for the **Default SAVE NEWGEN** in the EDIT options setting panel (command "ISET E").

```
-DSC- --------------------EDIT/VIEW/BROWSE options-----------------------------
COMMAND ===>

Confirm CANCEL/MOVE/REPLACE commands         ===> N  (Y=Yes, N=No)
Enable edit/view hilights (coloring)         ===> Y  (Y=Yes, N=No)
Action bar (CUA pulldown menu) active        ===> Y  (Y=Yes, N=No)
Display OLIST of History-List (@H)           ===> Y  (Y=Yes, N=No)
Prompt with FIND command after a Global FIND ===> Y  (Y=Yes, N=No)
Default SAVE NEWGEN (PDSE member generation) ===> N  (Y=Yes, N=No)

VIEW requires exclusive use of file          ===> N  (Y=Yes, N=No)
 (namely only one user can view/edit the same file)

      Cut and Paste Options                  ===> 1  (1,2)

                  Explanation of Cut and Paste Options
(1) DSC CUT/PASTE  - CUT/PASTE commands are DSC's for all applications
                               (ISPF, SDSF, OMVS, etc.)
(2) ISPF CUT/PASTE - CUT/PASTE commands are ISPF's for all applications

Press ENTER or END to exit. Enter CANCEL for installation defaults.
```

Chapter 8. DSC monitor

The DSC Monitor (introduced in DSC V8.1) is run as a started task in each node of a SYSPLEX that requires to automatically refresh the LLA directory entries of all updated LLA managed members (load as well as source modules). Each DSC Monitor node of a SYSPLEX listens to any LLA-related events and if applicable, immediately directs the z/OS LLA facility to refresh all pertinent directory entries. It also communicates all these events to the other Monitor nodes in the SYSPLEX so that they can trigger all corresponding LLA refresh activities in their LPAR.

Each Monitor node can be controlled:
- Via the z/OS console (MODIFY command). For details, see Appendix N, "IQIMONTR operator commands," on page 363.
- Menu driven DSC ISPF application (DSCMON command shortcut) which establishes cross-memory communications with the DSC Monitor started task running on its LPAR.

Installation

The Monitor component consists of four APF authorized modules that are delivered in the SIQILOAD target library. The installation may simply add this target library to the system's APF list or copy those 4 modules into any APF authorized library.

Target library SIQIINST includes two JCL members that may be used for either creating a procedure or a batch job for the Monitor execution. The DSC Monitor accepts the same PARMLIB definitions (members CSVLLAxx) as the z/OS LLA facility, for the purpose of specifying LLA groups of monitored libraries.

If the Monitor is submitted as a batch job, the submitting user must have a RACF® authority level of "CONTROL" to resource `IQIMONTR.OPER` of RACF class `FACILITY`. The same RACF authority is required from a DSC/ISPF user of the monitor control center application that wishes to shut down the Monitor or dynamically change its operating parameters.

For more information about installation, see "DSC monitor" in Chapter 2 of the *IBM DSC Installation and Customization Guide*.

For information about the Monitor operator commands, see Appendix N, "IQIMONTR operator commands," on page 363.

The DSC Monitor Options Menu

The DSC Monitor Options Menu is the main monitor menu - the user interface to the DSC monitor. From it you select options that lead to other menus within the monitor.

To display the DSC Monitor Options Menu), enter the command `DSCMON`. The menu is displayed:

```
-DSC-                    DSC Monitor Options Menu
Option ===>

Monitor State: ACTIVE  Timer: UNIT=1s DELAY=2s AUTO=10m POLL=5m PAUSE=0s
Authorization: FULL    Automatic LLA refresh: ENABLED

1  Display defined LLA library groups
2  Display monitored LLA libraries
3  Display monitored modules
4  Display SYSPLEX DSC Monitors
5  DSC Monitor started task control
6  DSC SMF Record Filtering control
7  DSC Monitor activity statistics

Press ENTER key to select or point and shoot at option description
Enter X or press END key to terminate
```

Figure 26. The DSC Monitor Options Menu

Here are the meanings of the Timer settings:

UNIT The interval at which the monitor checks for events. Currently set at one second (1s).

DELAY
How long the monitor waits before sending out a refresh request. This is designed to improve operating efficiency. By waiting a little while, the monitor may be able to send out a list of members requiring refresh, instead of just one member. Currently set at two seconds (2s).

AUTO
The interval after which a full comparison is done. This will then lead to a refresh for appropriate members. This full comparison guarantees that if information in a very active environment is missed, the update is still undertaken (albeit not immediately). Because the full comparison has a higher overhead, the auto interval should be fairly large. Currently set to ten minutes (10m).

POLL The interval at which other nodes in the SYSPLEX are polled. This polling ensures that nodes are still up. Currently set to five minutes (5m).

PAUSE
There are times when you do not want the DSC Monitor active, because you don't want it doing cache refreshes. For example, you may be undertaking a reallocation of libraries. In this instance, rather than needing to shut the monitor down and then restart it, you can pause the monitor. The pause then counts down, until it gets to 0s, and it becomes active again.

All of these options can be set through the **(5) DSC Monitor started task control => (4) TIMER facility control** menu.

The menu hierarchy within DSC monitor is two or three levels deep. At each level you can enter the `X` main command. At all but the top menu, this command displays the top (DSC Monitor Options Menu) within the DSC Monitor.

Activating and deactivating groups and libraries

Activating an item means that the item (group or library) is being monitored (and possibly updated in cache) by the DSC monitor. When an item is deactivated, then the item is no longer monitored. If an item is deactivated, and a member generates an event, the DSC monitor does not issue a request to have the cache updated. So the old version remains current.

You can list library groups by selecting option 1 (Display defined LLA library groups) from the DSC Monitor Options Menu. You can select libraries by selecting the same option and then entering the L line command against a particular group. Or you can directly display monitored groups by selecting option 2 (Display monitored LLA libraries) from the DSC Monitor Options Menu. Here is an example, using the first technique:

From the Options Menu, select option 1 (Display defined LLA library groups). The PARMLIB defined LLA Library Groups panel is displayed:

```
  -DSC-                   PARMLIB defined LLA Library Groups    Row 1 to 2 of 2
Command ===>                                                   Scroll ===> CSR

Monitor State: ACTIVE
Authorization: FULL

Main commands: S Sort list  X Exit to main menu
Line commands: A Activate  D Deactivate  R Refresh  L Libraries

  Sta Group    Last Refresh   Members
  ACT -LNKLST-                  12929
  ACT CSVLLA00                  18556
----------------------- End Of List -----------------------------------------
```

Figure 27. The PARMLIB defined LLA Library Groups panel

In this example, the CSVLLA00 group was not defined. DSC Monitor assumes such a library group exists. Since it does not, it has 0 members.

The Sta(tus) column shows the status of the group: ACT is active, DEA is deactivated.

To activate the group, enter the line command A against the relevant group. To deactivate it, enter D.

To view the libraries in the group, enter the line command L. Now the libraries are listed.

```
-DSC-                   Defined -LNKLST- Library List       Row 1 to 16 of 83
Command ===>                                                 Scroll ===> CSR

Monitor State: ACTIVE
Authorization: FULL

Main commands: S Sort list  F Find  X Exit to main menu
Line commands: A Activate  D Deactivate  R Refresh  M Members  B Browse

_  Sta Data Set Name                                Group  Last Refresh   MemNum
_  ACT ADM.SADMMOD                                  LNKLST                 1491
_  ACT ASF.V2R1M0.SASFPLNK                          LNKLST                    3
_  ACT ASM.SASMMOD1                                 LNKLST                   19
_  ACT ASM.SASMMOD2                                 LNKLST                   13
_  ACT BWB.V2R1M0.SBWBLOAD                          LNKLST                   41
_  ACT CAZ.V13R1M0.SCAZAUTH                         LNKLST                  416
_  ACT CAZ.V13R1M0.SCAZLINK                         LNKLST                    8
_  ACT CBC.SCCNCMP                                  LNKLST                   22
_  ACT CBC.SCLBDLL                                  LNKLST                    8
_  ACT CBC.SCLBDLL2                                 LNKLST                    6
_  ACT CEE.SCEERUN                                  LNKLST                 3598
_  ACT CEE.SCEERUN2                                 LNKLST                 1208
_  ACT CNM1.V6R2M1.CNMLINK                          LNKLST                 1419
_  ACT CNM1.V6R2M1.SAQNLINK                         LNKLST                    1
_  ACT CNM1.V6R2M1.SCNMLNKN                         LNKLST                    3
_  ACT CNM1.V6R2M1.SCNMLNK1                         LNKLST                    2
```

Figure 28. The Defined group Library List panel

To activate or deactivate a library, enter A or D against the relevant library. Note that the lowest level of activation or deactivation takes precedence. So it is possible to deactivate the monitoring of a group, but activate it for a library, and the library will be monitored.

The column headings is this menu (and other DSC monitor menus) are “clickable”. If you put the cursor on a column heading and press Enter, the entries in the table are sorted in order of the value in the column. The default order depends on the column. For example, if you click the Sta (Status) column, the values are listed in ascending order, hence ACT first, followed by DEA. For MemNum (number of members in the library) the opposite is the case, the entries are initially listed in descending order. To switch to the alternative order, click the column heading again.

Use the M line command to display the monitored load modules of a library.

```
-DSC-             LLA Library Modules                        Row 1 to 6 of 6
 Command ===>                                                Scroll ===> CSR

 Library Name: BWB.V2R1M0.SBWBLOAD

 Main commands: P Pending LLA refresh  X Exit to main menu
 Line commands: R Refresh

   BWBAUTH  BWBBLD   BWBCNT   BWBC9DT  BWBC9DTR BWBDEL   BWBEDT   BWBGRP
   BWBHFSD  BWBIMP1  BWBINF   BWBINT   BWBIVP   BWBIVPR  BWBJARC  BWBJAVA
   BWBJAVAB BWBJOBST BWBJ2ANT BWBJ2AST BWBJ2DPY BWBJ2EEB BWBJ2OBJ BWBLINK
   BWBLRECL BWBLST   BWBMIG   BWBMIGB  BWBMIGP  BWBPDS   BWBPRJI  BWBPRM
   BWBRPT   BWBSVE   BWBTRFER BWBTSOW  BWBULK   BWBUPD   BWBUTIL  BWBVER
   BWBVHIST
 ------------------------ End Of List ----------------------------------------
```

Use the P main command to display those modules which should be refreshed in LLA.

```
  -DSC-              LLA Library Modules                        Row 1 to 3 of 3
Command ===>                                                  Scroll ===> CSR
                    *** Members pending an LLA refresh ***
Library Name: BWB.V2R1M0.SBWBLOAD

Main commands: P Pending LLA refresh  X Exit to main menu
Line commands: R Refresh

  BWBHFSD  BWBIMP1  BWBINF   BWBINT   BWBIVP   BWBIVPR  BWBJARC  BWBJAVA
  BWBLRECL BWBLST   BWBMIG   BWBMIGB  BWBMIGP  BWBPDS   BWBPRJI  BWBPRM
  BWBVHIST
```

Displaying monitored load modules

To display the monitored load modules, select option 3 (Display monitored load modules) from the DSC Monitor Options Menu. This requires a bit more work by the DSC Monitor, so you are warned:

```
-DSC-        Confirm LLA Members Display
Command ===>

  YOU ARE ABOUT TO DISPLAY 31485 MEMBERS OF 85 LIBRARIES!

  Each library must be dynamically allocated in order to
    read its entire directory.

  This process may take a few minutes.

Press ENTER to CONFIRM or END to CANCEL
```

```
 -DSC-                   LLA Monitored Libraries            Row 1 to 16 of 85
Command ===>                                                Scroll ===> CSR

Monitor State: ACTIVE
Authorization: FULL

Main commands: S Sort list  F Find  X Exit to main menu
Line commands: A Activate  D Deactivate  R Refresh  M Members  B Browse

  Sta Data Set Name                              Group  Last Refresh   MemNum
  ACT ADM.SADMMOD                                LNKLST                 1491
  ACT ASF.V2R1M0.SASFPLNK                        LNKLST                    3
  ACT ASM.SASMMOD1                               LNKLST                   19
  ACT ASM.SASMMOD2                               LNKLST                   13
  ACT BWB.V2R1M0.SBWBLOAD                        LNKLST                   41
  ACT CAZ.V13R1M0.SCAZAUTH                       LNKLST                  416
  ACT CAZ.V13R1M0.SCAZLINK                       LNKLST                    8
  ACT CBC.SCCNCMP                                LNKLST                   22
  ACT CBC.SCLBDLL                                00                        8
  ACT CBC.SCLBDLL2                               LNKLST                    6
  ACT CEE.SCEERUN                                00                     3598
  ACT CEE.SCEERUN2                               LNKLST                 1208
  ACT CNM1.V6R2M1.CNMLINK                        LNKLST                 1419
  ACT CNM1.V6R2M1.SAQNLINK                       LNKLST                    1
  ACT CNM1.V6R2M1.SCNMLNKN                       LNKLST                    3
  ACT CNM1.V6R2M1.SCNMLNK1                       LNKLST                    2
```

You end up with a list like this:

```
-DSC-                   LLA Monitored Modules           Row 1 to 16 of 31,485
Command ===>                                                 Scroll ===> CSR

Monitor State: ACTIVE
Authorization: FULL

Main commands: R Refresh  S Sort list  F Find  X Exit to main menu
Line commands: R Refresh  B Browse

  Sta Module   Data Set Name                                 Last Refresh
  ACT #VSFSTUB CEE.SCEERUN
  ACT AAUABNSA CNM1.V6R2M1.CNMLINK
  ACT AAUAINTA CNM1.V6R2M1.CNMLINK
  ACT AAUAMDMA CNM1.V6R2M1.CNMLINK
  ACT AAUAPNMV CNM1.V6R2M1.CNMLINK
  ACT AAUAPNSF CNM1.V6R2M1.CNMLINK
  ACT AAUAPNSV CNM1.V6R2M1.CNMLINK
  ACT AAUASOLC CNM1.V6R2M1.CNMLINK
  ACT AAUCBTDA CNM1.V6R2M1.CNMLINK
  ACT AAUCDATA CNM1.V6R2M1.CNMLINK
  ACT AAUCGMSA CNM1.V6R2M1.CNMLINK
  ACT AAUCHTEA CNM1.V6R2M1.CNMLINK
  ACT AAUCMCHA CNM1.V6R2M1.CNMLINK
  ACT AAUCTIMA CNM1.V6R2M1.CNMLINK
  ACT AAUDADTR CNM1.V6R2M1.CNMLINK
  ACT AAUDATRP CNM1.V6R2M1.CNMLINK
```

Figure 29. The LLA Monitored Modules panel

Refreshing groups, libraries, and members

This process is the same as for activating groups and libraries, but now you can also refresh members (you can't activate or deactivate them).

A refresh means that the cache is compared with the stored item, and if changed, the cache is updated.

To refresh members, you have to first list them. Do so by entering `M` against the relevant library. When you do, the relevant LLA Library Modules panel is displayed:

```
-DSC-              LLA Library Modules                        Row 1 to 2 of 2
Command ===>                                                 Scroll ===> CSR

Library Name: IDI.V11R1M0.SIDIMOD1

Main commands: X Exit to main menu
Line commands: R Refresh

  IDIADOP  IDIEDPIE IDIEEDE  IDITR410 IDITR510 IDITR520 IDITR530 IDITR620
  IDITR630 IDITR640
----------------------- End Of List ----------------------------------------
```

Figure 30. The LLA Library Modules panel

This panel is slightly different, in that it lists eight members to a line. This is because there are potentially a large number of members in a library. If they were listed one to a line, the list could be very long.

When you enter `R` against a line, then the eight members are listed on a line. You can now edit the line to delete members you do not want to refresh.

```
-DSC-              LLA Refresh Module Directory Entries
Command ===>


Modify, add module member names or patterns (with "*" and "%" wild cards)

member-1 member-2 member-3 member-4 member-5 member-6 member-7 member-8
IDIADOP  IDIEDPIE IDIEEDE  IDITR410 IDITR510 IDITR520 IDITR530 IDITR620

SYSG      Local node
SYSG      Target node
L  Destination node(s): T (Target) L (Local) A (All) O (Other)

Press END key to cancel or the ENTER key to EXECUTE your request
```

Figure 31. The LLA Refresh Module Directory Entries panel

The Target node and Destination nodes(s) fields give you the chance to refresh these members for just the target SYSPLEX node, or for other nodes as well. The Target node is the name of the target node. The destination node options are:

T Just the target node.
L Just the local node (the node you are running the DSC monitor on).
A All nodes - every node in the SYSPLEX.
O Other nodes - every node in the SYSPLEX but the local node.

As an aside, if you decide to Browse a library, the MSL member list is displayed, and you can then engage the power of MSL to deal with members.

Listing and controlling nodes

Option 4 (Display SYSPLEX DSC Monitors) of the DSC Monitor Options Menu displays the SYSPLEX LLA Monitors panel:

```
-DSC-                   SYSPLEX DSC Monitors                  Row 1 to 4 of 4
Command ===>                                                 Scroll ===> CSR

Main commands: S Sort list  X Exit to main menu
Line commands: A Activate  D Deactivate  S Send  I Information

  Node Id  State  Type   Job Name Last Update
  SP13     IN-OUT REMOTE DSCMON13 14/08/12 20:51
  SP23     IN-OUT REMOTE DSCMON23 14/08/12 20:51
  SYSA     IN-OUT REMOTE DSCMONA  14/08/12 20:51
  SYSG     IN-OUT LOCAL  DSCMONG  14/08/12 20:51
----------------------- End Of List ------------------------------------------
```

Figure 32. The SYSPLEX LLA Monitors panel

From here you can activate or deactivate the monitor. You are not actually activating or deactivating the local node monitor, instead, you are activating or deactivating the sending and receiving of automatic LLA refresh notifications to and from other nodes. For example, if you enter the A line command, you get this panel displayed:

```
-DSC-                   DSC Monitor NODE ACTIVATION
Command ===>


Y  Activate incoming messages: Y (Yes) N (No)
Y  Activate outgoing messages: Y (Yes) N (No)

SYSG      Local node
SP23      Target node
T  Destination node(s): T (Target) L (Local) A (All) O (Other)

Press END key to cancel or the ENTER key to EXECUTE your request
```

Figure 33. The DSC Monitor NODE ACTIVATION panel

By this means, you can control the flow of information. For example, you may set up links between nodes so that one node is the maintenance node that instigates refreshes, and all other nodes receive these refresh messages, but do not instigate refreshes in their own right.

Controlling an individual monitor

The options of the DSC Monitor started task control (option 5) give you control of an individual monitor.

```
-DSC-                   DSC Monitor Control Options Menu
Option ===>

Monitor State: ACTIVE   Timer: UNIT=1s DELAY=2s AUTO=10m POLL=5m PAUSE=0s
Authorization: FULL

1  DSC Monitor STATUS control
2  MESSAGE facility control
3  TIMER facility control
4  DIAGNOSTICS facility control

Press ENTER key to select or point and shoot at option description
Enter X or press END key to exit back to Monitor control main menu
```

Figure 34. The DSC Monitor Control Options Menu

From Status control you can:

1. Pause the DSC Monitor task operation (the monitor stops till you tell it to resume).
2. Resume a previously stopped task operation.
3. Shut down the DSC Monitor task and release all common storage. You do this when you don't want to use the monitor in the near future.
4. Stop the DSC Monitor task. In this case, you don't release the common storage, so all the parameters are available for when you restart the monitor (in the near future).
5. Suspend any automatic LLA refresh activities.
6. Resume automatic LLA refresh activities.

```
-DSC-                   DSC Monitor STATUS Options Menu
Command ===>

Monitor State: ACTIVE  Timer: UNIT=1s DELAY=2s AUTO=10m POLL=5m PAUSE=0s
Authorization: FULL    Automatic LLA refresh: ENABLED

1  Pause DSC Monitor task operation
2  Resume DSC Monitor task operation
3  Shut down DSC Monitor task and release all common storage
4  Stop DSC Monitor task
5  Suspend automatic LLA refresh
6  Enable automatic LLA refresh

Press ENTER key to select or point and shoot at option description
Enter X or press END key to exit back to Monitor control main menu
```

Figure 35. The DSC Monitor STATUS Options Menu

From the MESSAGE facility control you can:

- Close the file so you are no longer writing messages to it.
- Open a closed message file.
- Spin the message file. It is closed, unallocated (to the hold queue), then, if you wish, copy it and purge it from the JES queue. The messages are then reallocated to a new file. You may need to do this when the message file starts to grow inordinately large.

```
-DSC-                   DSC Monitor MESSAGE Facility Control
Command ===>


O  Action: C (Close) O (Open) S (Spin)

*  Sysout Class

SYSG      Local node
SYSG      Target node
L  Destination node(s): T (Target) L (Local) A (All) O (Other)

Press END key to cancel or the ENTER key to EXECUTE your request
```

Figure 36. The DSC Monitor MESSAGE Facility Control panel

From the TIMER facility control you can set the different timer intervals, as already outlined. You can also set a particular time when you want to schedule a full LLA refresh. This means that at this time, the entire cache is refreshed. This guarantees that you have the latest members at least once a day.

```
-DSC-                   DSC Monitor TIMER Facility Control
Command ===>


1     Timer unit seconds (1-10)

2     LLA refresh delay seconds (1-99)

5     SYSPLEX polling interval minutes (1-99)

10    Automatic LLA refresh interval minutes (1-99)

0  0  Full LLA refresh scheduled time-of-day HH:MM (00:00-23:59)
      Note: enter 00:00 to cancel this schedule

SYSG      Local node
SYSG      Target node
L  Destination node(s): T (Target) L (Local) A (All) O (Other)

Press END key to cancel or the ENTER key to EXECUTE your request
```

Figure 37. The DSC Monitor TIMER Facility Control panel

The DIAGNOSTICS facility control is available for someone who is trouble-shooting the DSC Monitor. You are normally instructed on its use by IBM support personnel.

```
-DSC-                   DSC Monitor DIAGNOSTICS Facility Control
Command ===>


Y  In-core trace: Y (Yes) N (No)

O  Log output: C (Close) O (Open) S (Spin)

O  Snap output: C (Close) O (Open) S (Spin)

N  Dump monitor: T (Trace) A (All) N (None)

Press END key to cancel or the ENTER key to EXECUTE your request
```

Figure 38. The DSC Monitor DIAGNOSTICS Facility Control panel

Filtering SMF records

At the **SMF Record Filtering Control** panel you can enter individual filters to include or exclude SMF records.

```
 -DSC-                   SMF Record Filtering Control          Row 1 to 9 of 9
Command ===>                                                  Scroll ===> CSR

Monitor State: ACTIVE    Filtering: DISABLED
Authorization: FULL

Main commands: E Enable  D Disable  T Test  S Sort  R Refresh  F Find  X Exit
Line commands: B Browse

  Type Data Set Name Filter Mask
  INCL INTT025.SPFE.ASM
  EXCL INTT125.SPFE.ASM
  INCL SPFE.IBM.RLSE810.ASM
  EXCL SPIFFY.V810.RELEASE.INST
  EXCL INTT*25*LLIB
  EXCL SPFE*IBM*RLSE8*LIB
  INCL INTT*25%SPFE*
  INCL SPFE*IBM*RLSE810.ASM
  INCL SPIFFY.V810.REL*
------------------------ End Of List ----------------------------------------
```

If one filter indicates that a record should be included, and another filter indicates that the record should be excluded, then the record is excluded.

If you are unsure whether a record is going to be included or excluded, you can enter the data set name in the **SMF Record Filtering Test** panel. Here are two examples, which use the filtering criteria on the previous panel. In the first example, the status is determined to be "Including".

```
 -DSC-                   SMF Record Filtering Test
 Command ===>


     Data set name: INTT125.SPFE.LIST

  Filtering status: INCLUDING INTT125.SPFE.LIST

 Press END key to cancel or the ENTER key to EXECUTE your request
```

In the second example, the status is determined to be "Excluding".

```
 -DSC-                   SMF Record Filtering Test
Command ===>


    Data set name: SPFE.IBM.RLSE800.LLIB

 Filtering status: EXCLUDING SPFE.IBM.RLSE800.LLIB

Press END key to cancel or the ENTER key to EXECUTE your request
```

DSC Monitor activity statistics

The **DSC Monitor Activity Totals panel** displays a plethora of statistics. Here is the list (a concatenation of three screensful).

```
 -DSC-                   DSC Monitor Activity Totals         Row 1 to 29 of 49
Command ===>                                                 Scroll ===> CSR

Main commands: R Refresh  X Exit to main menu  END Back

     16400 Total size of IQIMONCA area
        64 Total number of cross memory blocks
       146 Total number of monitored LLA libraries
        12 Total no. of Cross Memory signal calls
         9 Total no. of Cross Memory request calls
         0 Total no. of Cross Memory Write-SMF calls
         3 Total no. of XCF event listener calls
         0 Total no. of LNKLST event listener calls
    122797 Total no. of SMF exit calls
      1739 Total no. of dropped SMF records
      1739 Total no. of IQIMONTR SMF records
         0 Total no. of filtered-in SMF records
         0 Total no. of filtered-out SMF records
         0 Total no. of Cross Memory refresh calls
         9 Total no. of Cross Memory command calls
      1447 Total no. of SMF type-14 records
        83 Total no. of SMF type-15 records
        13 Total no. of SMF type-15 LLA requests
         0 Total no. of SMF type-17 records
         0 Total no. of SMF type-18 records
      1786 Total no. of SMF type-42 records
      1616 Total no. of SMF type-42 subtype-06 records
         0 Total no. of SMF type-42 subtype-20 LLA requests
         0 Total no. of SMF type-42 subtype-21 LLA requests
         0 Total no. of SMF type-42 subtype-22 records
         0 Total no. of SMF type-42 subtype-23 records
         8 Total no. of SMF type-42 subtype-24 LLA requests
         0 Total no. of SMF type-42 subtype-25 LLA requests
         4 Total no. of SMF type-62 records
       151 Total no. of SMF type-64 records
         6 Total no. of XCF GROUP User Exit calls
        15 Total no. of XCF MESSAGE User Exit calls
        15 Total no. of XCF INPUT messages
        15 Total no. of XCF INPUT requests
        13 Total no. of XCF OUTPUT messages
        13 Total no. of XCF OUTPUT requests
         0 Number of losses due to XMRE shortage
         0 Number of losses due to Monitor inactive
         0 Total no. of invalid PC routine calls
         0 Total no. of invalid Write-SMF calls
         0 Total no. of invalid XM request calls
         0 Total no. of invalid ENF Listener calls
         0 Total no. of invalid XCF User Exit calls
         0 Total no. of rejected XCF input requests
         0 Total no. of rejected XCF output messages
         0 General purpose counter #1
         8 General purpose counter #2
      1170 General purpose counter #3
         0 General purpose counter #4
```

EXEC parameter options

Here are the options you can use in a `EXEC PGM=IQIMONTR,PARM=<option>` command.

AUTOREF=

Automatic refresh verification interval. <nnnn> seconds or <nnnS> seconds or <nnnM> minutes or <nnnH> hours. Must be between 1 and 999 minutes.

CLASS=

Output SYSOUT class.

DELAY=
Delay time between LLA managed library update and corresponding LLA refresh. <nnnn> seconds or <nnnS> seconds or <nnnM> minutes or <nnnH> hours. Must be between 0 seconds and 10 minutes.

FORCE
Force an LLA refresh of all libraries successfully activated at monitor startup.

FREE Release, at monitor startup, system storage previously allocated and not release by the monitor.

LNKLST
Activate, at monitor startup, monitoring of all LNKLST libraries. Implicit default unless NOLNKLST is specified.

LLA=xx
Activate, at monitor startup, monitoring of a PARMLIB defined LLA group. Default is LLA=00.

LLA=NONE
Do not activate, at monitor startup, monitoring of any PARMLIB defined LLA group.

NEW Do not reuse, at monitor startup, system storage previously allocated and not release by the monitor.

NOLNKLST
Do not activate, at monitor startup, monitoring of all LNKLST libraries.

NOREFRESH, NOREF
Do not automatically refresh any LLA directory entries.

NOSMFWR
Do not generate SMF type 42 records for DSC batch utility copy to PDS operations.

POLL=
Monitor's cross system polling interval. <nnnn> seconds or <nnnS> seconds or <nnnM> minutes or <nnnH> hours. Must be between 1 and 999 minutes.

REFTIME=
Time of day for a complete forced LLA refresh of all actively monitored libraries. <HH:MM:SS> 24 hours clock time.

SMFFILTER, SMFFILT
Activate, at monitor startup, the SMF Record Filtering Facility.

SMFNOFILT
Do not activate, at monitor startup, the SMF Record Filtering Facility. This is the default.

TIMER=
Monitor's internal basic timer unit. <nnnn> seconds or <nnnS> seconds or <nnnM> minutes or <nnnH> hours. Must be between 1 and 60 seconds.

XCFALL
Monitor node accepts incoming and transmits outgoing LLA refresh messages from and to all active monitor nodes in the SYSPLEX. Implicit default unless XCFIN or XCFOUT is specified.

XCFIN
Monitor node accepts incoming LLA refresh messages from all active monitor nodes in the SYSPLEX.

XCFOUT
Monitor node transmits outgoing LLA refresh messages to all active monitor nodes in the SYSPLEX.

Chapter 9. MSL commands

MSL commands are commands that you enter when a Member Select list is displayed.

Main command	Line command	Remarks
N/A	=	The "= command" on page 108 repeats the preceding line command.
N/A	+	The "+ command" on page 109 tags members.
(	(	The "(command" on page 109 prompts you with an entry panel for updating a member TITLE.
)	)	The ") command" on page 109 prompts you with an entry panel for updating a member USERKEY.
ALIas	A	The "ALIas command" on page 110 creates an alias to a member.
ASSIST	N/A	The "ASSIST command" on page 111 controls the display of MSL assist windows on the member selection list panel.
Browse	B	The "Browse command" on page 112 can be used to browse one or more members.
CLONe	N/A	The "CLONe command" on page 113 provides a comprehensive menu for cloning any library in the currently displayed member selection list.
COMPress	N/A	The "COMPress command" on page 113 is used to compress one or more of the libraries in the current concatenation hierarchy, or to a sequential data set. It is to be distinguished from the EDIT and VIEW subcommand COMPress, which is used to compress the library currently in EDIT or VIEW ("COMPRESS subcommand" on page 73).
CONFIRM	N/A	The "CONFIRM command" on page 114 activates or deactivates the member-delete confirmation screen.
Copy	C	The "Copy command" on page 115 copies the specified one or more members to the same or a different library.
COPYALl	N/A	The "COPYALl command" on page 116 copies all members of a PDS or PDSE to another library.
COPYTAG	N/A	The "COPYTAG command" on page 117 copies one or more tagged members to the nominated library.
DEFault	N/A	The "DEFault command" on page 118 is used to change the default process invoked by the "Select command" on page 169 during the current MSL session.
Delete	D	The "Delete command" on page 119 deletes one or more members specified from the library containing them.
DELETTAG	N/A	The "DELETTAG command" on page 120 deletes one or more tagged members in the current library.
DSName	N/A	The "DSName command" on page 121 is used to change the member selection list to another library, to refresh the current display, or to invoke the current process (BROWSE, EDIT, or VIEW) on a specified data set.

Main command	Line command	Remarks
Edit	E	The “Edit command” on page 122 can be used to edit one or more members.
EMPty	N/A	The “EMPty command” on page 123 is used to empty one or more of the libraries in the current concatenation hierarchy.
eXclude	X	The “eXclude command” on page 124 is used to eliminate members from the member selection list display, or to unexclude all excluded members.
EXIT	N/A	The “EXIT command” on page 125 is used to return directly to the panel from which MSL was invoked.
EXPDIR	N/A	The “EXPDIR command” on page 125 is used to expand the directory of one of the libraries in the current concatenation hierarchy, thereby allowing it to contain more members. It is to be distinguished from the EDIT and VIEW subcommand “EXPDIR subcommand” on page 77, which is used to compress the library currently in EDIT or VIEW.
FILter	N/A	The “FILter command” on page 126 is used to selectively tailor the display of members in the member selection list (or to remove all filtering).
FILter0	N/A	The “FILter0 command” on page 128 is used to select and display only member relative generation 0 of one or more members.
FILTTITl	N/A	The “FILTTITL command” on page 129 (or “FIL(”) can filter the member list by a specified pattern of a member title.
FILTTAG	N/A	The “FILTTAG command” on page 130 selects the tagged members to be displayed.
FILTUKEY	N/A	The “FILTUKEY command” on page 130 (or “FIL)”) can filter the member list by a specified pattern of a member user key.
Find	N/A	The “Find command” on page 131 locates a particular member in the member selection list. If the member is in the hidden list, it is displayed in the MSL.
Findname	N/A	The “Findname command” on page 132 finds a member in the displayed library concatenation.
FINDTAG	N/A	The “FINDTAG command” on page 133 finds a tagged member in the displayed library concatenation.
FindText	N/A	The “FindText command” on page 134 searches for a specified string in members. For FindText scenario examples, see Appendix O, “Searching with command FindText,” on page 367.
FINDTITL	N/A	The “FINDTITl command” on page 136 (or “F(”) can help you locate the next occurrence of a member title matching a given pattern.
FINDTXTG	N/A	The “FINDTXTG command” on page 137 (or “FT+(”) finds text within the first or all tagged members.
FINDUKEY	N/A	The “FINDUKEY command” on page 138 (or “F)”) finds a member title in the displayed library concatenation with a specified key.
FLIP	N/A	The “FLIP command” on page 138 toggles between visible and invisible (excluded and filtered-out) lines.
GENLOST	N/A	The “GENLOST command” on page 139 displays only the orphan generations of one or more PDSE members.

Main command	Line command	Remarks
GENRECov	G	The “GENRECov command” on page 139 recovers a generation for a member.
GENShow	*	The “GENShow command” on page 141 can be used to display all generations of a PDSE member.
Global	N/A	The “Global command” on page 142 can be used to issue one or more edit commands or macros on all or selected members.
GLOBLTAG	N/A	The “GLOBLTAG command” on page 143 issues one or more edit commands or macros on tagged members.
HIDe	N/A	The “HIDe command” on page 144 is used to selectively tailor the display of members in the member selection list, hiding items from display (instead of displaying them).
HIDETAG	N/A	The “HIDETAG command” on page 145 hides (excludes) members with tags matching a filtering criterion.
HIDETITLE	N/A	The “HIDETITLE command” on page 146 hides (excludes) members with titles matching a filtering criterion.
HIDEUKEY	N/A	The “HIDEUKEY command” on page 146 hides (excludes) members with title keys matching a filtering criterion.
	I	The “I line command” on page 147 displays in detail the standard and extended ISPF statistics for a non-load-module member, and displays a load-module map for load-module members (like the "L" line command).
INFO	N/A	The “INFO command” on page 148 is used to display information about the libraries in the current concatenation sequence of the MSL.
INFOTAG	N/A	The “INFOTAG command” on page 148 displays statistics information for a tagged member.
ISPEXEC	I	The “ISPEXEC command” on page 149 invokes ISPEXEC on the one or more members specified.
K	K	The “K command” on page 150 is used for library management functions, under SCLM.
LIB	N/A	The “LIB command” on page 151 allows you to switch to other libraries by changing the middle level qualifier (GROUP) of the current displayed libraries. In a hierarchy, the LIB command adds or removes a library to the concatenation.
LMap	L	The “LMap command” on page 152 can be used to display a load-module member analysis map.
Locate	N/A	The “Locate command” on page 153 positions the cursor in the member selection list panel at the first member matching the specified character string.
LOCATTAG	N/A	The “LOCATTAG command” on page 154 locates a tagged member in the selection list.
MAPpds (PDS only)	N/A	The “MAPpds (PDS only) command” on page 156 displays a list of PDS members, including deleted members, which can then be restored.
Move	M	The “Move command” on page 156 moves one or more members to a target library.
MOVEALl	N/A	The “MOVEALl command” on page 158 moves all of the members in a data set to a different data set.

Main command	Line command	Remarks
MOVETAG	N/A	The “MOVETAG command” on page 159 moves one or more tagged members to a target library.
P	P	The “P (main) command” on page 160 prints one or more members specified to a printer or to the ISPF LIST data set, as specified on the SET panel. The “P (line) command” on page 160 prints a listed member.
Printmem	N/A	The “Printmem command” on page 161 prints one or more members in the current library concatenation.
PRINTTAG	N/A	The “PRINTTAG command” on page 162 print one or more tagged members in the current library concatenation.
PROJECT	N/A	The “PROJECT command” on page 163 changes the library (or libraries) being processed to one (or ones) with the same name (or names) as currently displayed except that the high-level qualifier is as specified in the command.
QUIT	N/A	The “QUIT command” on page 163 aborts MSL or OLIST nested processing.
REFresh	N/A	The “REFresh command” on page 164 refreshes the member selection list from current directories and reloads the persistent member title list.
RELease	N/A	The “RELease command” on page 165 is used to close or delete the current print group. This is applicable only if the PRINT processing mode is set to GROUP.
Rename	R	The “Rename command” on page 165 can be used to rename one or more members in the current member selection list.
RESet	N/A	The “RESet command” on page 166 is used to reset some or all of the tailoring of the current member list.
RFIND	N/A	The “RFIND command” on page 167 repeats the most recent FINDTEXT, FINDNAME, or LOCATE command.
SAVE		The “SAVE command” on page 167 writes the currently displayed member selection list to a user-specified data set, a printer, or the ISPF LIST data set.
SCLMCMD	K	The “SCLMCMD command” on page 168 performs the specified SCLM function on the members (active only if SCLM support is active for the user).
SCLMPARM		The “SCLMPARM command” on page 169 displays the SCLM parameters active for the current library (active only if SCLM support is active for the user).
Select	S	The “Select command” on page 169 can be used to select one or more members for the BROWSE, EDIT, or View processing.
SELECTAG	N/A	The “SELECTAG command” on page 171 selects a tagged member for BROWSE, EDIT, or VIEW processing.
SET	N/A	The “SET command” on page 172 modifies your -DSC- default options.
SHOWcmd		The “SHOWcmd command” on page 173 controls the prompt display of a TSO command or CLIST before execution.
SHOWTitl		The “SHOWTitl command” on page 173 controls the member list display mode, and lets you enter and manage new member titles with optional keys.

Main command	Line command	Remarks
SORT		The “SORT command” on page 174 is used to put the member selection list into a specified order.
SORTTAG	N/A	The “SORTTAG command” on page 175 sorts the member selection list tagged entries.
SORTTITl	N/A	The “SORTTITl command” on page 176 (or “SORT(”) can sort members in ascending or descending order of member titles.
SORTUKEY	N/A	The “SORTUKEY command” on page 176 (or “SORT)”) can sort members in ascending or descending order of user member keys.
SSI		The “SSI command” on page 177 displays SSI information for the specified members.
STATS	Z	The “STATs command” on page 178 creates, removes, or allows the user to change statistics of members.
STATSTAG	N/A	The “STATSTAG command” on page 179 creates, removes, or changes the statistics of a tagged member.
SUBmit	J	Main command “SUBmit command” on page 180 can be used to submit one or more members to the JES input job queue. Line command J can be used to submit a listed member to the JES input job queue.
SUBMTTAG	N/A	The “SUBMTTAG command” on page 181 submits one or more tagged members to the JES input job queue.
TAG	+	The “TAG command” on page 181 places a character string in the RENAME field of the member list of members that match the specified name or pattern.
TAILOR		The “TAILOR command” on page 182 executes the MSL command or commands defined as your tailoring macro. The TAILOR command can also be used to display and change the current definition.
TITLe		The “TITLe command” on page 183 gives you complete control over the library member title list.
TOTALS	N/A	The “TOTALs command” on page 184 displays information totals for all visible members.
Tso	T	The “T command” on page 184 invokes the specified TSO command or CLIST on the one or more members specified.
TYPE		The “TYPE command” on page 185 changes the library (or libraries) being processed to one (or ones) with the same name (or names) as currently displayed.
UNFilter		The “UNFilter command” on page 186 removes the most recently applid filter, or all filters.
USAGE		The “USAGE command” on page 187 lists library members currently in use under ISPF from the displayed list, including the user IDs of the TSO users accessing them.
UTILity		The “UTILity command” on page 187 directly invokes the ISPF Utility Selection Panel from the member list display.
View	V	The “View command” on page 188 can be used to view one or more members.
Window	W	The “Window command” on page 189 displays a preview window in the member selection list for the selected member.

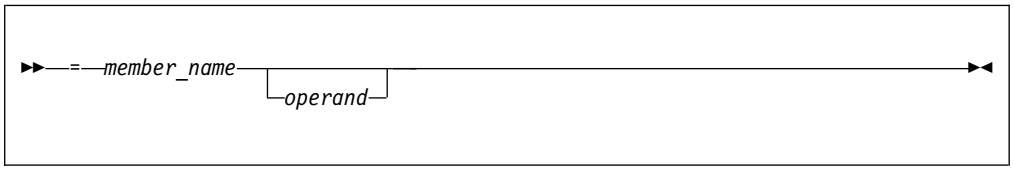
Main command	Line command	Remarks
wHere	H	The “wHere command” on page 189 indicates in which libraries of the concatenation one or more members occur.
WSPATH	N/A	The “WSPATH command” on page 190 sets the workstation PATH parameter default.
XFER	F	The “XFER command” on page 190 transfers files to or from the workstation.
%exec	%	The “%exec command” on page 191 executes a CLIST or REXX EXEC on one or more members.
%+ exec	N/A	The “%+ exec command” on page 192 executes a CLIST or REXX EXEC on one or more tagged members.
!tso cmd	!tso	The “!tso cmd command” on page 193 executes a TSO command on one or more members.
!+ cmd	N/A	The “!+ cmd command” on page 194 executes a TSO command on one or more tagged members.
linecmnd	N/A	The “linecmnd command” on page 195 invokes an MSL line command as a main command.
MSLcmd+	N/A	The “MSLcmd+ command” on page 196 invokes an MSL command on one or more tagged members.
MSLcmd(	N/A	The “MSLcmd(command” on page 196 invokes an MSL command on one or more titled members.
MSLcmd)	N/A	The “MSLcmd) command” on page 197 invokes an MSL command on one or more member title user keys.

All MSL line commands can be entered as group commands. See “Group commands” on page 50 for more information.

= command

The = command invokes the immediately preceding line command on the specified member.

Syntax



Operands

member_name
The name of the member in the current member selection list.

operand
The second operand, if any, appropriate to the previous command.

Usage notes

- If the previous command accepts (or requires) a second operand, the corresponding operand can (or must) be entered in the RENAME column.

- If you entered command = before multiple member names, the preceding line command is processed on all the specified members one by one.

Feedback messages

The feedback message depends on what processing was invoked.

Examples

The following example uses the = line command to remove ISPF statistics of member TEST01:

```
  NAME     RENAME
Z TEST00   REM
= TEST01
```

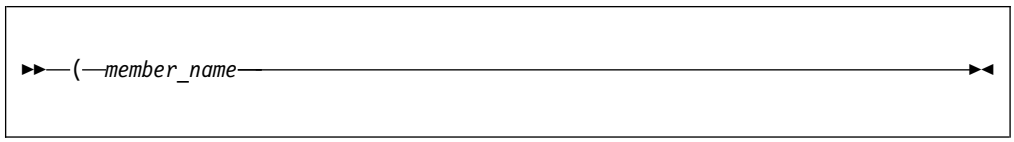
+ command

Tag members by placing a label in the RENAME column. This is a synonym for the "TAG command" on page 181.

(command

The (line command prompts you to update a library member title.

Syntax



Operands

member_name
A unique member name from the current library concatenation.

Usage notes

- A member might have an associated title record in the library member title list. A library persistent member title list is stored by MSL in the special member named Z999TITL. A title record contains the TITLE (50 bytes) and the USERKEY (8 bytes).
- Commands) and (are interchangeable.
- To manage a library member title list, use main command TITLe.
- To display member titles instead of ISPF statistics, use command SHOWTitl.

Example

```
( MEM123   displays a panel for you to update the TITLE in the title
           record for member MEM123.
```

) command

The) line command prompts you to update a library member user key.

Syntax

Operands

member_name
A unique member name from the current library concatenation.

Usage notes

- A member might have an associated title record in the library member title list. A library persistent member title list is stored by MSL in the special member named Z999TITL. A title record contains the TITLE (50 bytes) and the USERKEY (8 bytes).
- Commands) and (are interchangeable.
- To manage a library member title list, use main command TITLe.
- To display member titles instead of ISPF statistics, use command SHOWTitl.

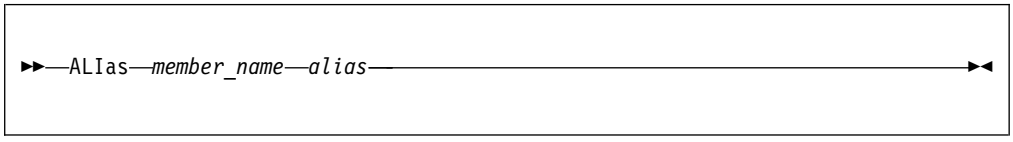
Example

```
) MEM123   displays a panel for you to update the USERKEY in the title
           record for member MEM123.
```

ALIas command

The ALIas command adds an alias name to an existing member. An alias is an additional (different name) directory entry pointing to same first block of data as the member's primary (or parent) directory entry. A delete of an alias entry simply removes it from the directory. A member is considered “deleted” when all directory entries (primary and aliases) pointing to its data are removed from the directory.

Syntax



Operands

member_name
A member name or pattern.

alias A new alias name. If multiple members are aliased (a pattern is used, instead of a member name), use = sign to specify identical characters.

Usage notes

ALIas is a main command. The line command equivalent of `ALIas` is `A`. Specify the alias name in the RENAME field of the primary entry.

PDSE program-objects are not supported.

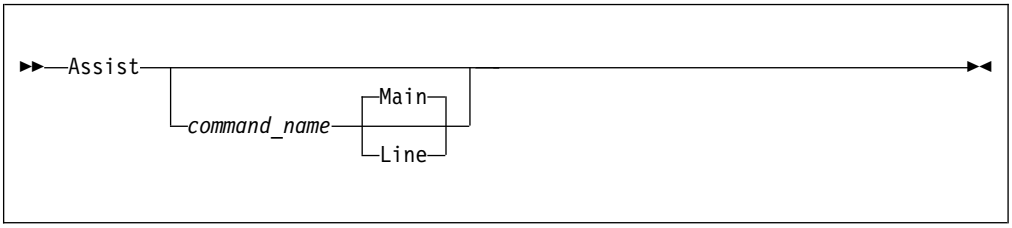
Examples

```
ALI ABC XYZ        - Make XYZ an alias of ABC
ALI IQ* IP=====    - To member names starting
                     with IQ create aliases
                     starting with IP
```

ASSIST command

The ASSIST command controls the display of MSL assist windows on the member selection list panel.

Syntax



Operands

command_name

The name of the command for which you want to see an assist window. If omitted, the whole list of available MSL commands is displayed.

```
-DSC-                    MSL Command Assistance
Cmd ===>

   For more details, point cursor at selected command and press ENTER
   Enter END or CANCEL to exit
   While reviewing an ASSIST example you may enter an MSL command,
     press ENTER , and be prompted with command over the MSL display.

------------------------ MAIN Commands --------------------------------
ASSIST   ALIAS    CLONE    COMPRESS CONFIRM  COPY     COPYALL  COPYTAG
DEFAULT  DELETE   DELETTAG DSNAME   EMPTY    EXCLUDE  EXIT     EXPDIR
FILTER   FILTER0  FILTTAG  FILTTITL FILTUKEY FINDNAME FINDTAG  FINDTEXT
FINDTXTG FINDTITL FINDUKEY FLIP     GENLOST  GENRECOV GENSHOW  GLOBAL
GLOBLTAG HIDE     HIDETAG  HIDETITL HIDEUKEY INFO     INFOTAG  LIB
LMAP     LOCATE   LOCATTAG MAPPDS   MOVE     MOVEALL  MOVETAG  PRINTMEM
PRINTTAG PROJECT  QUIT     REFRESH  RELEASE  RENAME   RESET    RFIND
SAVE     SCLM     SCLMPARM SET      SELECT   SELECTAG SHOWCMD  SHOWTITL
SORT     SORTTAG  SORTTITL SORTUKEY SSI      STATS    STATSTAG SUBMIT
SUBMTTAG TAG      TAILOR   TITLE    TOTALS   TYPE     UNFILTER USAGE
UTIL     WHERE    WSPATH   XFER     %exec    %+ exec  !tso cmd !+ cmd
linecmnd MSLcmd+  MSLcmd(  MSLcmd)
------------------------ LINE Commands --------------------------------
A alias  B browse C copy   D delete E edit   F xfer   G genrec H where
I info   J submit K sclm   L lmap   M move   P print  R rename S select
T tso    V view   W window X exclud Z stats  = repeat + tag    ( title
) userky % exec   ! tso    * gensho
```

Main and Line

The command type. If “Main”, then the explanation is for the specified main command, if “Line”, then the explanation is for the specified line command. The default is “Main”, but if that command does not exist as a main command, then a line command is assumed.

Usage notes

ASSIST is a main command only. It cannot be used as a line command.

You may enter any main command or line command while the assist window is displayed.

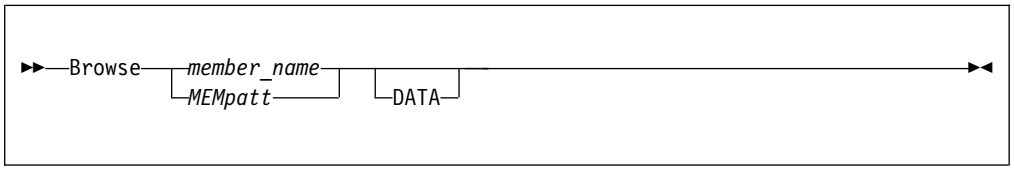
Examples

```
A A                 - Request assistance for the ASSIST main command
A A L               - Request assistance for the A (alias) line command
A Z                 - Request assistance for the Z (stats) line command
                      (there is no Z main command)
ASSIST COPY         - Request assistance for the Copy main command
ASSIST C            - Request assistance for the Copy main command
A C L               - Request assistance for the Copy line command
```

Browse command

Main command Browse can be used to browse one or more members. Line command B can be used to browse a listed member.

Syntax



Operands

member_name
The name of the member in the current member list.

MEMpatt
A member name pattern using the wildcard characters "%" and "*".

DATA Invoke the installation-defined data editor (for example, a VSAM editor) to process this member.

Usage notes

- When "B" is the MSL default action, to invoke the Browse process, perform a Point-and-Shoot action at the target member name, or use the SELECT main command.
- Different data browsers are supported, usually for VSAM files.
- Any PDSE member generation can be browsed.

Feedback messages

Message	Meaning
BROWSED	The member was browsed.
DELETED	The member was deleted before the BROWSE operation was initiated.
IO ERR	An input/output error occurred in reading the directory of the library or the member itself.

Message	Meaning
NO AUTH	Since you began working, your access to the library has been revoked.

Examples

The following example uses the B line command to browse member MEMBER03:

```
  NAME     RENAME
B MEMBER03
```

CLONe command

The CLONe main command clones the current library.

Syntax

Operands

library_number
The library concatenation sequence number.

Usage notes

- You are prompted with a confirmation panel in which you may override the suggested clone name and some of the space allocation attributes.
- When a PDSE library with member generations is cloned into another PDSE library with member generations, all members and all their generations are copied into the cloned library.

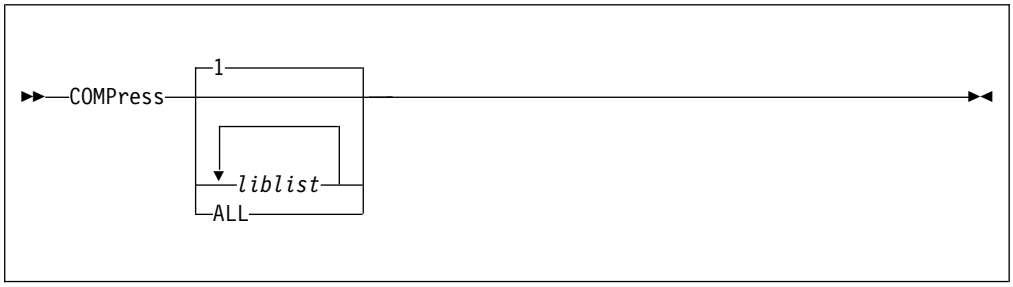
Examples

```
CLONE 2 - clone the second concatenated library.
CLON    - clone the first concatenated (or only) library.
```

COMPress command

The COMPress command is used to compress one or more of the libraries in the current concatenation hierarchy. It is to be distinguished from the `EDIT and VIEW` subcommand `COMPress`, which is used to compress the library currently in EDIT or VIEW.

Syntax



Operands

liblist Comprises one or more library numbers (if more than one is allocated) separated by blanks. If omitted, the first library (library 1) is compressed.

ALL All the concatenated libraries in the MSL.

Usage notes

COMPress is a main command only. It cannot be used as a line command.

Examples

```
COMPRESS
COMPRESS 3
COMPRESS 2 4
COMP ALL
```

CONFIRM command

The CONFIRM command activates or deactivates the member-delete confirmation prompt.

Syntax

Where the response is CONFIRM ON or CONFIRM OFF.

Operands

ON Activates the member-delete confirmation prompt. The default is ON.

OFF Deactivates the member-delete confirmation prompt.

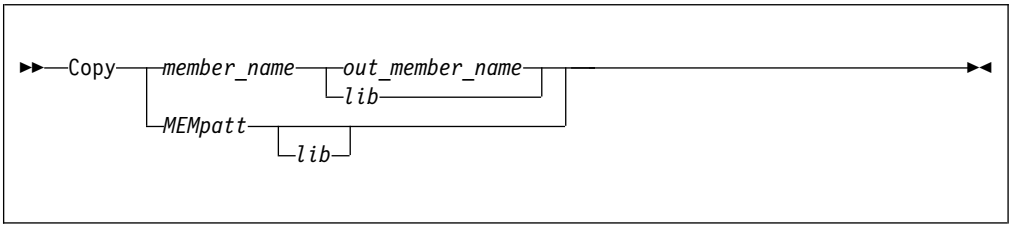
Examples

```
confirm ON
confirm OFF
```

Copy command

The Copy command copies the specified one or more members to the same or a different library.

Syntax



Operands

member_name
The name of the member in the current member list to be copied.

MEMpatt
A member name pattern using the wildcard characters "%" and "*".

out_member_name
The target member name. It is placed in the first library of the hierarchy, regardless of the current location of the source member.

lib The number of the library in the current concatenation list to which the source is to be copied.

Usage notes

- If command C is entered as a line command, it can be used to copy a listed member. Type the destination in the **RENAME** field of the member selection list.
- If command Copy is used as a main command, a pattern can be specified. In this case, each member matching the pattern is copied. If a pattern is specified, a target member name cannot be specified in the command; a panel is displayed on which target member names can be individually specified.
- If no destination is specified, a Copy prompt panel is displayed to specify the target library and replacement of the member with the same name. The default option of member replacement can be selected by using the SET command.
- Multiple C line commands are processed as a group.
- If a group of members are copied into an external library, the new member names can be specified in the second prompt panel.
- If the target is a sequential data set, all copied members are merged in sequence into a single consecutive chain of records.
- When copying a PDSE member generation, the target member must be a same name primary member instance (generation 0).
- PDSE member generations are copied in descending order of their relative generation numbers, thus maintaining their relative generation order in the target library.
- Use command shortcut `ISET MSL` to modify the MSL default options. Depending on the setting of option "Copy/Delete/Rename Generation 0", copying member generation 0 of a PDSE data set might affect the entire generation group.

Feedback messages

Message	Meaning
-COPIED	The member was copied.
-COPY ER	The member wasn't copied because an error occurred.
-DELETED	The member was deleted before the operation was initiated.
-IO ERR	An input/output error occurred in reading the directory of the library or the member itself.
-NO AUTH	Since you began working, your access to the library has been revoked.
-NO REPL	The member wasn't copied because the REPLACE option was set to NO.
-NOT OLD	You specified that the target is to be replaced only if it is newer than the source, and the source is not older than the target.
-NO STAT	You specified that the target is to be replaced only if it is older or newer than the source, and either the source or the target was lacking statistics.

Examples

C ABC ABCD
Copies member ABC into member ABCD in the first or only concatenated library.

C *XYZ* 2
Copies all the members that have a member name containing the string "XYZ" into the second concatenated library.

COPY * Copies all members into a target library or a sequential file, which is to be specified on a prompt panel.

The following example uses the C line command to copy member ABC into member ABCD in the first or only concatenated library:

```
  NAME     RENAME
C ABC      ABCD
```

COPYALl command

The COPYALl command copies all the members of a PDS or PDSE to a different library.

Syntax

Operands

This command has no parameters.

Usage notes

When you invoke this command, you are shown the “COPY ALL” panel, at which you enter the target library (either by naming it directly, or by selecting from the @H history list). The target library is not allowed to be one of the currently concatenated libraries.

You also specify whether you want to replace like-named library members. If you specify `Y`, then all like-named members in the target library are replaced by members from the source library. If you specify `N`, then like-named members are not copied from the source library, and in effect the "copy all" becomes "copy some".

All present members are copied, regardless of any prior filtering.

Only primary member instances (generation 0) are copied from a PDSE with member generations. To copy PDSE member generations, use the COPY command.

Feedback messages

Message	Meaning
-COPIED	The member was copied.
-COPY ER	The member wasn't copied because an error occurred.
-DELETED	The member was deleted before the operation was initiated.
-IO ERR	An input/output error occurred in reading the directory of the library or the member itself.
-NO AUTH	Since you began working, your access to the library has been revoked.
-NO REPL	The member wasn't copied because the REPLACE option was set to NO.
-NOT OLD	You specified that the target is to be replaced only if it is newer than the source, and the source is not older than the target.
-NO STAT	You specified that the target is to be replaced only if it is older or newer than the source, and either the source or the target was lacking statistics.

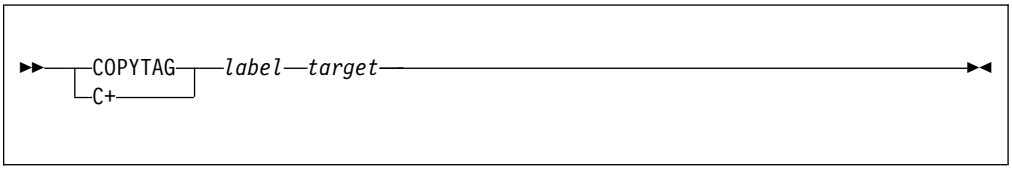
Examples

```
COPYAL
```

COPYTAG command

The COPYTAG command copies one or more tagged members to a target library.

Syntax



Operands

label A seven character string or pattern.

target The concatenation number of the target library in current concatenation.

Usage notes

A member tag is a non-blank label preceded by "+" in the RENAME column.

See "TAG command" on page 181 for instructions on how to tag members.

You are prompted to specify the target library and same name member replacement.

The same name member replacement default option may be selected via the SET command.

When members are copied into an external library, the new member names may be specified in a second prompt panel.

When the target is a sequential data set, all copied members are merged in sequence into a single consecutive chain of records.

The C line command may be used to copy a listed member.

Use command shortcut `ISET MSL` to modify the MSL default options. Depending on the setting of option "Copy/Delete/Rename Generation 0", copying member generation 0 of a PDSE data set might affect the entire generation group.

PDSE member generations are copied in descending order of their relative generation numbers, thus maintaining their relative generation order in the target library.

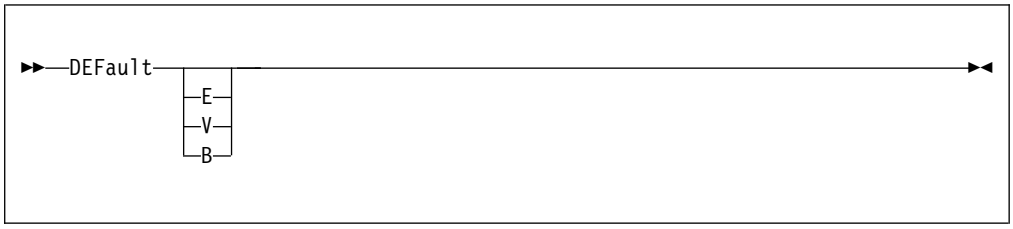
Examples

```
C+ X 3     copy all members tagged with X into third concatenated
           library.
C+ ABC*    copy all member names tagged with a label that starts ABC .
COPYTAG    copy all tagged members into a target library or a
           sequential file to be specified in a prompt panel.
```

DEFault command

The DEFault command is used to change the default process invoked by the SELECT and S commands during the current MSL session.

Syntax



Operands

E Invoke the E line command when the SELECT or S command is used in a member selection list.

V Invoke the V line command when the SELECT or S command is used in a member selection list.

B Invoke the B line command when the SELECT or S command is used in a member selection list.

Usage notes

DEFault is a main command only. It cannot be used as a line command.

If the operand is omitted, the current default is displayed.

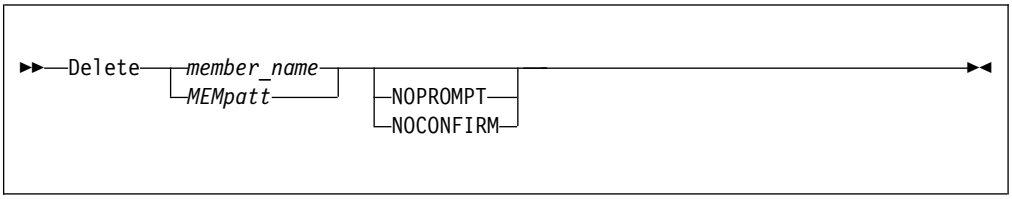
Examples

```
DEFAULT E
DEF B
DEF
```

Delete command

Main command Delete can be used to delete one or more members. Line command D can be used to delete a listed member.

Syntax



Operands

member_name
The name of the member in the current member list to be deleted. When it is a distinct name of a member with member generations in a PDSE library, you are prompted to delete one relative generation or all generations.

MEMpatt
A member name pattern using the wildcard characters "%" and "*".

NOPROMPT
A keyword indicating that the delete prompt panel is not to be displayed. "NOCONFIRM" is a synonym for "NOPROMPT".

Usage notes

- By default, a confirmation panel is displayed before any deletion takes place.
- With the proper authority, you can delete any member in the current library concatenation.

Feedback messages

Message	Meaning
-DELETED	The member was deleted.
-IO ERR	An input/output error occurred in reading the directory of the library or the member itself.
-NO AUTH	Since you began working, your access to the library has been revoked.
-REVEALD	Another member with the same name was found in a higher-level library, and is now being displayed in the MSL instead of the deleted one.

Examples

D TST NOPROMPT
Deletes member TST without a confirmation prompt.

DELETE *
Asks for confirmation to delete all the members in the current library.

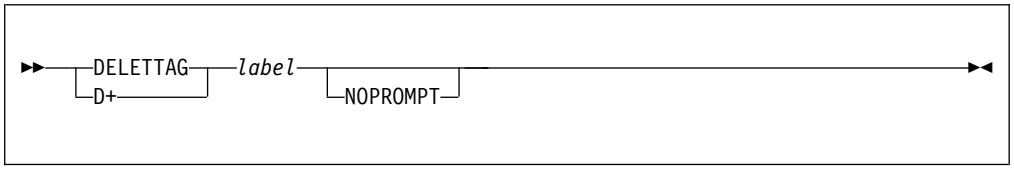
The following example uses the D line command to delete member JUNK with no confirmation prompt:

```
   NAME     RENAME
 D JUNK     NOCONFIRM
```

DELETTAG command

The DELETTAG command deletes one or more tagged members in the current library concatenation.

Syntax



Operands

label A seven character string or pattern.

NOPROMPT
If supplied, there is no confirmation prompt.

Usage notes

A member tag is a non-blank label preceded by "+" in the RENAME column.

See "TAG command" on page 181 for instructions on how to tag members.

By default, a confirmation panel is displayed before any deletion takes place.

With the proper authority, you can delete any member in the current library concatenation.

The “D” line command may be used to delete a listed member.

When selecting to delete a distinct member name of a PDSE with member generations, you are prompted to delete one relative generation or all.

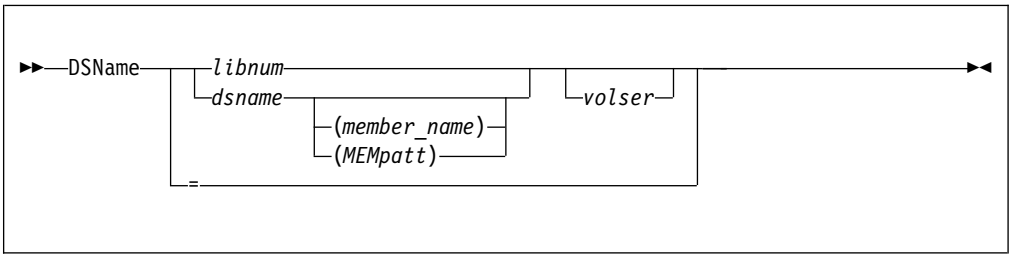
Examples

```
D+ X1 NOPROMPT   Delete all members tagged X1 without a confirmation
                 prompt.
DELETTAG *       Ask for a confirmation to delete all tagged members.
```

DSName command

The DSName command is used to change the member selection list to another library, to refresh the current display, or to invoke the current process (BROWSE, EDIT, or VIEW) on a specified data set.

Syntax



Operands

libnum The number of the library in the current concatenation list for which a member list is to be displayed

dsname
The name of a sequential data set or a library. If not enclosed in quotation marks, the current TSO prefix is prefixed to the name.

member_name
The name of the member in the library specified.

MEMpatt
A member name pattern using the wildcard characters “%” and “*”.

volser The volume serial number of the library or data set to be processed.

= The equals sign (=) forces Data Set Commander to refresh the member list of the current library or libraries. If this operand is specified, volser cannot be specified.

Usage notes

DSName is a main command only; it cannot be used as a line command.

If no operand is specified, the main entry panel of the current function (BROWSE, EDIT, or VIEW) is displayed. You can specify several libraries in an ISPF hierarchy.

If a particular member of a library is specified, the current default process (BROWSE, EDIT, or VIEW) is invoked on that member. If a library is specified without any member or pattern, an MSL is invoked for that library. This has the effect of changing the current library. If a library is specified with a pattern, an MSL is invoked for that library, filtered to include only members whose name match the pattern. This also has the effect of changing the current library. If a sequential data set is specified, the current default process (BROWSE, EDIT, or VIEW) is invoked on that data set.

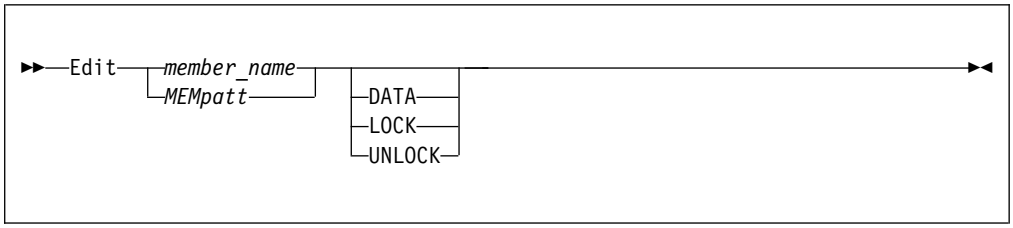
Examples

```
DSNAME
DSN =
DSN 2
DSN 'PAYROLL.JONES.COBOL'
DSN MYLIB(A%C*)
DSN JONES.COBOL CICS01
DSN 'ROGER12.ISPLOG1.LIST'
DSN A.COBOL(ABC)
```

Edit command

Main command Edit command can be used to edit one or more members. Line command E can be used to edit a listed member.

Syntax



Operands

member_name
The name of the member in the current member selection list.

MEMpatt
A member name pattern using the wildcard characters "%" and "*".

DATA Invoke the installation-defined data editor (for example, a VSAM editor) to process this member.

If not specified, the EDIT default (as specified on the entry panel or via the SET command) for locking is used.

Usage notes

- When "E" is the MSL default action, to invoke the Edit process, perform a Point-and-Shoot action at the target member name, or use the SELECT main command.
- Different data editors are supported, usually for VSAM files.
- Any PDSE member generation can be edited.

Feedback messages

Message	Meaning
E ACCTMAIN	E ACCT*
E ACCTMAIN LOCK	E STAT1 NOLOCK

Message	Meaning
-IN USE	The member wasn't edited because it was in use.
-IO ERR	An input/output error occurred in reading the directory of the library or the member itself.
-NO AUTH	Since you began working, your access to the library has been revoked.
-NO SAVE	The member wasn't saved.
-SAVED	The member was saved. This feedback message is displayed if the member was saved at any time during the current edit session, whether or not SAVE or END was the last command issued.

Examples

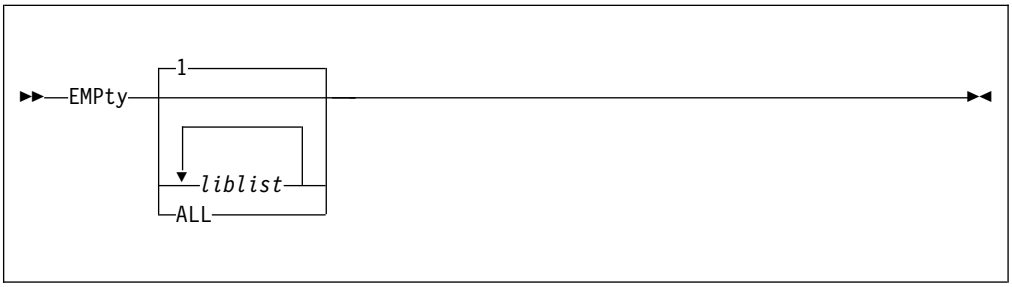
The following example uses the E line command to edit member MYLIST:

```
  NAME     RENAME
E MYLIST
```

EMPty command

The EMPty command is used to empty one or more of the libraries in the current concatenation hierarchy.

Syntax



Operands

liblist Comprises one or more library numbers (if more than one is allocated) separated by blanks. If omitted, the first library (library 1) is emptied and compressed.

ALL All the concatenated libraries in the MSL.

Usage notes

EMPty is a main command only. It cannot be used as a line command. Before DSC empties a library, as a precaution, it prompts the user for a final confirmation.

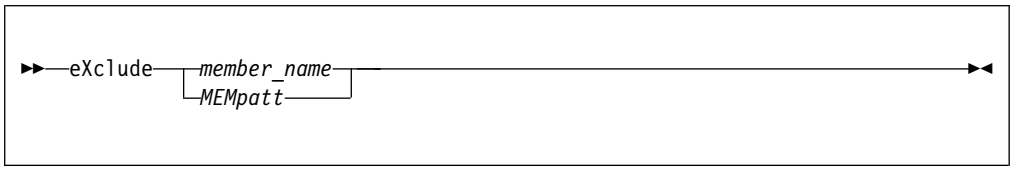
Examples

```
EMPTY
EMPTY 3
EMPTY 2 4
EMP ALL
```

eXclude command

The eXclude command is used to eliminate members from the member selection list display, or to unexclude all excluded members.

Syntax



Operands

member_name
The name of the member in the current member selection list.

MEMpatt
A member name pattern using the wildcard characters "%" and "*".

Usage notes

When using command eXclude, the selected members are stored in Excluded List, which is logically separated from Filtered List. Both excluded and filtered members are hidden from display. When using command eXclude with no parameters, all members in Excluded List are revealed.

Feedback messages

None. The specified members are removed from the displayed member selection list.

Examples

X *TST*
Hides all members with a name that contains "TST" from display.

EXC Reveals all previously hidden members.

The following example uses the X line command to hide member IQIDFLTS from display:

```
  NAME     RENAME
X IQIDFLTS
```

EXIT command

The EXIT command is used to return directly to the panel from which MSL was invoked.

Syntax

Operands

EXIT has no operands.

Usage notes

EXIT is a main command. It cannot be used as a line command.

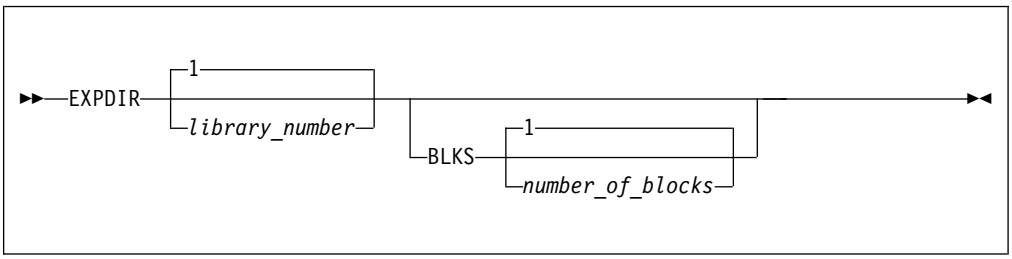
Examples

```
eXIT
```

EXPDIR command

The EXPDIR command is used to expand the directory of one of the libraries in the current concatenation hierarchy, thereby allowing it to contain more members. It is to be distinguished from the EDIT and VIEW subcommand EXPDIR, which is used to compress the library currently in EDIT or VIEW.

Syntax



Operands

library_number
The number of the library whose directory is to be expanded. If no number is entered, the default is 1.

BLKS Specifies by how many blocks the directory is to be expanded.

number_of_blocks
The number of blocks by which the directory is to be expanded. If no number is entered, the default is 1.

Usage notes

EXPDIR is a main command. it cannot be used as a line command.

One block is enough for 5 members with ISPF statistics or 20 members without statistics.

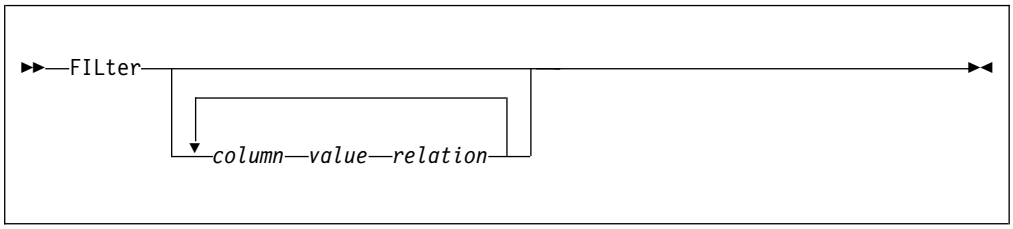
Examples

```
EXPDIR
EXPDIR 2
EXPDIR BLKS 3
EXPDIR 3 BLKS 4
```

FILter command

The FILter command is used to selectively tailor the display of members in the member selection list (or to remove all filtering).

Syntax



Operands

column An MSL display column heading abbreviation.

value A valid attribute value for parameter *column*.

relation
An applicable relation operator. If this parameter is omitted, the default value is the equal sign (=). The following operators are acceptable:

Table 6. Applicable relation operators

Definition	Operator
Begin with	.BW
	{
Contain	.CO
	{}
End with	.EW
	}
Equal	-NE
	.EQ
	=
Greater	.GT
Greater or equal	.GE

Table 6. Applicable relation operators (continued)

Definition	Operator
Higher	-LE
	.HI
	>
Higher or equal	.HE
	=>
	>=
Less	.LT
Lower	-HE
	.LO
	<
Lower or equal	.LE
	<=
Not	-
Not contain	-{}
	}{
Not equal	-EQ
	-=
	.NE
	<>
	=-
	><
Not higher	-HI
Not lower	-LO

Usage notes

When using command FILter, the member names that do not match the filtering criteria are stored in Filtered List. Filter List is logically separated from Excluded List. Both filtered and excluded members are hidden from display. When using command FILter with no parameters, all members in Filtered List are revealed.

If the first parameter is not a column title abbreviation, it is interpreted as the value of the member name column.

A negative number in the **Date** field indicates the recent number of days. An incomplete value in the **Date** field is converted to the nearest day of the year. Other special Date field values that are listed in the following figure are also acceptable:

```
TODAY YESTER WEEK RECENT MONTH QUARTER YEAR same as ...
TOD   DAY    WEE  REC    MON   QUA     YEA  same as ...
T     D      W    R      M     Q       Y    same as ...
-0    -1     -7   -15    -31   -92     -365 .
```

The FLIP command deactivates all active filters. For more information about deactivating filters, see the "UNFilter command" on page 186.

Examples

FIL *ABC* -
Displays all the members with a name that does not contain "ABC".

FIL CHA -10
Displays all the members that are modified in the last 10 days.

FIL SIZ 100 .LE TAG ? }
Displays all the members with more than 100 records whose tag names end with a question mark (?).

FIL TIT ACC .CO KEY 123
Displays all the members with a name whose title contains "ACC" and user key equals 123.

FIL ID MR { CRE Y CHA W
Displays all the members that are created last year and modified last week by any user ID that starts with "MR".

FIL CRE 12/ <
Displays all the members that are created after 1 January 2012.

FIL CHA 2013/04 <
Displays all the members that are modified after 1 April 2013.

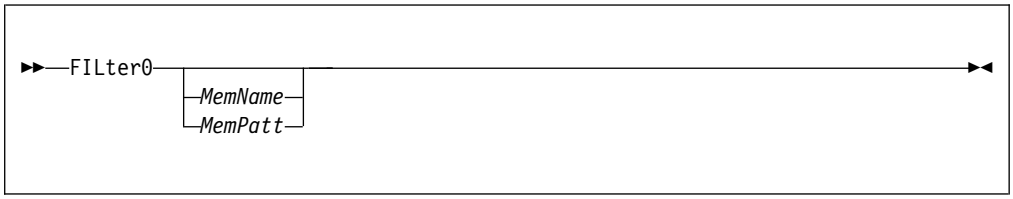
FIL RGEN 2 >=
Displays member generations 0, -1, and -2.

FIL Removes all filters.

FILter0 command

The FILter0 command is used to select and display only member relative generation 0 of one or more members.

Syntax



Operands

MemName
A member name.

MemPatt
A pattern mask of a member name with wildcard characters "%", "*", or both.

Usage notes

- Command FILter0 is an abbreviation of command `FILT RGEN 0 = NAME MemNam`.

- Command FILter0 deactivates all active filters. For more information about deactivating filters, see the "UNFilter command" on page 186.
- Only PDSE version 2 libraries with member generations are supported.

Examples

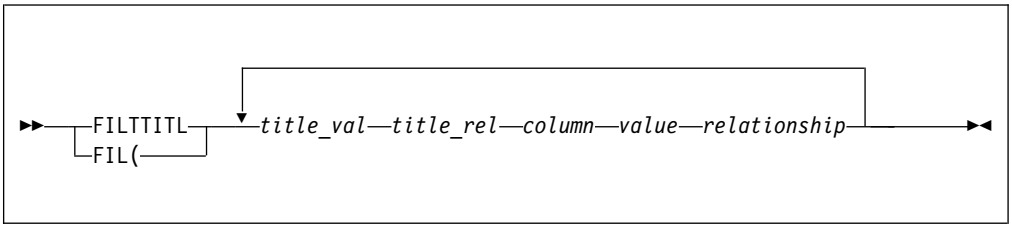
FILT0 Displays only relative generation 0 of all members.

FIL0 IQI*
Displays only relative generation 0 of all the members with a name that starts with "IQI".

FILTTITL command

The FILTTITL (or "FIL(") main command selects member titles to be displayed.

Syntax



Operands

title_val
A valid attribute value for column TITLE.

title_rel
An applicable relation operator for TITLE.

column An MSL display column heading abbreviation.

value A valid attribute value for Column.

relation
An applicable relation operator.

Usage notes

The FILTTITL command is abbreviation of FILTER TITLE *title_val title_rel*.

See the TITLE command for information on how to manage member titles. See the SHOWTITL command for information on how to display member titles. See the FILTER command for a complete syntax description.

The FLIP command deactivates all active filters (see also the UNFILTER command).

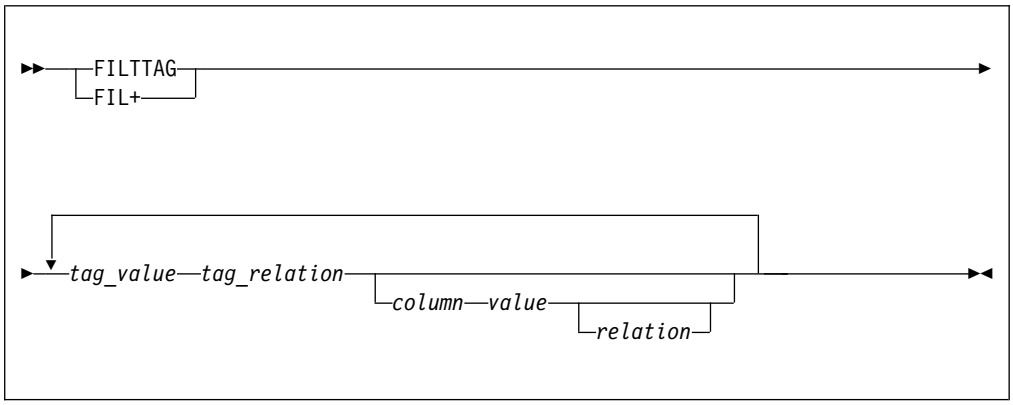
Examples

```
FIL( *ABC -     display all member titles that do not begin with ABC.
FIL( * CHA M    display all titled members modified in the last month.
FILTTITL        display only titled members.
```

FILTTAG command

The FILTTAG command selects which tagged members to display.

Syntax



Operands

tag_value
A valid attribute value for column RENAME.

tag_relation
An applicable relation operator for TAG.

column An MSL display column heading abbreviation.

value A valid attribute value for *column*.

relation
An applicable relation operator.

Usage notes

A member tag is a non-blank label preceded by "+" in the RENAME column.

See "TAG command" on page 181 for instructions on how to tag members.

FILTTAG command is an abbreviation of FILTER TAG TagVal TagRel.

See FILTER command assist for complete syntax description.

FLIP command deactivates all active filters (see "UNFilter command" on page 186 command).

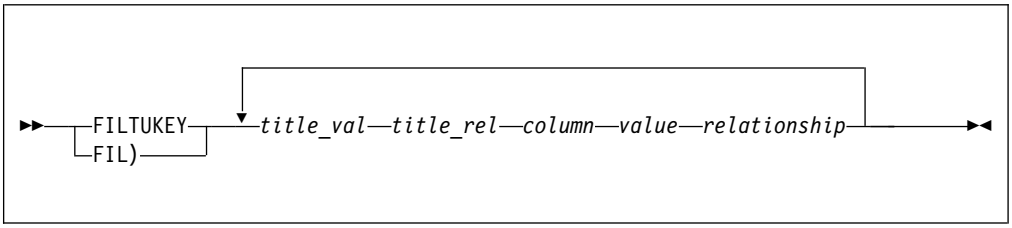
Examples

```
FIL+ *ABC -     Display all member tags that do not begin with ABC.
FIL+ * CHA M    Display all tagged members modified in last month.
FILTTAG         Display only tagged members.
```

FILTUKEY command

The FILTUKEY (or "FIL)") main command selects member user keys to be displayed.

Syntax



Operands

title_val
A valid attribute value for column TITLE.

title_rel
An applicable relation operator for TITLE.

column An MSL display column heading abbreviation.

value A valid attribute value for Column.

relation
An applicable relation operator.

Usage notes

The FILTUKEY command is an abbreviation of FILTER USERKEY *title_val title_rel*.

See the TITLE command for information on how to manage member titles. See the SHOWTITL command for information on how to display member titles. See the FILTER command for a complete syntax description.

The FLIP command deactivates all active filters (see also the UNFILTER command).

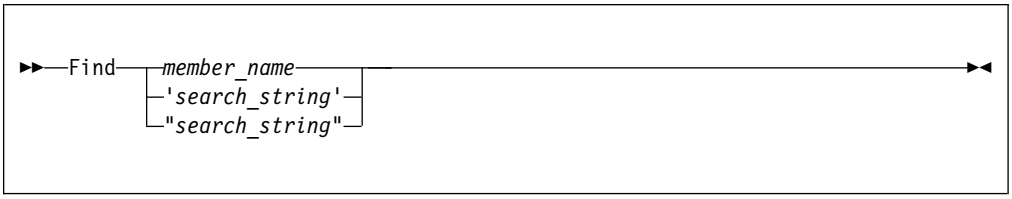
Examples

```
FIL) BPER {}   Display all member title keys that contain BPER.
FIL) * CHA W   Display all titled members modified in last week.
FILTUKEY       Display only titled members.
```

Find command

The Find command locates a particular member in the member selection list. If the member is in the hidden list, it is displayed in the MSL.

Syntax



Operands

member_name
The exact name of the member that is to be located in the member.

search_string
A search string. When a quoted search string is supplied, the Find command becomes equivalent to the FindText command.

Usage notes

Find is a main command only; it cannot be used as a line command.

The entire MSL is searched (including members that have been filtered out or excluded) for an exact match. If no match is found in either the displayed or hidden list, the directory of the library (or libraries) is reread, in case another user has recently added the member specified to the MSL. If there is still no match, a LOCATE command is issued for the *member_name* on the displayed list (to display the closest match).

If the automatic preview option is set, Find displays a preview window of the member located. To control this option, use the SET command.

To restrict the search to the displayed list, use the LOCATE command.

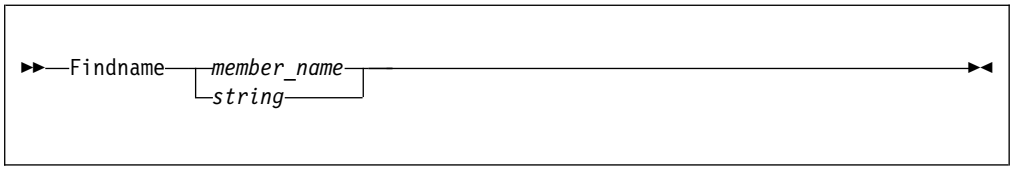
Examples

```
FIND STAT1     - Find member name STAT1 in any of the contatenated libraries
F ACCTMAIN     - Find member name ACCTMAIN in any of the contatenated libraries
F 'task'       - Find member containing string TASK
F "a'B"        - Find member containing string A'B
F X'abac'      - Find member containing two bytes
                 hexadecimal string of X'ABAC'
```

Findname command

The Findname command finds a member in the displayed library concatenation.

Syntax



Operands

member_name
An unquoted member name or name pattern.

string A quoted text string valid for the FINDTEXT command.

Usage notes

F *member_name* operates only on the displayed member list.

The search starts at current row and works down the list.

F *string* is same as FINDTEXT *string* FIRST.

The RFIND command invokes the corresponding FIND *member_name* or a FINDTEXT *string* command.

Examples

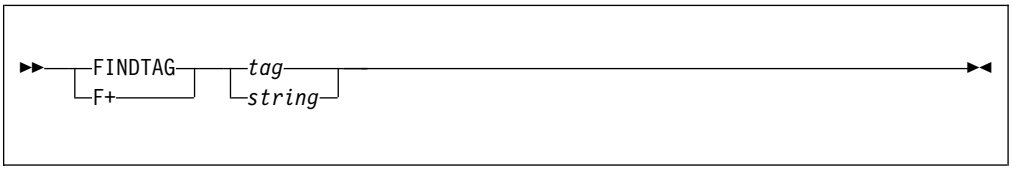
```
F MEM12345    Locate member name MEM12345 .
F *TEST*      Locate the first member name containing TEST.
F 'IBM'       Locate first member with a record containing IBM.
F "a'B"       Locate first member with a record containing A'B.
F X'0e0f'     Locate first member with a record containing 2 bytes
              hexadecimal string of x'0E0F'.
```

FINDTAG command

The FINDTAG command finds a tagged member in the displayed library concatenation.

This is a main command.

Syntax



Operands

tag An unquoted seven characters label or pattern.

string A quoted text string valid for the FINDTEXT command.

Usage notes

A member tag is a non-blank label preceded by + in RENAME column.

See "TAG command" on page 181 for instructions on how to tag members.

FINDTAG Tag operates only on displayed member names with tags.

The search starts at current row down the list.

F+ String is same as FT+ String FIRST.

The RFIND command invokes the corresponding F+ Tag or FT+ String command.

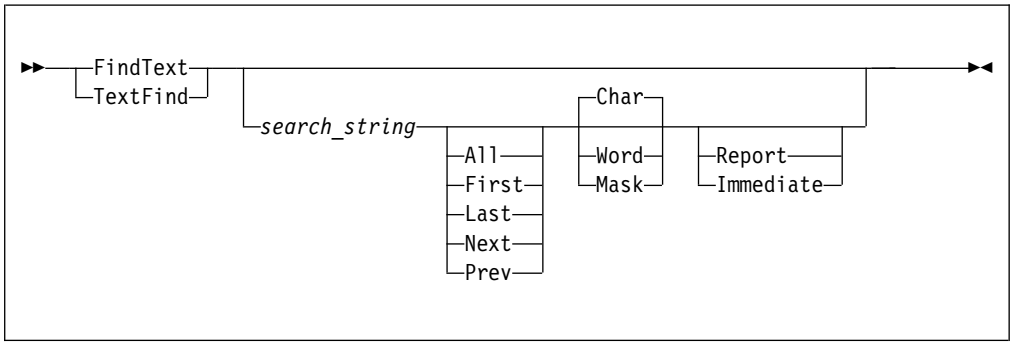
Examples

```
F+ DEBUG    Locate a member tagged DEBUG.
F+ *TEST*   Locate first member tag containing TEST.
F+ 'IBM'    Locate first tagged member with a record containing IBM.
F+ "a'B"    Locate first tagged member with a record containing A'B.
F+ X'0C0D'  Locate first tagged member with a record containing a
             2 bytes hexadecimal string of x'0C0D'.
```

FindText command

The FindText command searches for a specified string in members. For more information about FindText options, see Figure 47 on page 336.

Syntax



Operands

search_string
The string to be found. If it contains blanks or special characters, the text-string should be enclosed in quotation marks. The search string can be hexadecimal and case-sensitive SBCS characters, as well as DBCS search strings.

FindText handling of ampersand (&) characters in search strings conforms to ISPF EDIT conventions.

Note:

- Use double quotation marks (") to search for single quotation marks (').
  For example, "ex'am'ple".
- Use keyword C or c to indicate case-sensitive strings. For example, C'eXaMpLe'.
- Use keyword X or x to indicate hexadecimal strings. For example, X'1234'.

All All members are searched, and finds are flagged for each member.

First Searches from the first member that is displayed on the screen.

Last Searches from the last member that is displayed on the screen.

Next Searches from second member that is displayed on the screen.

Prev Finds the previous member where a match is found.

Char Searches for a character string.

Word Searches for a non-alpha and non-numerical word string. The following characters are considered as alpha characters:

$ @ #

Mask Searches for a string that matches a pattern mask. The following signs can be used in a pattern mask:

Asterisk (*)
Indicates any character string that contains zero or more characters.

Percent sign (%)
Indicates any single character.

Note:

- Pattern masks that consist of only asterisk (*), percent sign (%), or both are invalid.
- Hexadecimal notation and blanks are not allowed for pattern masks.

Report
Displays the complete MSL FINDTEXT HITS REPORT within an EDIT session, which might be further customized and stored into a user specified data set.

When option Report is in effect, multiple search criteria are supported. Each search criterion consists of a main TARGET string with optionally a WITH string and a WITHOUT string. A hit record must match at lease one search criterion, which means the record must contain the TARGET string and the WITH string, but not the WITHOUT string.

Immediate
Indicate that the FindText command is immediately executed without producing a report. A subsequent RFIND command can be used to find the next occurrence of the specified string.

Usage notes

- When all parameters are omitted, or when option Report is in effect, a complete menu is displayed to specify them. For an illustration of the menu, see the following figure:

```
-DSC-                      MSL Text Search Settings
COMMAND ===>

                                                                      More:
Specify string to search within the MSL members
 SEARCH string ===>
          mode ===> N   W (Word) or M (Mask) or N (Normal)
   WITH string ===>
          mode ===> N   W (Word) or M (Mask) or N (Normal)
WITHOUT string ===>
          mode ===> N   W (Word) or M (Mask) or N (Normal)
Specify search range in target data records:
  START COLUMN ===> 1      END COLUMN ===> 99999
Specify how many members to process before being prompted to resume:
    STOP AFTER ===> 10     Number of members to process successfully
  PROMPT AFTER ===> 10     Number of members to process before a prompt
Specify Y (Yes) or N (No) for the following options:
     AUTOMATIC ===> Y Process until reaches success limit?
       EXCLUDE ===> N Exclude mismatched members from displayed list?
   PACKED DATA ===> N Expand ISPF packed data format?
   FIND PROMPT ===> Y Prompt with FIND command upon selecting an member?
   FULL REPORT ===> Y Report all found records with multiple search criteria?
                      DETAILED ===> N Break down by search criteria?
Press ENTER for more search criteria or the END key to cancel

Note: use " (double quote) to search for ' (single quote) characters
Note: use C'... or c'... for case sensitive search strings
      use X'... or x'... for hexadecimal search strings
Note: use * for a pattern mask "any character string or none" indicator
      use % for a pattern mask "any single character" indicator
```

- To set the default options, use command `SET GLOBAL`.
- When keyword Report or Immediate is explicitly specified, it becomes the default setting until it is explicitly switched to the other option.
- Hexadecimal notations or blanks between quotation marks are unacceptable.

- The search starts from the first MSL entry that is displayed on the screen. The start column and end column numbers can be specified at the FindText command prompt menu.

Examples

TEXTFIND
Displays a menu to specify search parameters.

FT 'JOB 1' LAST
Searches from the last member to find the members that contain the string "JOB 1".

FT NAME WORD
Finds the members that contain the word "NAME".

FT NAME WORD R
Displays a menu to specify search parameters for the word "NAME".

FT "x'aBc'Y"
Finds the members that contain the string "X'ABC'Y".

TF X'81ab93'
Finds the members that contain the 3-byte hexadecimal value x'81AB93'.

FT c'Mike' l w
Searches from the last member to find the members that contain the case-sensitive word "Mike".

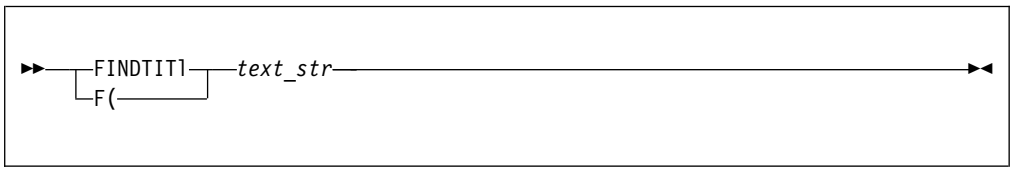
FT %ABC*XYZ%1%2 M
Finds the members that contain a string that matches the pattern mask "%ABC*XYZ%1%2".

For FindText scenario examples, see Appendix O, "Searching with command FindText," on page 367.

FINDTITl command

The FINDTITl or ("F(") command finds a member title in the displayed library concatenation.

Syntax



Operands

text_str
An unquoted string of up to 15 characters specifying a pattern.

Usage notes

FINDTITL operates only on displayed members with titles. The search starts at current row on the list, and proceeds down the list from that position.

See the TITLE command description or assist for how to manage member titles. See the SHOWTITL command description or assist for how to display member titles.

The RFIND command invokes the corresponding FINDTITL *text_str* command.

Examples

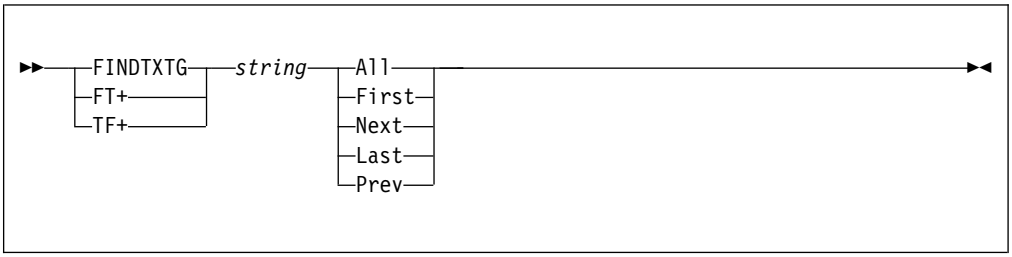
```
F( *DEBUG*     Locate a member with a title that contains DEBUG.
FINDTITL       Locate the next titled member.
```

FINDTXTG command

The FINDTXTG command finds text within the first or all tagged members.

This is a main command.

Syntax



Operands

string A quoted or unquoted text string to search for.

Position
Position at which the find starts. May be All or First or Next or Last or Prev.

Usage notes

A member tag is a non-blank label preceded by + in RENAME column.

See "TAG command" on page 181 for instructions on how to tag members.

FINDTXTG operates only on displayed members with tags.

When both parameters are omitted a GLOBAL+ command menu is displayed.

The RFIND command invokes FINDTXTG with most recent search string.

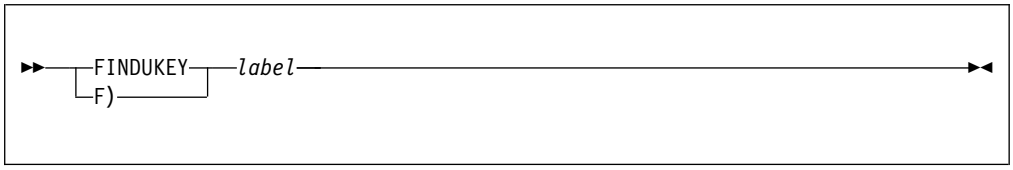
Examples

```
FT+ 'JOB 1' LAST     Find last tagged member with a record containing
                     JOB 1.
TF+ TYPRUN=HOLD F    Find first tagged member containing TYPRUN=HOLD.
FT+ "ADD 'TAX'"      Find next tagged member containing ADD 'TAX'.
TF+ X'1234AB' ALL    Find all tagged members containing hexadecimal
                     x'1234AB'.
FINDTXTG             Display a GLOBAL+ command entry menu.
```

FINDUKEY command

The FINDUKEY (or "F)") command finds a member in the displayed library concatenation with a specified title key.

Syntax



Operands

label An unquoted string or pattern of up to 8 characters.

Usage notes

The FINDUKEY command operates only on displayed members with titles. The search starts at current row and proceeds down the list.

See the TITLE command description or assist for information on how to manage member titles. See the SHOWTITL command description or assist for information on how to display member titles.

The RFIND command invokes the corresponding FINDUKEY *label* command.

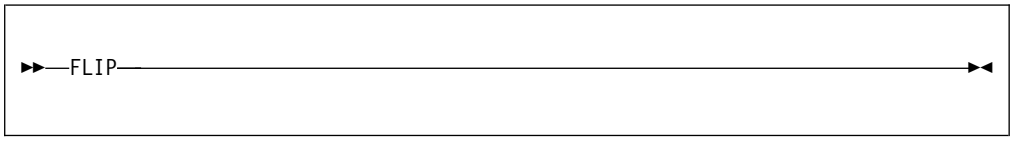
Examples

```
F) *BPER*      Locate a member title key that contains BPER.
FINDUKEY       Locate next titled member with any key.
```

FLIP command

The FLIP command toggles between visible and invisible (excluded and filtered-out) lines.

Syntax



Operands

FLIP has no operands.

Usage notes

- The FLIP command places all the displayed members in the EXCLUDE list, and reveals all the previously hidden members.
- After using command FLIP, to reveal all members, use command X with no parameters or `RESET X`.

- The FLIP command deactivates all active filters. For more information about deactivating filters, see the "UNFilter command" on page 186.

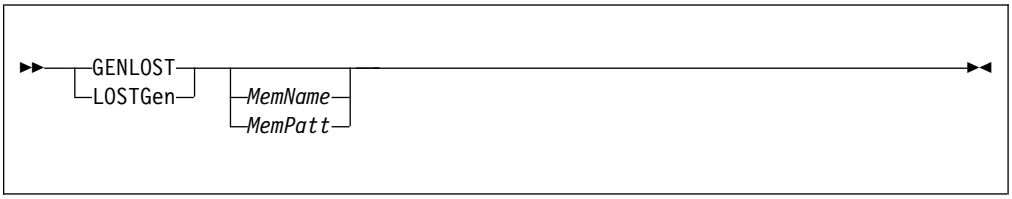
Examples

```
FLIP
```

GENLOST command

The GENLOST command displays only the orphan generations of one or more PDSE members.

Syntax



Operands

MemName
A member name.

MemPatt
A pattern mask of a member name with wildcard characters "%", "*", or both.

Usage notes

Only PDSE version 2 libraries with member generations are supported.

Examples

GENLOST DEAN123
Displays all the orphan generations of member DEAN123.

LOSTG D*
Displays all the orphan generations of the members with a name that starts with "D".

GENLOST
Displays all the orphan generations in the current library.

GENRECov command

The GENRECov command recovers a previous generation of a member.

Syntax

Operands

member_name
The member for which you are trying to recover a generation.

Note:

- If *member_name* exists in the library, you are prompted to select a specific nonzero relative generation number.
- This command only supports PDSE version 2 libraries with member generations.

Example

In this example the user wishes to replace the current version of member MEM2 with the most recent previous version of the member by using main command GENREC:

```
 -DSC--BROWSE L1---- MROTTER.PDSE2.SRC1 ---------------------ROW 00001 OF 00006
 COMMAND  ===> GENREC MEM2                                     SCROLL ===> CSR
HOTBAR: REFRESH  FLIP     COPYALL
              *SORT*SHOW*
   NAME     RENAME   LIB VV.MM      CHANGED         SIZE USERID  GENER
 _ MEM1                1 01.01 2013/11/25 07:28        1 MROTTER     0
 _ MEM1                1 01.00 2013/11/25 07:28        1 MROTTER    -1
 _ MEM2                1 01.03 2013/12/06 15:26        7 MROTTER     0
 _ MEM2                1 01.02 2013/12/06 15:25        6 MROTTER    -1
 _ MEM2                1 01.01 2013/11/25 07:28        1 MROTTER    -2
 _ MEM2                1 01.00 2013/11/25 07:28        1 MROTTER    -3
 _
    --END--
```

The user is prompted to select a member generation:

```
 -DSC- -------------- Recover a PDSE Member Generation -------------------------
 Command ===>

 ******* Specify an existing (non zero) generation number

 You have requested to recover member name MEM2     in:
    MROTTER.PDSE2.SRC1

 Recovered generation number ===> 0

 Press ENTER to recover the member or F3    to cancel.
```

After changing the selected generation number from 0 to 1 she is prompted again to confirm:

```
-DSC- -------------- Recover a PDSE Member Generation -------------------------
Command ===>

******* Confirm recovery of this member generation number

You have requested to recover member name MEM2     in:
   MROTTER.PDSE2.SRC1

Recovered generation number ===> 1

Press ENTER to recover the member or F3    to cancel.
```

And finally after successfully recovering relative generation 1 she gets:

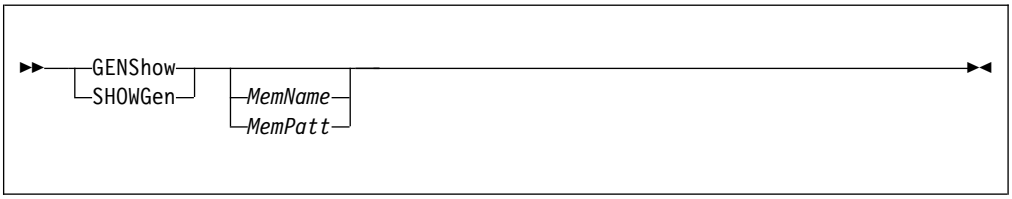
```
 -DSC--BROWSE L1---- MROTTER.PDSE2.SRC1 ---------------------ROW 00003 OF 00006
 COMMAND  ===>                                                 SCROLL ===> CSR
HOTBAR: REFRESH  FLIP     COPYALL
               *SORT*SHOW*
   NAME     RENAME   LIB VV.MM      CHANGED         SIZE USERID  GENER
 _ MEM2     +RECOVER   1 01.02 2013/12/06 15:25        6 MROTTER     0
 _ MEM2                1 01.03 2013/12/06 15:26        7 MROTTER    -1
 _ MEM2                1 01.01 2013/11/25 07:28        1 MROTTER    -3
 _ MEM2                1 01.00 2013/11/25 07:28        1 MROTTER    -4
 _  --END--

    IQIM079  Generation 1 of member MEM2 has been successfully recovered
```

The previous current version (generation 0) has become relative generation 1.

GENShow command

The GENShow command can be used to display all generations of a PDSE member.

Syntax



Operands

MemName
A member name.

MemPatt
A pattern mask of a member name with wildcard characters "%", "*", or both.

Usage notes

Only PDSE version 2 libraries with member generations are supported.

Examples

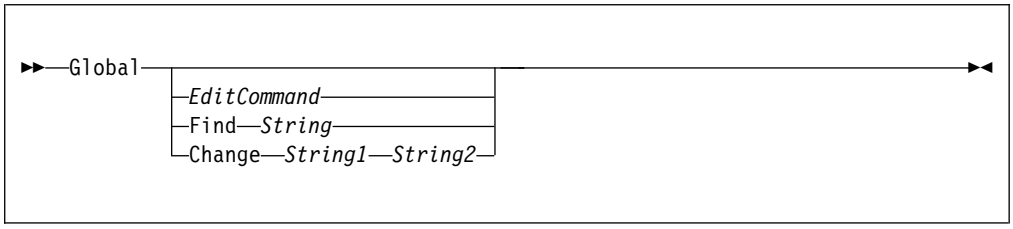
GENS MIKE101
Displays all generations of member MIKE101.

SHOWG M*
Displays all generations of all the members with a name that starts with "M".

Global command

The Global command can be used to issue one or more edit commands or macros on all or selected members.

Syntax



Operands

EditCommand
A valid ISPF EDIT primary command or macro.

Find The abbreviation of the EDIT FIND command.

Change
The abbreviation of the EDIT CHANGE command.

String An EDIT command valid character string.

String1
An EDIT command valid character string.

String2
An EDIT command valid character string.

Usage notes

- If the Global command is entered without operands, the GLOBAL prompt panel, which is illustrated in the following figure, is displayed:

```
-DSC- ------------------ QUICK FIND AND GLOBAL EDIT COMMANDS ------------------
COMMAND ===>                                                 SCROLL ===> PAGE

STOP AFTER   ===> 9999   (Number of members to process successfully)
PROMPT AFTER ===> 50     (Number of members to process before prompt is issued)
START COLUMN ===> 1     (Quick FIND starting column in target data record)
  END COLUMN ===> 99999 (Quick FIND end column in target data record)
AUTOMATIC    ===> Y (Process without editing successful members?)
LINK         ===> Y (Process each command only if previous command succeeds?)
PRINT        ===> N (Generate listing of each member changed and saved?)
EXCLUDE      ===> N (Exclude failing members from selection list?)
PACKED DATA  ===> N (Expand ISPF packed data format?)
Specify below the ISPF EDIT commands or macros to be executed (one per line).
Press END to process the global commands, or enter CANCEL to cancel.
--------------------------------------------------------------------------------
****** ***************************** Top of Data ******************************
''''''
''''''
''''''
''''''
''''''
''''''
****** **************************** Bottom of Data ****************************
```

- The EDIT FIND Regular Expression syntax is supported.
- To set pertinent control options, use command `SET G`.

- If the value of option AUTOMATIC is “Y”, command Global executes on all displayed members.
- If the value of option AUTOMATIC is “N”, each matching member is displayed in an EDIT session.
- If the value of option EXCLUDE is “Y”, all the members that failed the EDIT processing are hidden from display.
- If the value of option LINK is “Y”, command Global skips a member upon an EDIT failure.

Examples

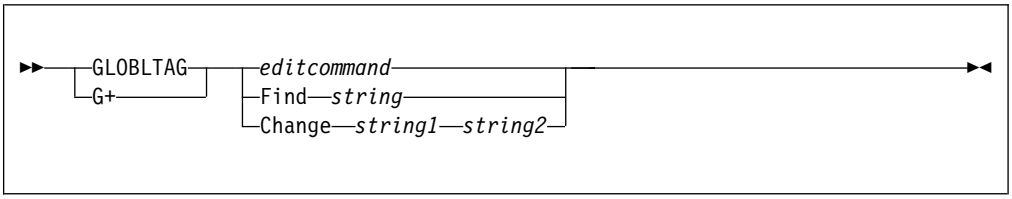
```
GLOBAL FIND SYSIN
G C ABC XYZ
G F 2 70 'SAVE ('
G F R'XYZ*1.9'
```

GLOBLTAG command

The GLOBLTAG command issues one or more edit commands or macros on tagged members.

This is a main command.

Syntax



Operands

editcommand
A valid ISPF EDIT primary command or macro.

Find The EDIT FIND command abbreviation.

Change
The EDIT CHANGE command abbreviation.

string, *string1*, *string2*
EDIT command valid character strings.

Usage notes

A member tag is a non-blank label preceded by + in RENAME column.

See “TAG command” on page 181 for instructions on how to tag members.

GLOBLTAG is same as GLOBAL command operating only on tagged members.

See GLOBAL command assist for additional information.

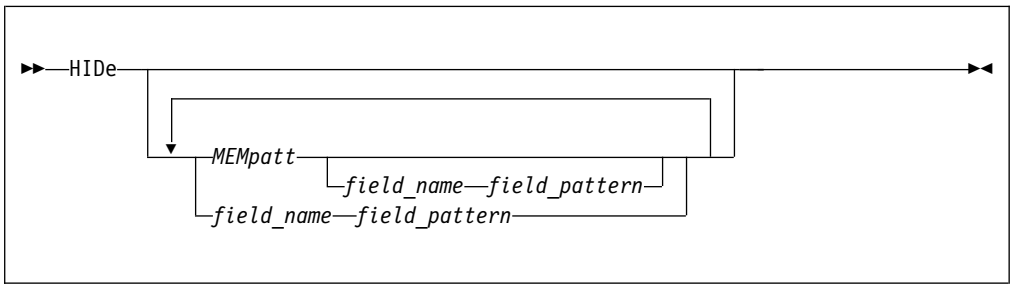
Examples

```
GLOBLTAG FIND SYSIN
G+ C ABC XYZ
G+ F 2 70 'SAVE ('
```

HIDe command

The HIDe command is used to selectively tailor the display of members in the member selection list, hiding (excluding) items from display.

Syntax



Operands

MEMpatt
A member name pattern using the wildcard characters "%" and "*".

field_name
The name of a member selection list column heading.

field_pattern
A pattern for values of the corresponding field using the wildcard characters "%" and "*".

Usage notes

If no operand is specified, all filtering is removed.

HIDe is a main command only; it cannot be used as a line command.

Up to six patterns (on six different fields), including member- name, may be specified in a single invocation; only the field name for the member name may be omitted, and only when it is the first pattern.

The HIDe command operates on the current MSL, removing from the list all members that match the pattern or patterns specified (and placing them on the hidden list).

To see members that have been filtered, enter `FLIP` and to remove all filtering, enter `RESET ALL`.

You can also specify a relative date keyword: TODAY, WEEK, MONTH, YEAR, RECENT (defined to the last ten days), or the minus sign followed by the number of days (from today). The relative date function can only be specified as the last parameter when invoking the FILTER command. The relative date must be in the ISPF US data notation format in the member list (YY/MM/DD).

Examples

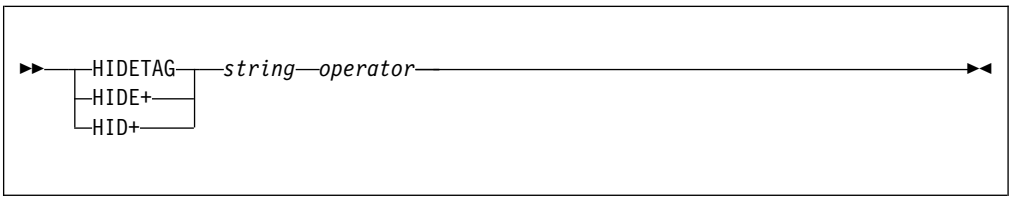
```
HID SIZ 100 =< hide all members with more than 100 records.
HID CRE MONTH  hide all members created in last month.
HID N XYZ .CO  hide all member names that contain XYZ.
HID *ABC* -    hide all member names that do not contain ABC.
HID CHA -10    hide all members modified in last 10 days.
HID CRE W -    hide all members created before last week .
HID            remove all filters.
```

HIDETAG command

The HIDETAG command hides (exclude) members with tags matching a filtering criterion.

This is a main command.

Syntax



Operands

string A valid character string or pattern for column RENAME.

string An applicable relation operator.

Usage notes

A member tag is a non-blank label preceded by + in RENAME column.

See "TAG command" on page 181 for instructions on how to tag members.

The HIDETAG command is an abbreviation for HIDE TAG TagVal TagRel.

When TagVal parameter is not * (default) all untagged members are first hidden, followed by the selected tagged members.

See HIDE command assist for complete syntax description.

FLIP command deactivates all active filters (see UNFILTER command).

Examples

```
HID+ ABC.CO     Hide all members with tags containing ABC along with
                all members that are not tagged.
HIDETAG         Hide all members that are tagged.
```

HIDETITLE command

The HIDETITLE command hides (exclude) members with titles matching a filtering criterion.

This is a main command.

Syntax

Operands

string A valid character string or pattern for column TITLE.

operator
An applicable relation operator.

Usage notes

See TITLE command assist for how to manage member titles.

See SHOWTITL command assist for how to display member titles.

HIDETITL command is abbreviation of HIDE TITLE TitlVal TitlRel.

When TitlVal parameter is not * (default) all untitled members are first hidden, followed by the selected titled members.

See HIDE command assist for complete syntax description.

FLIP command deactivates all active filters (see UNFILTER command).

Examples

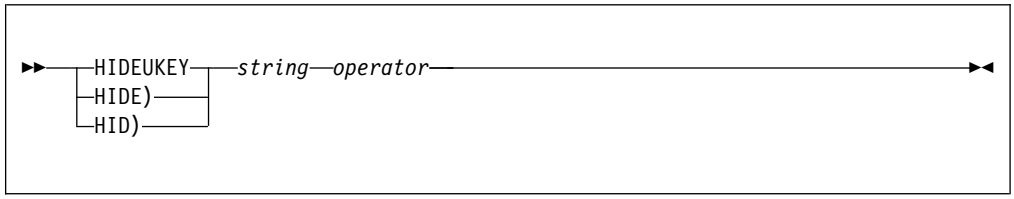
```
HID( *abcd*     Hide all members with titles containing ABCD along with
                all members that are not titled.
HIDETITL        Hide all members that are titled.
```

HIDEUKEY command

The HIDEUKEY command hides (exclude) members with title keys matching a filtering criterion.

This is a main command.

Syntax



Operands

string A valid character string or pattern for column USERKEY.

operator
An applicable relation operator.

Usage notes

See TITLE command assist for how to manage member titles.

See SHOWTITL command assist for how to display member titles.

HIDEUKEY command is abbreviation of HIDE USERKEY UkeyVal UkeyRel.

When UkeyVal parameter is not * (default) all untitled members are first hidden, followed by the selected titled members.

See HIDE command assist for complete syntax description.

FLIP command deactivates all active filters (see UNFILTER command).

Examples

```
HID) BPER -{     Hide all titled members with a User-Key that does not
                 Begin with BPER along with all untitled members.
HIDEUK           Hide all members that are titled.
```

I line command

The I line command displays member statistics information for non-load-module members, and displays a load-module member analysis map for load-module members.

Syntax

Operands

member_name
The current member name in the member selection list.

Usage notes

- For a source member, I displays either standard or extended ISPF statistics information.
- For a load-module member, I displays a load-module analysis map the same as the L line command.
- In a PDSE library with member generations, both the absolute and relative generations are displayed.

Examples

```
  NAME     RENAME
I IQIPLSTS          display member IQIPLSTS ISPF statistics.
```

INFO command

The INFO command is used to display information about the libraries in the current concatenation sequence of the MSL.

Syntax

Operands

INFO has no operands.

Usage notes

INFO is a main command only. It cannot be used as a line command.

Examples

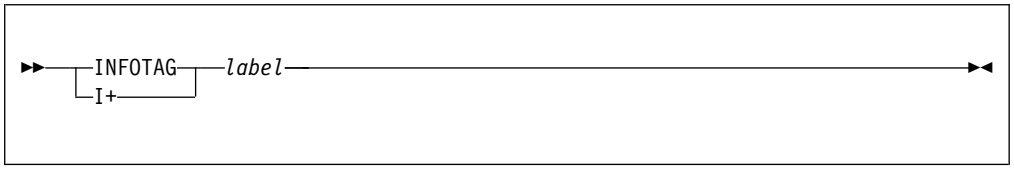
```
INFO
```

INFOTAG command

The INFOTAG command display a tagged member statistics information.

This is a main command.

Syntax



Operands

label A seven character string or pattern.

Usage notes

A member tag is a non-blank label preceded by + in the RENAME column.

See "TAG command" on page 181 for how to tag members.

For a source member, I+ displays either standard or extended ISPF statistics information.

In a PDSE library with member generations, both the absolute and relative generations are displayed.

For a load-module member, I+ displays a load-module analysis map.

The I line command may be used to display information for a listed member.

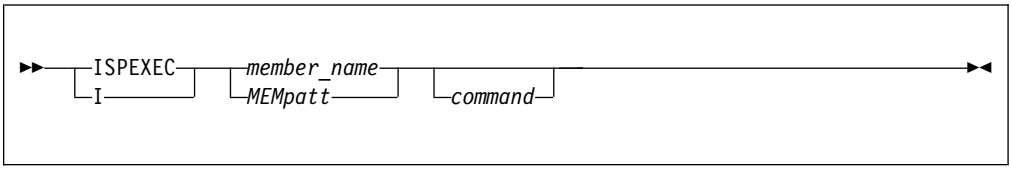
Examples

```
I+ XX         Display statistics of all members tagged XX.
I+ Y*         Display statistics of all members with tags beginning with Y.
I+            Display statistics of all tagged members.
```

ISPEXEC command

The ISPEXEC command invokes ISPEXEC on the one or more members specified.

Syntax



Operands

member_name
The name of the member in the current member selection list.

MEMpatt
A member name pattern using the wildcard characters "%" and "*".

command
The ISPEXEC function call to be invoked for this member.

Usage notes

ISPEXEC can be used as a main command. The command I can be used as a main command or a line command.

If I is entered as a line command, type the command operand in the RENAME field. If ISPEXEC or I is entered as a main command, a pattern may be used, in which case ISPEXEC is invoked on each member in the displayed list matching the pattern. If the command operand is omitted, the type of ISPEXEC call Data Set Commander constructs depends on the type of library (as indicated by the third-level qualifier in the data set name), as shown in the following table:

Library Type	Qualified Recognized	Default function cal constructed
CLIST	IS%CLIB CLIST*	ISPEXEC SELECT CMD(member)
Load module	IS%LLIB LOAD*	ISPEXEC SELECT PGM(member)
Message	IS%MLIB MSG*	ISPEXEC GETMSG(member) SHORTMSG(ZERRSM) LONGMSG(ZERRLM)
Panel	IS%PLIB PANEL*	ISPEXEC DISPLAY PANEL(member)

Note: If the command operand is omitted and the library is a panel library, the function call constructed is executed immediately displaying the panel directly.

Examples

```
ISPEXEC PANEL1
I PANEL1
I PANEL*
ISPEXEC ACCTMAIN
I PAYROLM TBOPEN
```

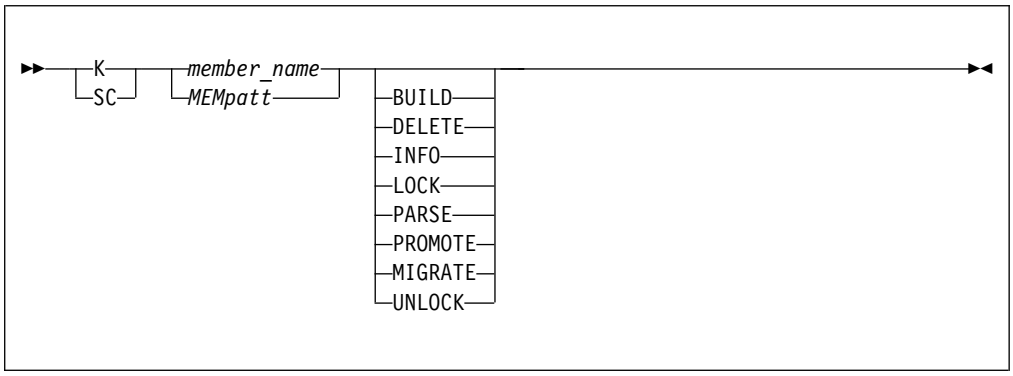
Feedback messages

The feedback message is the name of the function call you specified or that was implied by the library type.

K command

The K command is used for library management functions, under SCLM.

Syntax



Operands

member_name
The name of the member in the current member selection list.

MEMpatt
A member name pattern using the wildcard characters "%" and "*".

The request.

Possible request values are:

BUILD
Build a member.

DELETE
Delete database components.

INFO Displays change code, programming language and promoter associated with the selected member.

LOCK Lock a member or assign an access key.

PARSE
Parse a member for statistical and dependency information.

PROMOTE
Promote a member from one library to another library.

MIGRATE
Produce SCLM accounting information for members in a development library.

UNLOCK
Unlock a member in a development library.

If there is no request, a prompt window is displayed.

Usage notes

To set the SCLM project default values, use command SCLMPARM.

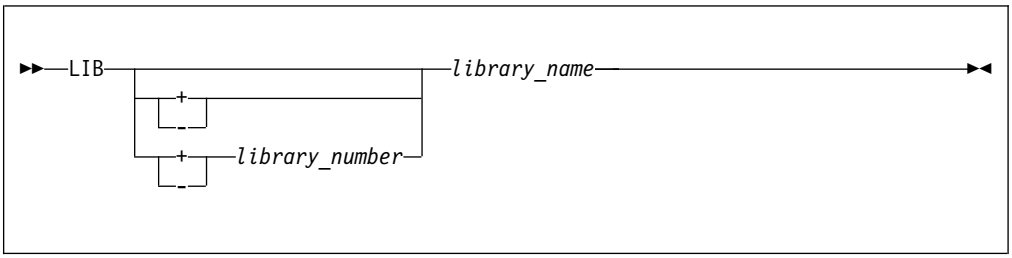
Examples

```
  NAME     RENAME
K IQIPLST  BUILD     issue an SCLM BUILD request on member IQIPLST .
K IQITSO             display an SCLM prompt menu for member IQITSO .
```

LIB command

The LIB command allows you to switch to other libraries by changing the middle level qualifier (GROUP) of the current displayed libraries. In a hierarchy, the LIB command adds or removes a library to the concatenation.

Syntax



Operands

+ Add a single library ahead of the current concatenation.

+ *library_number*
Inserts a new specified group in the hierarchy concatenation. The place where the group is inserted is determined by the library number.

- Specifies that the library specified is to be removed from the concatenation sequence.

library_name
The name of the library to be used as the specified library number.

Usage notes

LIB is a main command; it cannot be used as a line command.

If you have specified a library using "OTHER PARTITIONED OR SEQUENTIAL DATA SET" area of the BROWSE, EDIT, or VIEW Entry Panel, no concatenation of libraries can be defined. In this case, you cannot use the LIB command to add a library to the hierarchy, or to redefine any library other than library 1. The same restriction applies if you use the DSN command to switch libraries.

This command also provides the ability to specify the plus sign followed by a group. This notation indicates that the groups in the hierarchy concatenation should be shifted right from the specified library number, inserting the new specified group. This works only if a hierarchy (even of one library) is used upon entry to the MSL.

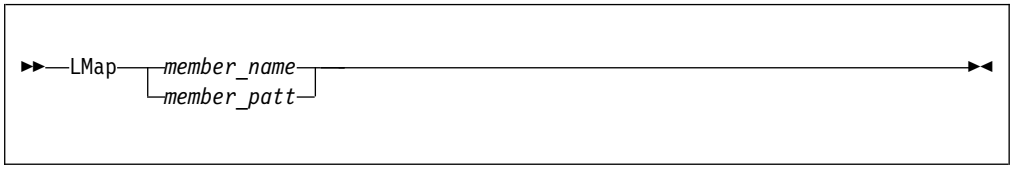
Examples

```
LIB TEST
LIB 2 TEST
LIB 2 -
LIB +1 DEV
LIB + DEV
LIB -
```

LMap command

The LMap command can be used to display a load-module member analysis map.

Syntax



Operands

member_name
The name of the load-module member in the current member selection list.

member_patt
A member name pattern with wildcard characters "%", "*", or both.

Usage notes

- An AMBLIST load-module analysis report is generated and displayed in an EDIT session.

- Only load-module libraries are supported.
- The corresponding L line command can be used to display an analysis map of one selected load-module member.

Examples

LMAP IQIMSL
Displays an analysis map of load-module member IQIMSL.

LM IPI*
Displays an analysis map for all the load-module members with a name that starts with "IPI".

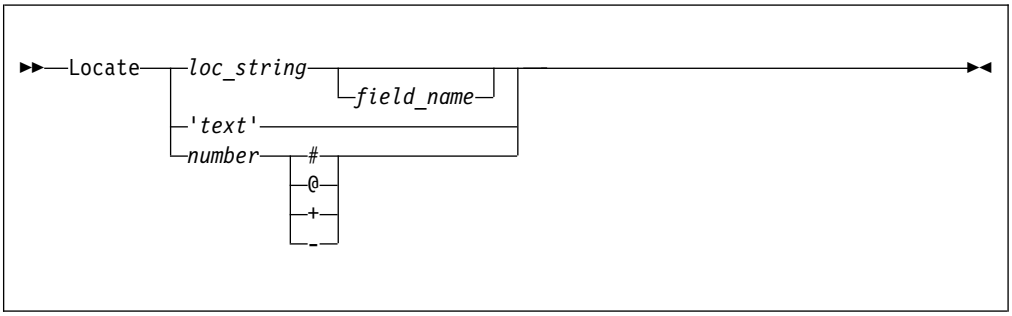
The following example uses the L line command to display an analysis map of load-module member IQISPF31:

```
  NAME     RENAME
L IQISPF31
```

Locate command

The Locate command positions the cursor in the member selection list panel at the member that matches the location parameters.

Syntax



Operands

loc_string
The leading characters of the field to be located. If the leading characters do not occur in the list, DSC positions the closest member at the top of the panel.

field_name
The name of a member selection list column heading. If omitted, the string is matched against the main sort field. (If you have not explicitly sorted the MSL, this is the member name field.)

text The string to be found within a member. The search starts with the member that is currently at the top of the panel. If the string is not found, then the bottommost member is displayed at the top of the panel.

number
The row number to be displayed at the top of the panel (`@` or `#`), or the number of rows to be skipped down (`+`) or up (`-`).

Usage notes

Locate is a main command only. It cannot be used as a line command.

A search is performed from the second member displayed on the screen to locate the first member in the displayed list for which the leading characters of the field specified (or implied) exactly match the string specified. If not found, the search starts again from the beginning of the list (that is, it wraps around). If not found again, the member closest to the locate string is selected.

The listing is positioned so that the member selected is the first member on the panel.

If the automatic preview option is on, `Locate` displays a preview window of the located member. To control this option, use the SET command.

Examples

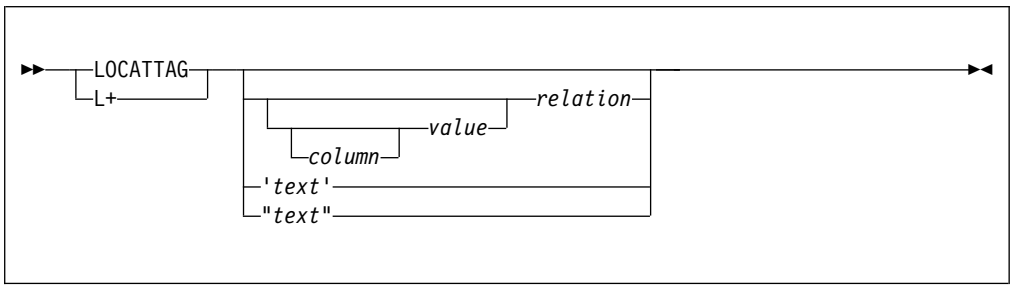
```
LOCATE ACCTM
L ROGER USERID
L 87/02 CHANGED
L 10 @
L 2 +
L 'JCL'
```

LOCATTAG command

The LOCATTAG command locates a tagged member in the selection list.

This is a main command.

Syntax



Operands

column An MSL display column heading abbreviation.
value A valid attribute value for Column.
relation
An applicable relation operator.
text A search string text within members.

Usage notes

A member tag is a non-blank label preceded by + in RENAME column.

See TAG command assist for how to tag members.

The search starts at current row down the list for ascending sort order, or up the list for descending sort order.

The RFIND command invokes the recent LOCATE Column Value Relation or corresponding FINDTEXT String command.

When Column is omitted, it defaults to primary SORT column.

When relation operator is omitted, it defaults to =.

The primary sort column heading is highlighted.

Date field value of a negative number indicates recent number of days.

The following date field special values are also acceptable:

```
TODAY YESTER WEEK RECENT MONTH QUARTER YEAR equivalent to...
-0    -1     -7   -15    -31   -122    -365.
```

The following operators are acceptable:

```
.EQ   equal
.LO   low
.HI   high
.LE   low or equal
.HE   high or equal,
.NE   not equal
.LT   less
.GT   greater
.GE   greater or equal
.CO   contain
.BW   begin with
.EW   end with
-EQ   not equal
-LO   not low
-HI   not high
-NE   equal
-LE   high
-HE   low
=     equal
<     low
>     high
-     not
{     begin with
}     end with
<>    not equal
><    not equal
-=    not equal
=-    not equal
=>    equal or high
<=    low or equal
>=    high or equal
{}    contain
}{    does not contain
-{}   does not contain
```

Examples

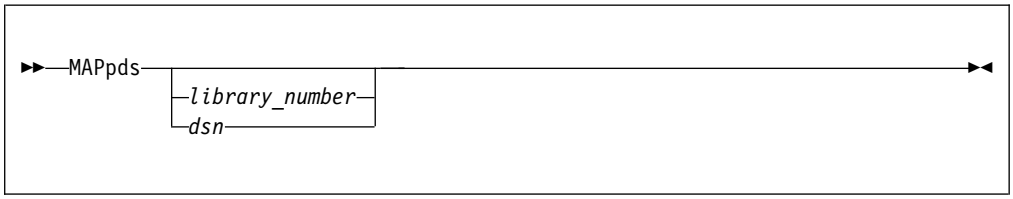
```
L+ ID IBM {}    Locate next tagged member saved by a user-id that contains IBM.
L+ MIKE01       For a list sorted by MEMBER column, locate tagged member
                name MIKE01 or the closest tagged member name.
L+ 1000.LT      For a list sorted by INIT column, locate a tagged member
                that was created with more than 1000 records.
L+ x'AB12ef'    Locate a tagged member with a record that constains a
```

```
                string of a hexadecimal number AB12EF.
L+ "X'123'"     Locate a tagged member with a record that constains a
                string of text characters X'123'.
```

MAPpds (PDS only) command

The MAPpds command displays a MAP list of PDS members, including those that have been deleted. Deleted members can then be restored.

Syntax



Operands

library_number
The number of the library member. Default value is "1".

dsn The name of a PDF library. This allows you to display the map of a PDS that is not the current PDS, without returning to an OLIST.

Usage notes

For more information see Chapter 12, "Browsing, viewing, and restoring deleted members of a PDS using the MAP list," on page 273.

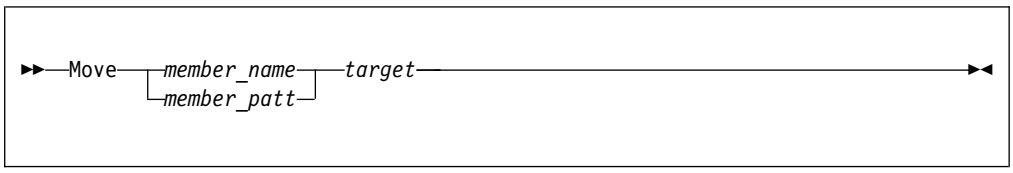
Examples

```
MAP 2            - Display a map of second library.
MAP              - Display a map of first (only) library.
MAP 'TEST.LOAD'  - Display a map of TEST.LOAD
```

Move command

The Move command moves one or more members to a target member or library. After a member is successfully moved, the original member is deleted.

Syntax



Operands

member_name
The name of a member in the current member selection list to be moved.

member_patt
A member name pattern mask with wildcard characters "%", "*", or both.

target The target member name in the same library, or a valid concatenation number of the target library in the current concatenation.

If the target library is a sequential data set, all moved members are merged in sequence into a single consecutive chain of records.

Usage notes

- You are prompted to specify the target library and same name member replacement. The target library is not allowed to be one of the currently concatenated libraries.
- To set the default option of same name member replacement, use the SET command.
- When a group of members are moved into an external library, the new member names can be specified in the second prompt panel.
- Use command shortcut `ISET MSL` to modify the MSL default options. Depending on the setting of option "Copy/Delete/Rename Generation 0", moving member generation 0 of a PDSE data set might affect the entire generation group.
- PDSE member generations are moved in descending order of their relative generation numbers, so their relative generation order is maintained in the target library.

Feedback messages

Message	Meaning
-DELETED	The member was deleted before the operation was initiated.
-IO ERR	An input/output error occurred in reading the directory of the library or the member itself.
-MOVE ER	The member was not moved because an error occurred.
-NO AUTH	Since you began working, your access to the library has been revoked.
-NO REPL	The member was not copied because the REPLACE option was set to NO.
-NOT OLD	You specified that the target is to be replaced only if it is newer than the source, and the source is not older than the target.
-NO STAT	You specified that the target is to be replaced only if it is older or newer than the source, and either the source or the target was lacking statistics.
-REVEALD	Another member with the same name was found in a higher-level library, and is now being displayed in the MSL.

Examples

`M *XYZ* 2`
Moves all the members with a name that contains "XYZ" into the second concatenated library.

`MOVE *` Moves all members into a target library or a sequential file, which is to be specified in a prompt panel.

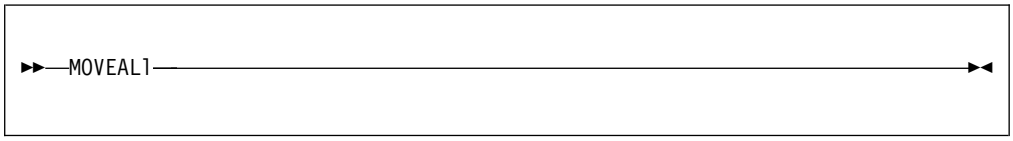
The following example uses the M line command to move member ABC into library XYZ, and move member IQIDFLTS into the second concatenated library:

```
  NAME     RENAME
M ABC      XYZ
M IQIDFLTS 2
```

MOVEALl command

The MOVEALl command moves all the members from the specified data set to a different data set.

Syntax



Usage notes

- You are prompted to specify the target library and like-named member replacement.
- The target library must not be one of the currently concatenated libraries.
- All present members are moved, regardless of any prior filtering.
- All successfully moved members are deleted from the original library.
- When moving a PDSE member with member generations, you might move either only generation 0 of the member, or all generations of the member.
- To modify the MSL default options, use command shortcut `ISET MSL`.

Examples

```
MOVEAL
```

Feedback messages

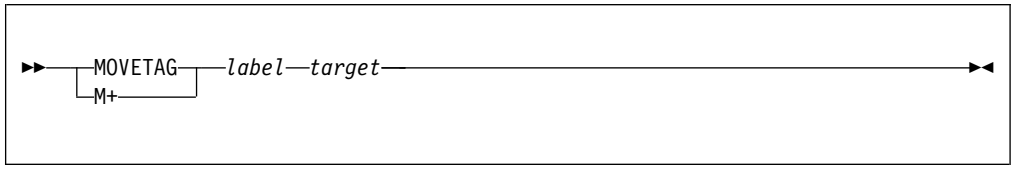
Message	Meaning
-DELETED	The member was deleted before the operation was initiated.
-IO ERR	An input/output error occurred in reading the directory of the library or the member itself.
-MOVE ER	The member was not moved because an error occurred.
-NO AUTH	Since you began working, your access to the library has been revoked.
-NO REPL	The member was not copied because the REPLACE option was set to NO.
-NOT OLD	You specified that the target is to be replaced only if it is newer than the source, and the source is not older than the target.
-NO STAT	You specified that the target is to be replaced only if it is older or newer than the source, and either the source or the target was lacking statistics.
-REVEALD	Another member with the same name was found in a higher-level library, and is now being displayed in the MSL.

MOVETAG command

The MOVETAG command moves one or more tagged members to a target library.

This is a main command.

Syntax



Operands

label A seven character string or pattern.

target The concatenation number of the target library in current concatenation.

Usage notes

A member tag is a non-blank label preceded by + in RENAME column.

See "TAG command" on page 181 for instructions on how to tag members.

You are prompted to specify the target library and same name member replacement. The target library is not allowed to be one of the currently concatenated libraries.

The same name member replacement default option may be selected via the SET command.

When a group of members is moved into an external library, the new member names may be specified in a second prompt panel.

When the target is a sequential data set, all moved members are merged in sequence into a single consecutive chain of records.

The M line command may be used to move a listed member.

All successfully moved members are deleted from the input library.

Use command shortcut `ISET MSL` to modify the MSL default options. Depending on the setting of option "Copy/Delete/Rename Generation 0", moving member generation 0 of a PDSE data set might affect the entire generation group.

PDSE member generations are moved in descending order of their relative generation numbers, thus maintaining their relative generation order in the target library.

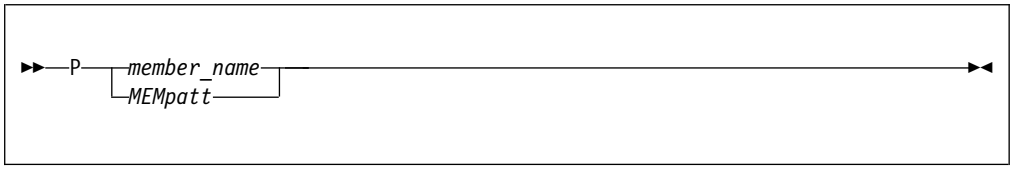
Examples

```
M+ X 3   Move all members tagged with X into third concatenated library.
M+ ABC*  Move all member names tagged with a label that starts ABC.
MOVETAG  Move all tagged members into a target library or a
         sequential file to be specified in a prompt panel.
```

P (main) command

The P main command prints the one or more members specified to a printer or to the ISPF LIST data set, as specified on the SET panel.

Syntax



Operands

member_name
The name of the member in the current member selection list.

MEMpatt
A member name pattern using the wildcard characters "%" and "*".

Usage notes

If you specify a pattern, a confirm print request panel is displayed, allowing you to verify the members that are to be printed, and to set the print options.

If the print-out is directed to the ISPF LIST data set, use the ISPF LIST command to process the output.

Note: Don't confuse this command with the ISPF PRINT command, which prints the screen image to the ISPF LIST data set.

Examples

```
P PAYROLM
P PAYROL*
```

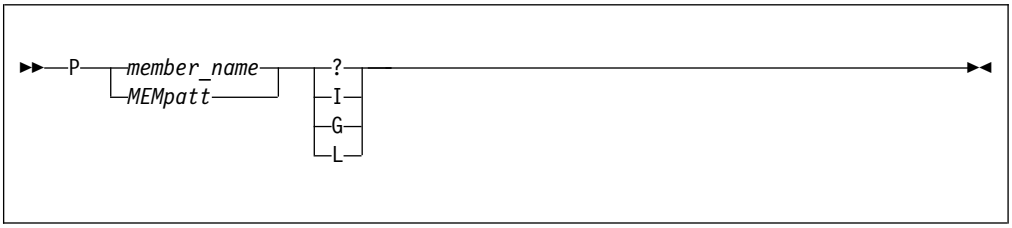
Feedback messages

Message	Meaning
-PRINT I	The member was printed in immediate mode.
-PRINT G	The member was printed in group mode.
-PRINT L	The member was printed to the ISPF LIST data set.
-NO AUTH	Since you began working, your access to the library has been revoked.
-DELETED	The member was deleted before the operation was initiated.
-EMPTY	The member selected for printing was empty.
-IO ERR	An input/output error occurred in reading the directory of the library or the member itself.

P (line) command

The P line command prints a listed member. PDSE member generations are supported.

Syntax



Operands

member_name
The name of the member in the current member selection list.

MEMpatt
A member name pattern using the wildcard characters "%"and "*".

? Request the print options screen.

I Process mode to print immediately.

G Process mode to group requests for later printing.

L Process mode to print direct to the ISPF LIST data set.

Usage notes

- Main command Printmem can be used to print one or more members.
- Use the `SET PRINT` command to set the various PRINT command default options.

Examples

The following example uses the P line command to print member IQIDFLTS into ISPF LIST, and print member IQIDBG into the default print data set:

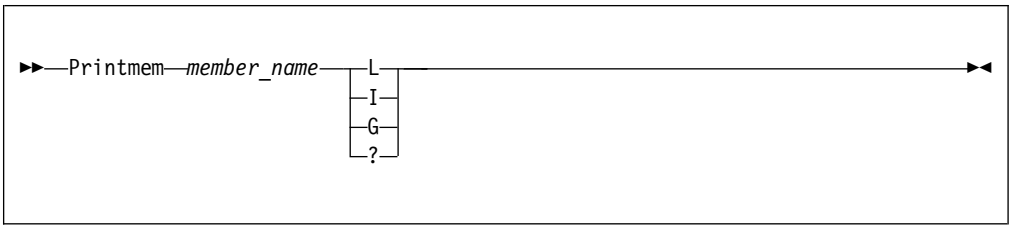
```
  NAME     RENAME
P IQIDFLTS L
P IQIDBG
```

Printmem command

The Printmem command print one or more members in current library concatenation.

This is a main command.

Syntax



Operands

member_name
An unquoted member name or name pattern.

L | I | G | ?
The print keyword. Here are the meanings of each value:
L Print to ISPF LIST data set.
I Immediately print to JES SYSOUT queue.
G Add printout to DSC grouped print file.
? Display a print options menu panel.

Usage notes

Use the SET PRINT command to set the various PRINT command default options.

The P line command may be used to print a listed member.

When selecting to print a distinct member name of a PDSE with member generations, you are prompted to print one relative generation or all.

Examples

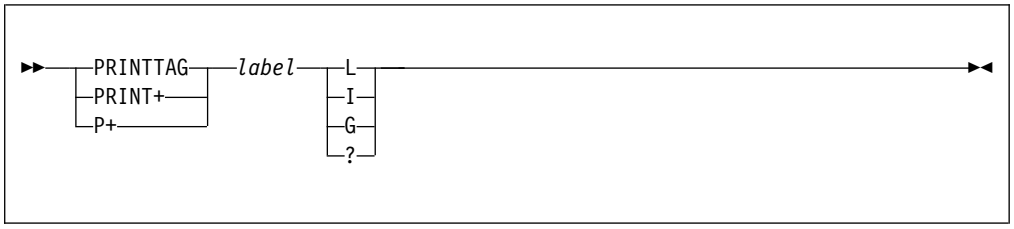
```
P *MAIN L    Print all members with names ending MAIN into ISPF LIST.
PRINTMEM *   Print all displayed members to default output data set.
```

PRINTTAG command

The PRINTTAG command prints one or more tagged members in the current library concatenation.

This is a main command.

Syntax



Operands

label A seven character string or pattern.

L | I | G | ?
The print keyword. Here are the meanings of each value:
L Print to ISPF LIST data set.
I Immediately print to JES SYSOUT queue.
G Add printout to DSC grouped print file.
? Display a print options menu panel.

Usage notes

A member tag is a non-blank label preceded by + in RENAME column.

See “TAG command” on page 181 for instructions on how to tag members.

Use the SET PRINT command to set the various PRINT command default options.

P line command may be used to print a listed member.

When selecting to print a distinct member name of a PDSE with member generations, you are prompted to print one relative generation or all.

Examples

```
P+ XYZ G    Print all members tagged XYZ into DSC grouped print file.
PRINTTAG    Print all tagged members to default output data set.
```

PROJECT command

The PROJECT command changes the library (or libraries) being processed to one with the same name as currently displayed except that the high-level qualifier is specified in the command.

Syntax

Operands

project_name
The name of the new high-level qualifier to be used.

Usage notes

PROJECT is a main command. It cannot be used as a line command.

Examples

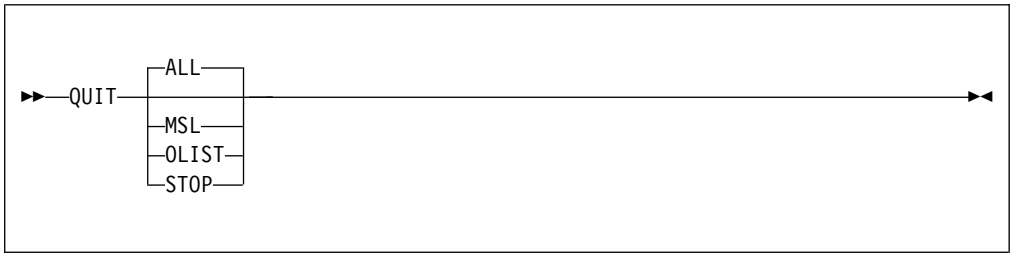
```
PROJECT PAYROLL
PROJECT SYS1
```

QUIT command

The QUIT command aborts MSL or OLIST nested processing.

This is a main command.

Syntax



Operands

Scope May be MSL or OLIST or STOP or ALL (default).

Usage notes

A QUIT remains in effect until the primary panel is reached for this split or until a QUIT STOP is entered.

A QUIT entered during GLOBAL command activity just stops the GLOBAL command at the current member.

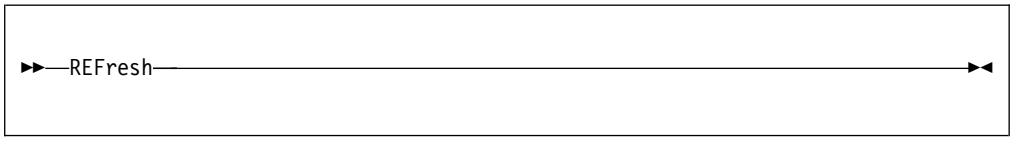
Examples

```
QUIT         Abort all nested OLIST and MSL processing in this split.
QUIT STOP    Stop aborting OLIST and MSL in this split.
```

REFresh command

The REFresh command refreshes the member selection list from current directories and reloads the persistent member title list.

Syntax



Operands

REFresh has no operands.

Usage notes

- REFresh is equivalent to the command `DSN = =`.
- To display member titles instead of ISPF status, use command SHOWTitl.

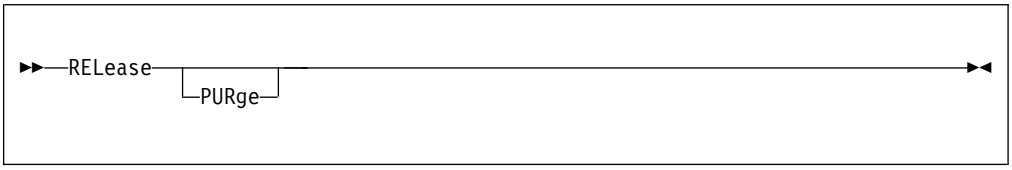
Examples

REF Retrieves member selection list from current directories, and redisplays the unfiltered list.

RELease command

The RELease command is used to close or delete the current print group. This is applicable only if the PRINT processing mode is set to GROUP.

Syntax



Operands

PURge Delete the current print group.

Usage notes

If you do not issue the RELease command, the current print group is automatically released when you log off or change print processing mode.

RELease is accepted from within Data Set Commander BROWSE, EDIT, and VIEW, and while a Data Set Commander enhanced member list or OLIST is active.

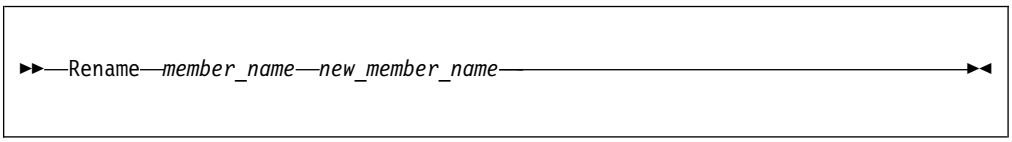
Examples

```
RELEASE
REL
REL PURGE
REL PUR
```

Rename command

Main command Rename can be used to rename one or more members. Line command R can be used to rename a listed member.

Syntax



Operands

member_name
The name of a member in the current member selection list, or a pattern mask.

new_name
The new name of the member. The value of this variable can be either a distinct new member name, or a new pattern mask with "=" characters that indicate the original member name identical characters.

Usage notes

- To rename a PDSE nonzero member generation, use the Move command.
- Use command shortcut `ISET MSL` to modify the MSL default options.
  - Depending on the setting of option "Copy/Delete/Rename Generation 0", renaming member generation 0 of a PDSE data set might affect the entire generation group.
  - Depending on the setting of option "RENAME member updates title and change date", renaming a PDSE member might also copy its title and update its ISPF Modification Date-Time stamp.

Feedback messages

The name of the member before the rename operation appears in the **Rename** field.

Examples

RENAME ABC XYZ
Renames member ABC to XYZ.

R IP* IQ======
Changes the member names that start with "IP" to new names that start with "IQ".

The following example uses the R line command to rename member MEMBERX to MEMBERY:

```
  NAME     RENAME
R MEMBERX  MEMBERY
```

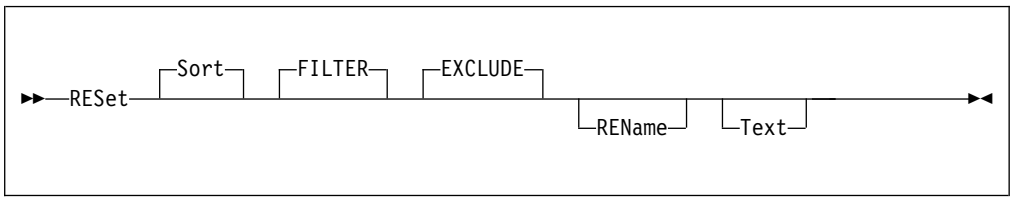
The following example uses the R line command to rename member O0L1D234 to N0E1W234:

```
  NAME     RENAME
R O0L1D234 N=E=W====
```

RESet command

The RESet command is used to reset the tailoring of the current member list.

Syntax



Operands

Sort Default sorting order (ascending by member name) should be restored.

FILTER
All filters should be removed.

EXCLUDE
All excluded members should be non-excluded.

REName
The rename field (including all feedback messages and tags) should be cleared.

Text Removes all overlaying text notes.

Examples

RES F Redisplays all filtered-out members.

RES R T
Clears all **RENAME** fields, and removes all overlaying text notes.

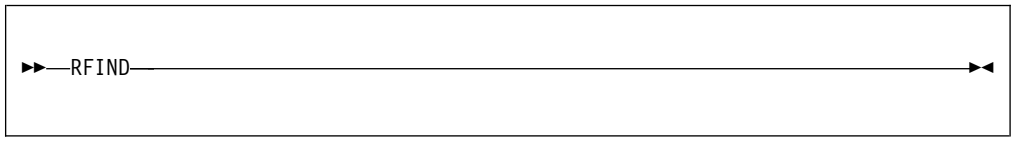
RESET Redisplays all hidden members, and sorts the list by member name.

RFIND command

The RFIND command repeats the most recent FINDTEXT or FINDNAME or LOCATE command.

This is a main command.

Syntax



Usage notes

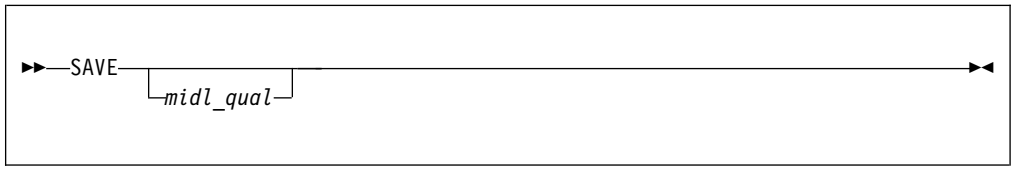
The PF5 key is usually defined as RFIND.

The repeated FINDTEXT, FINDNAME, or LOCATE starts from the next member off the top of the screen in the expected direction (up or down the list).

SAVE command

The SAVE command writes the currently displayed member selection list to a user-specified data set, a printer, or the ISPF LIST data set.

Syntax



Operands

midl_qual
The middle qualifier for the name of the data set to which the directory list is saved.

Usage notes

SAVE is a main command. It cannot be used as a line command.

If *midl_qual* is specified, Data Set Commander creates a data set whose name uses the following form:

Examples

```
'prefix.midl_qual.MEMBERS'
```

Where prefix is the current TSO prefix (or user ID).

If midl_qual is omitted, the directory list is printed as specified on the SET panel.

If the print-out is directed to the ISPF LIST data set, it can be printed using the ISPF LIST command.

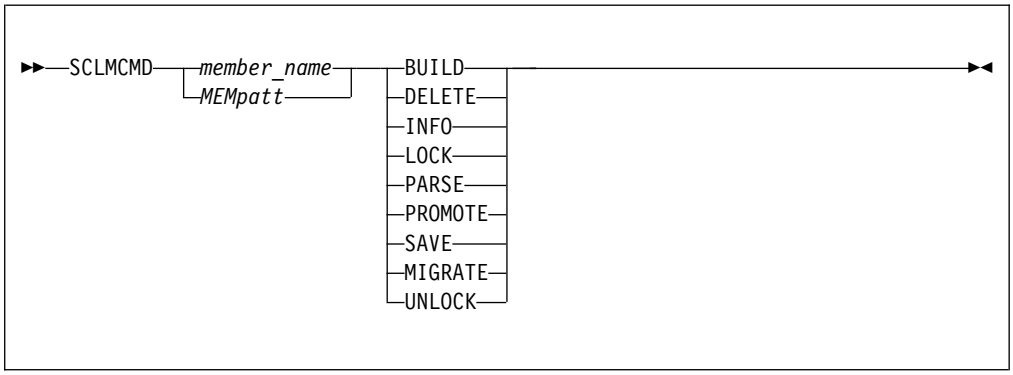
Examples

```
SAVE
SAVE JONES
```

SCLMCMD command

The SCLMCMD command performs the specified SCLM function on the members (active only if SCLM support is active for the user).

Syntax



Operands

member_name
The name of the member in the current member selection list.

MEMpatt
A member name pattern using the wildcard characters "%" and "*".

BUILD
Build a member.

DELETE
Delete database components.

INFO Displays change code, programming language and promoter associated with the selected member.

LOCK Lock a member or assign an access key.

PARSE
Parse a member for statistical and dependency information.

PROMOTE
Promote a member from one library to another library.

SAVE Save the member.

MIGRATE
Produce SCLM accounting information for members in a development library.

UNLOCK
Unlock a member in a development library.

Usage notes

When used as a line command, K invokes the same function.

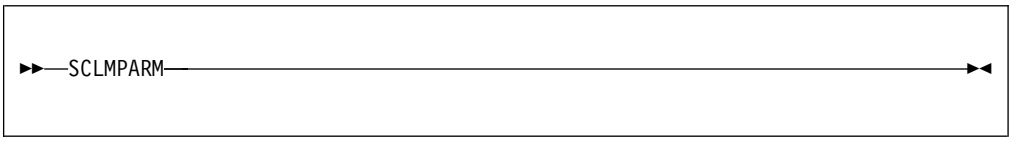
Examples

```
SCLMCMD PAYROL1 INFO
SCLMCMD PAYMAIN PROMOTE
```

SCLMPARM command

The SCLMPARM command displays the SCLM parameters active for the current library (active only if SCLM support is active for the user).

Syntax



Operands

SCLMPARM has no operands.

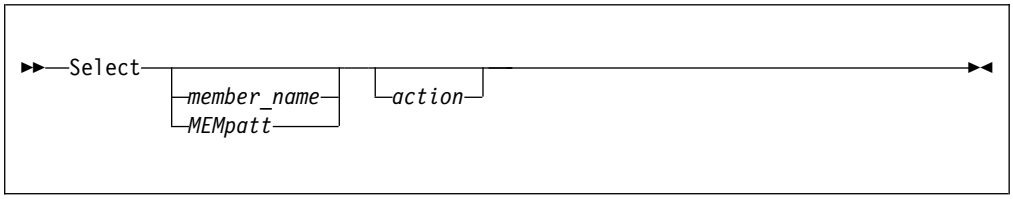
Examples

```
SCLMPARM
```

Select command

The Select command can be used to select one or more members for BROWSE, EDIT, or View processing.

Syntax



Operands

member_name
The name of the member in the current member list to be selected for the current or specified process. If the default or specified process is EDIT, this can also be the name of a new member that is to be created.

MEMpatt
A member name pattern using the wildcard characters "%" and "*".

action Indicates the target processing. The value of this variable can be a string of command name Browse, Edit, or View.

Usage notes

- Instead of using the Select command, you might use commands Browse, Edit, and View.
- A member can be selected by performing a Point-and-Shoot action at the target member name.
- When selecting a PDSE member with member generations, the most recent existing member generation is selected.
- If S is entered as a main command, a pattern can be specified. In this case, all members in the displayed list that match the pattern are processed. You can also specify the line command parameter. However, no other parameters can be specified. Thus, line commands that require a parameter in addition to the member name (such as R, which requires the new name) cannot be used in this way.
- If S is entered as a line command, you cannot specify the line command parameter. In this case, the current default operation is used.
- Data Set Commander has the ability to specify a line command for ISPF. Any line command can be entered as a main command, rather than as an operand of the SELECT command. For example, the command `B ACCT*` can be entered instead of `S ACCT* B`.

Feedback messages

The feedback messages depend on the process performed on the member.

Message	Meaning
SELECT ACCTMAIN	SELECT ACCTMAIN B
S ACCTMAIN B	S ACCT*
S ACCT* P	

Examples

S MEM01 E
Selects to edit member MEM01.

S DEV7*
Selects all the members with a name that starts with "DEV7" for the default processing.

The following example uses the S line command to select member MEMBER12 for the default processing:

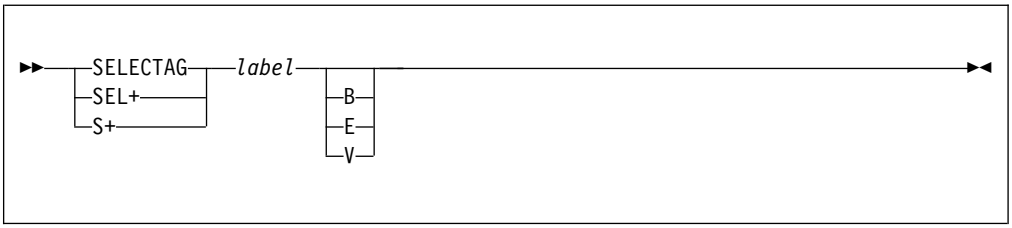
```
  NAME     RENAME
S MEMBER12
```

SELECTAG command

The SELECTAG command selects a tagged member for BROWSE or EDIT or VIEW processing.

This is a main command.

Syntax



Operands

label A seven character string or pattern.

B | V | E
The action - Browse, Edit, or View.

Usage notes

A member tag is a non-blank label preceded by + in RENAME column.

See "TAG command" on page 181 for instructions on how to tag members.

Instead of this command you may use the more explicit format of: `B+ label` (Browse) or `E+ label` (Edit) or `V+ label` (View).

When selecting a member name in a PDSE with member generations, the most recent existing member generation is chosen.

Examples

```
S+ XY E   Select to EDIT all members with a tag of XY.
S+ ABC*   Select all members with a tag starting ABC for default
SEL+      Select all tagged members for default processing.
```

SET command

The SET command modifies your -DSC- default options.

This is a main command.

Syntax

Operands

Option

The option can be blank, or one of these DSC SET codes:

A, ALL
Display menus of all modifiable options

M, MSL
Display Member Selection List (MSL) options menu

O, OLIST
Display Object List (OLIST) options menu

G, GLOBAL
Display GLOBAL edit and FINDTEXT options menu

P, PRINT
Display PRINT facility options menu

D, DSLIST
Display ISPF DSLIST support options menu

T, TSO
Display TSO shell support options menu

E, EDIT
Display ISPF EDIT, BROWSE, and VIEW options menu

I, INTERFACE
Display interactive user interface options menu

S, SCLM
Display SCLM support options menu

N, DIAGNOSE
Display ISPF dialog error diagnostics options menu

L, LIBRARY
Display -DSC- Persistent-Table-Library options menu

B, BOOKMGR
Display IBM BookMgr support options menu

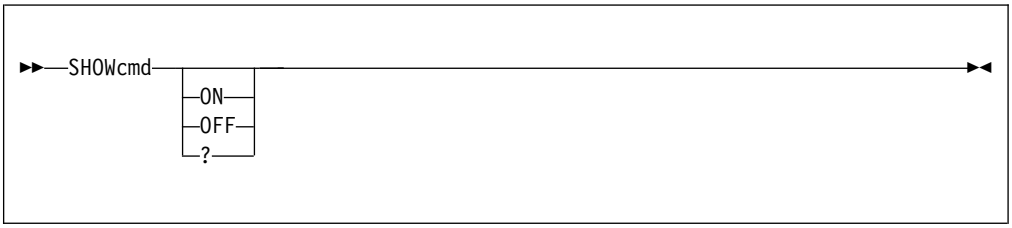
Examples

```
SET G    Display GLOBAL command defaults menu.
SET A    Display the DSC SET command main menu.
SET      Display the MSL default options menu.
```

SHOWcmd command

The SHOWcmd command controls the prompt display of TSO commands and CLISTs prior to execution.

Syntax



Operands

ON Entered TSO commands are displayed in a special prompt panel for verification before execution.

OFF TSO commands are executed when entered.

? The current SHOWCMD status is displayed.

When no operand is entered, the status of SHOWCMD is toggled between ON and OFF.

Usage notes

The SHOWCMD status is saved in the user PROFILE and stays in effect for all MSL displays.

A SHOWCMD ON status is noted with a *SHOW* mark on the MSL display.

A SHOWCMD OFF status is noted with a *EXEC* mark on the MSL display.

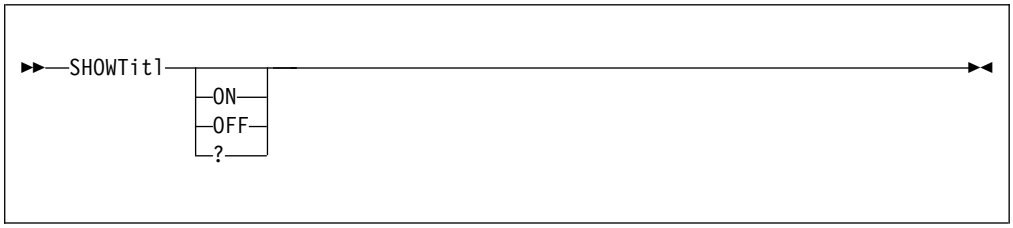
Examples

```
SHOW OFF     Execute TSO commands as entered.
SHOWC ON     Entered TSO commands are to be displayed in a special
             prompt panel for verification before execution.
SHOWCM ?     Display SHOWCMD status.
SHOWCMD      Toggle SHOWCMD ON/OFF status.
```

SHOWTitl command

The SHOWTitl command controls display of member titles.

Syntax



Operands

ON Member titles are displayed, instead of member statistics.

OFF Member statistics are displayed.

? The SHOWTitle option setting is displayed.

If an operand is omitted, the SHOWTitl option is toggled ON or OFF.

Usage notes

The SHOWTITL status is saved in the user PROFILE and stays in effect for all MSL displays.

Member titles are displayed only when there is at least one member with a title record.

See the TITLE command description ("TITLE command" on page 261) for further information on how to manage member titles.

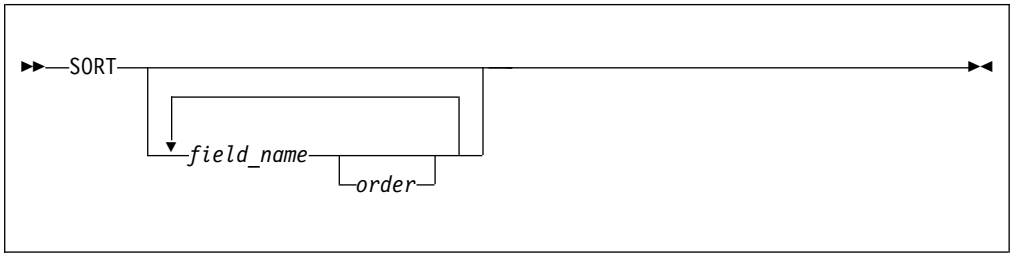
Examples

```
SHOWT ON     Display member titles instead of member statistics.
SHOWT OFF    Display member statistics.
SHOWTIT ?    Display SHOWTITL status.
SHOWTITL     Toggle SHOWTITL ON/OFF status.
```

SORT command

The SORT command is used to put the member selection list into a specified order.

Syntax



Operands

field_name

The name of a member selection list column heading.

order The order of sort:

A Ascending: lowest to highest.

D Descending: highest to lowest.

The default order depends on the particular field being sorted.

Usage notes

SORT is a main command. It cannot be used as a line command. Up to six field-name and order pairs may be specified.

When SORT is entered with no operands, the default sorting order (member name, ascending) is restored.

Examples

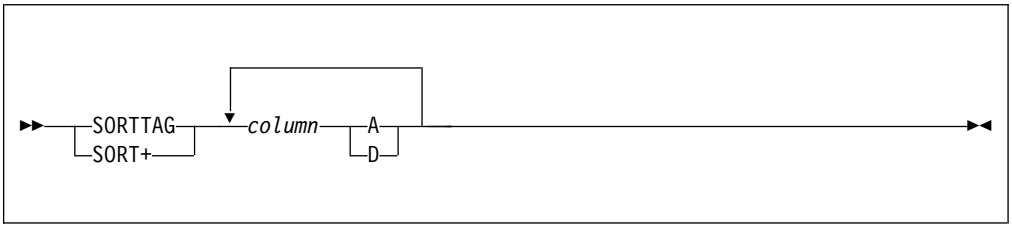
```
SORT
SORT MEMBER D
SORT CHANGED A
SORT LIB A
SORT LIB D MEMBER A CHA
SORT LIB M CRE ID
```

SORTTAG command

The SORTTAG command sorts the member selection list tagged entries.

This is a main command.

Syntax



Operands

column An MSL display column heading abbreviation or TEXT or NOTE.

Order Sort order. Possibilities are A (Ascending) or D (Descending).

Usage notes

A member tag is a non-blank label preceded by + in RENAME column.

See “TAG command” on page 181 for instructions on how to tag members.

The tagged members are sorted first and pushed to the top of the list.

See SORT command assist for any additional information.

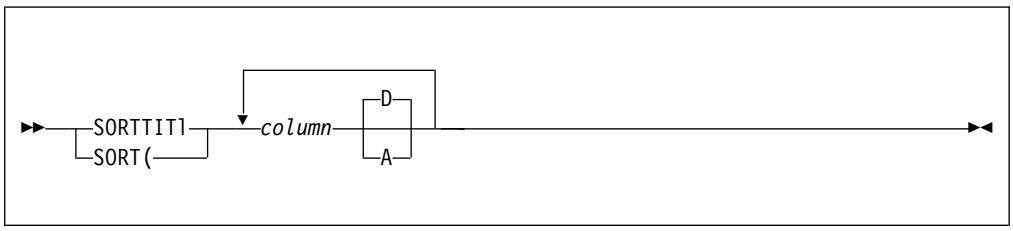
Examples

```
SORT+ CHA A         Sort by ascending order of change date.
SORT+ CREATE        Sort by descending (default) order of create date.
SORT+ ID A LIB D    Sort by ascending order saved user-id and descending
                    order of library concatenation number.
SORT+ TEXT          Sort by ascending (default) order of text of notes
                    overlaying member statistics.
SORTTAG             Sort by member TAG (default column) in ascending
                   (default) order.
```

SORTTITl command

The SORTTITL (or "SORT(") command sorts the member selection list titled entries in ascending or descending order.

Syntax



Operands

column An MSL display column heading abbreviation or an asterisk (*).

D | A The column is sorted in **D**escending (the default) or **A**scending order.

Usage notes

The titled members are sorted first, and then pushed to top of the list.

See the TITLE command description or assist for information on how to manage member titles. See the SHOWTITL command description or assist for how to display member titles.

Only the value entered in the NAME, RENAME, or TAG column is accepted.

See the SORT command description or assist for additional information.

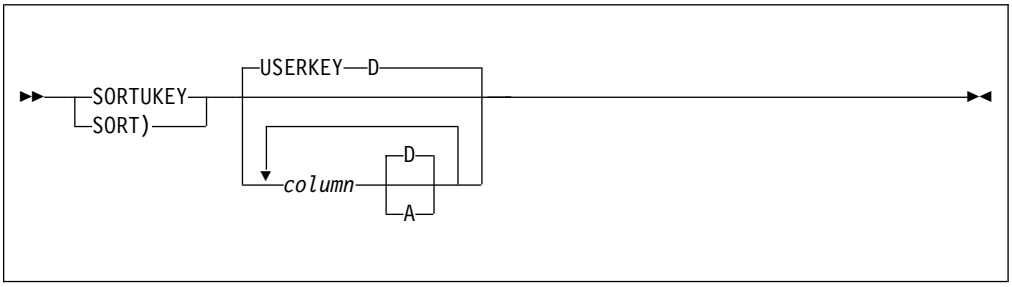
Examples

```
SORT( NAM D sort by descending order of member NAME .
SORT( TAG   sort by ascending (default) order of member TAG .
SORTTITL    sort by member TITLE (default column) in ascending
              (default) order.
SORT( *     resort by most recently specified selection list.
```

SORTUKEY command

The SORTUKEY (or "SORT)") command sorts the member selection list titled entries by title key.

Syntax



Operands

column An MSL display column heading abbreviation or an asterisk (*).

If column is omitted, the list is sorted by USERKEY.

D | A The column is sorted in **D**escending (the default) or **A**scending order.

Usage notes

The titled members are sorted first and moved to the top of the list.

See the TITLE command description or assist for information on how to manage member titles. See the SHOWTITL command description or assist for information on how to display member titles.

Only the value entered in the NAME, RENAME, or TAG column is accepted.

See the SORT command description or assist for additional information.

Examples

```
SORT) NAM D sort by descending order of member NAME .
SORT) TAG   sort by ascending (default) order of member TAG .
SORTUKEY    sort by member USERKEY (default column) in ascending
              (default) order.
SORT) *     resort by most recently specified selection list .
```

SSI command

The SSI command displays SSI information for the specified members.

Syntax

Operands

member_name

The name of the member in the current member selection list.

Usage notes

SSI is available for load libraries only.

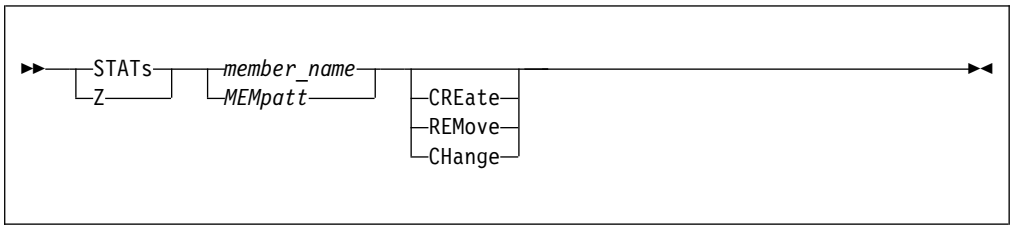
Examples

```
SSI ACCTMAIN
```

STATs command

The STATs command creates, removes, or allows the user to change statistics of members.

Syntax



Operands

member_name
The name of the member in the current member selection list.

MEMpatt
A member name pattern using the wildcard characters "%" and "*".

CREate
Create new statistics. VV and MM are set to 00, the CREATED and CHANGED dates of the member are set to the current date, the CHANGED time is set to the current time, SIZE and INIT are set to the current size of the member, MOD is set to 0, and USERID is set to your user ID.

REMove
Remove existing statistics (if any).

CHAnge
Modify or create new statistics. (This is the default.)

Usage notes

- Both the standard and extended format of ISPF statistics are supported in all supported z/OS releases. Extended ISPF statistics are displayed and converted even when ISPF support for this format is disabled.
- The STATs command is unavailable for load-module members.
- If you change the statistics of SCLM-controlled members, you must MIGRATE or PARSE them back into the SCLM project.
- Avoid changing the statistics of members that might contain any significant proprietary information.

Examples

STAT PAY*TAX REM
Removes the statistics of all the members with a name that matches the pattern mask "PAY*TAX".

STATS PAYROL CRE
Creates or refreshes the statistics of member PAYROL.

Z ACCT03
Displays the statistics update menu for member ACCT03.

The following example uses the Z line command to complete the following tasks:

- Create or refresh the statistics of member NEWACC.
- Remove the statistics of member OLDACC.
- Display the statistics update menu for member TESTCOB.

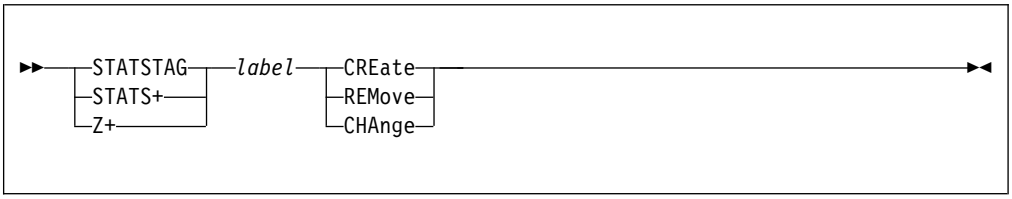
```
  NAME     RENAME
Z NEWACC   CRE
Z OLDACC   REM
Z TESTCOB
```

STATSTAG command

The STATSTAG command creates, removes, or changes the statistcs of a tagged member.

This is a main command.

Syntax



Operands

label A seven character string or pattern.

Action
The action is CREate new statistics, REMove stats, or CHAnge stats.

Usage notes

A member tag is a non-blank label preceded by + in RENAME column.

See "TAG command" on page 181 for instructions on how to tag members.

This command fully supports the standard as well as extended format of ISPF statistics in all supported z/OS releases.

Extended ISPF statistics are properly displayed and converted even when ISPF support, for this format, is disabled.

The Z line command invokes STATS on the selected member.

This command is unavailable for load-module members.

Refrain from changing statistics of special purpose members that may contain any significant proprietary information.

If you change statistics of SCLM controlled members you must MIGRATE or PARSE them back into the SCLM project.

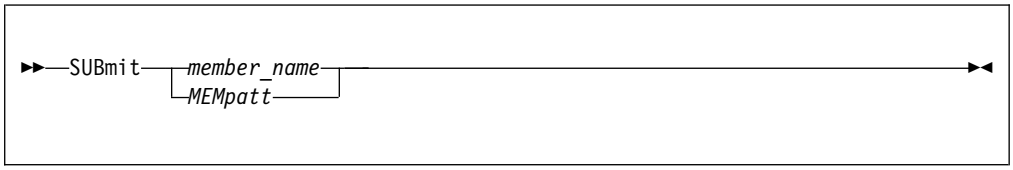
Examples

```
Z+ X CRE    Create new stats for all members tagged X.
STATS+      Display a stats update menu for all tagged members.
```

SUBmit command

Main command SUBmit can be used to submit one or more members to the JES input job queue. Line command J can be used to submit a listed member to the JES input job queue.

Syntax



Operands

member_name
The name of the member in the current member selection list.

MEMpatt
A member name pattern using the wildcard characters "%" and "*".

Usage notes

- The SUBmit main command and the J line command are only available for source members.

Feedback messages

Message	Meaning
SUBMIT	The member was submitted.

Examples

SUB DAILY*
Submits all the JCL jobs of the members with a name that starts with "DAILY".

The following example uses the J line command to submit all the records of member DAILYJOB to JES:

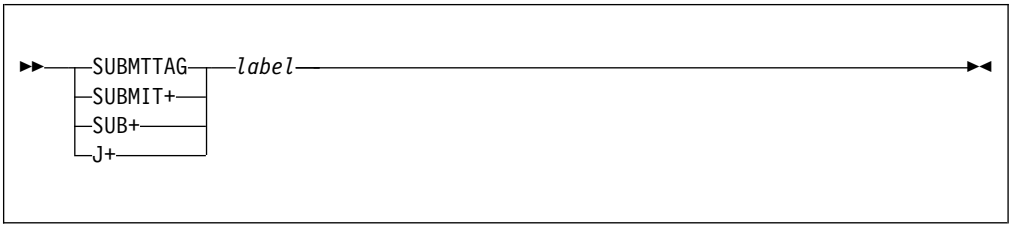
```
  NAME     RENAME
J DAILYJOB
```

SUBMTTAG command

The SUBMTTAG command submits one or more tagged members to the JES input job queue.

This is a main command.

Syntax



Operands

label A seven character string or pattern.

Usage notes

A member tag is a non-blank label preceded by + in RENAME column.

See “TAG command” for instructions on how to tag members.

The J line command invokes SUBMIT on the selected member.

This command is only available for source members.

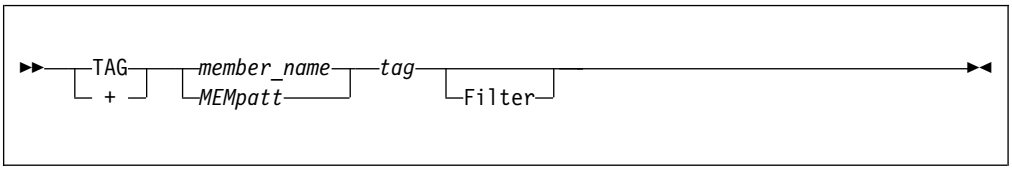
Examples

```
SUB+ OK    Submit JCL jobs of all members tagged OK.
J+ *XY*    Submit JCL jobs of all members with tags containing XY.
SUBMIT+    Submit JCL jobs of all tagged members.
```

TAG command

The TAG (or “+”) main command places a character string in the RENAME field of the member list of members that match the specified name or pattern.

Syntax



Operands

member_name
The name of the member in the current member selection list.

MEMpatt
A member name pattern using the wildcard characters "%" and "*".

tag A character string of up to seven characters with no embedded blanks to be placed in the RENAME field of the specified member, or all members matching the specified pattern.

If this parameter is omitted, the current tag is to be removed.

Filter After the tag is applied as specified, filter the member list to display only those members having the specified tag (including members with this tag as a result of prior invocations of the TAG command).

Usage notes

- A member tag is a non-blank label that is preceded by a plus sign (+) in the RENAME column. A string that is preceded by a hyphen (-) is a comment, not tag.
- Only after executing a TAG command, a member entry with non-blank data in the RENAME column is considered tagged.
- The Filter option invokes command `FILTER TAG tag` after tagging all selected members.

Feedback messages

The specified tag is placed in the feedback message field.

Examples

`TAG IQI* DSC`
Sets tag "+DSC" to all the members with a name that starts with "IQI".

`+ TST* DBG F`
Sets tag "+DBG" to all the members with a name that starts with "TST", and hide all the other members from display.

`+ *` Removes all the tags in the current member selection list.

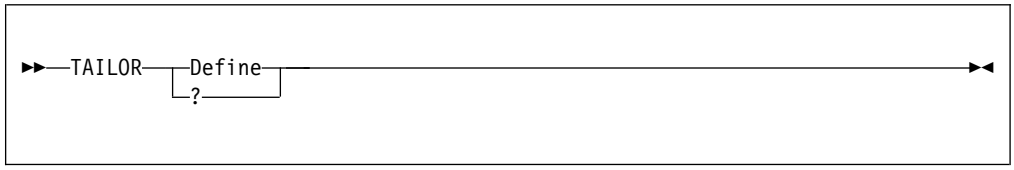
The following example uses the + line command to tag member DRIVER01 with a "DBG" label, and removes the tag of member DRIVER23:

```
  NAME     RENAME
+ DRIVER01 DBG
+ DRIVER23
```

TAILOR command

The TAILOR command executes the MSL command or commands defined as your tailoring macro. The TAILOR command can also be used to display and change the current definition.

Syntax



Operands

Define
Display a panel on which to specify the sequence of commands to be executed when the TAILOR command is invoked without operands.

? Display the currently specified tailoring commands.

Usage notes

TAILOR is a main command only. It cannot be used as a line command.

If TAILOR is invoked without operands, the currently defined tailoring commands are executed. (If no tailoring commands are defined, a panel is displayed on which tailoring commands can be specified, as if TAILOR DEFINE had been invoked.)

The PF key currently set to RCHANGE (usually PF6) also executes the TAILOR command.

You can use the PF key set to RCHANGE with a parameter entered on the command line.

The tailoring commands can also be defined on the Data Set Commander Options panels (accessed via the SET command) or via the BROWSE, EDIT, or VIEW Entry Panel (when Execute TAILOR is set to D).

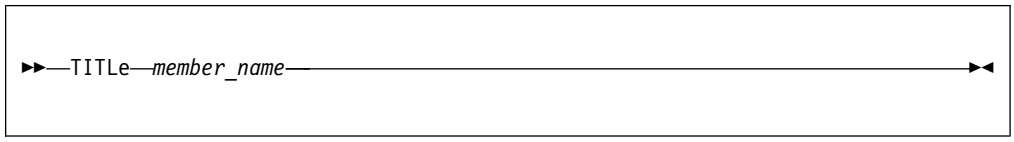
Examples

```
TAILOR
TAILOR ?
TAILOR DEFINE
TAILOR D
```

TITLe command

The TITLe main command prompts you to manage library member titles. You can update, store, empty, refresh, import, and migrate the member title list.

Syntax



Operands

member_name
A unique member name from the current library concatenation.

Usage notes

A member may have an associated title record in the library member title list. A title record contains a TITLE (50 bytes) and a USERKEY (8 bytes). A library persistent member title list is stored by MSL in a special library member named Z999TITL.

(is the MSL line command for updating a member TITLE.

) is the MSL line command for updating a member USERKEY.

Use the SHOWTITL command to display member titles.

Examples

```
TITL MEM123   Display to create or update member MEM123 title record.
TITLE         Display a menu for managing the library concatenation
              member title lists.
```

TOTALs command

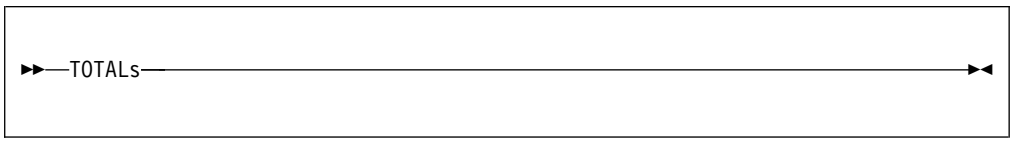
The TOTALs command displays information totals for all visible members.

For all visible members with ISPF statistics, the following numbers are displayed:

- Total number of lines.
- Total number of initial lines.
- Total number of modified lines.

For load-module members, the number of entries for RMODE(ANY) versus RMODE(24) and the corresponding total sizes are displayed.

Syntax



Operands

TOTALs has no operands.

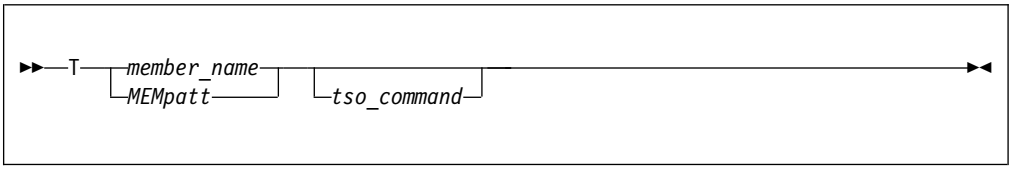
Usage notes

- TOTALs is a main command only. It cannot be used as a line command.
- Only one instance of a member alias group is counted.

T command

The T command invokes the specified TSO command or CLIST on one or more members specified.

Syntax



Operands

member_name
The name of the member in the current member selection list.

MEMpatt
A member name pattern using the wildcard characters "%" and "*".

tso_command
The TSO command or CLIST that is to be executed for this member.

If the value of this parameter is not a valid TSO command, a corresponding CLIST or REXX executable script is executed.

Usage notes

T can be used as a main command or a line command.

- When T is used as a main command, a pattern can be specified. In this case, each member matching the pattern is processed.
- When the T command is entered as a line command, specify the TSO command parameter in the RENAME field.

Before the T command is executed, a panel is displayed for verification and modification. In the panel, the following information is provided:

- TSO command name.
- Library name and member name as the first parameter: *lib_name*(*mem_name*).
- Volume serial as an optional parameter. By default, this parameter is omitted.

Feedback messages

The feedback message consists of the TSO command you specified.

Examples

```
Assuming a current library name of MROTTER.JCL , on volume SCLM09 , the
          following example illustrates the T command execution:
            NAME     RENAME
          T MEM7     RUN1      prompt command RUN1 'MROTTER.JCL(MEM7)' SCLM09
```

TYPE command

The TYPE command changes the library being processed with the same name as currently displayed except that the low-level qualifier is specified in the command.

Syntax

Operands

type_name
The name of the new low-level qualifier to be displayed.

Usage notes

TYPE is a main command. It cannot be used as a line command.

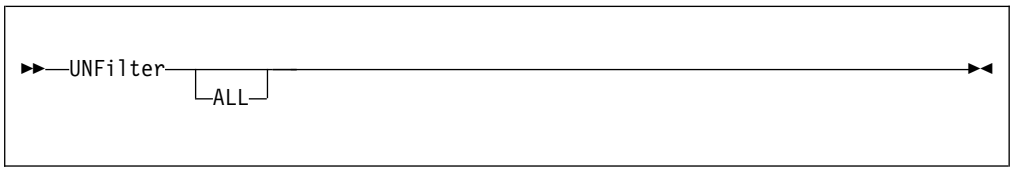
Examples

```
TYPE COBOL
TYPE CNTL
```

UNFilter command

The UNFilter command removes the most recently applied filter, or all filters.

Syntax



Operands

ALL A keyword indicating that all filters are to be removed.

Usage notes

UNFilter is a main command. It cannot be used as a line command.

If ALL is not specified, one level of filtering is removed: the last applied filter is removed first.

UNFilter ALL is equivalent to entering the "FILter command" on page 126 with no operands, or the "RESet command" on page 166.

Examples

```
UNFILTER
UNF
UNF ALL
```

USAGE command

The USAGE command lists library members currently in use under ISPF, and the user IDs of the TSO users accessing them.

Syntax

Operands

USAGE has no operands.

Usage notes

USAGE is a main command. It cannot be used as a line command.

Examples

```
USAGE
```

UTILity command

The UTILity command temporarily invokes ISPF main option 3 (Utilities).

Syntax

Operands

option A valid option code for the ISPF Utilities menu.

Usage notes

The ISPF Utilities are invoked within the current split screen.

Upon return from the ISPF Utilities invocation, the current member selection list is re-displayed.

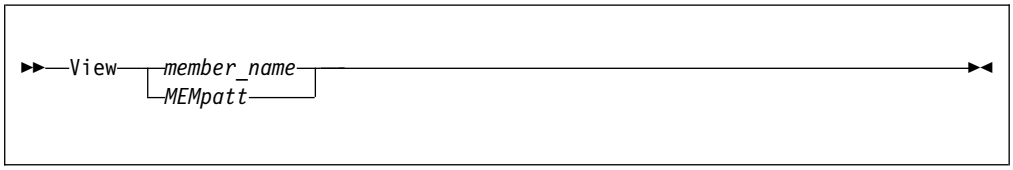
Examples

```
UTIL 2     Invoke the ISPF Data Set Utility menu.
UTIL 12    Invoke the ISPF SuperC Compare Utility menu.
UTILITY    Display the ISPF Utility Selection Panel menu.
```

View command

Main command View can be used to view one or more members. Line command V can be used to view a listed member.

Syntax



Operands

member_name
The name of the member in the current member selection list.

MEMpatt
A member name pattern using the wildcard characters "%" and "*".

Usage notes

- When "V" is the MSL default action, to invoke the View process, perform a Point-and-Shoot action at the target member name, or use the SELECT main command.
- Different data browsers are supported, usually for VSAM files.
- Any PDSE member generation can be viewed.

Feedback messages

Message	Meaning
SAVED	The member was saved at some during the session just ended. (You issued a SAVE command and explicitly confirmed your SAVE request.) This feedback message is displayed if the member was saved at any time during the session, whether or not SAVE or END was the last command issued.
VIEWED	The member was viewed.
DELETED	The member was deleted before the operation was initiated.
IO ERR	An input/output error occurred in reading the directory of the library or the member itself.
NO AUTH	Since you began working, your access to the library has been revoked.

Examples

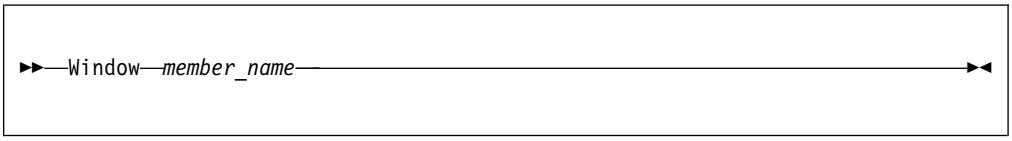
The following example uses the V line command to view member MEMBERXY:

```
  NAME     RENAME
V MEMBERXY
```

Window command

The Window command displays a preview window in the member selection list for the selected member.

Syntax



Operands

member_name
The name of the member in the current member selection list.

Usage notes

- To turn on the automatic preview option, which results in a preview window after a successful FIND or LOCATE process, use command SET.
- PDSE member generations are supported.

Feedback messages

None.

Examples

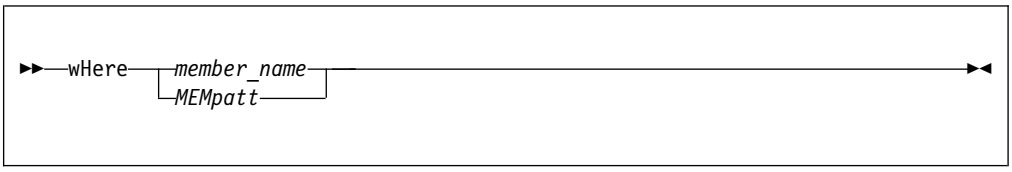
The following example uses the W line command to display an excerpt of member IQIDFLTS in a window:

```
  NAME     RENAME
W IQIDFLTS
```

wHere command

The wHere command indicates in which libraries of the concatenation one or more members occur.

Syntax



Operands

member_name
The name of the member in the current member selection list.

MEMpatt
A member name pattern using the wildcard characters “%” and “*”.

Usage notes

Command wHere is relevant for only an MSL library concatenation of multiple libraries.

Feedback messages

Message	Meaning
-IN nnnn	The library or libraries in which the member occurs.

Examples

WH MAINPROG
Shows the residence of member MAINPROG in the concatenation.

H IQI* Shows the residence of all the members with a name that starts with "IQI".

The following example uses the H line command to show the residence of member IQIMSL. Member IQIMSL is found in concatenated libraries 1 and 4.

```
  NAME     RENAME
H IQIMSL   IN:    14
```

WSPATH command

The WSPATH command sets the workstation PATH parameter default.

This is a main command.

Syntax

Operands

path A workstation directory path.

Usage notes

The default path is used by the XFER main command which requires an active work-station connection.

Examples

```
WSP c:\work\mydir    Set workstation default path of c:\work\mydir.
WSPATH               Display workstation default path.
```

XFER command

Main command XFER can be used to transfer one or more files to or from the workstation. Line command F can be used to transfer one listed file to or from the workstation.

Syntax

Operands

member_name
A member name or pattern mask.

Usage notes

- XFER command requires an active work-station connection.
- The F line command might be used to invoke XFER on a listed member.
- The default transfer type is BINary for LOAD libraries and TEXT for other libraries.
- Use the WSPATH main command to set the workstation default path.
- By default, a confirmation panel is displayed before any transfer takes place.
- Multiple F line commands are processed as a group.

Examples

XFER ACCT*
Transfers all the members with a name that starts with "ACCT".

The following example uses the F line command to transfer member MYDOC:

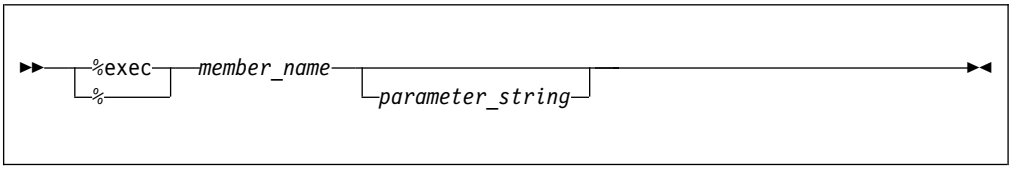
```
  NAME     RENAME
F MYDOC
```

%exec command

The %exec command invokes a TSO CLIST or REXX executable script on one or more members. The value of variable exec is the name of a valid TSO CLIST or REXX executable script file.

When using this command as a line command, the name of a valid TSO CLIST or REXX executable script file can be entered in the **RENAME** field.

Syntax



Operands

Exec The name of a CLIST or REXX EXEC.

member_name
A member name or pattern.

parameter_string
A parameter string to be passed to the CLIST.

Usage notes

The CLIST or EXEC is passed the library name (member name) as first parameter, followed by the volume serial and the rest of specified parameters.

The volume parameter is optional and is either omitted (by default), or included (see above) based on the current DSC customization.

When SHOWCMD ON is in effect, you are first prompted with a display of the full command. You can verify and further modify it before execution. You may also enter a QUIT command in order to abort CLIST execution over a group of selected members.

Example

Assuming a current library name of MROTTER.CLIST, on volume SCLM10, the following examples illustrate the % command execution:

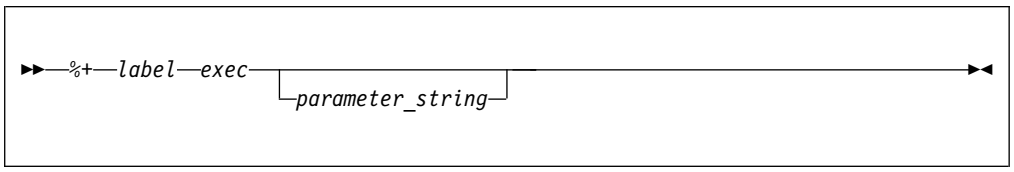
```
%TEST1 MEM7 DIAG    Execute %TEST1 'MROTTER.CLIST(MEM7)' SCLM10 DIAG.
%  MEM* TEST2       Execute %TEST2 'MROTTER.CLIST(MEM1)' SCLM10,
                    Execute %TEST3 'MROTTER.CLIST(MEM2)' SCLM10, etc.

  NAME     RENAME
% MEM7     TEST1     execute %TEST1 'MROTTER.CLIST(MEM7)' SCLM10 .
% NEWACC             display %?     'MROTTER.CLIST(NEWACC)' SCLM10
                       to be completed before execution .
```

%+ exec command

The %+ exec command executes a CLIST or REXX EXEC on one or more tagged members.

This is a main command.

Syntax



Operands

label A seven character string or pattern.

exec The name of a CLIST or REXX EXEC.

parameter_string
An optional parameter string to be passed to the CLIST.

Usage notes

A member tag is a non-blank label preceded by + in RENAME column.

See “TAG command” on page 181 for instructions on how to tag members.

%+ is same as % command operating only on tagged members.

The CLIST or EXEC is passed the library name (member name) as first the parameter, followed by the volume serial and the rest of specified parameters.

The volume parameter is optional and is either omitted (by default), or included (see above) based on the current DSC customization.

The % line command may be used to execute a CLIST on a listed member.

When SHOWCMD ON is in effect, you are first prompted with a display of the full command. You can verify and further modify it before execution. You may also enter a QUIT command in order to abort CLIST execution over a group of selected members.

Example

Assuming a current library name of MROTTER.CLIST, on volume SCLM10, with tagged members MEMX and MEMY, the following example illustrates the %+ command execution:

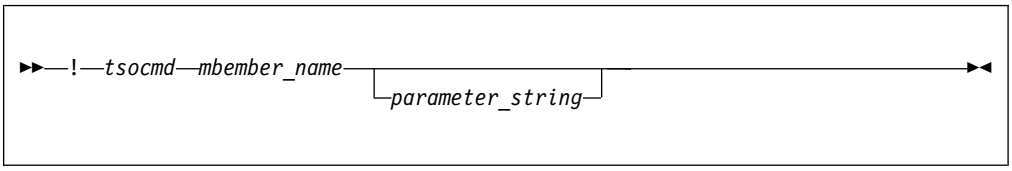
```
%+ * MYEXEC   Execute %MYEXEC 'MROTTER.CLIST(MEMX)' SCLM10,
              Execute %MYEXEC 'MROTTER.CLIST(MEMY)' SCLM10.
```

!tso cmd command

The !tso cmd command executes a TSO command on one or more members.

When using this command as a line command, the TSO command can be entered in the **RENAME** field.

Syntax



Operands

tsocmd The name of a TSO command.

member_name
A member name or pattern.

parameter_string
An optional parameter string to be passed to the command.

Usage notes

The TSO command is passed the library name (member name) as the first parameter, followed by the volume serial and the rest of specified parameters.

The volume parameter is optional and is either omitted (by default), or included (see above) based on the current DSC customization.

If the TsoCmd parameter is not a valid TSO command, a CLIST or REXX EXEC with the same name will be executed.

When SHOWCMD ON is in effect, you are first prompted with a display of the full command. You can verify and further modify it before execution. You may also enter a QUIT command in order to abort TSO command execution over a group of selected members.

Example

Assuming a current library name of MROTTER.JCL, on volume SCLM09, the following examples illustrate the ! command execution:

```
!RUN1 MEM7 TEST    Execute RUN1 'MROTTER.JCL(MEM7)' SCLM09 TEST.
!  MEM* RUN2       Execute RUN2 'MROTTER.JCL(MEM1)' SCLM09.
                   Execute RUN2 'MROTTER.JCL(MEM2)' SCLM09, etc.
```

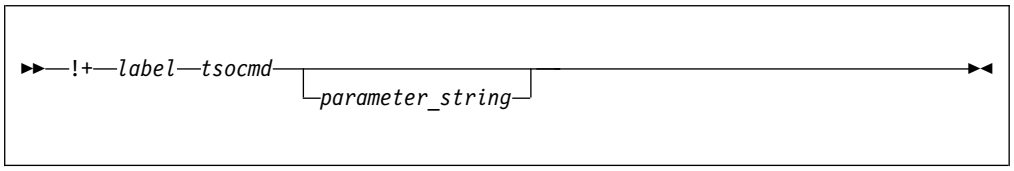
```
  NAME     RENAME
! MEM3     RUN1      execute RUN1 'MROTTER.JCL(MEM3)' SCLM09 .
! MEM5                display ?    'MROTTER.JCL(MEM5)' SCLM09 to be
                       completed before execution .
```

!+ cmd command

The !+ cmd command executes a TSO command on one or more tagged members.

This is a main command.

Syntax



Operands

label A seven character string or pattern.

tsocmd The name of a TSO command.

parameter_string
A parameter string to be passed to the command.

Usage notes

A member tag is a non-blank label preceded by + in RENAME column.

See “TAG command” on page 181 for instructions on how to tag members.

!+ is same as ! command operating only on tagged members.

The TSO command is passed the library name (member name) as the first parameter, followed by the volume serial and the rest of specified parameters.

The volume parameter is optional and is either omitted (by default), or included (see above) based on the current DSC customization.

If the tsocmd parameter is not a valid TSO command, a CLIST or REXX EXEC with the same name will be executed.

The ! line command may be used to execute a TSO command on listed member.

When SHOWCMD ON is in effect, you are first prompted with a display of the full command. You can verify and further modify it before execution. You may also enter a QUIT command in order to abort TSO command execution over a group of selected members.

Example

Assuming a current library name of MROTTER.JCL, on volume SCLM09, with tagged members MEMX and MEMY, the following example illustrates the !+ command execution:

```
!+ * RUN2    Execute RUN2 'MROTTER.JCL(MEMX)' SCLM09.
             Execute RUN2 'MROTTER.JCL(MEMY)' SCLM09.
```

linecmnd command

The linecmnd command invokes an MSL line command as a main command.

This is a main command.

Syntax

Operands

line_command
An MSL line command (single character).

mebmer_name
A member name or pattern.

Examples

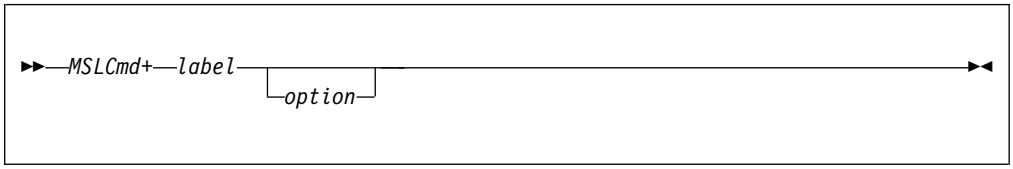
```
B IQIDFLTS    Browse member IQIDFLTS.
D JUNK*       Delete all members with name starting JUNK.
C *           Copy all displayed members to a target library.
```

MSLcmd+ command

The MSLcmd+ command invokes an MSL command on one or more tagged members.

This is a main command.

Syntax



Operands

MSLCmd
An MSL line or main command name.

label A seven character string or pattern. Default is *.

option An optional parameter relevant to the command.

Usage notes

A member tag is a non-blank label preceded by + in RENAME column.

See "TAG command" on page 181 for instructions on how to tag members.

The following main commands act upon tagged members:

```
COPYTAG (or C+)    DELETTAG (or D+),    FILTTAG (or FIL+)
FINDTAG (or F+)    FINDTXTG (or FT+)    GLOBLTAG (or G+)
HIDETAG (or HID+)  INFOTAG (or I+)      LOCATTAG (or L+)
MOVETAG (or M+)    PRINTTAG (or P+)     SORTTAG (or SORT+)
SELECTAG (or S+ or B+ or E+ or V+)      STATSTAG (or Z+)
SUBMTTAG (or J+)
```

See the command assist for each of the above commands.

Examples

```
C+ X 3          Copy all members tagged with X into third concatenated
                library.
P+ XY*          Print all member names tagged with a label that starts XY.
HID+ ABC.CO     Hide all members with tags containing ABC along with
                all members that are not tagged.
D+              Delete all tagged members (same as D+ *).            .
```

MSLcmd(command

The MSLcmd(command invokes an MSL command on one or more titled members.

This is a main command.

Syntax

Operands

MSLCmd
An MSL line or main command name.

*option***n**
An optional parameter relevant to the command.

Usage notes

See TITLE command assist for how to manage member titles.

See SHOWTITL command assist for how to display member titles.

The following main commands act upon titled members:

```
FILTTITL (or FIL()     FINDTITL (or F(),
HIDETITL (or HID)      SORTTITL (or SORT()
```

See the command assist for each of the above commands

Examples

```
F( *DEBUG*   Locate a member title that contains DEBUG.
FIL( ABC*    Display all member titles that do not begin with ABC.
SORT( CHA A  Sort by ascending order of change date.
```

MSLcmd) command

The MSLcmd) command invokes an MSL command on one or more member title user keys.

This is a main command.

Syntax

Operands

MSLCmd
An MSL line or main command name.

*option***n**
An optional parameter relevant to the command.

Usage notes

See TITLE command assist for how to manage member titles.

See SHOWTITL command assist for how to display member titles.

The following main commands act upon user keys of titled members:

```
FILTUKEY (or FIL))     FINDUKEY (or F))
HIDEUKEY (or HID))     SORTUKEY (or SORT))
```

See the command assist for each of the above commands.

Examples

```
F) *DEBUG*    Locate a member title user key that contains DEBUG.
FIL) *ABC     Display all member title user keys that begin with ABC.
SORT)         Sort by ascending order of title user key.
```

Chapter 10. OLIST commands

Data Set Commander provides a function called OLIST that gives access to the different object classes.

OLIST maintains two types of object lists–temporary and permanent.

Permanent OLISTs are maintained in the user's OLIST library. By default, when the user logs on, Data Set Commander looks for a non-concatenated library with the DD name PLSTLIBW.

If it does not find this DD name PLSTLIBW pre-allocated, it tries to allocate an existing library named 'id.PLIST.LIBRARY' (later, using the Customization Wizard, you determine whether "id" is the TSO userid or the user's current TSO prefix). If such a library does not exist, it attempts to use DD IPITBLIB. If this is also unavailable, Data Set Commander dynamically creates a new 'id.PLIST.LIBRARY', with these attributes: "DSNTYPE(LIBRARY) DSORG(PO) RECFM(F B) LRECL(80) BLKSIZE(6160) SPACE=(320,160)", and the UNIT name specified with the Customization Wizard.

Note: Although Data Set Commander version 7.1 allows a user to separate the OLISTs from other persistent tables in different libraries, it is recommended that a single PDSE library be maintained for both purposes.

Main Command	Line Command	Remarks
	=	The "= (equal) line command" on page 204 invokes the immediately preceding line command on the item specified.
/		The same as POPULATE.
	/	The "/ (slash) line command" on page 205 displays the Object List Line Command input panel. From this panel you have access to all line commands that can be applied an OLIST data set. You can use the slash command when you are not sure of the available line commands.
	/D	The "/D line command" on page 206 deletes one or more entries in the OLIST. The remaining entries are renumbered.
	?cmd	The "*?cmd* line command" on page 206 displays a panel for you to verify the command before execution.
	%exec	The "*%exec* line command" on page 207 invokes a TSO CLIST or REXX executable script on a data set object.
	other	The "*other* line command" on page 207 invokes a TSO command, or a CLIST or REXX executable script on a data set object.
A	A	The "A command" on page 207 allocates a data set.
Assist		The "Assist command" on page 208 displays information about OLIST main and line commands.
B	B	The "B line command" on page 208 invokes an MSL with a default process of BROWSE, or invokes BROWSE on an object. The action taken depends on the type of object.

Main Command	Line Command	Remarks
	BF	The “BF line command” on page 209 invokes a VSAM BROWSE function on an OLIST object.
C	C	The “C line command” on page 210 catalogs the specified data set on the indicated volume.
CANcel		The “CANcel command” on page 210 ends the use of the OLIST without saving any changes you have made to the list itself.
	CLONe	The “CLONe command” on page 211 provides a comprehensive menu for cloning any given non-VSAM data set.
CLRVOL		The “CLRVOL command” on page 211 clears the VOLUME column of a data set object.
CMDparms		The “CMDparms command” on page 212 controls a field in which TSO command parameters can be specified. The parameters specified in this field are appended to all TSO commands you enter on the OLIST.
COMPress (PDS only)	COMP	The “COMPress (PDS only) command” on page 212 compresses the specified library.
COpy		The “COpy line command” on page 213 copies the one or more members specified.
COPYALl		The “COPYALl line command” on page 213 copies all the members of one partitioned dataset to a different data set.
CUT		The “CUT command” on page 213 copies the OLIST into the specified clipboard number.
Delete	D	The “Delete command” on page 214 deletes a data set or the one or more members specified (with confirmation).
DEFault		The “DEFault command” on page 214 changes the default process invoked by the SELECT and S commands during the current OLIST session.
DSLIST	DSLIST	The “DSLIST line command” on page 215 invokes an ISPF data set list (option 3.4) of all items in the current catalog matching the specification.
E	E	The “E line command” on page 216 invokes an MSL with a default process of EDIT, or invokes EDIT on a data set or member. The action taken depends on the type of object.
	EF	The “EF line command” on page 216 invokes a VSAM EDIT function on an OLIST object.
EMPty	EMP	The “EMPty command” on page 217 removes all members from the specified library, or all data from a sequential data set.
END		The “END command” on page 217 saves the permanent OLIST changes and ends the processing.
eXclude	X	The “eXclude main command” on page 218 excludes selected OLIST objects. When this command is used, the *EXCLUDE* tag appears next to the Volume or Class column on the OLIST screen. If you need to exclude a certain range of entries, use the /XX line command at the beginning of the range and the end of the range.
EXPDIR (PDS only)	EXPDIR	The “EXPDIR (PDS only) command” on page 219 expands the library specified.

Main Command	Line Command	Remarks
EXPORT		The "EXPORT command" on page 219 saves the OLIST under its current name in the specified library.
FILLCLAS		The "FILLCLAS command" on page 220 is an alias of FILLVOL ("FV"). It checks the existence and attributes of each object in an OLIST and updates all CLASS and VOLUME fields.
FILLVOL		The "FILLVOL command" on page 221 fills in the VOLUME column or CLASS column of data set objects.
FILter		The "FILter command" on page 223 selectively tailors the display of members in the OLIST (or to remove all filtering).
Find		The "Find command" on page 224 locates the next item in the OLIST whose name contains a specified text string.
FindMem		Alias of the "MEMFind command" on page 245.
FindText		The "FindText command" on page 225 searches for a specified string in sequential and partitioned data set objects. For FindText scenario examples, see Appendix O, "Searching with command FindText," on page 367.
FLIP		The "FLIP command" on page 227 toggles between visible and invisible (excluded and filtered-out) lines.
FREe	FREe	The "FREe command" on page 228 frees unused space in a specified dataset object.
	/I	The "/I line command" on page 228 inserts one or more empty lines in the OLIST for the insertion additional items.
	HDELETE	The "HDELETE line command" on page 229 deletes a migrated (archived) data set object.
	HLIST	The "HLIST line command" on page 229 displays archiving information about a migrated data set object.
	INFO	The "INFO line command" on page 230 displays information about a data set object.
LEVEL		The "LEVEL command" on page 230 shows only data set objects that satisfy the specified level of DSNAME qualifier, thus acting like a filter.
LISTALOC		The "LISTALOC command" on page 231 appends allocated data sets to the current OLIST.
LISTBASE	LISTB	The "LISTBASE command" on page 231 appends generation-data-group base names to the current OLIST.
LISTBOOK	LISTK	The "LISTBOOK command" on page 232 appends BookManager BOOK data set names to the current OLIST.
LISTCAT	LISTC	The "LISTCAT line command" on page 233 appends cataloged data set names to the current OLIST.
LISTCLON		The "LISTCLon main command" on page 233 populates an OLIST with clone data set names matching a given pattern.
LISTGdg	LISTG	The "LISTGdg command" on page 234 appends generation-data-group data set names to the current OLIST.
LISTHIST		The "LISTHIST command" on page 235 appends the most recently used data sets to the current OLIST.
LISTMIGR	LISTM	The "LISTMigr command" on page 235 appends migrated (archived) data set names to the current OLIST.

Main Command	Line Command	Remarks
LISTMULT		The “LISTMULT main command” on page 236 appends data set names to the current OLIST from multiple list specifications.
LISTNVS		The “LISTNvs main command” on page 237 populates an OLIST with NON-VSAM data set names matching a given pattern.
LISTPAGE		The “LISTPAGE main command” on page 237 appends cataloged Paging-Space data set names to the current OLIST.
LISTPDSE		The “LISTPDSE main command” on page 238 appends cataloged PDSE library data set names to the current OLIST.
LISTSHLF	LISTF	The “LISTSHLF command” on page 239 appends BookManager BOOKSHELF data set names to the current OLIST.
LISTSMP	LISTZ	The “LISTSMP command” on page 240 appends SMP/E ZONE VSAM cluster names to the current OLIST.
LISTSYS		The “LISTSYS command” on page 240 appends specific system data set names to the current OLIST.
LISTTAPE	LISTT	The “LISTTAPE main command” on page 241 appends cataloged TAPE library data set names to the current OLIST.
LISTVSAM		The “LISTVSAM main command” on page 242 appends VSAM cluster names to the current OLIST.
LISTVTOC	LISTV	The “LISTVTOC command” on page 243 appends data set names, from specific volumes, to the current OLIST.
Locate		The “Locate command” on page 244 locates the next data set (or object) name beginning with the specified text string.
	LOSTGen	The “LOSTGen line command” on page 244 displays only the orphan generations of a PDSE library.
MAPpds		The “MAPpds (PDS only) command” on page 245 displays a data map of a PDS library, from which you can restore deleted members.
MEMFind		The “MEMFind command” on page 245 locates the first, next, or all libraries in the OLIST that contain the specified member.
MF		Same as MEMFind.
MLIST		Same as LISTMULT.
MOVE (PDS only)	M	The “MOVE (PDS only) line command” on page 247 moves the specified member or members.
MOVEALl		The “MOVEALl line command” on page 247 moves all of the members from one data set to a different data set.
OLIST	O	The “OLIST line command” on page 248 invokes a temporary OLIST of all items in the current catalog matching the specification.
OPEN		The “OPEN command” on page 248 switches to another OLIST.
OPRINT		The “OPRINT command” on page 248 prints the current OLIST.
PASTE		The “PASTE command” on page 249 attaches the contents of a previously cut OLIST to the end of the current OLIST.

Main Command	Line Command	Remarks
POPULATE		The "POPULATE command" on page 249 accesses a pull-down menu which allows you to select how to populate the current OLIST. This is similar to selecting the Populate option on the Action Bar. From the Populate pull-down menu, you select from nine population options.
PRINT (PDS or Sequential only)	P	The "PRINT (PDS or Sequential only) line command" on page 250 copies the one or more members specified.
QUIT		The "QUIT command" on page 251 aborts all the nested OLIST and MSL processing in the current split.
	/R	The "/R line command" on page 251 repeats an existing line in the OLIST one or more specified times (presumably for subsequent editing).
REFRESH		The "REFRESH line command" on page 252 refreshes the current OLIST display from original parameters.
RELEASE		The "RELEASE main command" on page 252 closes or deletes the current print group.
RENAME	R	The "RENAME line command" on page 252 renames a data set or a member.
RESet		The "RESet command" on page 253 clears selected (or all) columns in the display and removes the empty lines.
RFIND		The "RFIND main command" on page 254 repeats the current FIND, EXCLUDE, FINDTEXT, or MEMFIND command.
RIGHT		The "RIGHT command" on page 255 invokes ISPF Data Set List Utility on the object that the cursor is positioned at.
S	S	The "S line command" on page 255 selects an item and invokes the default process for that item. (The default process depends on the type of object, how OLIST was invoked, and the setting on the Data Set Commander Options panel for OLIST.)
SAVE		The "SAVE command" on page 255 saves permanent OLIST under a new name. This command can also save a temporary list as a permanent list with a new name.
SET		The "SET command" on page 256 can be used to modify default options.
SHOWARCh		The "SHOWARCh command" on page 257 is an alias name of SHOWMIG (or SHOWM). It controls the hiding (exclusion) of migrated dataset objects.
SHOWCLAs		The "SHOWCLAs command" on page 258 shows the Class (Type) column in the OLIST display.
SHOWcmd		The "SHOWcmd command" on page 258 controls whether TSO commands, REXX EXECs, and CLISTs are to be displayed before execution (so that they can be modified) or are to be executed immediately.
SHOWMigr		The "SHOWMigr command" on page 259 controls the display of migrated (archived) data sets.
SHOWVOL		The "SHOWVOL command" on page 260 shows the Volume column in the OLIST display.
SORT		The "SORT command" on page 260 sorts the entries in the OLIST.

Main Command	Line Command	Remarks
SUBmit	SUBMIT	The "SUBmit line command" on page 261 submits a data set or a member as a batch job.
TITLE		The "TITLE command" on page 261 gives you the ability to enter a description for an existing OLIST from a Define OLIST Description input panel.
U	U	The "U line command" on page 262 uncatalogs the data set.
UPDate		The "UPDate command" on page 262 invokes the Data Set Commander EDIT panel for extensive editing of the OLIST. **Note:** You can edit and save the history command list.
UTIL		The "UTIL command" on page 263 opens a nested level of ISPF option 3 (Utilities) or a suboption of option 3.
V	V	The "V line command" on page 264 invokes an MSL with a default process of VIEW, or invokes VIEW on a data set or member. The action taken depends on the type of object.
VALIDate		The "VALIDate command" on page 264 is used to compare the entries in the OLIST with the current catalog and volume, and to bring them into conformity with the catalog. It marks items on the OLIST that are not in the catalog, and corrects the volume information for those that show the wrong volume. Migrated or archived data sets are indicated.
	VF	The "VF line command" on page 265 invokes a VSAM VIEW function on an OLIST object.
	/X	The "/X line command" on page 266 excludes one or more OLIST entries from display.
	XFER	The "XFER line command" on page 267 accesses a pop-up window to upload or download data sets or workstation files.

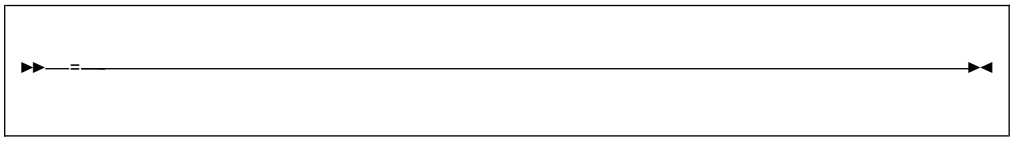
Note: From the main command, you can enter a number followed by a space and a line command, or, you can enter a range of entries <from#>-<to#> followed by a space and a line command to execute the EDIT, VIEW or BROWSE commands.

In the Command line, enter: `3 E` to edit the entry Number 3, or, `3-6 b` to browse the entries from Number 3 to Number 6.

= (equal) line command

The = line command invokes the immediately preceding line command on the item specified.

Syntax



Usage notes

= can only be used as a line command.

Examples

```
Command   Member   Num. Data Set Names/Objects  Volume
--------  -------- ---- ---------------------- ------
B                    1 'ACCOUNTS.JONES.JCL'
=                    2 'ACCOUNTS.JONES.COBOL'
=                    3 'ACCOUNTS.TEST.COBOL'    TST001
=         ACCMAIN    4 'ACCOUNTS.TEST.COBOL'
=          PAY*      5 'ACCOUNTS.TEST.COBOL'    TST001
```

/ (slash) line command

The slash command displays the Object List Line Command input panel.

Syntax

Usage notes

```
-DSC-------------------- Object List Line Command -------------------
COMMAND ===>
      Select line command (with "S") or point with cursor
      Press ENTER to execute or END to cancel.
_ Allocate dataset    _ List VTOC
_ Browse              _ Move members
_ Catalog dataset     _ OLIST
_ Compress library    _ Print
_ Copy members        _ Rename dataset
_ Delete              _ Submit members
_ DSLIST              _ Uncatalog dataset
_ Edit                _ View
_ Expand directory    _________ TSO commands
_ Free unused space   ____      Delete line(s)
_ Dataset information ____      Insert line(s)
_ Listcat             ____      Repeat line(s)

MEMBER   NUM.  DATA SET NAME                                  VOLUME
-------- ----- ---------------------------------------------- ------
            1 'SYS1.AADRLIB'                                  G1703D
```

Figure 39. Object List Line Command input panel

From this panel you have access to all line commands that can be applied to an OLIST data set. Use the slash command when you are not sure of the available line commands.

The slash command can only be used as a line command.

```
  File  Edit  Find  Display  Populate  Settings  Menu  Util  Test  Help  Exit
-------------------------------------------------------------------------------
-DSC- OLIST (B) ----------- LEVEL SYS1*LIB ---------------- Row 1 to 15 of 132
Command    ===>                                             SCROLL ===> CSR
Hotbar: OPRINT   REFRESH  CLRVOL   FILLVOL  UTIL     UPDATE   CUT      FLIP
                                                              *TEMPORARY LIST*
TSO PARMS  ===> ____________________________________________________________
Command   Member   Numbr Data Set Names / Objects                       Class
--------- -------- ----- ---------------------------------------------- -------
/                    1 'SYS1.AADRLIB'
                     2 'SYS1.AADRYLIB'
                     3 'SYS1.ACMDLIB'
```

/D line command

The /D line command deletes one or more entries in the OLIST. The remaining entries are renumbered.

Usage notes

- The syntax of the /D line command follows the rules of the ISPF EDIT D and DD line commands.
- /D can only be used as a line command; it cannot be used as a main command.
- /D can be used with a number (0 - 9999) specifying the number of lines to delete.
- To delete a range of OLIST entries, insert a /DD line command in both the first and last entries of the range. When multiple /D and /DD line commands are present, only the first /D line command or the first pair of /DD line commands will be executed.
- For more comprehensive editing, use OLIST main command UPDATE.

Examples

/D Deletes the current entry.

/D999 Deletes up to 999 OLIST entries that start with the current entry.

?*cmd* line command

The ?*cmd* line command displays a panel for you to verify the command before execution. The value of variable *cmd* is a command or file name. Any line command that has up to 8 characters and is not documented on the OLIST Command Assistance panel is interpreted as a TSO command, or the name of a CLIST or REXX executable script file.

Usage notes

- The object must be a valid VSAM or non-VSAM data set.
- In the verification panel, the command can be further modified before being executed.
- When command `SHOWCMD ON` is in effect, the question mark (?) is redundant.
- If the TSO PARMS field is not blank, the value will be appended to the combined command that follows the object name and member name.

Examples

?LISTDS

Displays a panel with a LISTDS command ready for execution.

%*exec* line command

The *%exec* line command invokes a TSO CLIST or REXX executable script on a data set object. The value of variable *exec* is the name of a valid TSO CLIST or REXX executable script file.

Usage notes

- The object must be a valid VSAM or non-VSAM data set.
- When command `SHOWCMD ON` is in effect, the complete command statement is displayed for verification or modification before being executed.
- If the TSO PARMS field is not blank, the value will be appended to the combined command that follows the object name and member name.
- If the Member field is not blank, and the object is a partitioned data set, the command will be processed by the DSC MSL function.

Examples

`%SHOWDS`
Execute CLIST script SHOWDS on the current data set object.

other line command

The *other* line command invokes a TSO command, or a CLIST or REXX executable script on a data set object. The value of variable *other* is a command or file name. Any line command that has up to 8 characters and is not documented on the OLIST Command Assistance panel is interpreted as a TSO command, or the name of a CLIST or REXX executable script file.

Usage notes

- The object must be a valid VSAM or non-VSAM data set.
- When command `SHOWCMD ON` is in effect, the complete command statement is displayed for verification or modification before being executed.
- If the TSO PARMS field is not blank, the value will be appended to the combined command that follows the object name and member name.
- If the Member field is not blank, and the object is a partitioned data set, the command will be processed by the DSC MSL function.

Examples

`HRECALL`
Execute TSO command `HRECALL` on the current data set object.

A command

The A line command allocates a data set.

Usage notes

A can be used as a line command or, when preceded by an item number, as a main command.

The A command ignores the member name field.

Examples

```
Command   Member   Num. Data Set Names/Objects  Volume
--------  -------- ---- ---------------------- ------
A                     2 'ACCOUNTS.JONES.COBOL'
A                     3 'ACCOUNTS.TEST.COBOL'   TST001

2 a
```

Assist command

The Assist main command can either display a list of all main and line commands of OLIST or detailed information about a specific command.

```
-DSC-                    OLIST Command Assistance
Cmd ===>

   For more details, point cursor at selected command and press ENTER
   Enter END or CANCEL to exit
   While reviewing an ASSIST example you may enter an OLIST command,
     press ENTER , and be prompted with command over the OLIST display.

------------------------ MAIN Commands ---------------------------------
ASSIST   #f-#l    CANCEL   CLEARVOL CMDPARMS CUT      DEFAULT  END
EXCLUDE  EXPORT   FILLCLAS FILLVOL  FILTER   FIND     FINDTEXT FLIP
LEVEL    LISTALOC LISTBASE LISTBOOK LISTCAT  LISTCLON LISTGDG  LISTHIST
LISTMIGR LISTMULT LISTNVS  LISTPAGE LISTPDSE LISTSHLF LISTSMP  LISTSYS
LISTTAPE LISTVSAM LISTVTOC LOCATE   MEMFIND  OPEN     OPRINT   PASTE
POPULATE QUIT     REFRESH  RELEASE  RESET    RFIND    RIGHT    SAVE
SET      SHOWARCH SHOWCMD  SHOWMIG  SHOWTYPE SHOWVOL  SORT     TITLE
UPDATE   UTIL     VALIDATE

------------------------ LINE Commands ---------------------------------
/        /D  /DD  /I       /R       /X  /XX  =        ?<Cmd>   %<Exec>
ALLOCATE BF       BROWSE   CATALOG  CLONE    COMPRESS COPY     COPYALL
DELETE   DSLIST   EDIT     EF       EMPTY    EXPDIR   FREE     HDELETE
HLIST    INFO     LISTBASE LISTBOOK LISTCAT  LISTGDG  LISTMIGR LISTSHLF
LISTSMP  LISTTAPE LISTVTOC LOSTGEN  MAPPDS   MOVE     MOVEALL  OLIST
PRINT    RENAME   SELECT   SUBMIT   UNCATALO VF       VIEW     XFER
<other>
```

Figure 40. The ASSIST list of all main and line commands

command-name
The name of the command for which you want to see an assist window. If omitted, the whole list of available OLIST commands is displayed.

Usage notes

ASSIST is a main command only. It cannot be used as a line command.

You may enter any main command while the assist window is displayed.

B line command

The B line command invokes an MSL with a default process of BROWSE, or invokes BROWSE on an object. The action taken depends on the type of object, as shown below:

TYPE	Member or pattern specification (if any)	Processing
SEQ		Browse data set

TYPE	Member or pattern specification (if any)	Processing
PDS	None	Display MSL of all members with browse as default process
PDS	Pattern specified	Display MSL of matching members with browse as default process
PDS	Member specified	Browse member
LIST		Display temporary OLIST of matching items with browse as default process
VSAM		Browse VSAM file (if option installed)
DB2®		Browse Db2 file (if option installed)
USER		Browse VSAM file (if option installed)
PC		Browse PC file (if option installed)

Usage notes

B can be used as a line command or, when preceded by an item number, as a main command.

Examples

```
Command   Member   Num. Data Set Names/Objects  Volume
--------  -------- ---- ---------------------- ------
B                     2 'ACCOUNTS.JONES.COBOL'
B                     3 'ACCOUNTS.TEST.COBOL'   TST001
B          ACCMAIN    4 'ACCOUNTS.TEST.COBOL'
B           PAY*      5 'ACCOUNTS.TEST.COBOL'   TST001
```

BF line command

The BF line command invokes a VSAM BROWSE function on an OLIST object. The action taken depends on the type of object, as shown below:

TYPE	Member or pattern specification (if any)	Processing
SEQ		Invoke the VSAM browser
PDSe	None	Display MSL of all members with browse as default process
PDSe	Pattern specified	Display MSL of matching members with browse as default process
PDSe	Member specified	Invoke VSAM browser over member
SCLM	None	Display MSL of all members with edit as default process
SCLM	Pattern specified	Display MSL of matching members with edit as default process
SCLM	Member specified	Invoke ISPF browser over member
SCLM		Same as for SCLM
LIST		Display temporary OLIST of matching items with browse as default process
OLIST		Display permanent OLIST of matching items with browse as default process

TYPE	Member or pattern specification (if any)	Processing
VSAM		Browse VSAM file (if option installed)
USER		Invoke the USER-supplied browser (if option installed)

Usage notes

BF can be used as a line command or, when preceded by an item number, as a main command.

The VSAM browser must be first defined during DSC customization via the %IQIWIZRD CLIST. If that is not the case, this command acts like the OLIST BROWSE command.

Examples

```
Command   Member   Num. Data Set Names/Objects  Volume
--------  -------- ---- ---------------------- ------
BF                    2 'ACCOUNTS.JONES.COBOL'
BF                    3 'ACCOUNTS.TEST.COBOL'   TST001
BF         ACCMAIN    4 'ACCOUNTS.TEST.COBOL'
BF          PAY*      5 'ACCOUNTS.TEST.COBOL'   TST001
```

C line command

The C line command catalogs the specified data set on the indicated volume.

Usage notes

C can be used as a line command or, when preceded by an item number, as a main command.

The volume field must be specified.

The C command ignores the member name field.

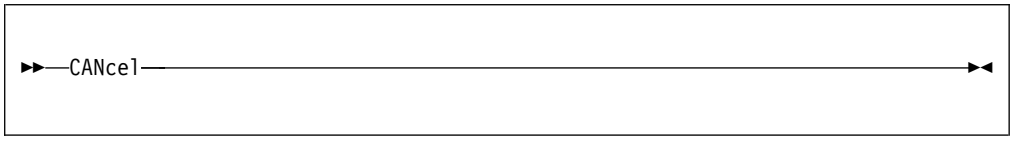
Examples

```
Command   Member   Num. Data Set Names/Objects  Volume
--------  -------- ---- ---------------------- ------
C                   3  'ACCOUNTS.TEST.COBOL'    TST001
```

CANcel command

The CANcel command ends the use of the OLIST without saving any changes you have made to the list itself.

Syntax



Operands

CANcel has no operands.

Usage notes

CANcel is a main command only. It cannot be used as a line command.

Note: On the editing panel that is displayed following the "UPDate command" on page 262, the CANcel command ends the editing session without saving any changes you have made; you are returned to the OLIST display panel.

Examples

```
CANCEL
CAN
```

CLONe command

The CLONe line command clones a partitioned-library or sequential data set object.

Syntax

Operands

Object_name
The name of the object. A clone dataset name must have a suffix (such as ".CLONE") conforming to the installation naming convention.

Volume
The volume of the object.

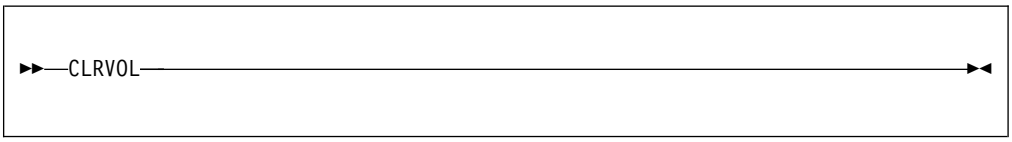
Usage notes

You are prompted with a confirmation panel in which you can override the suggested clone name and some of the space allocation attributes.

CLRVOL command

The CLRVOL command clears the VOLUME column of a data set object.

Syntax



Operands

CLRVOL has no operands.

Usage notes

The command is a good candidate for the OLIST Hotbar.

CMDparms command

The CMDparms command controls a field in which TSO command parameters can be specified. The parameters specified in this field are appended to all TSO commands you enter on the OLIST.

Syntax

Operands

ON Displays the field. (This is the default.)

OFF Removes the field.

Usage notes

CMDparms is a main command only. It cannot be used as a line command.

This option is also controlled from the Data Set Commander Options panel.

Examples

```
CMDPARMS
CMD
CMD ON
CMD OFF
```

COMPress (PDS only) command

The COMPress line command compresses the specified library.

Usage notes

COMPress can be used as a line command or, when preceded by an item number, as a main command.

The COMPress command ignores the member name field.

Examples

```
Command   Member   Num. Data Set Names/Objects  Volume
--------  -------- ---- ---------------------- ------
COMPRESS              2 'ACCOUNTS.JONES.COBOL'
COMP                  3 'ACCOUNTS.TEST.COBOL'   TST001
```

COpy line command

The COPY line command copies one or more members or sequential data sets, possibly having different attributes.

Usage notes

An object name, member or pattern, and volume are required.

COPY can be used as a line command or, when preceded by an item number, as a main command.

This command is passed to MSL for processing; the COPY/MOVE prompt panel is displayed for specification of the target library and other parameters.

If a dataset having the specified name and volume does not exist, or if it does not have partitioned organization, you are prompted with an entry panel in which you can modify the Line command, Dataset name, or Volume.

Examples

```
Command   Member   Num. Data Set Names/Objects  Volume
--------  -------- ---- ---------------------- ------
COPY       *          2 'ACCOUNTS.JONES.COBOL'
COPY       *          3 'ACCOUNTS.TEST.COBOL'   TST001
COPY       ACCMAIN    4 'ACCOUNTS.TEST.COBOL'
COPY       PAY*       5 'ACCOUNTS.TEST.COBOL'   TST001
```

COPYALl line command

The COPYALl line command copies all members of a partitioned data set to another data set.

Usage notes

The command supports only PDS and PDSE libraries.

When you invoke this command, you are prompted to the target library and like-named member replacement. The target library must be different from the current one. All members are copied regardless of member name specification.

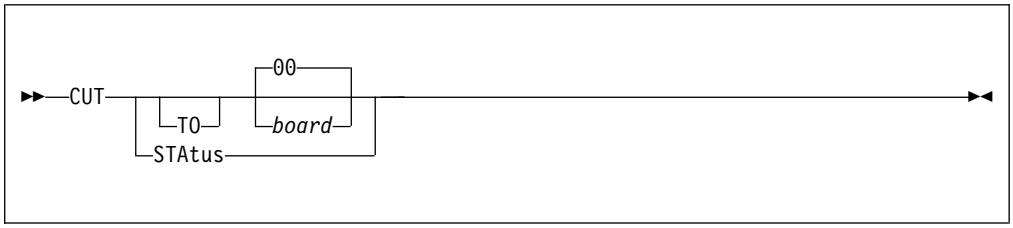
Examples

```
COPYALL
```

CUT command

The CUT command copies the OLIST into the specified clipboard number.

Syntax



Operands

board An integer from 00 to 99 or a name indicating the clipboard from which the data is to be pasted. If no board is specified, 00 is the default clipboard.

STAtus
Displays the clipboard management status.

Usage notes

Use the PASTE command to copy a previously cut OLIST to the end of a displayed OLIST or to an edited file.

Examples

```
CUT TO MYLIST
CUT 91
CUT
CUT STA
```

Delete command

The Delete command deletes a data set or the one or more members specified (with confirmation).

Usage notes

Delete can be used as a line command or, when preceded by an item number, as a main command.

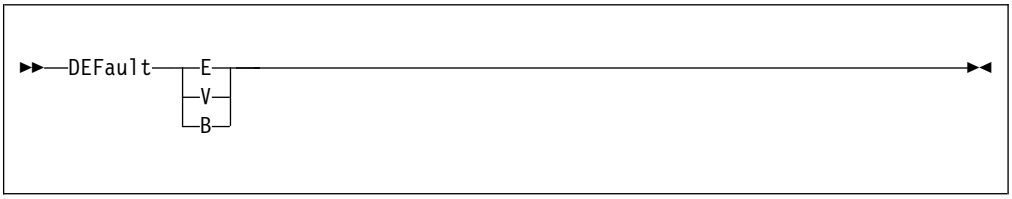
Examples

```
Command   Member   Num. Data Set Names/Objects  Volume
--------  -------- ---- ----------------------- ------
D                     2 'ACCOUNTS.JONES.COBOL'
D                     3 'ACCOUNTS.TEST.COBOL'   TST001
D          ACCMAIN    4 'ACCOUNTS.TEST.COBOL'
D          PAY*       5 'ACCOUNTS.TEST.COBOL'   TST001
```

DEFault command

The DEFault command changes the default process invoked by the SELECT and S commands during the current OLIST session.

Syntax



Operands

E Invoke the E line command when the SELECT or S command is used in an OLIST.

V Invoke the V line command when the SELECT or S command is used in an OLIST.

B Invoke the B line command when the SELECT or S command is used in an OLIST.

Usage notes

DEFault is a main command only; it cannot be used as a line command.

If the operand is omitted, the current default is displayed.

Examples

```
DEFAULT E
DEF B
DEF
```

DSLIST line command

The DSLIST line command invokes an ISPF data set list (option 3.4) of all items in the current catalog matching the specification.

Usage notes

DSLIST can be used as a line command or, when preceded by an item number, as a main command. The item must conform to input specifications for a data set list. You must specify at least one asterisk. To get a full list of a specific level, specify it as shown in the last example below.

You can also invoke DSLIST by clicking on (or moving the cursor to) a line, and pressing the F10 (LEFT) or F11 (RIGHT) key.

Examples

```
Command   Member   Num. Data Set Names/Objects  Volume
--------  -------- ---- ---------------------- ------
DSLIST                2 'ACCOUNTS.*.COBOL'
DSLIST                3 'ACCOUNTS.TEST.*'       TST001
DSLIST                4 'ACCOUNTS.TEST.COB*'
DSLIST                5 'ACCOUNTS.*'
```

E line command

The E line command invokes an MSL with a default process of EDIT, or invokes EDIT on a data set or member. The action taken depends on the type of object, as shown below:

TYPE	Member or pattern specification (if any)	Processing
SEQ		Edit data set
PDS	None	Display MSL of all members with edit as default process
PDS	Pattern specified	Display MSL of matching members with edit as default process
PDS	Member specified	Edit member
LIST		Display temporary OLIST of matching items with edit as default process
VSAM		Edit VSAM file (if option installed)
DB2		Edit Db2 file (if option installed)
USER		Edit VSAM file (if option installed)
PC		Edit PC file (if option installed)

Usage notes

E can be used as a line command or, when preceded by an item number, as a main command.

Examples

```
Command   Member   Num. Data Set Names/Objects  Volume
--------  -------- ---- ---------------------- ------
E                     2 'ACCOUNTS.JONES.COBOL'
E                     3 'ACCOUNTS.TEST.COBOL'   TST001
E          ACCMAIN    4 'ACCOUNTS.TEST.COBOL'
E          PAY*       5 'ACCOUNTS.TEST.COBOL'   TST001
```

EF line command

The EF line command invokes a VSAM EDIT function on an OLIST object. The action taken depends on the type of object, as shown below:

TYPE	Member or pattern specification (if any)	Processing
SEQ		Invoke the VSAM editor
PDSe	None	Display MSL of all members with browse as default process
PDSe	Pattern specified	Display MSL of matching members with browse as default process
PDSe	Member specified	Invoke VSAM editor over member
SCLM	None	Display MSL of all members with edit as default process

TYPE	Member or pattern specification (if any)	Processing
SCLM	Pattern specified	Display MSL of matching members with edit as default process
SCLM	Member specified	Invoke ISPF editor over member
SCLM		Same as for SCLM
LIST		Display temporary OLIST of matching items with edit as default process
OLIST		Display permanent OLIST of matching items with edit as default process
VSAM		Edit VSAM file (if option installed)
USER		Invoke the USER-supplied editor (if option installed)

Usage notes

EF can be used as a line command or, when preceded by an item number, as a main command.

The VSAM editor must be first defined during DSC customization via the %IQIWIZRD CLIST. If that is not the case, this command acts like the OLIST EDIT command.

Examples

```
Command   Member   Num. Data Set Names/Objects  Volume
--------  -------- ---- ---------------------- ------
EF                    2 'ACCOUNTS.JONES.COBOL'
EF                    3 'ACCOUNTS.TEST.COBOL'   TST001
EF         ACCMAIN    4 'ACCOUNTS.TEST.COBOL'
EF          PAY*      5 'ACCOUNTS.TEST.COBOL'   TST001
```

EMPty command

The EMPTY line command empties all data from a partitioned or a sequential data set.

Usage notes

EMPty can be used as a line command or, when preceded by an item number, as a main command.

The EMPty command ignores the member name field.

Examples

```
Command   Member   Num. Data Set Names/Objects  Volume
--------  -------- ---- ---------------------- ------
EMPTY                 2 'ACCOUNTS.JONES.COBOL'
E                     3 'ACCOUNTS.TEST.COBOL'   TST001
```

END command

The END command saves the permanent OLIST changes and ends the processing.

Syntax

Operands

The END command has no operands.

Examples

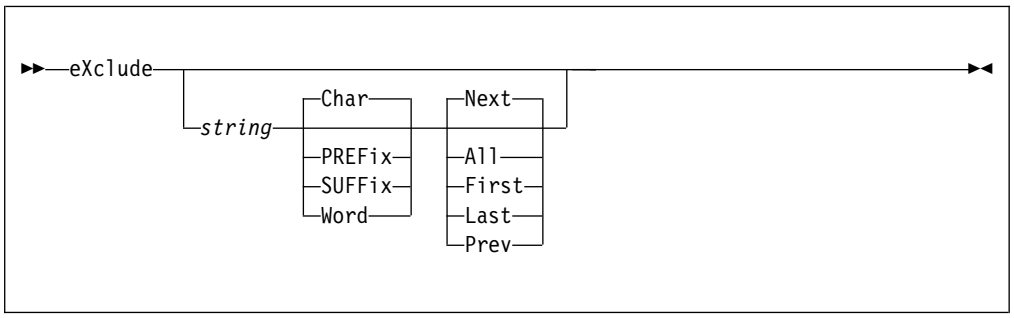
END Normally ends the current OLIST processing.

eXclude main command

Use the eXclude main command to exclude selected OLIST objects. When this command is used, the *EXCLUDE* tag appears next to the Volume or Class column on the OLIST screen.

eXclude can also be used as a line command by specifying `X`.

Syntax



Operands

string The text string to be found in the item name.

Char When specified, restricts search of the text string to a character within the data set name. This is the default.

PREFix
When specified, restricts search of the text string to the prefix of a qualifier within the data set name.

SUFFix
When specified, restricts search of the text string to the suffix of a qualifier within the data set name.

Word When specified, restricts search of the text string to the qualifier within the data set name.

Next Search the list for the next member specified in the string. This is the default.

All Exclude all members that possess the text string.

First Search the list for the first member specified in the string.

Last Search the list for the last member specified in the string.

Prev Search the list for the previous member specified in the string.

Usage notes

If no operands are supplied, a menu is displayed for you to specify parameters.

Command RFIND may be subsequently used to exclude the next occurrence of the specified string.

Examples

```
EXCLUDE ASM
X SYS1 W A
X TEST SUFF F
X 'T L' P
EXCLUDE
```

EXPDIR (PDS only) command

The EXPDIR line command expands the library specified.

Usage notes

EXPDIR can be used as a line command or, when preceded by an item number, as a main command.

The EXPDIR command ignores the member name field.

Examples

```
Command   Member   Num. Data Set Names/Objects  Volume
--------  -------- ---- ---------------------- ------
EXPDIR                2 'ACCOUNTS.JONES.COBOL'
EXPDIR                3 'ACCOUNTS.TEST.COBOL'   TST001
```

EXPORT command

The EXPORT command saves the OLIST under its current name in the specified library.

Syntax

Operands

library_name
The name of the library to be used as the specified library number.

Usage notes

Use the EXPORT command to export an OLIST to a public OLIST library.

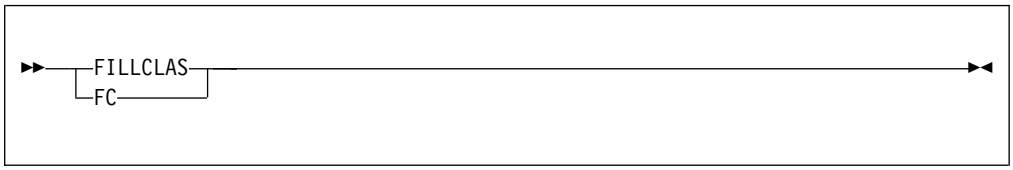
Examples

```
EXPORT TEST
```

FILLCLAS command

The FILLCLAS command checks the existence and attributes of each object of a given OLIST and updates all CLASS and VOLUME fields.

Syntax



Operands

FILLCLAS has no operands.

Usage notes

- FILLCLAS can be abbreviated “FC”.
- The following object CLASS names are supported:

  ALIAS
  Catalog alias qualifier

  BOOK
  IBM BookManager book data set

  CMD TSO command or executable data set

  DB2 Db2 table name or pattern

  GDFIFO
  Generation data group of FIFO order

  GDLIFO
  Generation data group of LIFO order

  GDS Generation data set

  ISPF ISPF PDF project, group, or type library concatenation

  LIBR CA-LIBRARIAN (C) library data set

  LIST Data set name pattern mask

  OE MVS™ OpenEdition file

  OLIST
  DSC special temporary OLIST

  PAN CA-PANVALET (C) library data set

  PDS PDS library data set

PDSE PDSE library data set

SCLM SCLM project managed library concatenation

SEQ Physical sequential data set

SEQEXT
Extended-format sequential data set

SEQLF
Large-format sequential data set

SHELF
IBM BookManager book shelf data set

TAPE Tape cataloged data set

USER User defined object

VSAM
VSAM cluster

VSAMDA
VSAM data component data set

VSAMIX
VSAM index component data set

ZONE SMP/E managed VSAM cluster

ZUNIX
zUNIX file or directory path

ARCV
Archived data set

MIGR
Archived data set

TAPE
Archived to tape data set

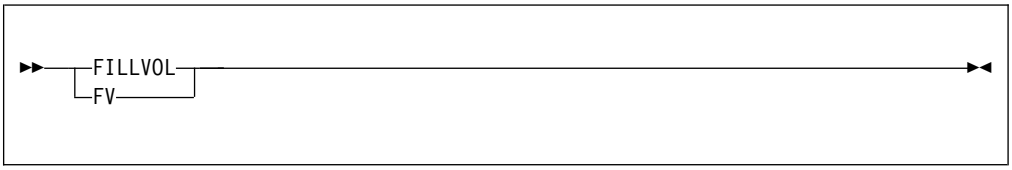
Examples

FC Fills the CLASS field or VOLUME field of all data set objects.

FILLVOL command

The FILLVOL command fills in the VOLUME column or CLASS column of data set objects.

Syntax



Operands

FILLVOL has no operands.

Usage notes

- The FILLVOL command can be abbreviated “FV”. The command is a good candidate for the OLIST Hotbar.
- The following object CLASS names are supported:

  ALIAS
  Catalog alias qualifier

  BOOK
  IBM BookManager book data set

  CMD TSO command or executable data set

  DB2 Db2 table name or pattern

  GDFIFO
  Generation data group of FIFO order

  GDLIFO
  Generation data group of LIFO order

  GDS Generation data set

  ISPF ISPF PDF project, group, or type library concatenation

  LIBR CA-LIBRARIAN (C) library data set

  LIST Data set name pattern mask

  OE MVS OpenEdition file

  OLIST
  DSC special temporary OLIST

  PAN CA-PANVALET (C) library data set

  PDS PDS library data set

  PDSE PDSE library data set

  SCLM SCLM project managed library concatenation

  SEQ Physical sequential data set

  SEQEXT
  Extended-format sequential data set

  SEQLF
  Large-format sequential data set

  SHELF
  IBM BookManager book shelf data set

  TAPE Tape cataloged data set

  USER User defined object

  VSAM
  VSAM cluster

  VSAMDA
  VSAM data component data set

  VSAMIX
  VSAM index component data set

  ZONE SMP/E managed VSAM cluster

ZUNIX
zUNIX file or directory path

ARCV
Archived data set

MIGR
Archived data set

TAPE
Archived to tape data set

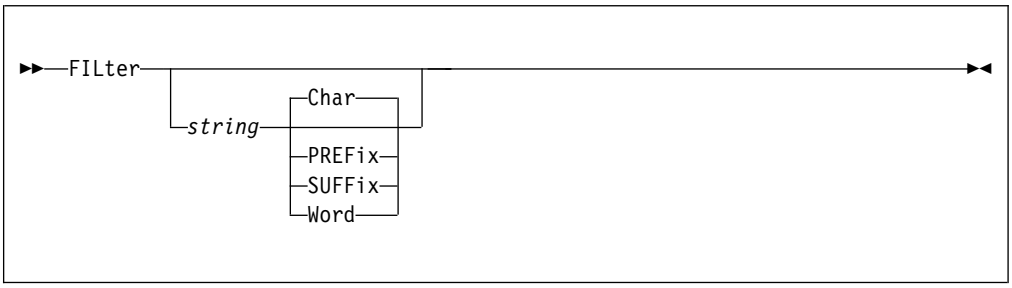
Examples

FV Fills the VOLUME field or CLASS field of all data set objects.

FILter command

The FILter command shows only the selected objects from the current OLIST display.

Syntax



Operands

string A text string to be found in the object name.

Char Character within the OLIST.

PREFix
First letter of a word within the OLIST.

SUFFix
Last letter of a word within the OLIST.

Word Word within the OLIST.

Usage notes

Wildcard characters are not accepted under the command FILter.

If no operands are supplied, a menu is displayed for you to specify parameters.

Command FLIP may be subsequently used to show all objects excluded from display.

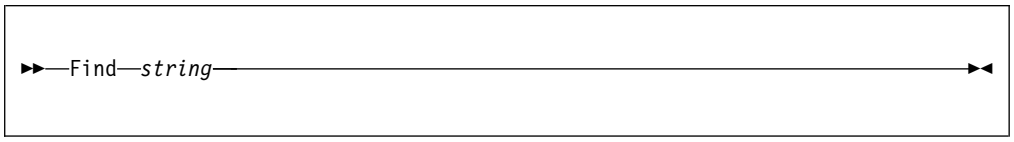
Examples

```
FILTER TEST WORD
FILTER R CHAR
FILTER I PREFIX
FILTER T SUFFIX
```

Find command

The Find command locates the next item in the OLIST whose name contains a specified text string.

Syntax



Operands

string The text string to be found in the item name.

Usage notes

Find is a main command only; it cannot be used as a line command.

Do not enclose the string or pattern in quotation marks.

Find starts the search from the second entry on the list and searches to the end of the list. If nothing is found, the search starts again from the top. If again nothing is found, the list does not change it position.

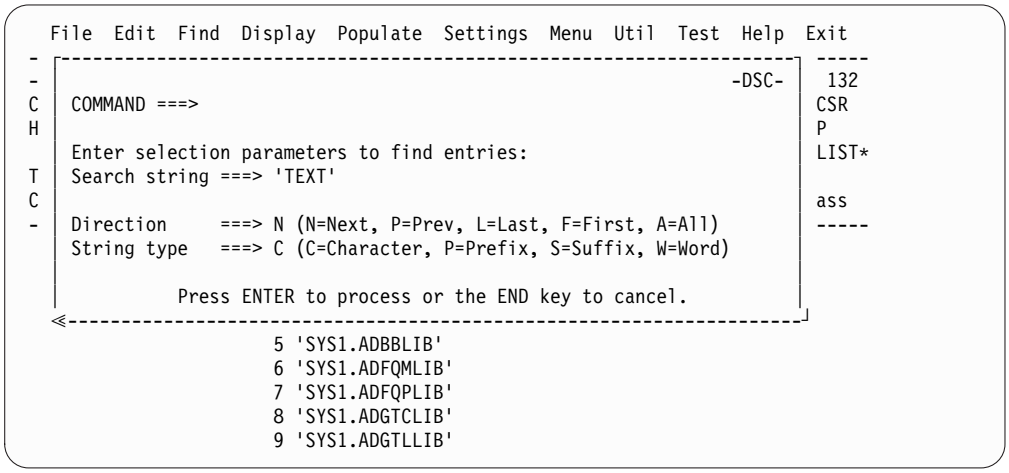


Figure 41. The Find command pop-up

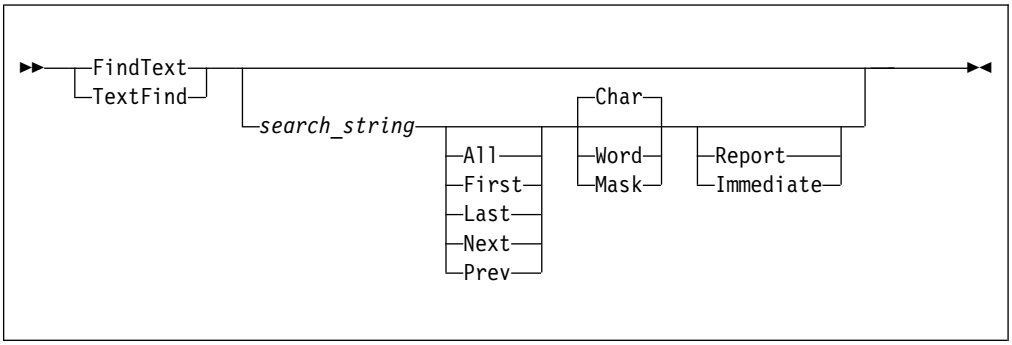
Examples

```
FIND STAT1
F
```

FindText command

The FindText command searches for a specified string in sequential and partitioned data set objects. For more information about FindText options, see Figure 47 on page 336.

Syntax



Operands

search_string
The string to be found. If it contains blanks or special characters, the text-string should be enclosed in quotation marks. The search string can be hexadecimal and case-sensitive SBCS characters, as well as DBCS search strings.

FindText handling of ampersand (&) characters in search strings conforms to ISPF EDIT conventions.

Note:

- Use double quotation marks (") to search for single quotation marks ('). For example, "ex'am'ple".
- Use keyword C or c to indicate case-sensitive strings. For example, C'eXaMpLe'.
- Use keyword X or x to indicate hexadecimal strings. For example, X'1234'.

All All objects are searched, and finds are flagged for each object.

First Searches from the first object that is displayed on the screen.

Last Searches from the last object that is displayed on the screen.

Next Searches from the next object after the one where a match is found.

Prev Searches from the previous object where a match is found.

Char Searches for a character string.

Word Searches for a non-alpha and non-numerical word string. The following characters are considered as alpha characters:

$ @ #

Mask Searches for a string that matches a pattern mask. The following signs can be used in a pattern mask:

Asterisk (*)
Indicates any character string that contains zero or more characters.

Percent sign (%)
Indicates any single character.

Note:

- Pattern masks that consist of only asterisk (*), percent sign (%), or both are invalid.
- Hexadecimal notation and blanks are not allowed for pattern masks.

Report
Displays the complete OLIST FINDTEXT HITS REPORT within an EDIT session, which might be further customized and stored into a user specified data set.

When option Report is in effect, multiple search criteria are supported. Each search criterion consists of a main TARGET string with optionally a WITH string and a WITHOUT string. A hit record must match at lease one search criterion, which means the record must contain the TARGET string and the WITH string, but not the WITHOUT string.

Immediate
Indicate that the FindText command is immediately executed without producing a report. A subsequent RFIND command can be used to find the next occurrence of the specified string.

Usage notes

- When all parameters are omitted, or when option Report is in effect, a complete menu is displayed to specify them. For an illustration of the menu, see the following figure:

```
-DSC-                       OLIST Text Search Settings
COMMAND ===>


Specify string to search within the OLIST objects
 SEARCH string ===>
          mode ===> N   W (Word) or M (Mask) or N (Normal)
   WITH string ===>
          mode ===> N   W (Word) or M (Mask) or N (Normal)
WITHOUT string ===>
          mode ===> N   W (Word) or M (Mask) or N (Normal)
Specify search range in target data records:
  START COLUMN ===> 1      END COLUMN ===> 99999
Specify how many objects to process before being prompted to resume:
    STOP AFTER ===> 999    Number of objects to process successfully
  PROMPT AFTER ===> 12345  Number of objects to process before a prompt
Specify Y (Yes) or N (No) for the following options:
     AUTOMATIC ===> Y Process until reaches success limit?
       EXCLUDE ===> Y Exclude mismatched objects from displayed list?
   PACKED DATA ===> N Expand ISPF packed data format?
   FIND PROMPT ===> Y Prompt with FIND command upon selecting an object?
   FULL REPORT ===> Y Report all found records with multiple search criteria?

Press ENTER for more search criteria or the END key to cancel

Note: use " (double quote) to search for ' (single quote) characters
Note: use C'... or c'... for case sensitive search strings
      use X'... or x'... for hexadecimal search strings
Note: use * for a pattern mask "any character string or none" indicator
      use % for a pattern mask "any single character" indicator
```

- To set the default options, use command `SET GLOBAL`.
- When keyword Report or Immediate is explicitly specified, it becomes the default setting until it is explicitly switched to the other option.
- Hexadecimal notations or blanks between quotation marks are unacceptable.

- The search starts from the first OLIST entry that is displayed on the screen. The start column and end column numbers can be specified at the FindText command prompt menu.

Examples

TEXTFIND
Displays a menu to specify search parameters.

FT 'JOB 1' LAST
Searches from the last object to find the next one that contains the string "JOB 1".

FT NAME WORD
Finds the next object that contains the word "NAME".

FT NAME WORD R
Displays a menu to specify search parameters for the word "NAME". A report is to be displayed for the search result.

FT "x'aBc'Y"
Finds the next object that contains the string "X'ABC'Y".

TF X'81ab93'
Finds the next object that contains the 3-byte hexadecimal value x'81AB93'.

FT c'Mike' l w
Searches from the last object to find the next one that contains the case-sensitive word "Mike".

FT %ABC*XYZ%1%2 M
Finds the next object that contains a string that matches the pattern mask "%ABC*XYZ%1%2".

For FindText scenario examples, see Appendix O, "Searching with command FindText," on page 367.

FLIP command

The FLIP command toggles between visible and invisible (excluded and filtered-out) lines.

Syntax

Operands

FLIP has no operands.

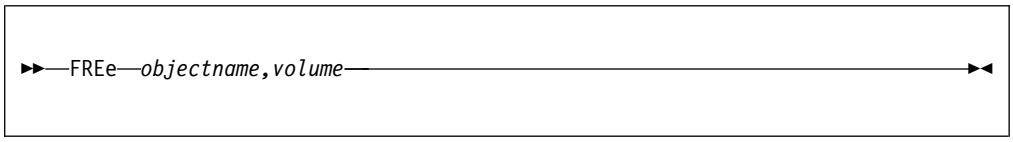
Examples

```
FLIP
```

FREe command

The FREe line command frees unused space in a specified data set object.

Syntax



Usage notes

You are prompted to select one or more of these applicable actions:

COMPRESS (PDS only)
the dataset.

RELEASE (Non-VSAM or VSAM)
unused space extents.

CONSOLIDATE (Non-VSAM or VSAM)
contiguous space extents.

If a dataset by the specified name and volume does not exist, you are prompted with an entry panel in which you may modify: the Line command, Dataset name, or Volume.

Examples

```
Command   Member   Num. Data Set Names/Objects  Volume
--------  -------- ---- ---------------------- ------
FREE                  2 'ACCOUNTS.JONES.COBOL'
FREE                  3 'ACCOUNTS.TEST.COBOL'   TST001
FREE       ACCMAIN    4 'ACCOUNTS.TEST.COBOL'
FREE       PAY*       5 'ACCOUNTS.TEST.COBOL'   TST001
2 FRE
```

/I line command

The /I line command inserts one or more empty lines in the OLIST for the insertion additional items.

Usage notes

/I can only be used as a line command; it cannot be used as a main command.

/I can be used with a number specifying the number of empty lines to insert.

Examples

```
Command   Member   Num. Data Set Names/Objects  Volume
--------  -------- ---- ---------------------- ------
/I                    2 'ACCOUNTS.JONES.COBOL'
/I3                   3 'ACCOUNTS.TEST.COBOL'   TST001
```

HDELETE line command

The HDELETE line command deletes a migrated (archived) data set object.

Usage notes

If a data set by the specified name is cataloged, a confirmation panel is displayed.

If a data set by the specified name is not cataloged, an entry panel prompts you. In it you can modify the Line command, Data Set name, or Volume.

Examples

```
Command   Member   Num. Data Set Names/Objects  Volume
--------  -------- ---- ---------------------- ------
HDELETE               2 'ACCOUNTS.JONES.COBOL'
HDELETE               3 'ACCOUNTS.TEST.COBOL'   TST001
```

HLIST line command

The HLIST line command displays archiving information about a migrated data set object.

Usage notes

If a data set by the specified name is not cataloged, an entry panel prompts you. In it you can modify the Line command, Data Set name, or Volume.

Examples

```
Command   Member   Num. Data Set Names/Objects  Volume
--------  -------- ---- ---------------------- ------
HLIST                 2 'ACCOUNTS.JONES.COBOL'
HLIST                 3 'ACCOUNTS.TEST.COBOL'   TST001
```

I line command

The I line command provides information about a data set.

```
                            Data Set Information
Command ===>

Data Set Name  . . . : SYS1.ALINKLIB

General Data                          Current Allocation
 Volume serial . . . : G1703D          Allocated blocks  . : 187
 Device type . . . . : 3390            Allocated extents . : 1
 Organization  . . . : PO              Maximum dir. blocks : 194
 Record format . . . : U
 Record length . . . : 0
 Block size  . . . . : 32760          Current Utilization
 1st extent blocks . : 187             Used blocks . . . . : 162
 Secondary blocks  . : 146             Used extents  . . . : 1
                                       Used dir. blocks  . : 162
 Creation date . . . : 2005/09/20      Number of members . : 966
 Referenced date . . : 2006/09/27
 Expiration date . . : ***None***
```

Figure 42. The Data Set Information panel

Usage notes

I can be used as a line command or, when preceded by an item number, as a main command.

The I command ignores the member name field.

Examples

```
2 i
```

INFO line command

The INFO line command displays information about a data set object.

Usage notes

If a data set by the specified name is not cataloged, an entry panel prompts you. In it you can modify the Line command, Data Set name, or Volume.

If a data set is migrated (archived), the HLIST command is invoked.

If a data set is a VSAM cluster, the IDCAMS utility is invoked.

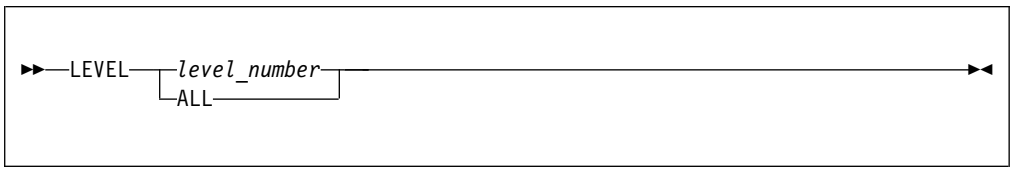
Examples

```
Command   Member   Num. Data Set Names/Objects  Volume
--------  -------- ---- ---------------------- ------
INFO                  2 'ACCOUNTS.JONES.COBOL'
INFO                  3 'ACCOUNTS.TEST.COBOL'   TST001
```

LEVEL command

The LEVEL command shows only data set objects that satisfy the specified level of DSNAME qualifier.

Syntax



Operands

level_number
A qualifier level number

ALL Displays data sets of every level

Usage notes

LEVEL can only be used a main command.

If you enter the command LEVEL with no operand, a message is displayed requesting the input of either a level qualifier or the operand ALL.

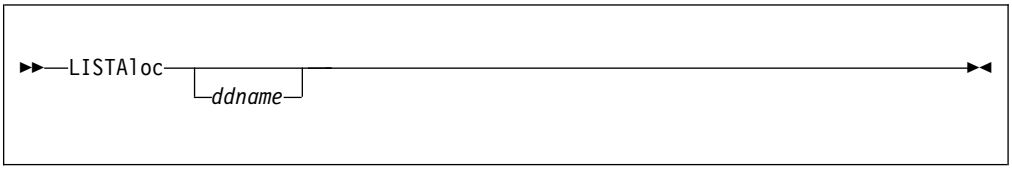
The first level of qualifier is assumed. Therefore, a level of qualifier specified as "1" returns data set names of two positions or less, where a level qualifier of "2" returns all data sets of three positions or less.

Level 1	Level 2	Level 3
SERVICES	SERVICES	SERVICES
SERVICES.ACSREP	SERVICES.ACSREP	SERVICES.ACSREP
	SERVICES.ACSREP.JCL	SERVICES.ACSREP.JCL
		SERVICES.ACSREP.PCF.JCL

LISTALOC command

The LISTALOC command appends allocated data sets to the current OLIST.

Syntax



Operands

ddname
Any DD name allocated to your TSO session.

Usage notes

LISTALOC is a main command only; it cannot be used as a line command.

You may use this command with the "MEMFind command" on page 245 or "FindText command" on page 225, to reveal where in the concatenation a certain member resides.

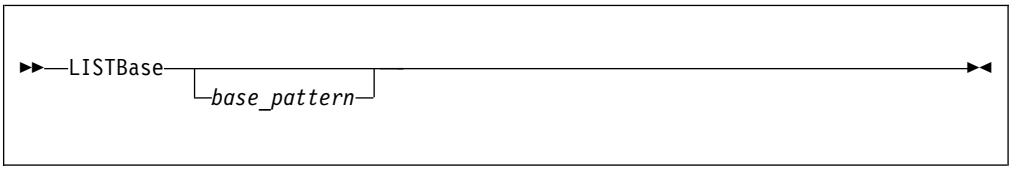
Examples

```
LISTA STEPLIB   - add to OLIST the DD STEPLIB data sets.
LISTA           - add all data sets allocated to your TSO session.
```

LISTBASE command

The LISTBASE command appends generation-data-group base names to the current OLIST.

Syntax



Operands

base_pattern
A free form pattern of GDG base name. If the pattern is not supplied, DSC displays the DSNAME pattern entry panel.

Usage notes

LISTBASE is a main command only; it cannot be used as a line command.

A pattern may have "*" and "%" wild cards in any position.

DSC supports more generic patterns than ISPF DSLIST. The whole DSN is treated as a contiguous character string, regardless of the number of dots (qualifiers).

DSC automatically appends a `.*` to any DSN pattern that is not supported by ISPF DSLIST.

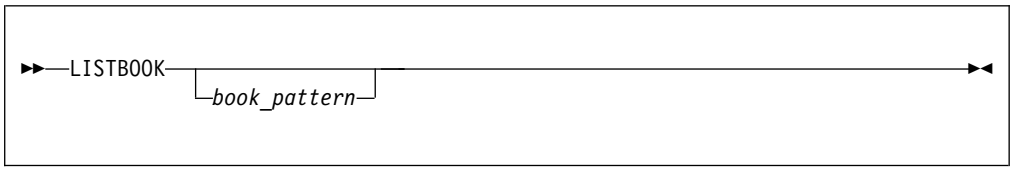
Examples

```
LISTB IMS*DAY* - add to OLIST generation-data-group base
                 names matching a pattern of IMS*DAY*
LISTB  - display command associated entry panel
```

LISTBOOK command

The LISTBOOK command appends BookManager BOOK data set names to the current OLIST.

Syntax



Operands

book_pattern
A free form pattern of BookManager BOOK names. If the pattern is not supplied, DSC displays the DSNAME pattern entry panel.

Usage notes

LISTBOOK is a main command only; it cannot be used as a line command.

A pattern may have "*" and "%" wild cards in any position.

DSC supports more generic patterns than ISPF DSLIST. The whole DSN is treated as a contiguous character string, regardless of the number of dots (qualifiers).

Specifying a suffix .BOOK in the DSN pattern is not required.

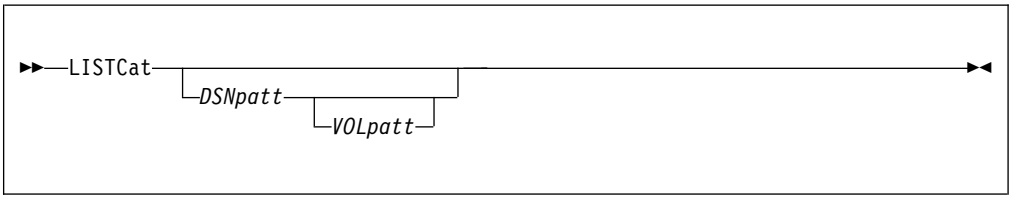
Examples

```
LISTBOOK PP*DB2 - add to OLIST data set names matching a pattern
                  of PP*DB2*.BOOK
LISTK  - display command associated entry panel
```

LISTCAT line command

The LISTCAT command appends cataloged data set names to the current OLIST.

Syntax



Operands

DSNpatt
A free form pattern of a cataloged DSNAME. If the pattern is not supplied, DSC displays the DSNAME pattern entry panel.

VOLpatt
A free form pattern of a VOLUME.

Usage notes

LISTCAT is a main command only; it cannot be used as a line command.

A pattern may have "*" and "%" wild cards in any position.

DSC supports more generic patterns than ISPF DSLIST. The whole DSN is treated as a contiguous character string, regardless of the number of dots (qualifiers).

DSC automatically appends a `.*` to any DSN pattern that is not supported by ISPF DSLIST.

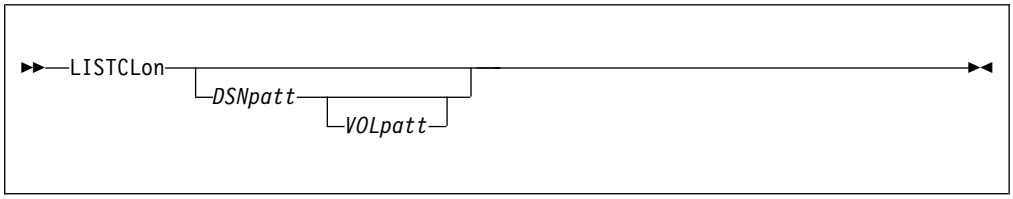
Examples

```
LISTC ISP*LPA* SYS* - add to OLIST cataloged data set names
                     matching a pattern of ISP*LPA* that reside on volumes
                     matching a pattern of SYS*
LISTC SYS%.M*LIB* - add to OLIST cataloged data set names
                    matching a pattern of SYS%.M*LIB*
LISTC  - display command associated entry panel
```

LISTCLon main command

The LISTCLon command appends cloned data set names to the current OLIST.

Syntax



Operands

DSNpatt
A free form pattern of a cataloged DSNAME. If the pattern is not supplied, DSC displays the DSNAME pattern entry panel.

VOLpatt
A free form pattern of a VOLUME.

Usage notes

LISTCLON is a main command only; it cannot be used as a line command.

A clone dataset name must have a suffix (such as ".CLONE") conforming to the installation naming convention.

A pattern may have "*" and "%" wild cards in any position.

DSC supports more generic patterns than ISPF DSLIST. The whole DSN is treated as a contiguous character string, regardless of the number of dots (qualifiers).

DSC automatically appends a `.*` to any DSN pattern that is not supported by ISPF DSLIST. If the DSN is longer than 38 characters, the appended ".CLONE" may be truncated.

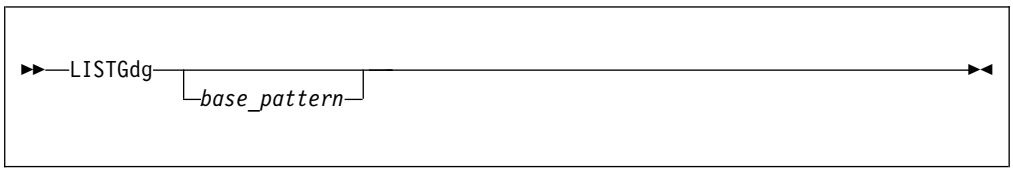
Examples

```
LISTCL ISP*LPA* SYS* - add to OLIST cataloged dataset names
                      matching a pattern of ISP*LPA*.<clone>
                      that reside on volumes matching a pattern of SYS*.
LISTCL SYS%.M*LIB* -  add to OLIST cataloged dataset names
                      matching a pattern of SYS%.M*LIB*.<clone>.
```

LISTGdg command

The LISTGdg command appends generation-data-group data set names to the current OLIST.

Syntax



Operands

base_pattern
A pattern mask of GDG base name. If the pattern is not supplied, DSC displays the DSNAME pattern entry panel.

Usage notes

- Command LISTGdg can be used as a main command or a line command.
- The data sets of each generation group are ordered in FIFO or LIFO order with their corresponding relative generation numbers.
- A pattern may have "*" and "%" wild cards in any position.
- DSC supports more generic patterns than ISPF DSLIST. The whole DSN is treated as a contiguous character string, regardless of the number of dots (qualifiers).
- DSC automatically appends a `.*` to any DSN pattern that is not supported by ISPF DSLIST.
- GDG data set objects are displayed with a - (*-nn*) marker in the command line, where *nn* is the generation number.

Examples

LISTG SYS*LOG*
Add to OLIST generation-data-set names matching a pattern of SYS*LOG*.

LISTG Display command associated entry panel.

LISTHIST command

The LISTHIST command appends the most recently used data sets to the current OLIST.

Syntax

Usage notes

You may use this command to access the most recently used data sets.

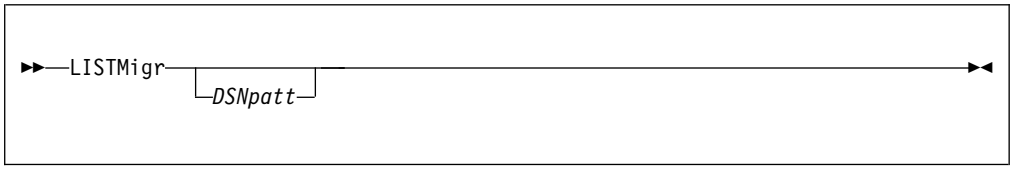
Examples

```
LISTH
```

LISTMigr command

The LISTMIGR command appends migrated (archived) data set names to the current OLIST.

Syntax



Operands

DSNpatt
A free-form pattern of a cataloged DSNAME.

Usage notes

A pattern may have "*" and "%" wild cards in any position. Data Set Commander supports more generic patterns than ISPF DSLIST. The whole DSN is treated as a contiguous character string, regardless of the number of dots (qualifiers).

Data Set Commander automatically appends a ".*" to any DSN pattern that is not supported by ISPF DSLIST.

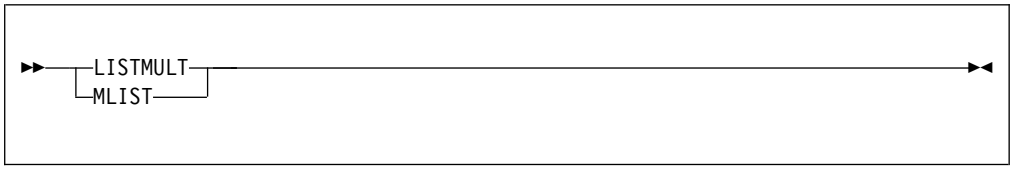
Examples

```
LISTM CICS*DATA* - add to OLIST migrated data set names
                   matching a pattern of CICS*DATA*
LISTM  - display command associated entry panel
```

LISTMULT main command

The LISTMULT main command appends data set names to the current OLIST from multiple specifications.

Syntax



Usage notes

LISTMULT displays a data entry panel for specifying multiple LISTCAT specifications. Each specification may include a different DSNAME or VOLUME pattern.

A pattern may have "*" and "%" wild cards in any position. Data Set Commander supports more generic patterns than ISPF DSLIST. The whole DSN is treated as a contiguous character string, regardless of the number of dots (qualifiers).

Data Set Commander automatically appends a ".*" to any DSN pattern that is not supported by ISPF DSLIST.

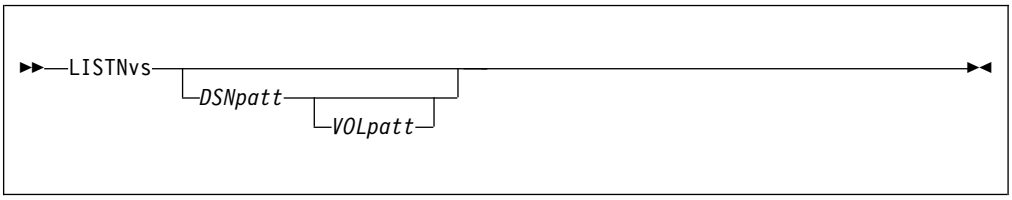
Examples

```
MLIST  - display a data entry panel for specifying multiple
         LISTCAT specifications.
```

LISTNvs main command

The LISTNvs command appends cloned data set names to the current OLIST.

Syntax



Operands

DSNpatt
A free form pattern of a cataloged DSNAME. If the pattern is not supplied, DSC displays the DSNAME pattern entry panel.

VOLpatt
A free form pattern of a VOLUME.

Usage notes

A pattern may have "*" and "%" wild cards in any position.

Data Set Commander supports more generic patterns than ISPF DSLIST. The whole DSN is treated as a contiguous character string, regardless of the number of dots (qualifiers).

Data Set Commander automatically appends a ".*" to any DSN pattern that is not supported by ISPF DSLIST.

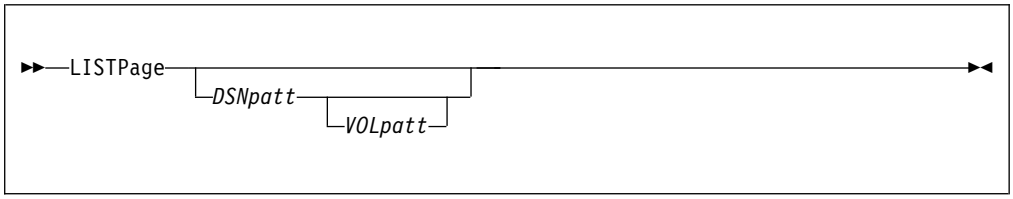
Examples

```
LISTN ISP*LPA* SYS* - add to OLIST NON-VSAM dataset names
                     matching a pattern of ISP*LPA*
                     that reside on volumes matching a pattern of SYS*.
LISTN SYS%.M*LIB* -  add to OLIST NON-VSAM dataset names
                     matching a pattern of SYS%.M*LIB.
```

LISTPAGE main command

The LISTPAGE main command appends cataloged Paging-Space data set names to the current OLIST.

Syntax



Operands

DSNpatt
A free-form pattern of a cataloged DSNAME.

VOLpatt
A free-form pattern of a VOLUME.

Usage notes

If no operands are supplied, you are prompted to supply the DSNAME pattern and (optionally) the volume pattern.

A pattern may have "*" and "%" wild cards in any position. Data Set Commander supports more generic patterns than ISPF DSLIST. The whole DSN is treated as a contiguous character string, regardless of the number of dots (qualifiers).

Data Set Commander automatically appends a ".*" to any DSN pattern that is not supported by ISPF DSLIST.

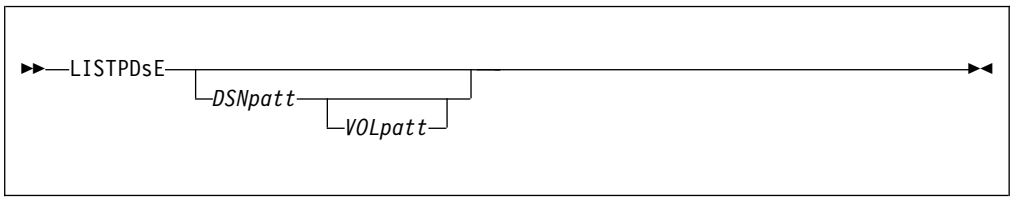
Examples

```
LISTP PAGE* SYS* - add to OLIST paging-space data set names
                   matching a pattern of PAGE* that reside on volumes
                   matching a pattern of SYS*
LISTP SYS%.PAG* - add to OLIST paging-space data set names
                  matching a pattern of SYS%.PAG*
LISTP - display command associated entry panel
```

LISTPDSE main command

The LISTPDSE main command appends cataloged PDSE library data set names to the current OLIST.

Syntax



Operands

DSNpatt
A free-form pattern of a cataloged DSNAME.

VOLpatt
A free-form pattern of a VOLUME.

Usage notes

If no operands are supplied, you are prompted to supply the DSNAME pattern and (optionally) the volume pattern.

A pattern may have "*" and "%" wild cards in any position. Data Set Commander supports more generic patterns than ISPF DSLIST. The whole DSN is treated as a contiguous character string, regardless of the number of dots (qualifiers).

Data Set Commander automatically appends a ".*" to any DSN pattern that is not supported by ISPF DSLIST.

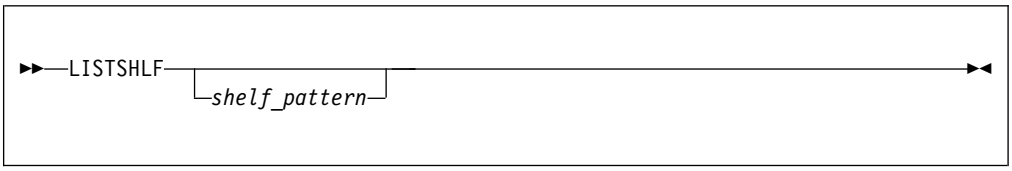
Examples

```
LISTPDE INT*25* USR* - add to OLIST PDSE library names
                       matching a pattern of INT*25* that reside on volumes
                       matching a pattern of USR*
LISTPDSE IS*MAC* - add to OLIST PDSE library names
                   matching a pattern of IS*MAC*
LISTPDSE - display command associated entry panel
```

LISTSHLF command

The LISTSHLF command appends BookManager BOOKSHELF data set names to the current OLIST.

Syntax



Operands

shelf_pattern
A free form pattern of BookManager BOOKSHELF names. If the pattern is not supplied, DSC displays the DSNAME pattern entry panel.

Usage notes

LISTSHLF is a main command only; it cannot be used as a line command.

A pattern may have "*" and "%" wild cards in any position.

DSC supports more generic patterns than ISPF DSLIST. The whole DSN is treated as a contiguous character string, regardless of the number of dots (qualifiers).

Specifying a suffix .BKSHELF in the DSN pattern is not required.

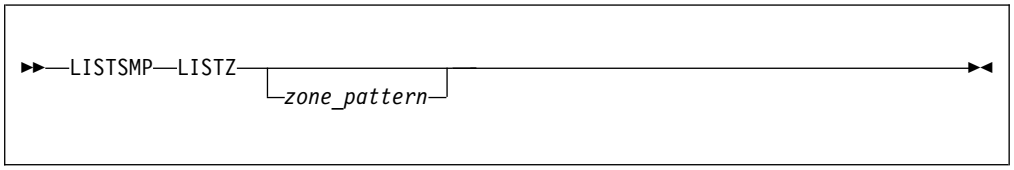
Examples

```
LISTSHLF PP*DB2 - add to OLIST data set names matching a pattern
                  of PP*DB2*.BKSHELF
LISTF  - display command associated entry panel
```

LISTSMP command

The LISTSMP command appends SMP/E ZONE VSAM cluster names to the current OLIST.

Syntax



Operands

zone_pattern
A free form pattern of SMP/E ZONE VSAM cluster names. If the pattern is not supplied, DSC displays the DSNAME pattern entry panel.

Usage notes

LISTSMP is a main command only; it cannot be used as a line command.

A pattern may have "*" and "%" wild cards in any position.

DSC supports more generic patterns than ISPF DSLIST. The whole DSN is treated as a contiguous character string, regardless of the number of dots (qualifiers).

Specifying a suffix .CSI in the DSN pattern is not required.

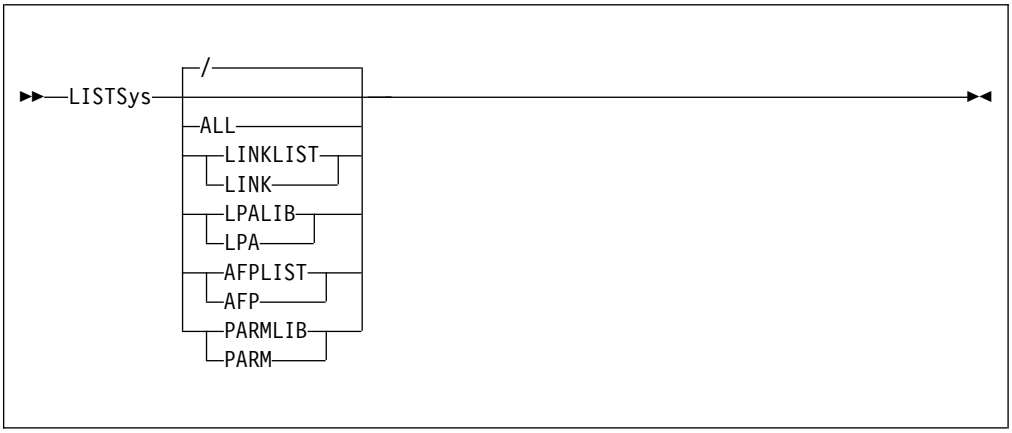
Examples

```
LISTSMP SYS* - add to OLIST VSAM cluster names matching a pattern
               of SYS*.CSI
LISTZ  - display command associated entry panel
```

LISTSYS command

The LISTSYS command populates the current OLIST with the libraries of the specified system libraries.

Syntax



Operands

ALL Indicates APFLIST, LINKLIST, and LPALIB (default).

APFLIST
The authorized program facility library list.

LINKLIST
The LINKLIST load libraries.

LPALIB
The link pack area libraries.

PARMLIB
The z/OS PARMLIB libraries.

Usage notes

Use this command with the "MEMFind command" on page 245 command to locate where the system may locate a module.

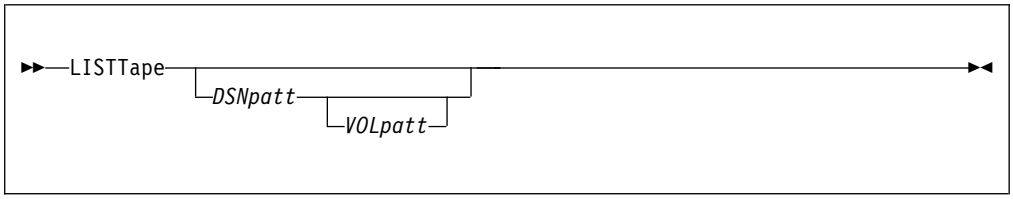
Examples

```
LISTS LPA  - add to OLIST all library names included in the
             system Link-Pack-Area (LPA).
LISTS PARM - add to OLIST all library names included in the
             system parameter library list (PARMLIB).
LISTS ALL  - add to OLIST all library names included in the
             system lists of: LINKLIST, LPALIB, PARMLIB, APF.
LISTSYS    - display a menu for specifying parameters.
```

LISTTAPE main command

The LISTTAPE main command appends cataloged TAPE data set names to the current OLIST.

Syntax



Operands

DSNpatt
A free-form pattern of a cataloged DSNAME.

VOLpatt
A free-form pattern of a VOLUME.

Usage notes

If no operands are supplied, you are prompted to supply the DSNAME pattern and (optionally) the volume pattern.

A pattern may have "*" and "%" wild cards in any position. Data Set Commander supports more generic patterns than ISPF DSLIST. The whole DSN is treated as a contiguous character string, regardless of the number of dots (qualifiers).

Data Set Commander automatically appends a ".*" to any DSN pattern that is not supported by ISPF DSLIST.

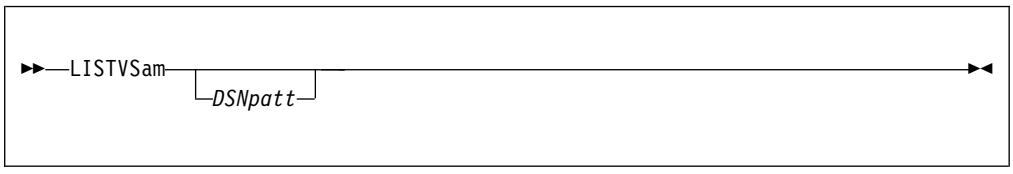
Examples

```
LISTT SYS*SMF* DAY* - add to OLIST TAPE data set names
                      matching a pattern of SYS*SMF* that reside on volumes
                      matching a pattern of DAY*
LISTTAP IMS*LOG* - add to OLIST TAPE data set names
                   matching a pattern of IMS*LOG*
LISTTAPE  - display command associated entry panel
```

LISTVSAM main command

The LISTVSAM main command appends VSAM cluster names to the current OLIST.

Syntax



Operands

DSNpatt
A free-form pattern of a cataloged DSNAME.

Usage notes

If no operands are supplied, you are prompted to supply the DSNAME pattern.

A pattern may have "*" and "%" wild cards in any position. Data Set Commander supports more generic patterns than ISPF DSLIST. The whole DSN is treated as a contiguous character string, regardless of the number of dots (qualifiers).

Data Set Commander automatically appends a ".*" to any DSN pattern that is not supported by ISPF DSLIST.

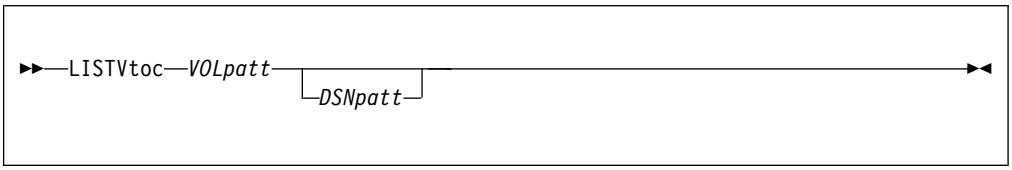
Examples

```
LISTVS CICS*CSI*
LISTVS
```

LISTVTOC command

The LISTVTOC command appends data set names, from specific volumes, to the current OLIST.

Syntax



Operands

VOLpatt
A free form pattern of a VOLUME. If the pattern is not supplied, DSC displays the DSNAME pattern entry panel.

DSNpatt
A free form pattern of a DSNAME. If the pattern is not supplied, DSC displays the DSNAME pattern entry panel.

Usage notes

LISTVTOC is a main command only; it cannot be used as a line command.

A pattern may have "*" and "%" wild cards in any position.

DSC supports more generic patterns than ISPF DSLIST. The whole DSN is treated as a contiguous character string, regardless of the number of dots (qualifiers).

DSC automatically appends a "*" to any DSN pattern that ends with a ".", or is just a first-level qualifier.

Examples

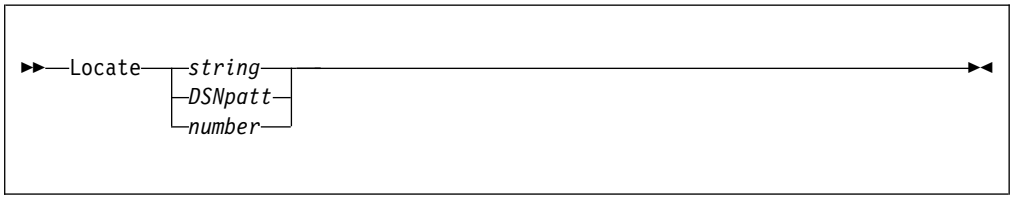
```
LISTV WRK* SYS*DATA* - add to OLIST any data set names
                       matching a pattern of SYS*DATA* that reside on volumes
                       matching a pattern of WRK*
```

```
LISTV SYSRES - add to OLIST all data set names residing on
               volume SYSRES
LISTV - display command associated entry panel
```

Locate command

The Locate command locates the next data set (or object) name beginning with the specified text string.

Syntax



Operands

string The text string the data set name is to begin with.

DSNpatt
A pattern representing the text string to be located at the beginning of the item name using the wildcard characters "%" and "*".

number
The entry number of the item to be located.

Usage notes

Locate is a main command only; it cannot be used as a line command.

If the specified text string does not begin with a quotation mark ('), quotation marks beginning data set names are ignored. If the specified text string begins with a quotation mark, only data set names beginning with a quotation mark are considered to match.

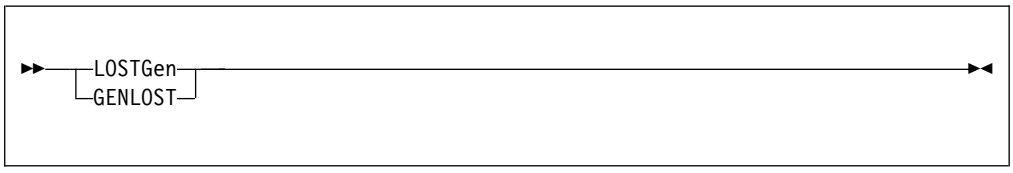
Examples

```
LOCATE ACCOUNTS
L 'ACCOUNTS
LOCATE A*B
L 23
```

LOSTGen line command

The LOSTGen command displays only the orphan generations of a PDSE library.

Syntax



Usage notes

Only PDSE version 2 libraries with member generations are supported.

MAPpds (PDS only) command

The MAPpds command displays a map of all existing and deleted members of a PDS library. Deleted members may be browsed, viewed, and restored into the directory.

Syntax

Operands

MAPpds has no operands.

Usage notes

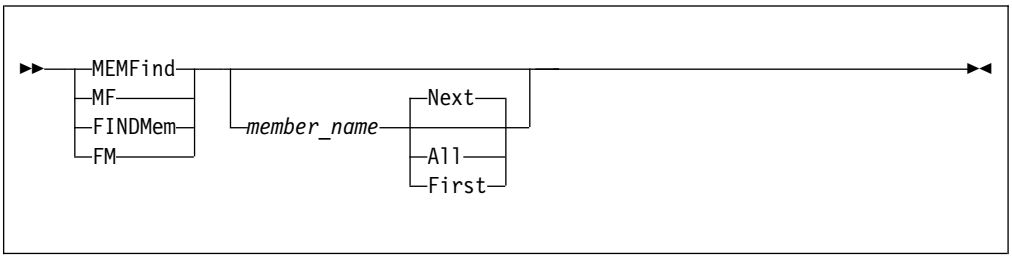
MAPpds is a line command only; it cannot be used as a main command.

For more information about MAPPds, see Chapter 12, “Browsing, viewing, and restoring deleted members of a PDS using the MAP list,” on page 273.

MEMFind command

The MEMFind command locates the first, next, or all libraries in the OLIST that contain the specified member.

Syntax



Operands

member_name
The name of the member, or a generic unrestricted member_name pattern.

Next Search the list for the next library containing the member specified. This is the default.

All Search all libraries for the member specified.

First Search the list in order; stop as soon as a library is found containing the member.

Usage notes

MEMFIND is a main command only; it cannot be used as a line command.

The search starts at the first OLIST entry displayed on the screen.

If no operands are supplied, a menu is displayed for you to specify parameters:

```
-DSC- OLIST (B) ------------ DATA SET HISTORY ----------------- Row 1 to 6 of 6
 C --------------------------- OLIST Find Member --------------------------- R
 H | -DSC-      Cmd ===>                                                    | E
   | The MEMFIND command must be followed by a member name                  | ST*
 T | Specify member name(s) to search within the OLIST libraries:           |
 C | Member name(s) ===>          (Specific name                            | s
 - |                               or unrestricted name pattern             | ---
   |                                                                        |
   | Search scope   ===> 1  1=Start from Olist NEXT entry                   |
   |                        2=Start from Olist FIRST entry                  |
   |                        3=Search ALL Olist entries                      |
   |                                                                        |
   | Exclude failed ===> N  Y/N                                             |
   |                                                                        |
   |     Press ENTER to process or the END key to cancel.                   |
   |                                                                        |
  ------------------------------------------------------------------------
```

If NEXT, FIRST, or ALL is not specified, the search begins with the next item on the current display.

Following a MEMFind, the RFIND command (or the key assigned to RFIND, normally PF5) repeats the last MEMFind (with the operand NEXT assumed).

When the member is found, MEMFind places the member name in the MEMBER field.

When ALL is specified with GLOBAL EXCLUDE(YES) in effect, only matching libraries are displayed.

Examples

```
MEMFIND PAYMAIN
MEMFIND PAYM*
MEMF PAYMAIN FIRST
MEMFIND PAYMAIN NEXT
MEMFIND P* NEXT
MEMF TAX1990 ALL
```

MLIST command

The MLIST command populates the current OLIST with entries from multiple list specifications.

Syntax

Operands

MLIST has no operands.

Usage notes

This command is identical to the “LISTMULT main command” on page 236.

MOVE (PDS only) line command

The MOVE line command moves the specified member or members.

Usage notes

A member or pattern is required.

MOVE can be used as a line command or, when preceded by an item number, as a main command.

This command is passed to MSL for processing; the COPY/MOVE prompt panel is displayed for specification of the target library and other parameters.

Examples

```
Command   Member   Num. Data Set Names/Objects  Volume
--------  -------- ---- ---------------------- ------
MOVE       *          2 'ACCOUNTS.JONES.COBOL'
MOVE       *          3 'ACCOUNTS.TEST.COBOL'   TST001
MOVE       ACCMAIN    4 'ACCOUNTS.TEST.COBOL'
MOVE       PAY*       5 'ACCOUNTS.TEST.COBOL'   TST001
```

MOVEALl line command

The MOVEALl line command moves all members from the nominated data set to a different data set.

Usage notes

You are prompted to specify the target library and like-named member replacement.

The target library must not be one of the currently concatenated libraries.

All present members are moved, regardless of any prior filtering.

Examples

```
MOVEAL
```

OLIST line command

The OLIST line command invokes a temporary OLIST of all items in the current catalog matching the specification.

Usage notes

OLIST can be used as a line command or, when preceded by an item number, as a main command. The first level must be fully qualified. In all other levels, wildcards ("%" and "*") can be used freely.

OLIST is the default process whenever a generic data set specification is selected. The VOLUME field is ignored.

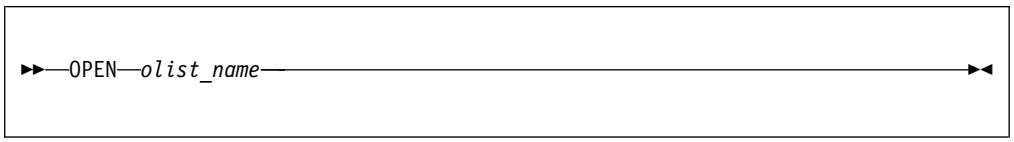
Examples

```
Command   Member   Num. Data Set Names/Objects  Volume
--------  -------- ---- ---------------------- ------
OLIST                 2 'ACCOUNTS.%PAY*.COBOL'
OLIST                 3 'ACCOUNTS.%%TEST.*'     TST001
OLIST                 4 'ACCOUNTS.TEST'
```

OPEN command

The OPEN command switches to another OLIST.

Syntax



Operands

olist_name
The name of the OLIST you want to switch to.

Usage notes

Usually, it is easier to switch to another OLIST by typing over the permanent OLIST name. However, when operating in a temporary OLIST, the Open list field is not visible. This is when the OPEN command is useful.

Examples

```
open ledger1
open payrol
```

OPRINT command

The OPRINT command prints the current OLIST.

Syntax

Operands

OPRINT has no operands.

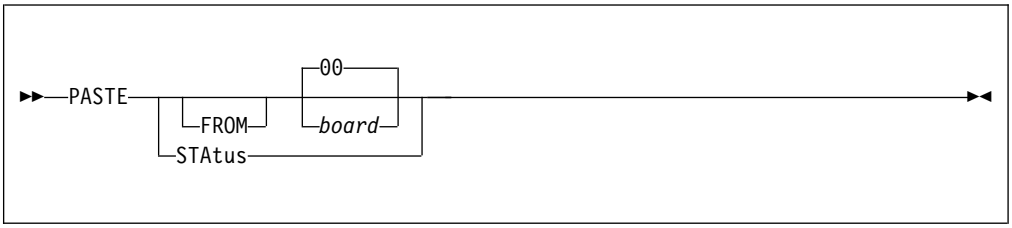
Examples

```
OPRINT
```

PASTE command

The PASTE command attaches the contents of a previously cut OLIST to the end of the current OLIST.

Syntax



Operands

board An integer from 00 to 99 or a name, indicating the clipboard from which the data is to be pasted. If no board is supplied, the default clipboard is 00.

STAtus
Displays clipboard management status.

Usage notes

Use the "CUT command" on page 213 command and the "PASTE command" command to copy lines among different OLISTs.

The selected clipboard must have been created by a previous OLIST CUT command.

Examples

```
PASTE 5
PASTE
```

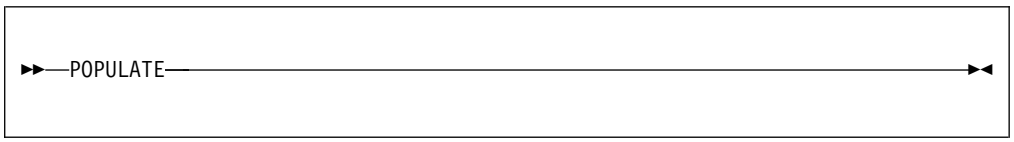
POPULATE command

The POPULATE command accesses a pull-down menu which allows you to select how to populate the current OLIST. This is similar to selecting the Populate option on the Action Bar. From the Populate pull-down menu, you select from nine population options.

The following figure illustrates the POPULATE command prompt menu:

```
   File  Edit  Find  Display  Populate  Settings  Menu  Util  Test  Help  Exit
- +------------ Populate into OLIST -------------+ -------------------------
- | Option ===>                            -DSC- | ------- Row 1 to 53 of 92
C | Select one of the following options:         |          SCROLL ===> CSR
H |     1 - Allocations...                       |
  |     2 - Catalog...                           |      *EXEC*TEMPORARY LIST*
C |     3 - VTOC ...                             |                    Class
- |     4 - Multiple Levels...                   | ------------------ -------
  |     5 - History                              |
  |     6 - Migrated files...                    |
  |     7 - SYSTEM files...                      |
  |     8 - GDG (Generation Data-Groups)...      |
  |     9 - GDS (Generation Data-Sets)...        |
  |    10 - NON-VSAM files...                    |
  |    11 - CLONE files...                       |
  |    12 - TAPE files...                        |
  |    13 - VSAM clusters...                     |
  |    14 - PAGE files...                        |
  |    15 - SMP/E zones...                       |
  |    16 - BOOKMANAGER books...                 |
  |    17 - BOOKMANAGER bookshelves...           |
  |    18 - Paste (from clipboard)               |
  |                                              |
  | Press Enter to process or END to cancel      |
  +----------------------------------------------+
                     18 'SHARE.DSC810.SIQICLIB'
```

Syntax



Operands

POPULATE has no operands.

Examples

```
POPULATE
```

PRINT (PDS or Sequential only) line command

The PRINT line command prints a sequential data set or invokes the MSL PRINT command for a partitioned data set.

Usage notes

A member or pattern may be specified.

PRINT can be used as a line command or, when preceded by an item number, as a main command.

Examples

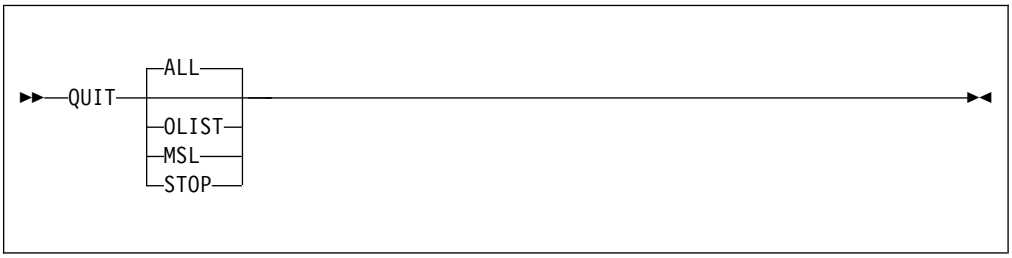
```
Command   Member   Num. Data Set Names/Objects  Volume
--------  -------- ---- ---------------------- ------
PRINT      *          2 'ACCOUNTS.JONES.COBOL'
```

```
PRINT      *          3 'ACCOUNTS.TEST.COBOL'   TST001
PRINT      ACCMAIN    4 'ACCOUNTS.TEST.COBOL'
PRINT      PAY*       5 'ACCOUNTS.TEST.COBOL'   TST001
```

QUIT command

The QUIT command aborts all the nested OLIST and MSL processing in the current split. A QUIT command remains in effect until the primary panel is reached for the split, or command `QUIT STOP` is entered.

Syntax



Operands

ALL Aborts all the nested OLIST and MSL processing in the current split.

OLIST
Aborts the nested OLIST processing in the current split.

MSL Aborts the nested MSL processing in the current split.

STOP Stops aborting the nested OLIST and MSL processing in the current split.

Examples

`QUIT` Aborts all the nested OLIST and MSL processing in the current split.

`QUIT STOP`
Stops aborting the nested OLIST and MSL processing in the current split.

/R line command

The /R command repeats an existing line in the OLIST one or more specified times (presumably for subsequent editing).

Usage notes

/R can only be used as a line command; it cannot be used as a main command.

/R can be used with a number specifying the number of times to repeat the line.

You can overtype the information in the other input fields (MEMBER, DATA SET NAME, VOLUME). The original line remains intact. The cursor is positioned on the first of the newly inserted lines, so that you can select it by pressing the Enter key.

Examples

```
Command   Member   Num. Data Set Names/Objects  Volume
--------  -------- ---- ---------------------- ------
/R                    2 'ACCOUNTS.JONES.COBOL'
/R3                   3 'ACCOUNTS.TEST.COBOL'   TST001
```

REFRESH line command

The REFresh line command refreshes the current OLIST from original parameters.

Usage notes

A **permanent** OLIST is refreshed by reloading its latest stored copy from the OLIST library. A **temporary** OLIST that was created from a given DSN pattern, is refreshed by revisiting the catalog or VTOCs to match the originally specified pattern. A **temporary** OLIST, created from the DSC Data Set History List, is refreshed from the most recent version of that list.

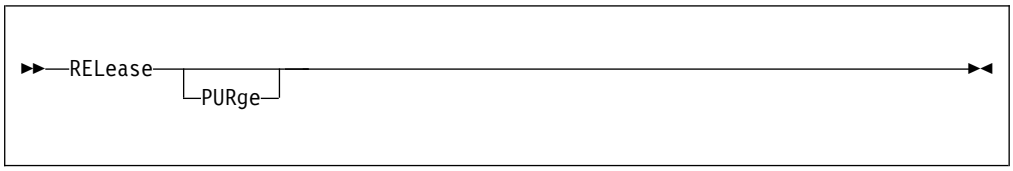
Examples

```
REF
REFRESH
```

RELEASE main command

The RELease main command closes or deletes the current print group.

Syntax



Operands

PURge
When this keyword is specified, the current print group closed and deleted. If the keyword is not specified, the current print group is closed and unallocated.

Usage notes

Current print group is written out to dynamically allocated SYSOUT data set with DD name IQISOUT.

Examples

```
RELEASE
REL PUR
```

RENAME line command

The RENAME line command renames a data set or a member.

Usage notes

RENAME can be used as a line command or, when preceded by an item number, as a main command.

RENAME does not accept a pattern in the member field.

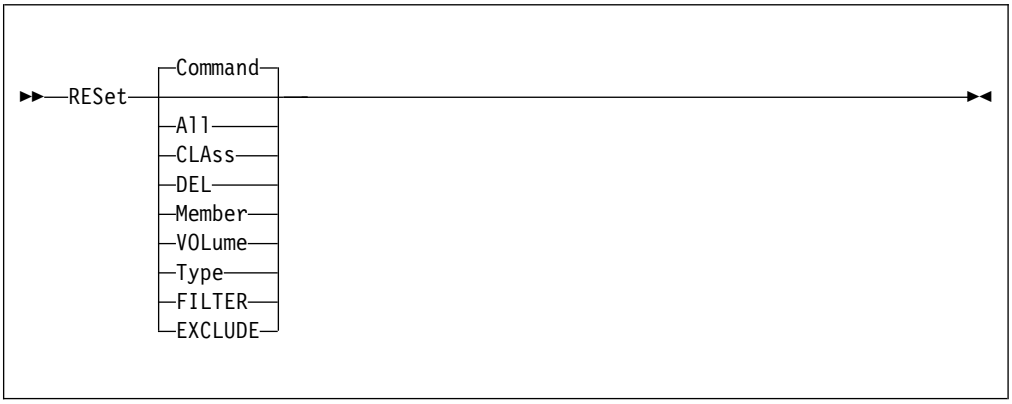
Examples

```
Command   Member   Num. Data Set Names/Objects  Volume
--------  -------- ---- ---------------------- ------
RENAME                2 'ACCOUNTS.JONES.COBOL'
R                     3 'ACCOUNTS.TEST.COBOL'   TST001
R          ACCMAIN    4 'ACCOUNTS.TEST.COBOL'
```

RESet command

The RESet command clears selected (or all) columns in the display and removes the empty lines.

Syntax



Operands

Command
Blank out the Command column. This is the default.

All Blank out the Command column, the Member column, and the Volume or CLass column.

CLAss Blank out the Class column.

Del Following a VALIDATE command, remove from the OLIST entries that contain "*DEL*" in the Class column because they do not correspond to any object in the catalog or on the volume.

Member
Blank out the Member column.

Type Blank out the Class column.

Volume
Blank out the Volume column.

Filter Remove all OLIST filtering.

Exclude
Restore all OLIST excluded objects.

Usage notes

RESet is a main command only; it cannot be used as a line command.

When RESet is issued (with or without operands), empty lines are removed and the entries are renumbered.

If RESet FILTER or RESET X is used, all other parameters stay the same.

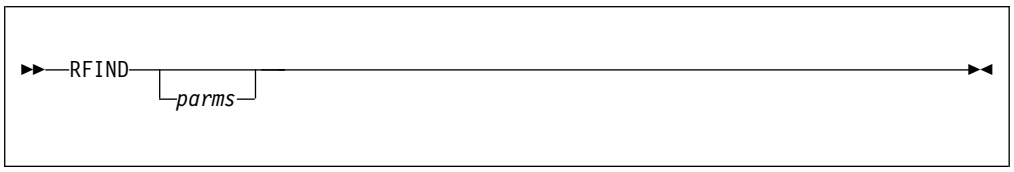
Examples

```
RESET
RES ALL
RESET COMMANDS
RES C
RESET DEL
RES DEL
RES FILTER
RESET MEMBER
RES M
RES X
RESET VOLUME
RESET VOL
```

RFIND main command

The RFIND main command repeats the current FIND, EXCLUDE, FINDTEXT, or MEMFIND command.

Syntax



Operands

parms Any valid operands of OLIST command FIND.

Usage notes

If any of FIND, EXCLUDE, FINDTEXT, or MEMFIND are executed on the current OLIST, only the most recently used is in effect for RFIND.

Command RFIND is usually available via F5 key and is most effective when used without any operands.

When EXCLUDE is in effect, RFIND excludes, from the OLIST display, the next object matching the exclusion criteria.

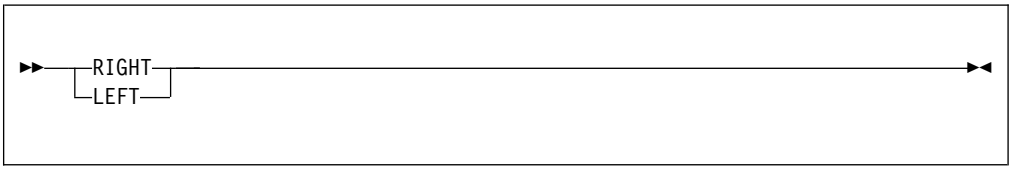
Examples

```
RFIND
```

RIGHT command

The RIGHT command invokes ISPF Data Set List Utility on the object that the cursor is positioned at.

Syntax



Operands

The RIGHT command has no operands.

Usage notes

- Alias of command RIGHT: LEFT.
- The DSLIST main menu is initialized with the object name in the Dsname Level field.
- Instead of entering the command, you can use the function keys:

  PF10 `LEFT`

  PF11 `RIGHT`

S line command

The S line command selects an item and invokes the default process for that item. (The default process depends on the type of object, how OLIST was invoked, and the setting on the Data Set Commander Options panel for OLIST.)

Usage notes

S can be used as a line command or, when preceded by an item number, as a main command.

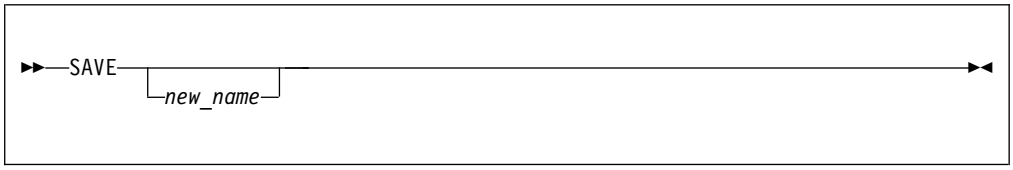
Examples

```
Command   Member   Num. Data Set Names/Objects  Volume
--------  -------- ---- ---------------------- ------
S                     2 'ACCOUNTS.JONES.COBOL'
S                     3 'ACCOUNTS.TEST.COBOL'   TST001
S          PAYMAIN    4 'ACCOUNTS.TEST.COBOL'   TST001
S          PAYM*      5 'ACCOUNTS.TEST.COBOL'   TST001
5 S
```

SAVE command

The SAVE command saves a permanent OLIST under a new name.

Syntax



Operands

new_name
New name of the indicated OLIST.

Usage notes

SAVE is a main command only; it cannot be used as a line command.

If no new-name is specified, the OLIST is saved under the current name.

Examples

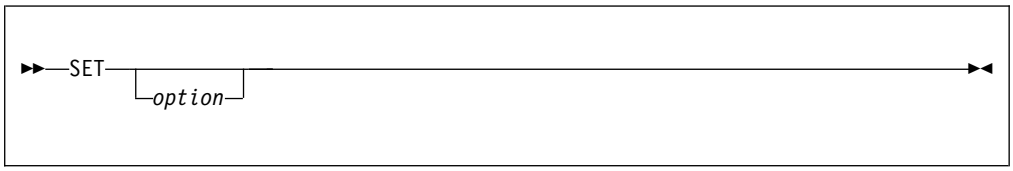
```
SAVE
```

A temporary OLIST can be saved as a permanent OLIST. When saving as a permanent OLIST, you need to rename the OLIST with a new name.

SET command

The SET command can be used to modify default options.

Syntax



Operands

option One of the options that appear on the main menu of command SET, which is shown below:

```
-DSC- --------------------Setting IBMDSC Defaults----------------- End of data
COMMAND ===>

Select options by main command LETTER and/or any CHARACTER line command
               or CURSOR point-and-shoot!

Web link: http://www.ibm.com/software/products/us/en/data-set-commander
 IBMDSC is running under ISPF version 7.2

  _  A - ALL       - Select all the below displayed options
  _  M - MSL       - Member Selection List options
  _  O - OLIST     - Object list options
  _  G - GLOBAL    - Global edit and Findtext options
  _  P - PRINT     - Print options
  _  D - DSLIST    - DSLIST options
  _  T - TSO       - TSO shell options
  _  E - EDIT      - Edit, Browse and View options
  _  I - INTERFACE - Specify user interface options
  _  N - DIAGNOSE  - Diagnose ISPF errors
  _  L - LIBRARY   - Persistent table library options
  _  B - BOOKMGR   - BookManager interface options

    Make your selection and press the ENTER key or press the END key to exit
```

Figure 43. Main menu of command SET: Setting IBMDSC Defaults

Usage notes

The SET command invokes command `DSC SET`. The shortcut of command `DSC SET` is `ISET`.

Examples

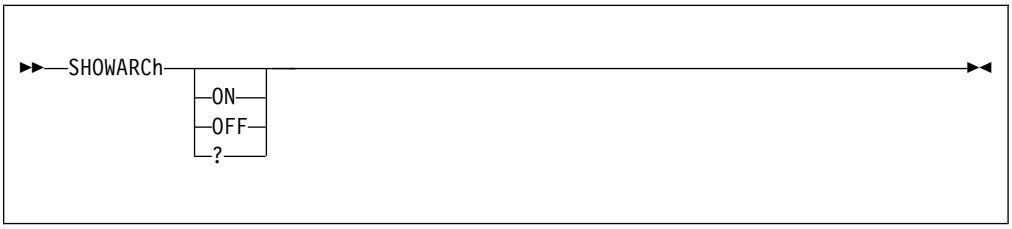
SET MSL
: Displays the Member Selection List options menu, where you can modify the MSL default options.

SET ALL
: Displays the main menu of command SET, where you can select an option for modification.

SHOWARCh command

The SHOWARCh command controls the display of migrated (archived) data sets.

Syntax



Operands

OFF Migrated data sets are initially hidden (excluded) from the OLIST display.

ON Migrated data sets are displayed as usual.

? Displays the current SHOWARCh status.

If no parameter is supplied, the SHOWARCh option toggles between ON or OFF.

Usage notes

The SHOWARCH setting is saved in your PROFILE and stays in effect for all subsequent OLIST displays.

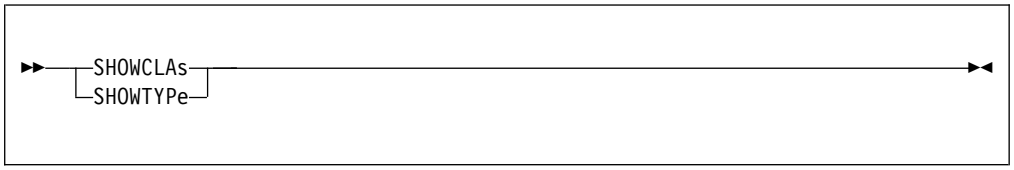
Examples

```
SHOWARCH
SHOWARC OFF
```

SHOWCLAs command

The SHOWCLAs command shows the Class (Type) column in the OLIST display.

Syntax



Usage notes

The OLIST display may include either a Class or Volume column on the right-hand side of the Object name.

Main command SHOWVOL switches back to a Volume display.

Use main command RCHANGE (F6) to toggle between SHOWTYPE and SHOWVOL.

SHOWCLAs is a main command only; it cannot be used as a line command.

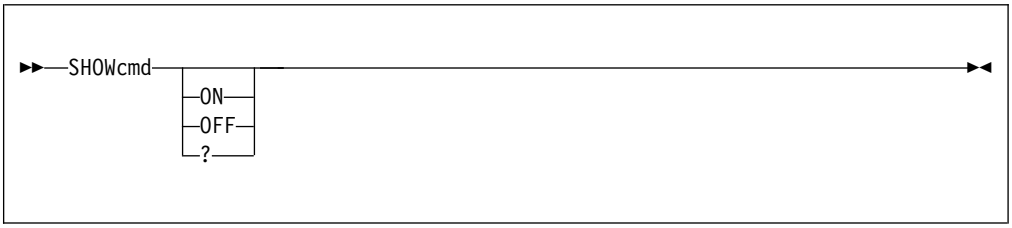
Examples

```
SHOWCLA
SHOWTYPE
```

SHOWcmd command

The SHOWcmd command controls whether TSO commands, REXX EXECs, and CLISTs are to be displayed before execution (so that they can be modified) or are to be executed immediately.

Syntax



Operands

ON TSO commands, REXX EXECs, and CLISTs are to be displayed before execution.

OFF TSO commands, REXX EXECs, and CLISTs are to be executed immediately.

? Display SHOWcmd option setting.

Usage notes

If an operand is omitted, the SHOWCMD option is toggled ON or OFF.

SHOWcmd is a main command only; it cannot be used as a line command.

The SHOWcmd setting is saved in your user PROFILE and stays in effect for all subsequent OLIST displays.

A SHOWcmd ON status is noted with a *SHOW* mark on the OLIST display. A SHOWcmd OFF status is noted with a *EXEC* mark on the OLIST display.

This option is also controlled from the ISPF Productivity Facility Options panels.

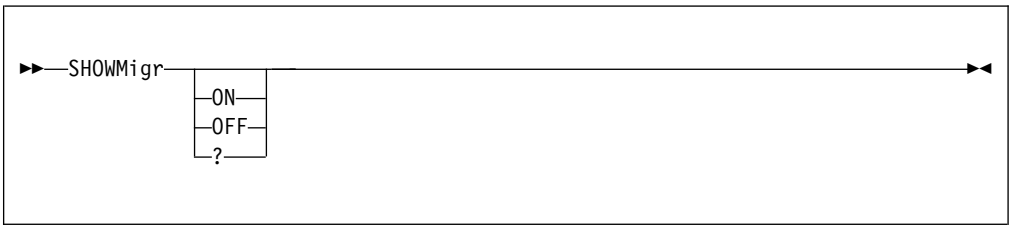
Examples

```
SHOW ON   - TSO commands are displayed before being
            executed on selected object.
SHOW OFF  - TSO commands are executed immediately.
SHOW ?    - Display SHOWcmd option setting.
SHOW      -  Toggle the option ON or OFF
```

SHOWMigr command

The SHOWMigr command controls the display of migrated (archived) data sets.

Syntax



Operands

OFF Migrated data sets are initially hidden (excluded) from the OLIST display.

ON Migrated data sets are displayed as usual.

? Displays the current SHOWMigr status.

If no parameter is supplied, the SHOWMigr option toggles between ON or OFF.

Usage notes

The SHOWMIGR setting is saved in your PROFILE and stays in effect for all subsequent OLIST displays.

Examples

```
SHOWMIGR
SHOWM OFF
```

SHOWVOL command

The SHOWCOL command shows the Volume column in the OLIST display.

Syntax

Usage notes

The OLIST display may include either a Class or Volume column on the right-hand side of the Object name.

Main command SHOWCLAS switches back to a Class display.

Use main command RCHANGE (F6) to toggle between SHOWTYPE and SHOWVOL.

SHOWVOL is a main command only; it cannot be used as a line command.

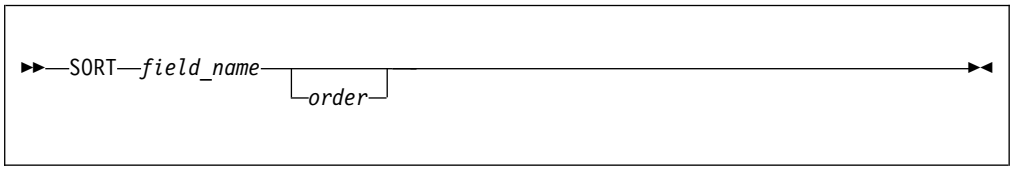
Examples

```
SHOWVOL
```

SORT command

The SORT command sorts the entries in the OLIST.

Syntax



Operands

field_name
The name of an OLIST field: COMMAND, DSNAME, MEMBER, CLASS, or VOLUME.

order The order of sort:

A Ascending: lowest to highest.

D Descending: highest to lowest.

Usage notes

SORT is a main command only; it cannot be used as a line command.

The SORT command ignores a leading quote (or hyphen) in the item name.

Examples

```
SORT DSN
SORT MEMBER
SORT MEMBER D
SORT DSN D MEMBER A
SORT VOLUME
SORT class VOLUME
```

SUBmit line command

The SUBmit line command submits a data set or a member as a batch job.

Usage notes

SUBmit can be used as a line command or, when preceded by an item number, as a main command.

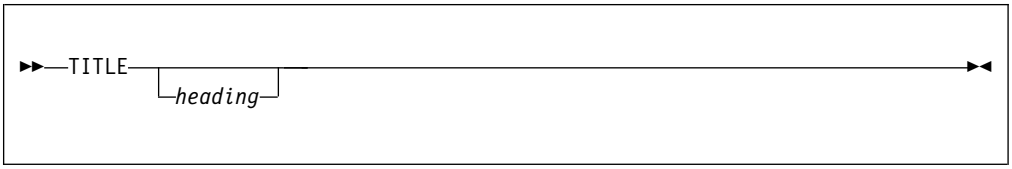
Examples

```
Command   Member   Num. Data Set Names/Objects  Volume
--------  -------- ---- ---------------------- ------
SUBMIT                2 'ACCOUNTS.JONES.COBOL'
SUB                   3 'ACCOUNTS.TEST.COBOL'   TST001
SUBMIT     ACCMAIN    4 'ACCOUNTS.TEST.COBOL'
SUB        PAY*       5 'ACCOUNTS.TEST.COBOL'   TST001
```

TITLE command

The TITLE command gives you the ability to set a permanent OLIST heading.

Syntax



Operands

heading
The heading text (in free form).

Usage notes

TITLE is a main command only; it cannot be used as a line command.

The TITLE command always displays an entry panel to let you modify the OLIST heading before saving it.

The description is saved in the reference list

Examples

```
TITLE My Project
TITLE
```

U line command

The U line command uncatalogs the data set.

Usage notes

U can be used as a line command or, when preceded by an item number, as a main command.

The U command ignores the member name field.

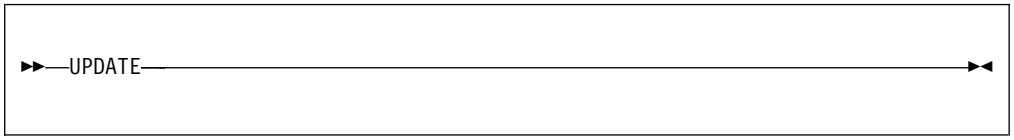
Examples

```
Command   Member   Num. Data Set Names/Objects  Volume
--------  -------- ---- ---------------------- ------
U                     3 'ACCOUNTS.TEST.COBOL'   TST001

3 U
```

UPDate command

The UPDate command invokes the Data Set Commander EDIT panel for extensive editing of the OLIST.

Syntax



Operands

UPDate has no operands.

Usage notes

UPDate is a main command only; it cannot be used as a line command.

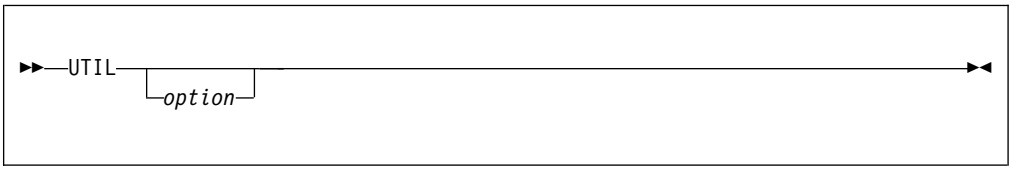
Examples

```
UPDATE
UPD
```

UTIL command

The UTIL command opens a nested level of ISPF option 3 (Utilities). or a suboption of option 3.

Syntax



Operands

option An integer indicating a menu item of option 3.

Usage notes

UTIL is a main command only; it cannot be used as a line command. If no option is supplied, the ISPF Utility Selection panel is displayed.

```
 Menu  Help
------------------------------------------------------------------------------
                           Utility Selection Panel
Option ===>

1  Library     Compress or print data set.  Print index listing.  Print,
                 rename, delete, browse, edit or view members
2  Data Set    Allocate, rename, delete, catalog, uncatalog, or display
                 information of an entire data set
3  Move/Copy   Move, or copy members or data sets
4  Dslist      Print or display (to process) list of data set names.
                 Print or display VTOC information
5  Reset       Reset statistics for members of ISPF library
6  Hardcopy    Initiate hardcopy output
7  Transfer    Download ISPF Client/Server or Transfer data set
8  Outlist     Display, delete, or print held job output
9  Commands    Create/change an application command table
11 Format      Format definition for formatted data Edit/Browse
12 SuperC      Compare data sets                          (Standard Dialog)
13 SuperCE     Compare data sets Extended                 (Extended Dialog)
14 Search-For  Search data sets for strings of data       (Standard Dialog)
15 Search-ForE Search data sets for strings of data Extended (Extended Dialog)
16 Tables      ISPF Table Utility
17 Udlist      Print or display (to process) z/OS UNIX directory list




             ┌------------------------------------------------┐
             |          Press the END key to return to OLIST  |
             <------------------------------------------------┘
```

Figure 44. The Utility Selection panel

Examples

```
UTIL
UTIL 2
```

V line command

The V line command invokes an MSL with a default process of VIEW, or invokes VIEW on a data set or member. The action taken depends on the type of object, as shown below:

TYPE	Member or pattern specification (if any)	Processing
SEQ		View data set
PDS	None	Display MSL of all members with view as default process
PDS	Pattern specified	Display MSL of matching members with view as default process
PDS	Member specified	View member
LIST		Display temporary OLIST of matching items with view as default process
VSAM		View VSAM file (if option installed)
DB2		View Db2 file (if option installed)
USER		View VSAM file (if option installed)
PC		View PC file (if option installed)

Usage notes

V can be used as a line command or, when preceded by an item number, as a main command.

Examples

```
Command   Member   Num. Data Set Names/Objects  Volume
--------  -------- ---- ---------------------- ------
V                     2 'ACCOUNTS.JONES.COBOL'
V                     3 'ACCOUNTS.TEST.COBOL'   TST001
V          ACCMAIN    4 'ACCOUNTS.TEST.COBOL'
V          PAY*       5 'ACCOUNTS.TEST.COBOL'   TST001

4 V
```

VALIDate command

The VALIDate command is used to compare the entries in the OLIST with the current catalog and volume, and to bring them into conformity with the catalog. It marks items on the OLIST that are not in the catalog, and corrects the volume information for those that show the wrong volume. Migrated or archived data sets are indicated.

Syntax

Operands

VALIDate has no operands.

Usage notes

VALIDate is a main command only; it cannot be used as a line command.

Following VALIDate, use the RESET DEL command to remove entries that have the feedback message "-NOT FND-" in the command column because they were not found in the catalog or the volume.

Examples

```
VALIDATE
```

```
  File  Edit  Find  Display  Populate  Settings  Menu  Util  Test  Help  Exit
-------------------------------------------------------------------------------
-DSC- OLIST (B) ----------- Objects List --------------------- Row 1 to 4 of 4
Command    ===>                                              Scroll ===> CSR

Hotbar: OPRINT   REFRESH  CLRVOL   FILLVOL  UTIL     UPDATE   CUT      FLIP
+------------------------------------------------------------------- Assist -+
| NOTE: Enter the "RESET DEL" command to remove items marked as deleted      |
|       (Those with "-NOT FND-" in the COMMAND column)                       |
+-------------------------------------------------------------------------------+
Open list  ===> NEWLIST  (or BLANK for reference list)
TSO PARMS  ===>
Command   Member   NUM  Data Set Names / Objects                        Class
--------- -------- ---- ---------------------------------------------- -------
-NOT FND-             1 'INTT125.CNTL.JCL'                             *DEL*
                     2 'INTT025.SPFE.JCL'                             PDS
                     3 CLIST                                          PDS
                     4 )u/intt125/MYDATA                              OE
                       ---------------- END OF LIST ----------------

                     ┌------------------------------┐
                     | IQIP908  1 item(s) not found |
                     ≪------------------------------┘
```

VF line command

The VF line command invokes a VSAM VIEW function on an OLIST object. The action taken depends on the type of object, as shown below:

TYPE	Member or pattern specification (if any)	Processing
SEQ		Invoke the VSAM editor
PDSe	None	Display MSL of all members with browse as default process
PDSe	Pattern specified	Display MSL of matching members with browse as default process

TYPE	Member or pattern specification (if any)	Processing
PDSe	Member specified	Invoke VSAM editor over member
SCLM	None	Display MSL of all members with edit as default process
SCLM	Pattern specified	Display MSL of matching members with edit as default process
SCLM	Member specified	Invoke ISPF editor over member
SCLM		Same as for SCLM
LIST		Display temporary OLIST of matching items with edit as default process
OLIST		Display permanent OLIST of matching items with edit as default process
VSAM		Edit VSAM file (if option installed)
USER		Invoke the USER-supplied editor (if option installed)

Usage notes

VF can be used as a line command or, when preceded by an item number, as a main command.

The VSAM editor must be first defined during DSC customization via the %IQIWIZRD CLIST. If that is not the case, this command acts like the OLIST VIEW command.

Examples

```
Command   Member   Num. Data Set Names/Objects  Volume
--------  -------- ---- ---------------------- ------
VF                    2 'ACCOUNTS.JONES.COBOL'
VF                    3 'ACCOUNTS.TEST.COBOL'   TST001
VF         ACCMAIN    4 'ACCOUNTS.TEST.COBOL'
VF          PAY*      5 'ACCOUNTS.TEST.COBOL'   TST001
```

/X line command

The /X line command excludes one or more OLIST entries from display.

Usage notes

- The syntax of the /X line command follows the rules of the ISPF EDIT X and XX line commands.
- /X can only be used as a line command; it cannot be used as a main command.
- /X can be used with a number (0 - 999) specifying the number of lines to exclude.
- /X can be used in pairs, in the form /XX, to indicate a block of lines to exclude.
- Command eXclude can be used to accomplish similar results.

Examples

/X Excludes the current entry from display.

/X123 Excludes up to 123 OLIST entries that start with the current entry from display.

XFER line command

The XFER line command accesses a pop-up window to upload or download data sets or workstation files.

You must have an active workstation connection using the ISPF Workstation Client to use this command.

Syntax

Operands

XFER has no operands.

Examples

```
XFER
```

Chapter 11. TSO command shell

Data Set Commander's TSO Command Shell provides a convenient way of entering TSO commands, CLISTs, REXX EXECs, and ISPEXECs from within ISPF. The TSO Command Shell maintains two independent lists: History Command List and Permanent Command List.

Both History Command List and Permanent Command List can store up to 999 commands. You can invoke any command from either list by selecting the number of that list from the TSO Command Shell, or, directly from any ISPF panel without having to display the TSO command processor panel. The commands in History Command List are stored chronologically-- from the most recent to the least recent. Both History Command List and Permanent Command List are remembered across ISPF session.

TSO shell options

Using the command `DSC SET`, you can select the TSO settings. From the TSO Shell Options panel, you are asked to select one of the two options:

- Use the Data Set Commander TSO shell
- Use the standard ISPF TSO shell

When you select the Data Set Commander TSO shell, you can set your panel preference:

- Enter “H” to show History Command List in the Initial screen, or “P” to show Permanent Command List
- Enter “Y” to automatically fill Permanent Command List or History Command List, or “N” without automatic filling
- Enter a number in “Output line number” to display the output of TSO commands

The **Command list limit** field lets you nominate the maximum number of entries to be stored in permanent and history command lists.

Invoking the TSO command shell

You can invoke the TSO Command Shell using one of the following methods:

- From the ISPF main menu, select option 6
- On the command line of any panel, enter the TSO command with a question mark:

  ```
  tso ?
  ```

To exit the TSO Command Shell, press the END key.

TSO shell commands

Data Set Commander TSO Shell has the following commands:

Command	Remarks
`/IS`	Uses standard ISPF/TSO.

Command	Remarks
/H	Displays history command list.
/EH	Edits the history command list.
/EP	Edits the permanent command list.
/SAV	Saves the command list in the library.
/RES	If you did not save your new entries in the library, you can always use this command to restore the command list to its original one.
<c><entry number>	<c> can be a question mark "?", or a slash "/", or can be omitted.

Invoking a command

In the Data Set Commander TSO Command Shell panel, you can invoke the commands on History Command List or Permanent Command List using the following methods:

- Enter a command entry number on the main Command line and press Enter.
- Enter a question mark followed by a command entry number (for example, ?3), and press Enter.
- Move the cursor to a command on Permanent Command List and press Enter.
- Enter a slash and a command number (for example /5), and press Enter. This brings up the whole command to one screen no matter how long the command is.

Note: To avoid redundancy, the command invoked by number is not added to History Command List.

You can also invoke a Data Set Commander TSO command from other panels:

- Enter a command entry number from Permanent Command List, for example TSO 3.
- Use the equal sign to invoke the most recently executed command, for example, TSO =.
- Invoke the TSO Command Shell with a new command on the main Command line, for example:

```
TSO ?ALLOC FILE(INPUT) DA('ACCT.TEST') SHR [ENTER]
```

Adding entries to permanent command list

You can add an entry to Permanent Command List using one of the following methods:

- Type the command directly into the command-line field
- Use the Edit command to "Cut" and "Paste"
- If your "Automatic filling" is set up, you can type a new command in the main command line and press ENTER.

Modifying a command

Before executing a command, you can modify the command. To modify the command, invoke the command first to bring it to the main Command line. Edit the command and press ENTER to execute it. If your Automatic filling is set up, the new command is shown in Permanent Command List.

To ensure that a command is correct before you execute it, you can proceed a command from Permanent Command List with a question mark and bring it to the main Command line. Make appropriate changes if you need to.

Chapter 12. Browsing, viewing, and restoring deleted members of a PDS using the MAP list

The MAP list (member selection list) is reached by entering the OLIST MAPpds line command, or the MSL MAPpds main command.

```
-DSC--PDS-MAP  L2-- TESTUR.TEST.PDS ----------------------ROW 00001 OF 00137
COMMAND  ===>                                               SCROLL ===> PAGE
             *SORT*                                 ON VOLUME C$US02
   NAME    SYNONYM  SEQNUM    TTR DATASIZE BLKNUM RECNUM
           9Z000609     50 000609 00000A00      1
           9Z000607     49 000607 000007D0      1
           9Z000605     48 000605 00000C80      1
           9Z000603     47 000603 00000B40      1
           9Z000601     46 000601 00000A00      1
           9Z00060F     53 00060F 00000B40      1
           9Z00060D     52 00060D 00000A00      1
           9Z00060B     51 00060B 000008C0      1
           9Z000517     45 000517 000007D0      1
           9Z000515     44 000515 000008C0      1
  IQICDEL0               1 00002A 000009B0      1
  IQICDEL1               2 000101 00000EB0      1
  IQICDEL2               3 000103 00000DC0      1
  IQICDEL3               4 000105 00000C80      1
  IQICDEL4               5 000107 00000B90      1
  IQICF001               6 000109 00000BE0      1
  IQICF002               7 00010B 00000BE0      1
  IQICLIP                8 00010D 00000690      1
  IQICLIPS               9 00010F 00000780      1
  IQICOPAS              10 000111 00001B30      1
```

Here is further explanation of some of these columns:

NAME
: This field is blank if the member is a currently-deleted member, otherwise it shows the member name. If a deleted member is restored without supplying the member name, then the SYNONYM value becomes the NAME value.

  When the MAP list is sorted by NAME, then currently deleted members appear at the top of the list (since they have a blank NAME), and members that have been restored without supplying a name are at the bottom of the list (because "9" sorts after letters).

SYNONYM
: This field is blank for current members. If a member has been deleted, then the SYNONYM is the TTR of the member with a leading "9Z". This guarantees a unique synonym.

  When you sort by SYNONYM, the column is sorted in descending order. This means that the most-recently-created deleted member is at the top of the list.

SEQNUM
: This is the default sort order. If you sort by this column, then the "*SORT*" indicator disappears, and the column heading is not highlighted.

TTR The TTR is used as a portion of the SYNONYM for deleted blocks.

RECNUM
This column is only populated when you have browsed or viewed a member.

Main commands available on the MAP list are:

Assist Shows main and line commands available in the MAP list.

EXIT Terminates the member list "MAP mode" display processing.

EXPDIR
Same as the MLS EXPDIR command (see "EXPDIR subcommand" on page 77).

Find Finds a member entry in a PDS MAP list. The syntax is "Find *seqn*" or "Find *name*" where *seqn* is the member entry sequence number. and *name*.

INFO Displays data set information for the library or libraries being processed.

If multiple libraries are concatenated in the member list, side-by-side information is displayed.

REFresh
Refreshes the member selection list from the directory. This is equivalent to the command "DSN = =".

SORT Sorts the entries in the MAP list. See "Sorting members in the MAP list" on page 275 for more information.

UNLock (or DEQ)
Releases exclusive control of a PDS library.

The MAPpds command display attempts to acquire exclusive control in anticipation of a subsequent attempt to restore a deleted member.

Line commands available on the MAP list are:

B Browses a member or range of members.

When used as a line command, browses just this member.

When used as a main command, you can name the member (for example `B IQICDEL0`, or you can nominate a range of members (for example `5-12` to browse the members with the sequence number 5 to the sequence number 12). `B *` browses all members, one at a time.

To stop in the middle of browsing a range of members, enter `QUIT`, and then respond to the message by pressing ENTER.

You can browse deleted members.

After you have browsed (or viewed or edited) a member, the total number of records (RECNUM) is updated.

E Edits a member or range of members. You cannot actually edit a member using E. It acts more like the V command. However, when you view using the E command, you can CUT into a clipboard (see "Enhanced CUT and PASTE" on page 35).

R Restores deleted members. See "Restoring deleted members" on page 275 for more information.

V Views a member. Same as E.

Sorting members in the MAP list

The quick way to sort is to point and shoot a column heading. When you do this, SEQNUM is the second sort key. "*SORT*" above the SYNONYM column indicates that the list is sorted, and the column it is sorted by is highlighted. SEQNUM is the default sort order. If you sort by SEQNUM then the "*SORT" indicator is turned off, and no column is highlighted.

Alternatively, you can enter the SORT main command. You can specify the column (Name, Synonym, SEQnum, Ttr, DATasize, Blknum, Recnum) and order (Ascending, which is the default, or Descending).

Restoring deleted members

The Restore line and main command restores deleted members.

To see which members have been deleted, sort the MAP list by SYNONYM or NAME. Either method places the deleted members (which have a blank NAME and a non-blank SYNONYM) at the top of the list. The only difference is that when you sort by SYNONYM, the most-recently created member is at the top of the list. This is more likely to be a member that you want to restore.

To restore a member so that it has the value of SYNONYM as its NAME, enter the R line command against the entry, or nominate the member in a restore range on the R main command.

Examples:

```
R 5    - restores deleted member with sequence number 5
R 4-7  - restores deleted members with sequence number 4 through 7
R 9-*  - restores deleted members with sequence number 9
         to the end of deleted members
```

If you nominate a range, and the range includes current (not-deleted) members, then the deleted members in the range are restored, but nothing happens to the current members.

If you restore a range of members, you can then sort the MAP list by descending name (`SORT N D`), and the restored members (which have names beginning with "9Z") are displayed at the top of the list. You can now rename them.

To restore a member and give it a name (different from the SYNONYM), enter the line command `R` *`name`* against the entry, or the main command `R` *`sequence_number name`*. The name must be unique.

Note: Deleted members are lost after a COMPRESS.

Restoring deleted members

Chapter 13. Panel Extension Language

The Data Set Commander (DSC) Panel Extension Language (PEL) provides new functionality to the ISPF panel language. PEL is implemented as a dynamic panel preprocessor. PEL reads panel members from the panel library, preprocesses the panel lines, and lets ISPF use the results. Using this technique, PEL provides several advantages:

- Common panel sections can be shared across multiple panels via the include member statement. This facility provides the means to design a common interface (for example, a pull-down menu) that can be used across multiple panels, applications, or the entire ISPF session. With centralization of common panel elements and the ability to change a member and have its effects reflected on all panels, installations benefit from reduced maintenance costs.
- Multiple panel versions can be dynamically generated based upon environmental conditions. With this facility, panels can be created with different lines used for different versions of ISPF, different groups of users, different logon procedures, different programs, and more. These versions can be maintained in the same panel library as they originate from the same source. Here again, installations benefit from reduced maintenance effort.
- Access to new variables not available in the standard panel language without writing code.
- Ability to create panels that co-exist in multiple ISPF environments. For example, while preparing the migration to a new version of ISPF, panel code can be written so that it does not affect users working on the previous version of ISPF, while allowing users who have already migrated to the new version take advantage of new facilities.

Users are provided with the ability to display or hide the action bars on panels.

The following panel uses PEL to display different lines depending on the presence of a pre-allocated DDNAME. It also demonstrates an INCLUDE statement and some PEL assignment statements.

```
)BODY
%--------- LOCALLY WRITTEN UTILITIES -----------
%COMMAND ==>_ZCMD
+Current system:&SYS running MVS &MVS &FMID
%  1 + SMFEXT - Browse SMF extracts
))IF-DDNAME=OPERLIB
%  2 + SCHED  - Scheduling system
))ELSE
%  2 + SDSF   - Display Jobs
))IF-END
%  3 + HDF    - Hardware Definitions
%  X + EXIT   - Return to main menu
)INIT
))INC:SYSVARS
)PROC
 &ZSEL=TRANS(&:ZCMD
             1,'PGM(SMFEXT) PARM(PROMT,PANEL=SMPX12)'
))IF-DDNAME=OPERLIB
             2,'CMD(%SCD01)'
))ELSE
             2,'PGM(SDSF)'
```

```
))END-IF
             3,'CMD(%HDF)'
             x,'EXIT' )
)END
```

The included member SYSVARS contains three lines:

```
))ASSIGN:SYS=SYSID
))ASSIGN:MVS=MVSLEVEL
))ASSIGN:FMID=MVSFMID
```

As you can see, PEL checks for the presence of a preallocated DD name "OPERLIB". If it is present, the menu will contain a job scheduling utility, and if not, it will contain SDSF. On a particular system, the panel could be generated as:

```
)BODY
%--------- LOCALLY WRITTEN UTILITIES -----------
%COMMAND ==>_ZCMD
+Current system:&SYS running MVS &MVS &FMID
%  1 + SMFEXT - Browse SMF extracts
%  2 + SCHED  - Scheduling system
%  3 + HDF    - Hardware Definitions
%  X + EXIT   - Return to main menu
)INIT
&SYS='SYST'
&MVS='SP4.3.0'
&FMID='HBB4430'
)PROC
 &ZSEL=TRANS(&:ZCMD
             1,'PGM(SMFEXT) PARM(PROMT,PANEL=SMPX12)'
             2,'CMD(%SCD01)'
             3,'CMD(%HDF)'
             x,'EXIT' )
)END
```

The panel is displayed as:

```
--------- LOCALLY WRITTEN UTILITIES -----------
 COMMAND ==>_ZCMD
 Current system: SYST running MVS SP4.3.0 HBB4430
   1   SMFEXT - Browse SMF extracts
   2   SCHED  - Scheduling system
   3   HDF    - Hardware Definitions
   X   EXIT   - Return to main menu
```

Statement syntax

PEL statements are identified by right parenthesis in the first and second positions of the panel line.

Comment lines are identified by "))*" beginning in column one. These lines are ignored by ISPF.

Some PEL statements place a dependency on the availability of DSC in the ISPF session. Some may be optional, and provide support for panel elements that are not needed when DSC is not active. To allow use of PEL statements within panels that are sometimes processed outside the DSC environment, the leading left parentheses may be replaced with the tag "/*<<IBMDSC>>" or "/*<<SPFE>>". The alternate tag starts with the standard comment indicator, and is valid for non-BODY sections of the panel.

For example, these two lines provide the identical function:

```
))INC:OPERUTIL

/*<<IBMDSC>>INC:OPERUTIL
```

When PEL statements are evaluated

PEL is a dynamic preprocessor. You need not run a special utility to activate the PEL statements. However, due to panel caching, PEL statements are evaluated the first time the user references a panel. Subsequent displays of the same panel reuse the previous evaluation. For example, after displaying the menu shown in the example above, the menu will show the same information even if the user frees or allocates the OPERLIB DD name. To cause the panel statements to be re-evaluated, perform the same actions as you would if the panel source had changed. For example, run the ISPF session in Dialog Test mode. This is the least recommended method since running under Dialog Test incurs significant overhead.

- Use the DSC panel testing facility to specify that the panel is being tested and should be constantly refreshed. This is a more efficient solution than running under Dialog Test because panel refreshing will occur only for the specified panel. The DSC panel testing facility is activated via the DSCDTEST command shortcut, or by clicking the Test option on the MSL or OLIST action bar and select Panel testing and diagnosis.
- Restart your ISPF session. You need not re-logon.

Assignments

With PEL, you can set dialog variables to values that are not otherwise accessible. For example, you can set a variable to the program name specified in the PGM= statement on the logon procedure.

Each PEL assignment statement generates a single panel assignment statement where the assigned value is a character constant created by DSC at the time the panel is evaluated. For example, the statement:

```
ASSIGN:DEST=TSODEST
```

generates (in a specific installation) the following line:

```
DEST='REMOTE12'
```

Like any other assignment statement, PEL assignment statements are only valid in the sections where ISPF assignment statements are valid.

The following table lists the available assignments:

Table 7. Assignment context

Keyword	Value returned	Notes
APPL	ISPF application ID	Similar to ZAPPLID
CPUID	Current CPUID	CPU serial number
CPUMODEL	Current model	CPU model number
GUI	GUI workstation mode	Returns Y or N (based upon ZGUI variable)
LOGPGM	Logon procedure program	From PGM= statement in LOGON JCL.
MIGSYS	Name of migration system	As specified during DSC customization

Table 7. Assignment context (continued)

Keyword	Value returned	Notes
MIGVOL	Name of migration volume from DSC customization	If none specified, the value from the DELVOL in ISRCONFG is used.
MVSFMID	Current IBM FMID	Example: HBB4430
MVSLEVEL	Current MVS level	Example: SP4.3.0
OPER	Operator authority	From PSCBCTRL. Returns Y or N
PANEL	Name of current panel	Useful in included panels
PGM	Program invoking panel	From SELECT PGM()
SMS	Indicates if SMS is active	Returns Y or N
SMSLEVEL	Current SMS level	
SPFEVER	DSC Version	Four character maintenance version (for example, 5001)
SRC.MGR	Checks which source manager is active (SCLM, or not).	If SCLM activated for user (using DSC customization) returns S, otherwise returns N.
SYSID	The SYSTEMID	From CVTSNAME
TSODEST	Default destination	From PSCBDEST
TSOUNIT	Default allocation unit	From PSCBGPNM
VER	ISPF Version	Similar to part of ZENVIR

Conditional statements

PEL provides a set of conditional statements to allow inclusion or omission of panel lines.

The general structure of the conditional statement block is as follows:

```
    ))IF-CONDITION
(panel statements included if condition is true)
    ))ELSE
(panel statements included if condition is false)
    ))IF-END
```

The `))ELSE` construct is optional, but the `))IF-END` line is required. Up to 8 nested levels of IF statements can be specified.

Testing DSC customization site-wide dialog settings

```
))IF-VAR.DLGV<n>=<c>
```

Where:

<n> One of 1, 2, 3, or 4

<c> A one-character value set during DSC customization to the corresponding PEL managed variable.

Example:

```
    )BODY WIDTH(80) CMD(ZCMD)
    ))IF-VAR.DLGV1=A
    .                    .Corporate Accounting Menu
```

```
))ELSE
))IF-VAR.DLGV1=L
.                    .Corporate Legal Affairs Menu
))ELSE
.                    .Corporate General Menu
))IF-END
))IF-END
```

ISPF version testing

```
))IF-VER<OP>ISPFVERSION
```

Where:

<op> One of the comparison symbols =, <, or >.

ispfversion
A three character specification of the ISPF version being tested.

Example:

```
PROC
.
.
))IF-VER>3.2
     8,'PGM(MYPROG) PARM(A) SUSPEND'
))ELSE
     8,'PGM(MYPROG) PARM(A) '
))IF-END
.
.
)END
```

Since the SUSPEND keyword is only supported on ISPF versions above 3.2, a test is included to pass different statements based on the version of ISPF.

Environment testing

PEL lets you check several environment values to conditionally pass panel lines to ISPF. This feature provides the ability to custom tailor panels for different groups of users based on userid, logon procedure name, the allocation of a DDNAME, or for different programs.

```
))IF-<environment-keyword>=<environment-value>
```

Where:

<environment-keyword>
One of the environment variables.

<environment-value>
The value the environment variable is tested against.

The following table lists the supported environment fields:

Table 8. Environmental keyword context

Environment keyword	Valid environment values	Notes
APPL	current applied	From ZAPPILD
DD	DD name to be tested	True if DD allocated
GUI	Y or N	If running in GUI mode

Table 8. Environmental keyword context (continued)

Environment keyword	Valid environment values	Notes
HOTBAR	Y or N	Set by the user with the SET command (in MSL or PLIST).
LOGPGM	Logon proc program name	From PGM= on the logon JCL
MIGSYS	name of migration system or N/A if none specified	From DSC customization.
MIGVOL	Migration system volser	From DSC customization or ISRCONFG
OPER	Y or N	From PSCBCTRL
PANEL	current panel	Used in included members
PGM	current program	From SELECT PGM()
SECTION	current panel section	Used in included members
SRC.MGR	S or N or Y	If SCLM active for userid (as set by DSC customization), and S is true.
SYSID	System ID	From CVTSNAME
TSODEST	Default destination	From PDSCDEST
TSOUNIT	Default allocation unit	From PSCBGPNM
USERID	Current userid	

For example, assume that you want the system group (which uses the LOG$SYS logon procedure) to have access to a special system utilities menu. You could change the main menu)BODY section to have the following lines:

```
))IF-LOGONPROC=LOG$SYS
    %Y + - SYSTEM UTILITIES
))IF-END
```

Similarly, in the &ZSEL statement on the)PROC section:

```
))IF-LOGONPROC=LOG$SYS
    Y,'PANEL(SYSUTIL)'
))IF-END
```

As another example, assume that you include menu definition lines in an external member called MENUDEF1 that is included from both the main menu (ISR@PRIM) and the utilities menu (ISRUTIL). The following lines can be used in MENUDEF1 to change the description of the X command:

```
))IF-PANEL=ISR@PRIM
    %X  - TERMINATE ISPF USING LOG/LIST DEFAULTS
))ELSE
    %X  - RETURN TO PREVIOUS PANEL
))IF-END
```

Unconditional branching

Two statements allow you to define labels and branch to a label, bypassing lines in between:

```
))JMP:<label>
))LBL:<label>
```

Where:

<label>
An 8 character label (padded with blanks if necessary). Labels have the same syntax rules as member names. They must start with alphabetic, @, $, or #, and be followed by alphanumeric or $, @, #.

Example:

```
))JMP:LABEL1
      %Y + - SYSTEM UTILITIES
      THE ABOVE LINE IS IGNORED
))LBL:LABEL1
```

Note: DSC will ignore all statements up to the first label statement matching the JMP statement label. You can therefore have multiple non-unique labels. The label specified in the JMP statement is searched for in the forward direction only.

Statements between the JMP and the matching LBL pair are never cached.

Including external members

The `))INC:xxxx` statement is used to include external members into the processed panel. Up to eight levels of nesting are allowed.

```
))INC:<member-name>
```

Where:

<member-name>
The name of the member to be included.

Example:

```
))INC:SYSOPT
```

PEL requirements

Panels pre-processed by the ISPF panel preprocessor (ISPPREP) are ignored by PEL. Panels that contain PEL statements cannot be pre-processed by the ISPF preprocessor. The performance penalty of not using the ISPF panel preprocessor is more than offset by the PEL caching mechanism used within DSC.

The panels and referenced members (included members) must reside in the ISPPLIB library. LIBDEFs cannot be used.

The panels must be allocated to the ISPPLIB library using real allocation. Products (such as TSO/PLUS) that simulate real allocation but allocate the library in another address space cannot be used with PEL.

PEL quick reference

Table 9. PEL statement and function summary

Statement	Function
))ASSIGN:variable=KEYWORD	Assign value to variable
))ELSE	IF condition alternative
))IF-APPL=applid	Test for ZAPPLID
))IF-DDNAME=allocatedddname	Test for allocated DD
))IF-END	IF block terminator

Table 9. PEL statement and function summary (continued)

Statement	Function
))IF-GUI=Y-or-N	Test if running in GUI mode
))IF-LOGONPROC=logonproc	Test LOGON PROC name
))IF-OPER=Y or N	Test for operator authority
))IF-PANEL=panel-name	Test displayed panel name
))IF-PGM=program-name	Test SELECT PGM() caller
))IF-TSODEST=destination	Test for destination
))IF-TSOUNIT=unitname	Test for default unit name
))IF-UID=userid Test	TSO USERID
))IF-VAR.DLGV<n>=<c>	Test site-wide dialog variable settings
))IF-VER<v.r	Test ISPF version
))IF-VER=v.r	Test ISPF version
))IF-VER>v.r	Test ISPF version
))INC:member	Include member (with caching)
))JMP:label	Branch to label
))LBL:label	Label definition

Chapter 14. Batch utility IQIBUTIL

This is a brief overview of the DSC Batch Utility, which is intended to help system and application programmers manipulate partitioned and sequential data sets.

Introducing IQIBUTIL

IQIBUTIL is fully compatible with the IBM IEBCOPY utility. It supports all IEBCOPY EXEC PARM options, all input (SYSIN) control statements, and all job control JCL statements. This introduction summarizes the additional functionality that is provided by IQIBUTIL on top of standard IEBCOPY capabilities. Detailed documentation of the standard IEBCOPY user interface is available in "Chapter 3. IEBCOPY (Library Copy) Program" of *IBM z/OS DFSMSdfp Utilities*, SC26-7414.

Conventions

Notational conventions

The notational conventions that are used in this documentation and the Online User Guide follow the same conventions as the DFSMSdfp Utilities book.

Utility control statement syntax conventions

If a comma followed by a blank is found before column 72, IQIBUTIL assumes a control statement continuation. A statement continuation must have at least one blank starting in column 1. The character that is specified in column 72 has no special significance.

The sequential number of each input control statement is printed in the utility output report as a six-digit number that is enclosed within a pair of angle brackets, < >.

Unique functionality of IQIBUTIL

In addition to standard IEBCOPY functions, you can use IQIBUTIL to perform the following tasks:

- Add alias names to members of a partitioned data set.
- Copy one or more members of a partitioned data set, along with their aliases, into another partitioned data set with the same or different record format and length.
- Copy one or more members of a PDSE data set, along with their aliases and member generations, into another PDSE data set with the same or different record format and length.
- Copy one or more members of a partitioned data set and merge them into a sequential data set.
- Copy a sequential data set into another sequential data set with the same or different record format and length.
- Create a DSC-managed list of member titles for a partitioned data set.
- Delete members or member groups of a partitioned data set.
- Delete one or more members of a PDSE data set, along with all their member generations.
- Empty and compress a physical sequential or a partitioned data set.
- Expand the directory of a PDS data set.

- Import the DSC-managed list of member titles from one partitioned data set to another.
- Move members from one partitioned data set into another partitioned or sequential (unload) data set.

  Note: This function deletes all the original members that are successfully copied.
- Print a list of the directory entries of the selected or all member names of one or more concatenated partitioned data sets.
- Print a list of the locations of all member data extents, of existing and deleted members, of a PDS data set.
- Print a list of DSC-managed titles of a partitioned data set.
- Rename members of a partitioned data set.
- Recover the deleted members of a PDS data set.
- Restore the most recent member generation of one or more members of a PDSE data set.

Order of execution

Unlike IEBCOPY, IQIBUTIL first parses and validates all EXEC PARM options and all SYSIN control statements. It also dynamically pre-allocates all data sets specified via OUTDSN and INDSN keyword parameters; for more information, see "Utility control statements syntax" on page 294. IQIBUTIL terminates all further processing upon any syntax error or dynamic allocation failure.

IEBCOPY Utility Compatibility

Direct IQIBUTIL to adhere to the syntax rules of the IEBCOPY utility by specifying PARM=COMPAT. When executing IEBCOPY standard functions such as COPY or COPYGRP, direct IQIBUTIL to do so in a compatible fashion by specifying PARM=PASSTHRU, which means that all pertinent input control statements must adhere to the standard and current IEBCOPY rules.

Note: When IQIBUTIL member name pattern support for PDSE libraries requires a higher z/OS level, it will implicitly assume full compatibility mode (PARM=PASSTHRU).

Note: IQIBUTIL might be used to transparently replace IEBCOPY without making any changes to existing IEBCOPY JCL. See "IQIBUTIL" in Chapter 2 "Data Set Commander installation and customization" in *DSC Installation and Customization Guide*.

Data set dynamic allocation

IQIBUTIL can dynamically allocate any input or output data set specified via INDSN or OUTDSN keyword parameters. Also, certain print (SYSOUT) data sets such as DD(IQIBUPRT) and DD(IQIBUDOC), might be dynamically allocated as needed.

Member name pattern mask support

IQIBUTIL supports two member name pattern characters:

- A wildcard asterisk (*) represents "any string of zero or more characters".
- A wildcard percent sign (%) represents "any single character".

A member name pattern mask can be specified instead of a specific member name in a SELECT or EXCLUDE control statement.

New member name pattern mask support

When a member name pattern mask is specified in a SELECT statement, it can be accompanied by a new name mask with an equal sign (=) meaning "use the original character in the same position".

Non-standard member name support

When MEMRULE=3 option is in effect, non-standard member names and new member names might be specified via the SELHEX and EXCLHEX control statements. See "Example 14: Manipulate non-standard member names" on page 325.

DSC-managed partitioned data set member title list

DSC can maintain an optional persistent list of member titles for a partitioned data set that does not contain load-module members (that is, an undefined record format). This persistent list is stored by DSC in a dedicated member with a site-wide defined member name (such as Z999TITL).

Copying a partitioned or sequential data set into a different record format data set

IQIBUTIL can be used to copy a sequential data set or members of a partitioned data set into a target data set with a different record format.

If the length of the input record is longer than the length of the output record, the input record is truncated.

If the length of the input record is shorter than the length of the output record, the input record is padded with a pad character that you specify.

Copying partitioned data set members into a sequential data set

IQIBUTIL can copy one or more members of a partitioned data set into a single sequential data set. Multiple members are consecutively merged into the output data set.

How IQIBUTIL uses virtual storage for tables and buffers

For all IEBCOPY supported commands, IQIBUTIL uses similar storage resources. For all other functions and enhancements it uses storage above 16 MB line.

When the SIZE= parameter (see the IEBCOPY chapter in *DFSMSdfp Utilities*) is not explicitly specified, IQIBUTIL dynamically calculates the optimal below 16 MB line available storage and implicitly generates an appropriate SIZE= parameter.

Avoiding the need to supply control statements

IQIBUTIL supports the same convention as IEBCOPY for executing the utility without the SYSIN DD input control statements file. When any of the following parameters is specified in the JCL EXEC PARM field, SYSIN is not opened and a corresponding control statement is automatically generated.

- COPYSEQ
- EMPTY
- EXPDIR
- LISTDIR

- MAPPDS
- MOVE
- RECOVER
- RECOVGEN
- TITLEIMP
- TITLEMIG
- TITLELIST

JCL EXEC statement PARM option parameters

IQIBUTIL supports the following EXEC statement PARM keywords in addition to the standard IEBCOPY keywords:

AGE=*age*
Specify this parameter if you wish to direct IQIBUTIL to restrict member selection by most recent update date, stored in the user data of a directory entry containing standard ISPF statistics data. The age value is expressed as number of days relative to the current date (AGE=0).

Note: *age* is a decimal number of up to seven digits, or one of the following keywords:

TODAY (or T) same as AGE=0

DAY (or D) same as AGE=1

WEEK (or W) same as AGE=7

MONTH (or M) same as AGE=31

QUARTER (or Q) same as AGE=93

YEAR (or Y) same as AGE=365

ALLGEN
Specify this parameter if you wish to direct IQIBUTIL to process all selected PDSE member generations, wherever applicable. This option also implies REPLACE for all copied member generations.

CLASS=*class*
This parameter directs IQIBUTIL to use a specific SYSOUT class for any dynamically allocated output report data sets written to DD statements IQIBUPRT and IQIBUDOC. The *class* value may be any valid SYSOUT class character (including "*").

COMPAT
This parameter directs IQIBUTIL to enforce the stricter syntax rules of IEBCOPY.

COPYSEQ (or CQ)
This parameter directs IQIBUTIL to generate a control statement to perform a COPYSEQ operation.

EMPTY
This parameter directs IQIBUTIL to generate a control statement to perform an EMPTY operation.

EXPDIR
This parameter directs IQIBUTIL to generate a control statement to perform an EXPDIR operation.

HELP This parameter directs IQIBUTIL to write a listing of the Online User Guide to the sequential data set specified via IQIBUDOC DD statement.

INDISP=*disp*
You may set a default disposition of a data set that was dynamically allocated via an INDSN= parameter. The *disp* keyword may be OLD or SHR (SHR is the default).

LIST=NO, LIST=YES, LIST=ALL, or LIST=ONLY
Sets the default value for the LIST= operand when it is omitted from a command statement. The default value is YES.

When LIST=ALL is specified, all the other LIST= settings are overridden with LIST=YES and additional messages that pertain to the command execution.

LISTDIR (or DIRLIST or DIR)
If you wish to direct IQIBUTIL to generate a control statement, specify this parameter to make the control statement perform a LISTDIR operation.

MAPPDS (or PDSMAP or MAP)
If you wish to direct IQIBUTIL to generate a control statement, specify this parameter to make the control statement perform a MAPPDS operation.

MAXRC=*n*
When running multiple utility operations, you may set a limit for an acceptable utility step return code. If this limit is reached, all remaining operations are skipped.

Note: *n* is a decimal number of up to 4 digits. A zero value has no effect (same as omitted).

MEMRULE=*n*
You may set the member naming convention rule as follows:

n=1 Accept only member names with upper-case alpha or numeric or national symbol characters.

n=2 Accept, in addition to those included when MEMRULE=1, "_" (X'6D') and "{" (x'C0').

n=3 Accept, in addition to those included when MEMRULE=2, all printable special characters except for: "*", "%", "(", ")", "," (comma), and " " (blank).

Note: The value of *n* cannot be higher than the site-wide DSC customization setting for this rule.

MOVE
This parameter directs IQIBUTIL to generate a control statement to perform a MOVE operation.

NOGEN
Specify this parameter if you wish to direct IQIBUTIL to skip all PDSE secondary member generations.

MOVEGRP
Directs IQIBUTIL to generate a control statement to perform a MOVEGRP operation.

NOGEN
Directs IQIBUTIL to skip all PDSE secondary member generations.

NOSTAMP
Directs IQIBUTIL to perform the following functions:

- When you rename a member, refrain from updating the ISPF statistics and member title.

- When executing a LISTDIR option, skip BIND date-time stamp retrieval.

NUMBER=*n* or N=*n* or NUMBER=ALL or N=ALL
You may set the default number of directory blocks to be used in an EXPDIR operation, or the default number of deleted members to be used in a RECOVER operation. The operand *n* is either "ALL" or a decimal number of up to 6 digits.

Note: The maximum acceptable number of directory blocks (for EXPDIR) is 99.

OUTDISP=*disp*
You may set a default disposition (SHR or OLD) of a dynamically allocated data set via OUTDSN= parameter (see below). The *disp* keyword may be OLD or SHR (SHR is the default).

PAD=*PadChar*
You can set a default pad character for copying records into a file with a longer record length. The value of variable *PadChar* can be expressed in one of the following forms:

c A single printable character.

C'*c***'** A 4-character string where *c* is a single printable character other than a single quotation mark (').

C"*c***"** A 4-character string where *c* is a single printable character other than a double quotation mark (").

X'*hd***'** A 5-character string where *hd* is a valid 2-hexadecimal-digit string.

X"*hd***"** A 5-character string where *hd* is a valid 2-hexadecimal-digit string.

PASSTHRU
Specifying this parameter directs IQIBUTIL to accept only IEBCOPY supported control statements for standard IEBCOPY operations.

Note: This does not apply to IQIBUTIL operations ALIAS, COPYSEQ, DELETE, EMPTY, EXPDIR, LISTDIR, MAPPDS, RECOVER, RECOVGEN, TITLEIMP, TITLEMIG, or TITLELIST.

REPOLDER (or OLDER)
The default member replacement option for INDD= and INDSN= keyword parameters.

RC4NODEL
Specifying this parameter causes IQIBUTIL to set return code X'04' when a DELETE operation fails to delete one or more members.

RECOVER
This parameter directs IQIBUTIL to generate a control statement to perform a RECOVER operation.

STAMP
Directs IQIBUTIL to update the ISPF Modification Date-Time stamp and member title when you rename a member.

Note: This option also implies parameter ALLGEN for all the copied member generations.

TITLEIMP
This parameter directs IQIBUTIL to generate a control statement to perform a TITLEIMP operation.

TITLEMIG
This parameter directs IQIBUTIL to generate a control statement to perform a TITLEMIG operation.

TITLELIST
This parameter directs IQIBUTIL to generate a control statement to perform a TITLELIST operation.

USERID=*userid* **or UID=***userid*
Directs IQIBUTIL to restrict member selection by user ID of the most recent update, stored in the user data of a directory entry containing standard ISPF statistics data.

Note: *userid* is a string of up to 8 characters long. It may he either a distinct user ID or a patterns mask with "*" and "%" wild card characters.

USERKEY=*userkey* **or UKEY=***userkey*
Overrides the user key value that is stored in each title of the target members of TITLEMIG and TITLEIMP operations.

Note: *userkey* is a string that consists of up to 8 printable characters.

JCL EXEC statement PARM option defaults customization

You can customize the default settings of the following EXEC PARM options into member IQIDFLTS by using the IQIWIZRD customization wizard:

- ALLGEN | NOGEN
- LIST={YES | NO | ONLY}
- MEMRULE=*n*
- STAMP | NOSTAMP

JCL DD statements

These DD statements are used by IQIBUTIL in addition to the standard IEBCOPY statements:

IQIBUDFL DD
Defines a partitioned data set that contains the DSC panel definition members.

Member IQIDFLTS of this library contains the DSC site-wide parameter defaults. If member IQIDFLTS is copied into a PARMLIB system library, this DD statement may be omitted.

IQIBUPRT DD
Defines a sequential data set for listing control statements and messages.

This data set may be specified instead of the standard SYSPRINT DD. When both SYSPRINT and IQIBUPRT DDs are omitted (or DUMMY), IQIBUTIL dynamically allocates an IQIBUPRT DD as a SYSOUT data set.

IQIBUDOC DD
Defines a sequential data set for listing IQIBUTIL user guide summary (this report).

When IQIBUDOC is omitted (or DUMMY), it is dynamically allocated as a SYSOUT data set, if PARM=HELP is specified or due to any control statement syntax error.

IQIBUTIL special control statements

IQIBUTIL supports the following major control statements in addition to the standard IEBCOPY statements:

ALIAS
Abbreviation: ALI.

Adds alias names to one or more members of a partitioned data set.

COMPRESS
Compresses a PDS partitioned data set.

COPYSEQ
Abbreviation: CQ.

Consecutively copies one or more members of a partitioned data set into a sequential data set. This command can also be used to copy one sequential data set to another sequential data set with the same or different record format.

DELETE
Abbreviation: DEL.

Deletes one or more members of a partitioned data set.

DELGRP
Deletes one or more member groups of a partitioned data set, along with their PDSE member generations.

EMPTY
Indicates the beginning of a deletion operation of all members of a partitioned data set, followed by a compress operation of the data set (PDS only). This command can also erase all data of a physical sequential data set.

EXPDIR
Expands the directory of a PDS data set.

LISTDIR
Abbreviations: DIR and DIRLIST.

Lists the directory entries of the selected or all member names of one or more concatenated partitioned data sets.

MAPPDS
Abbreviations: MAP and PDSMAP.

Lists locations of all member data extents of the existing and deleted members in a PDS data set.

MOVE
Abbreviation: MV.

Indicates a COPY operation from one partitioned data set to another, and deletes the original members that are successfully copied.

MOVEGRP
Indicates a COPYGRP operation from one partitioned data set to another, and deletes the original members that are successfully copied, along with their PDSE member generations.

RECOVER
Indicates a restoration of a deleted member of a PDS partitioned data set.

RECOVGEN
Abbreviations: GENRECOV, RECOVERGEN, and GENRECOVER.

Indicates a switch between the most recent PDSE secondary member generation and the current primary member version.

RENAME
Abbreviation: REN.

Renames one or more members of a partitioned data set.

TITLECOPY
Copies the selected DSC managed member titles from one partitioned data set to another.

TITLEIMP
Indicates a copy operation of all DSC-managed member titles from one partitioned data set to another.

TITLEMIG
Indicates a conversion operation of a sequential data set (or member) into a DSC-managed persistent member title list of a partitioned data set.

TITLELIST
Indicates a report operation of all DSC-managed member titles of a partitioned data set.

INDSN=
Indicates the beginning of another COPY step similar to the standard INDD= statement.

EXCLHEX
Specifies a member name (16 hexadecimal digits) to be excluded from current operation.

SELHEX
Specifies a member name (16 hexadecimal digits), and optionally a new name, to be included in current operation.

Filtering target member names

To manipulate specific or groups of members, specify the member name filtering criteria in a combination of AGE= and USERID= parameters in a command control statement that is followed by the SELECT and EXCLUDE control statements. The candidate members must first match the specified values of age and user ID before applying the SELECT and EXCLUDE statement filtering criteria.

Member name pattern masks are specified via the MEMBER keyword parameter of a SELECT or EXCLUDE statement following the same syntax convention as for standard member names.
- An "*" (asterisk) represents any string of 0 to 8 characters.
- A "%" (percent sign) represents any single character.

For example, this control statement targets all member names starting with "X" and having "MRO" in character positions 3 to 5:

```
SELECT MEMBER=X%MRO*
```

New member name pattern masks are specified via the MEMBER keyword parameter of a SELECT statement following the same syntax convention as for standard new member names.
- An "=" (equal sign) represents the character in same position in the target member name.

For example, this control statement renames all member names starting with "X" and having "MRO" in character positions 3 to 5, into new names that have "IBM" in positions 3 to 5 and same characters in all other positions.

```
SELECT MEMBER=((X%MRO*,==IBM===))
```

If the new member name mask length is less than 8, longer original member names are truncated.

Member name filter processing rules

A member filter group is defined by a group of SELECT AND EXCLUDE statements. The following general rules apply to the processing of a member filter group:

- If no member name pattern masks are used, you cannot use both a SELECT and EXCLUDE statement in the same filter group.
- A given member name or pattern mask can be used only once per filter group in either a SELECT or an EXCLUDE statement.
- Regardless of the statements order, EXCLUDEd member name pattern masks are processed first, followed by EXCLUDEd specific member names, SELECTed member name pattern masks, and finally by SELECTed specific member names.
- If a member name is not explicitly matching any of the specified filters, it is implicitly excluded if there is at least one SELECTed member name pattern. Otherwise, it is implicitly selected if there is at least one EXCLUDEd member name pattern.
- When operating on member groups, for example, the primary name and its aliases, if at least one name from a member group is explicitly or implicitly selected, the whole member group will be included. If a primary name is explicitly excluded by using an EXCLUDE statement, the whole member group will be excluded.

After processing of a filtered target member group, IQIBUTIL prints out a list of all filter statements that have been found as irrelevant (that is, not affecting the filtering results).

When AGE or USERID parameters apply (LISTDIR function), only members with matching ISPF statistics are eligible for SELECT and EXCLUDE processing.

Record reformatting

Sequential data sets or members of a partitioned data set might be copied into a target data set with a different record format and a different logical record length.

An input data set record that must be copied into a smaller-size output record is truncated accordingly.

An input data set record that must be copied into a larger-size output record is padded with a specified pad character.

The following commands support record reformatting:

- COPYGRP
- COPYGROUP
- COPYSEQ
- MOVEGRP

Record reformatting is only available for the following record formats:

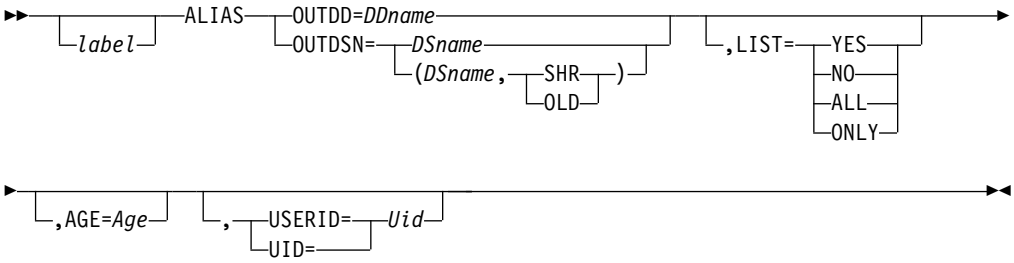
- Fixed blocked or unblocked
- Variable blocked or unblocked

Utility control statements syntax

Here is information about the control statements.

ALIAS

Use the ALIAS (or ALI abbreviation) statement to add alias names to partitioned data set members.



Where:

OUTDD=*DDname*
: Specifies the DDname of the partitioned data set that is to be updated.

OUTDSN={*DSname***|(***DSname***,SHR)|(***DSname***,OLD)}**
: Specifies the DSname of the cataloged partitioned data set that is to be updated. {SHR|OLD} specifies the disposition of the dynamically allocated data set. When this parameter is omitted, the default from the "OUTDISP=" EXEC PARM field applies. When both are omitted "SHR" is used.

LIST={YES|NO}
: Specifies whether the names of the aliased members are to be listed in the SYSPRINT data set. When this parameter is omitted, the default from the EXEC PARM field applies.

LIST=ALL
: Same as LIST=YES with additional member pre-filtering related messages.

LIST=ONLY
: Same as LIST=YES.

AGE=*Age*
: Specifies the maximum number of days since the most recent update date of a member. The value of variable *Age* can be either a decimal number that consists of up to seven digits, or one of the following keywords:

  TODAY or T
  : Same as 0.

  DAY or D
  : Same as 1.

  WEEK or W
  : Same as 7.

  MONTH or M
  : Same as 31.

  QUARTER or Q
  : Same as 93.

  YEAR or Y
  : Same as 365.

USERID=*Uid* **or UID=***Uid*
: Specifies the user ID of the most recent update of a member. The value of variable *Uid* can be either a string that consists of up to seven characters, or a pattern mask.

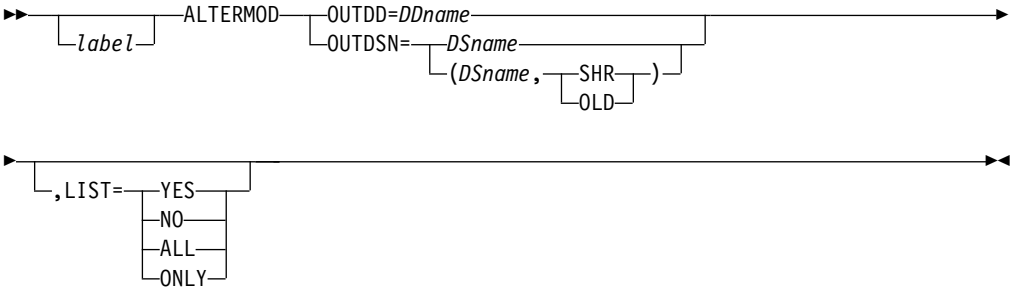
Usage notes for ALIAS:

- Either OUTDD or OUTDSN keywords must be specified, but together they are mutually exclusive.

- The target member group must be specified in one or more SELECT statements following this statement.
- All the MEMBER keyword entries of each SELECT statement must include a new member name parameter which becomes the target alias name.
- ALIAS command is not allowed to operate on a program object member of a PDSE library.

ALTERMOD

The ALTERMOD statement is required to alter load modules in place. ALTERMOD only works with a PDS (not a PDSE).



Where:

OUTDD=*DDname*
: Specifies the DDname of the partitioned data set that is to be altered.

  "O=" is an acceptable abbreviation of "OUTDD=".

OUTDSN={*DSname***|(***DSname***,SHR)|(***DSname***,OLD)}**
: Specifies the DSname of the cataloged partitioned data set that is to be altered.

  "ODS=" is an acceptable abbreviation of "OUTDSN=".

  {SHR|OLD} specifies the disposition of the dynamically allocated data set. When this parameter is omitted, the default from the "OUTDISP=" EXEC PARM field applies. When both are omitted "SHR" is used.

LIST={YES|NO}
: Specifies whether the names of the altered members are to be listed in the SYSPRINT data set. When this parameter is omitted, the default from the EXEC PARM field applies.

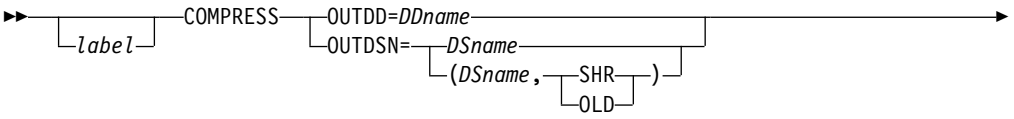
LIST={ALL|ONLY}
: same as LIST=YES.

Usage notes for ALTERMOD:

- Either OUTDD or OUTDSN keywords must be specified, but together they are mutually exclusive.
- The target member group can be specified in one or more EXCLUDE or SELECT statements following this statement.

COMPRESS

Use the COMPRESS statement to compress a PDS data set.



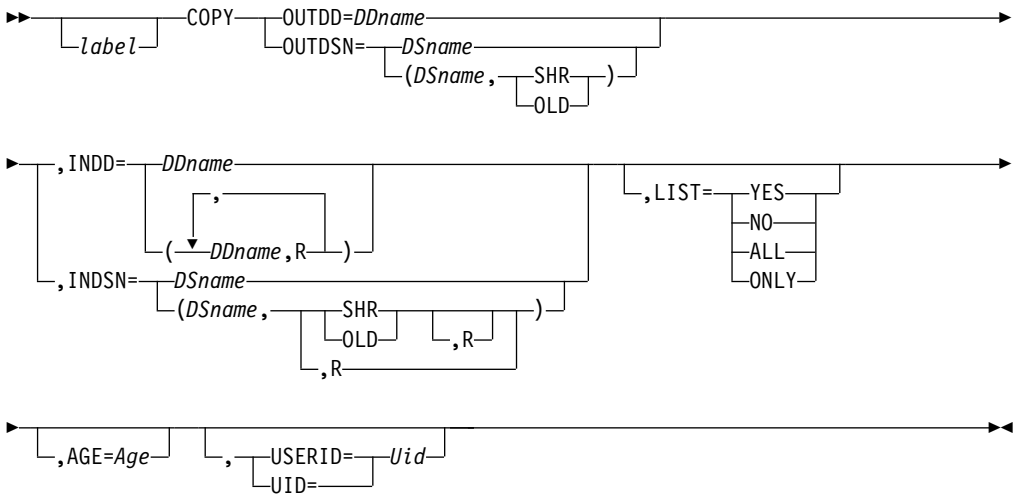
Where:

All keyword parameters have the same syntax as for the COPY statement.

Usage notes for COMPRESS:
- Either OUTDD or OUTDSN keywords must be specified, but together they are mutually exclusive.
- The COMPRESS statement is converted into an equivalent COPY statement for a compress operation.

COPY

The COPY statement is used to begin one or more copy, unload, or load operations.



Where:

OUTDD=*DDname*
Specifies the DDname of the output data set.

"O=" is an acceptable abbreviation of "OUTDD=".

OUTDSN={*DSname***|(***DSname***,SHR)|(***DSname***,OLD)}**
Specifies the DSname of the cataloged output data set.

"ODS=" is an acceptable abbreviation of "OUTDSN=".

{SHR|OLD} specifies the disposition of the dynamically allocated data set. When this parameter is omitted, the default from "OUTDISP=" EXEC PARM field applies. When both are omitted "SHR" is used.

INDD=[(]{*DDname***|(***DDname***,R)}[,...][)]**
Specifies the DDname of an input data set. R specifies that all members to be copied or loaded from this input data set are to replace any identically named members on the output partitioned data set.

"I=" is an acceptable abbreviation of "INDD=".

INDSN={*DSname***|(***DSname***,SHR[,R])|(***DSname***,OLD[,R])|(***DSname***,,R)}**
Specifies the DSname of the cataloged input data set. {SHR|OLD} specifies the disposition of the dynamically allocated data set. When this parameter is omitted, the default from the "INDISP=" EXEC PARM field applies. When both are omitted "SHR" is used.

"IDS=" is an acceptable abbreviation of "INDSN=".

LIST={YES|NO}
Specifies whether the names of the copied members are to be listed in the SYSPRINT data set. When this parameter is omitted, the default from the EXEC PARM field applies.

LIST=ALL
Same as LIST=YES with additional member pre-filtering related messages.

LIST=ONLY
Same as LIST=YES.

AGE=*Age*
Specifies the maximum number of days since the most recent update date of a member. The value of variable *Age* can be either a decimal number that consists of up to seven digits, or one of the following keywords:

TODAY or T
Same as 0.

DAY or D
Same as 1.

WEEK or W
Same as 7.

MONTH or M
Same as 31.

QUARTER or Q
Same as 93.

YEAR or Y
Same as 365.

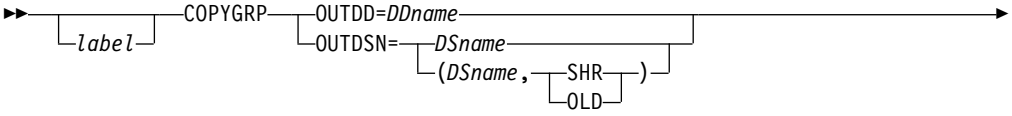
USERID=*Uid* **or UID=***Uid*
Specifies the user ID of the most recent update of a member. The value of variable *Uid* can be either a string that consists of up to seven characters, or a pattern mask.

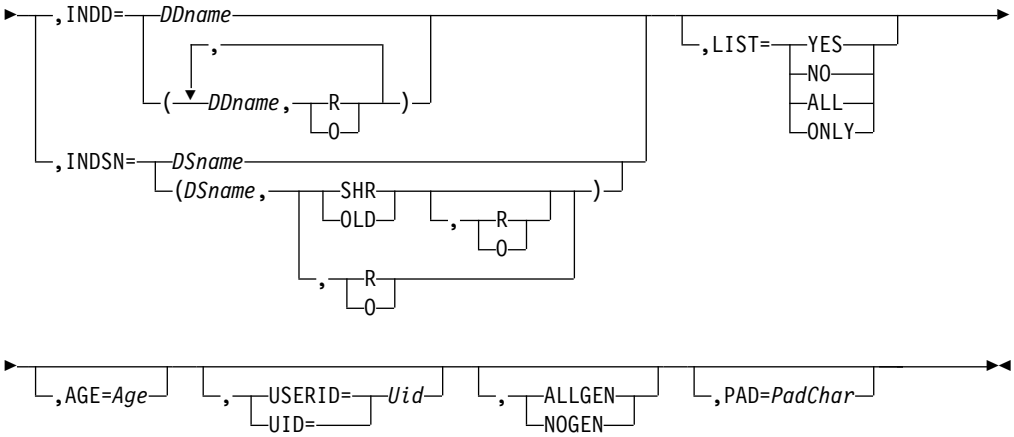
Usage notes for COPY:

- Either OUTDD or OUTDSN keywords must be specified, but together they are mutually exclusive.
- Either INDD or INDSN keywords may be specified, but together they are mutually exclusive.
- An INDD= or INDSN= statement following a COPY statement begins a new step in the current COPY operation.
- The target member group can be specified in one or more EXCLUDE or SELECT statements following one or more INDD and INDSN specifications.

COPYGRP

The COPYGRP statement is used to begin a group copy, unload, or load operation. A group consists of a member and all of its aliases.





Where:

ALLGEN | NOGEN
Specifies whether or not (default) all selected PDSE member generations are to be copied. When this parameter is omitted, the default from the EXEC PARM field applies.

Note: ALLGEN also implies REPLACE for all copied members.

LIST={YES | NO}
Specifies whether the names of the copied members are to be listed in the SYSPRINT data set. When this parameter is omitted, the default from the EXEC PARM field applies.

LIST=ALL
Same as LIST=YES with additional member pre-filtering related messages.

LIST=ONLY
Same as LIST=YES with only successfully copied members messages.

O Specifies that only the target members that are older than the similarly named input members are to be replaced.

PAD=*PadChar*
Specifies the pad character for copying records into a file with a longer record length. The value of variable *PadChar* can be expressed in one of the following forms:

c A single printable character.

C'*c***'** A 4-character string where *c* is a single printable character other than a single quotation mark (').

C"*c***"** A 4-character string where *c* is a single printable character other than a double quotation mark (").

X'*hd***'** A 5-character string where *hd* is a valid 2-hexadecimal-digit string.

X"*hd***"** A 5-character string where *hd* is a valid 2-hexadecimal-digit string.

All other keywords have the same meaning and syntax as for the COPY statement.

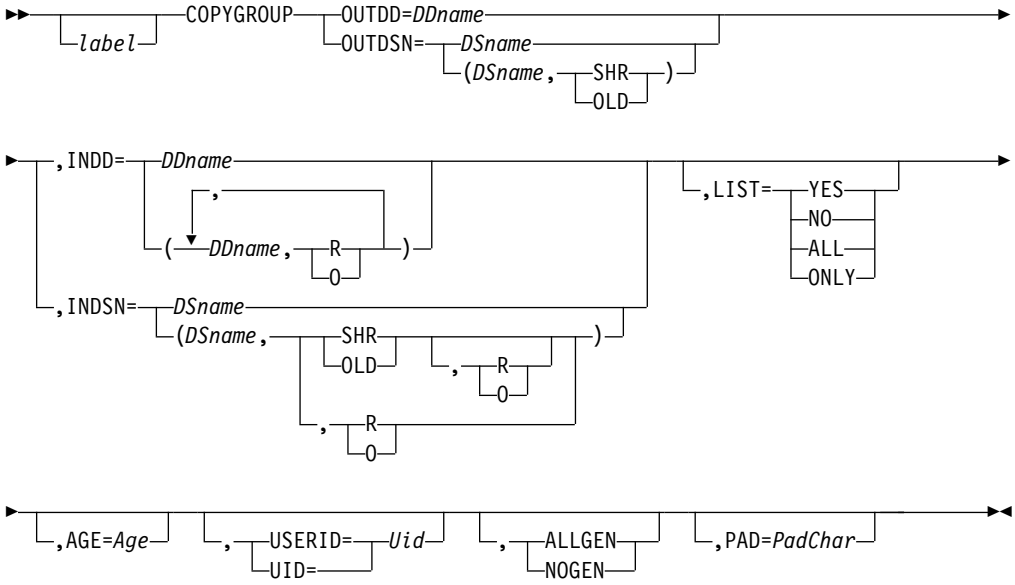
Usage notes for COPYGRP

- The COPYGRP statement can be used to copy member groups from or to a partitioned data set with the same or different record format and record length.

- Either OUTDD or OUTDSN keywords must be specified, but together they are mutually exclusive.
- Only a single input data set is allowed and must be specified via an INDD or INDSN keyword.
- The target member groups can be specified in one or more EXCLUDE or SELECT statements.
- When the COPYGRP statement is used to unload a PDSE data set to a sequential data set, the PDSE member generations are not included.
- When a non-alias primary name is explicitly excluded, the entire member group will not be copied into the target library.
- When the COPYGRP statement is used to copy member groups to a library with a different record format or record length, neither the input nor output library has an undefined or spanned record format.

COPYGROUP

The COPYGROUP statement is used to begin a group copy, unload, or load operation. A group consists of a member, all of its aliases, and all of its PDSE member generations.



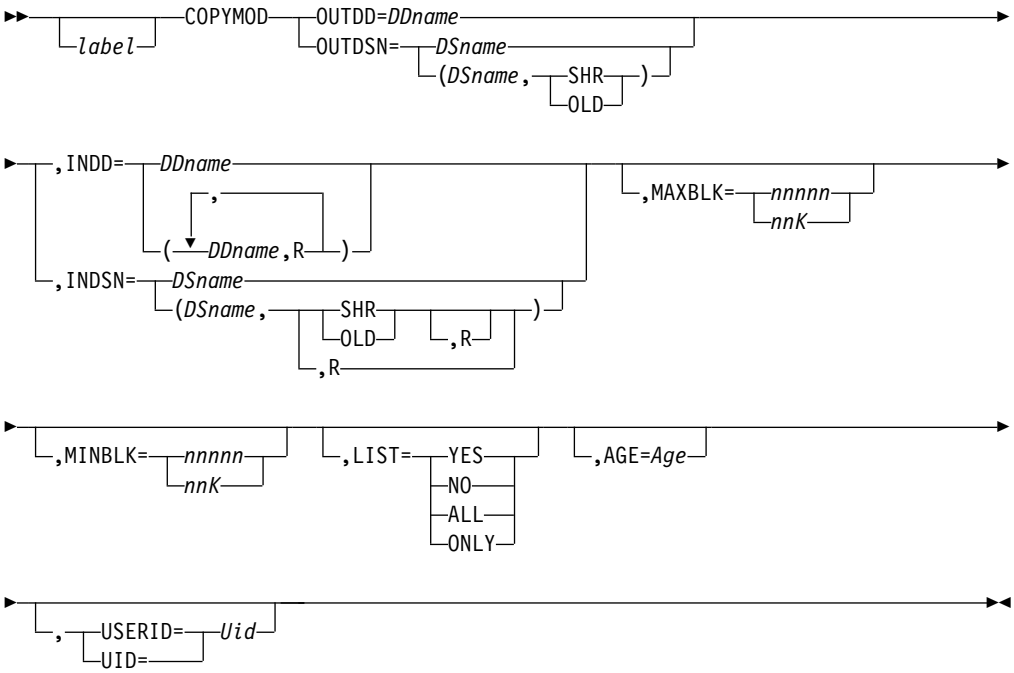
Where all keywords have the same meaning and syntax as for the "COPYGRP" on page 298 statement.

Usage notes for COPYGROUP:

- COPYGROUP operates same as COPYGRP when either the input or output is a PDSE data set. It can also copy, unload, and load just PDS and PS data sets.
- When running in a z/OS level that does not support an IEBCOPY COPYGROUP statement, IQIBUTIL converts it to a COPYGRP statement with identical parameters.

COPYMOD

The COPYMOD statement is used to begin one or more copy, unload, or load operations of load module libraries.



Where:

MAXBLK={*nnnnn* | *nn***K}**
Specifies the maximum block size for records in the output partitioned data set. The *nnnnn* value is specified as a decimal number; K indicates that the *nn* value is to be multiplied by 1024 bytes.

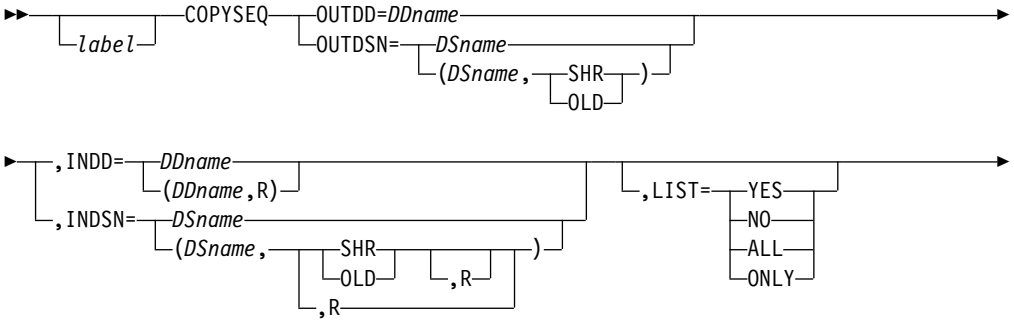
MINBLK={*nnnnn* | *nn***K}**
Specifies the minimum block size for records in the output partitioned data set.

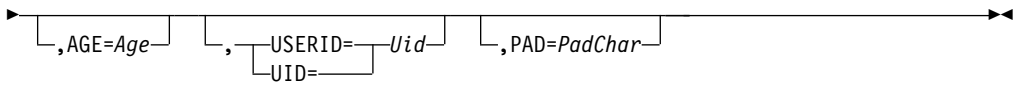
Usage notes for COPYMOD:

- All other keyword parameters have the same meaning and syntax as for the COPY statement.

COPYSEQ

Use the COPYSEQ (or CQ abbreviation) statement to consecutively copy one or more members of a partitioned data set into a physical sequential data set. Use the COPYSEQ statement to copy a physical sequential data set into another sequential data set.





Where:

OUTDD=*DDname*
: Specifies the DDname of the output sequential data set. A JES SYSOUT data set is also acceptable.

OUTDSN={*DSname* **| (***DSname***,SHR) | (***DSname***,OLD)}**
: Specifies the DSname of the cataloged output sequential data set. {SHR | OLD} specifies the disposition of the dynamically allocated data set. When this parameter is omitted, the default from the "OUTDISP=" EXEC PARM field applies. When both are omitted “SHR” is used.

INDD=[(]{*DDname* **| (***DDname***,R)}**
: Specifies the DDname of an input data set. R specifies that the input data set attributes (RECFM, LRECL, BLKSIZE) should be applied to the output data set.

  “I=” is an acceptable abbreviation of “INDD=”.

INDSN={*DSname* **| (***DSname***,SHR[,R]) | (***DSname***,OLD[,R]) | (***DSname***,,R)}**
: Specifies the DSname of the cataloged input data set. {SHR | OLD} specifies the disposition of the dynamically allocated data set. When this parameter is omitted, the default from the “INDISP=” EXEC PARM field applies. When both are omitted “SHR” is used.

  “IDS=” is an acceptable abbreviation of “INDSN=”.

LIST={YES | NO}
: Specifies whether the names of the copied members are to be listed in the SYSPRINT data set. When this parameter is omitted, the default from the EXEC PARM field applies.

LIST=ALL
: Same as LIST=YES with additional member pre-filtering related messages.

LIST=ONLY
: Same as LIST=YES.

PAD=*PadChar*
: Specifies the pad character for copying records into a file with a longer record length. The value of variable *PadChar* can be expressed in one of the following forms:

  c — A single printable character.

  C'*c***'** — A 4-character string where *c* is a single printable character other than a single quotation mark (').

  C"*c***"** — A 4-character string where *c* is a single printable character other than a double quotation mark (").

  X'*hd***'** — A 5-character string where *hd* is a valid 2-hexadecimal-digit string.

  X"*hd***"** — A 5-character string where *hd* is a valid 2-hexadecimal-digit string.

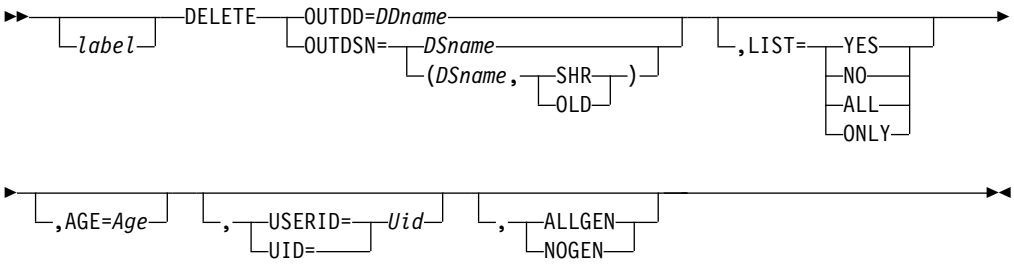
Usage notes for COPYSEQ:

- Either OUTDD or OUTDSN keywords must be specified, but together they are mutually exclusive.
- Either INDD or INDSN keywords must be specified, but together they are mutually exclusive.
- The output data set must be physical sequential or SYSOUT.
- The target member group can be specified in one or more EXCLUDE or SELECT statements following the COPYSEQ statement.
- When the input data set is not partitioned, no SELECT or EXCLUDE statements are allowed to follow the COPYSEQ statement.

- When the input record length is greater than the output record length, the input record will be truncated accordingly.
- When the input record length is less than the output record length, the input record will be padded with a specified pad character; if the pad character is not specified, it is a blank by default.

DELETE

Use the DELETE (or DEL abbreviation) statement to delete one or more members of a partitioned data set.



Where:

OUTDD=*DDname*
: Specifies the DDname of the target partitioned data set.

OUTDSN={*DSname***|(***DSname***,SHR)|(***DSname***,OLD)}**
: Specifies the DSname of the cataloged target partitioned data set. {SHR|OLD} specifies the disposition of the dynamically allocated data set. When this parameter is omitted, the default from the "OUTDISP=" EXEC PARM field applies. When both are omitted “SHR” is used.

LIST={YES|NO}
: Specifies whether the names of the deleted members are to be listed in the SYSPRINT data set. When this parameter is omitted, the default from the EXEC PARM field applies.

LIST=ALL
: Same as LIST=YES with additional member pre-filtering related messages.

LIST=ONLY
: Same as LIST=YES.

AGE=*Age*
: Specifies the maximum number of days since the most recent update date of a member. The value of variable *Age* can be either a decimal number that consists of up to seven digits, or one of the following keywords:

  TODAY or T
  : Same as 0.

  DAY or D
  : Same as 1.

  WEEK or W
  : Same as 7.

  MONTH or M
  : Same as 31.

  QUARTER or Q
  : Same as 93.

  YEAR or Y
  : Same as 365.

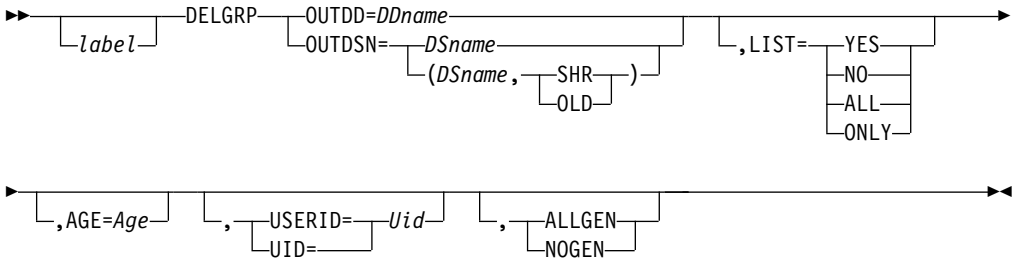
USERID=*Uid* **or UID=***Uid*
Specifies the user ID of the most recent update of a member. The value of variable *Uid* can be either a string that consists of up to seven characters, or a pattern mask.

ALLGEN|NOGEN
Specifies whether or not (default) all selected PDSE member generations are to be deleted. When this parameter is omitted, the default from the EXEC PARM field applies.

Usage notes for DELETE:
- Either OUTDD or OUTDSN keywords must be specified, but together they are mutually exclusive.
- The target member group must be specified in one or more EXCLUDE or SELECT statements following the DELETE statement.
- A new member name or R (replace) parameter is not allowed in the MEMBER keyword parameter of a SELECT statement following the DELETE statement.
- Keyword ALLGEN can be used to delete members and their aliases even when there are no member generations.

DELGRP

Use the DELGRP statement to delete one or more member groups of a partitioned data set. A group consists of a member and all its aliases along with all its PDSE member generations.



Where:

OUTDD=*DDname*
Specifies the DDname of the target partitioned data set.

OUTDSN={*DSname***|(***DSname***,SHR)|(***DSname***,OLD)}**
Specifies the DSname of the cataloged target partitioned data set. {SHR|OLD} specifies the disposition of the dynamically allocated data set. When this parameter is omitted, the default from the "OUTDISP=" EXEC PARM field applies. When both are omitted “SHR” is used.

LIST={YES|NO}
Specifies whether the names of the deleted members are to be listed in the SYSPRINT data set. When this parameter is omitted, the default from the EXEC PARM field applies.

LIST=ALL
Same as LIST=YES with additional member pre-filtering related messages.

LIST=ONLY
Same as LIST=YES.

AGE=*Age*
Specifies the maximum number of days since the most recent update date of a member. The value of variable *Age* can be either a decimal number that consists of up to seven digits, or one of the following keywords:

TODAY or T
Same as 0.
DAY or D
Same as 1.
WEEK or W
Same as 7.
MONTH or M
Same as 31.
QUARTER or Q
Same as 93.
YEAR or Y
Same as 365.

USERID=*Uid* **or UID=***Uid*
Specifies the user ID of the most recent update of a member. The value of variable *Uid* can be either a string that consists of up to seven characters, or a pattern mask.

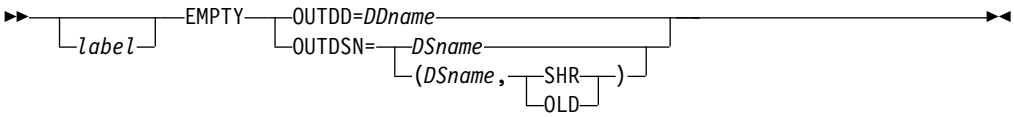
ALLGEN|NOGEN
Specifies whether or not (default) all selected PDSE member generations are to be deleted. When this parameter is omitted, the default from the EXEC PARM field applies.

Usage notes for DELGRP

- DELGRP target member names follow the same rules as COPYGRP target member names.
- The target member groups can be specified in one or more EXCLUDE or SELECT statements.
- When a non-alias primary name is explicitly excluded, the entire group will not be deleted from the target library.

EMPTY

Use the EMPTY statement to delete all members of a partitioned data set or to erase all data of a physical sequential data set.



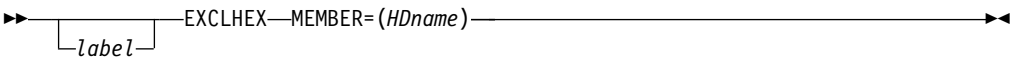
Where:

All keyword parameters have the same syntax as for the DELETE statement.

Usage notes for EMPTY:
- Either OUTDD or OUTDSN keywords must be specified, but together they are mutually exclusive.
- An EMPTY operation of a PDS data set also automatically triggers a COMPRESS operation after removing all members of the data set.

EXCLHEX

The EXCLHEX statement specifies a single member name to be excluded from the current operation.



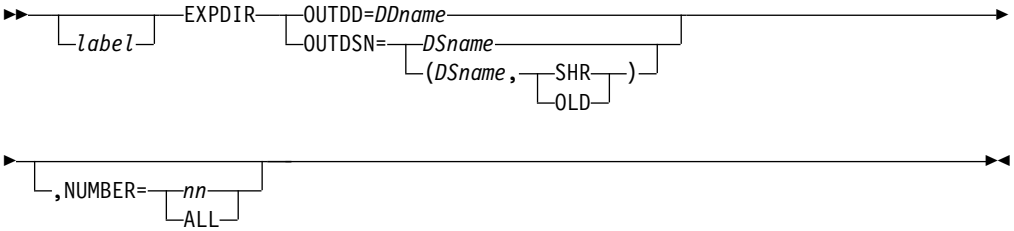
Where:

MEMBER=(*HDname***)**
Specifies a 16 hexadecimal digits of a member name to be excluded from input data set.

Usage notes for EXCLHEX:
- This statement should be used, instead of an EXCLUDE statement, for manipulating non-standard member names.
- The MEMBER parameter must be enclosed in a single set of parentheses.

EXPDIR

Use the EXPDIR statement to expand the directory of a PDS data set with one or more directory blocks.

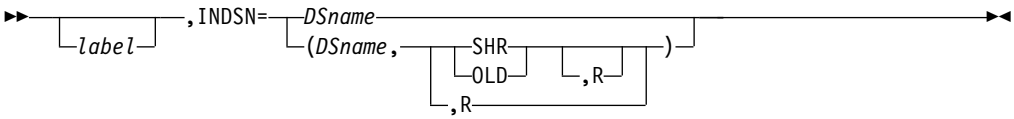


Where:
OUTDD=*DDname*
Specifies the DDname of the target PDS data set.
OUTDSN={*DSname***|(***DSname***,SHR)|(***DSname***,OLD)}**
Specifies the DSname of the cataloged target PDS data set. {SHR|OLD} specifies the disposition of the dynamically allocated data set. When this parameter is omitted, the default from the "OUTDISP=" EXEC PARM field applies. When both are omitted “SHR” is used.
NUMBER={*nn***|ALL}**
Specifies the number of directory blocks to be added to the partitioned data set directory. The *nn* value is specified as a decimal number between 0 and 99 or the word ALL. A 0 is treated as an omitted parameter. ALL is interpreted as 99 directory blocks. When this parameter is omitted, the default from the “NUMBER=” EXEC PARM field applies. When both are omitted, one directory block is added.

Usage notes for EXPDIR:
- A PDS directory cannot be expanded beyond the first extent of the data set.
- The EXPDIR statement does not support the undefined or spanned record format.

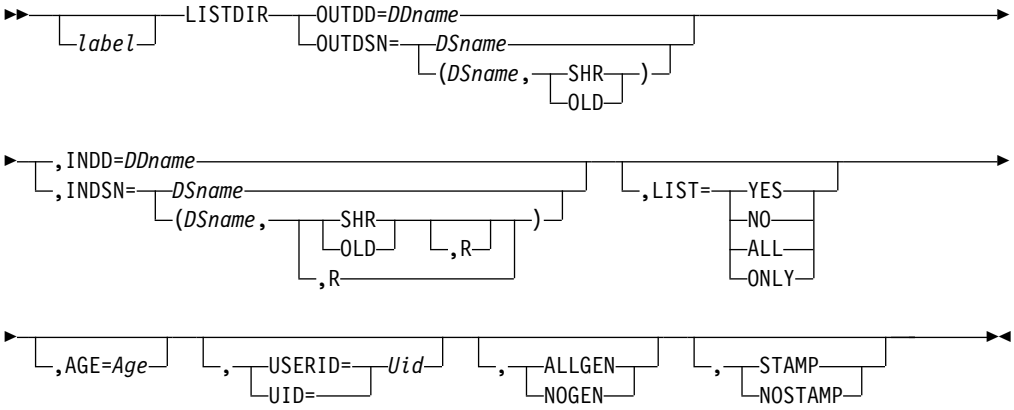
INDSN=

Use the INDSN= (or IDS= abbreviation) statement in all cases where an INDD= (or I= abbreviation) statement may be used.



LISTDIR

Use the LISTDIR (or DIRLIST or DIR) statement to print a listing of the directory entries of selected (or all) member names of one or more concatenated partitioned data sets.



Where:

OUTDD=*DDname*
: *DDname* specifies the ddname of a physical sequential output data set. "O=" is an acceptable abbreviation of "OUTDD=". A JES SYSOUT data set is also acceptable.

OUTDSN=[*DSname* **| (***DSname*,**SHR) | (***DSname*,**OLD)]**
: *DSname* specifies the dsname of the cataloged output sequential data set. {SHR | OLD} specifies the disposition of the dynamically allocated data set. When this parameter is omitted, the default from the "OUTDISP=" EXEC PARM field applies. When both are omitted "SHR" is used.

LIST=[YES | NO]
: Specifies whether the ISPF statistics or load module attributes should be included in the output listing. When this parameter is omitted, the default from the EXEC PARM field applies.

LIST=ALL
: Same as LIST=YES with additional member pre-filtering related messages.

LIST=ONLY
: Same as LIST=YES.

AGE=*Age*
: Specifies the maximum number of days since the most recent update date of a member. The value of variable *Age* can be either a decimal number that consists of up to seven digits, or one of the following keywords:

  TODAY or T
  : Same as 0.

  DAY or D
  : Same as 1.

WEEK or W
Same as 7.

MONTH or M
Same as 31.

QUARTER or Q
Same as 93.

YEAR or Y
Same as 365.

USERID=*Uid* **or UID=***Uid*
Specifies the user ID of the most recent update of a member. The value of variable *Uid* can be either a string that consists of up to seven characters, or a pattern mask.

ALLGEN|NOGEN
Specifies whether or not (default) all selected PDSE member generations are to be listed. When this parameter is omitted, the default from the EXEC PARM field applies.

All remaining keywords have the same meaning and syntax as for the COPY statement.

ISPF statistics output record layout:

```
columns 1  to 1  - carriage control character (blank)
columns 2  to 9  - member name
columns 11 to 13 - library concatenation number
columns 15 to 16 - version level
columns 17 to 17 - dot character separator
columns 18 to 19 - modification level
columns 21 to 30 - creation date (YYYY/MM/DD)
columns 32 to 41 - modification date (YYYY/MM/DD)
columns 43 to 47 - modification time (HH:MM)
columns 49 to 56 - number of current records
columns 58 to 65 - number of initial records
columns 67 to 74 - number of modified records
columns 76 to 83 - userid of most recent update
columns 85 to 89 - PDSE member relative generation number
columns 91 to 98 - PDSE member absolute generation number (hexadecimal)
```

Load module attributes output record layout:

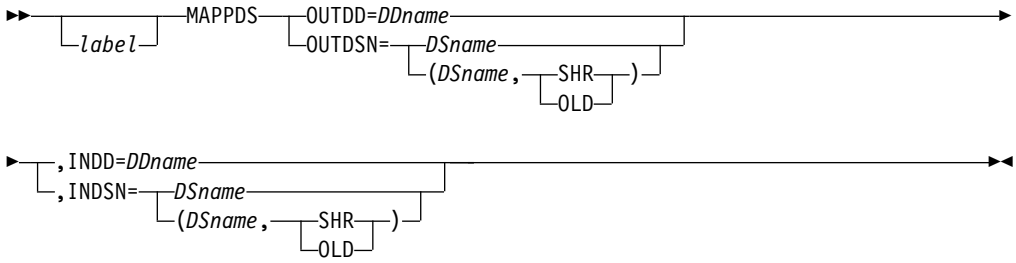
```
columns   1 to   1 - carriage control character (blank)
columns   2 to   9 - member name
columns  11 to  13 - library concatenation number
columns  15 to  22 - load module size (hexadecimal)
columns  24 to  29 - entry point location TTR(hexadecimaL)
columns  31 to  38 - "alias of" member name
columns  40 to  49 - BIND date (YYYY/MM/DD)
columns  51 to  55 - BIND time (HH:MM)
columns  57 to  58 - apf authorization code
columns  60 to  62 - addressing mode
columns  64 to  66 - residency mode
columns  68 to  75 - ssi data (hexadecimal)
columns  77 to  80 - reentrant attribute
columns  82 to  85 - reuse attribute
columns  87 to  90 - refreshable attribute
columns  92 to  95 - only loadable attribute
columns  97 to 100 - page boundary attribute
columns 102 to 105 - not executable attribute
```

Usage notes for LISTDIR:

- The layout of each output record is described in the SYSPRINT report of the utility.
- LISTDIR may be used to simulate the selection results of a group of SELECT and EXCLUDE statements, before specifying it to an actual member manipulation command such as COPY or DELETE.
- LISTDIR accepts a concatenation of multiple input partitioned libraries, specified via any valid combination of INDD and INDSN keyword parameters.

MAPPDS

Use the MAPPDS (or PDSMAP or MAP) statement to print a listing of locations and sizes of all member data extents, of existing and deleted members, of a PDS data set.



Where:

OUTDD=*DDname*
: *DDname* specifies the ddname of a physical sequential output data set. “O=” is an acceptable abbreviation of “OUTDD=”. A JES SYSOUT data set is also acceptable.

OUTDSN=[*DSname***|(***DSname***,SHR)|(***DSname***,OLD)]**
: *DSname* specifies the dsname of the cataloged output sequential data set. {SHR|OLD} specifies the disposition of the dynamically allocated data set. When this parameter is omitted, the default from the "OUTDISP=" EXEC PARM field applies. When both are omitted "SHR" is used.

INDD=*DDname*
: *DDname* specifies the ddname of a PDS partitioned data set.

INDSN=[*DSname***|(***DSname***,SHR)|(***DSname***,OLD)]**
: *DSname* specifies the dsname of a cataloged PDS partitioned data set. {SHR|OLD} specifies the disposition of the dynamically allocated data set. When this parameter is omitted, the default from the "INDISP=" EXEC PARM field applies. When both are omitted "SHR" is used.

PDS member data map output record layout:

```
columns 1  to 1  - carriage control character (blank)
columns 2  to 9  - member data extent sequence number
columns 11 to 13 - library concatenation number
columns 15 to 22 - existing member name
columns 24 to 31 - deleted member synonym name
columns 33 to 38 - member data location TTR (hexadecimal)
columns 40 to 47 - member data total size (hexadecimal)
columns 49 to 54 - member data number of blocks
```

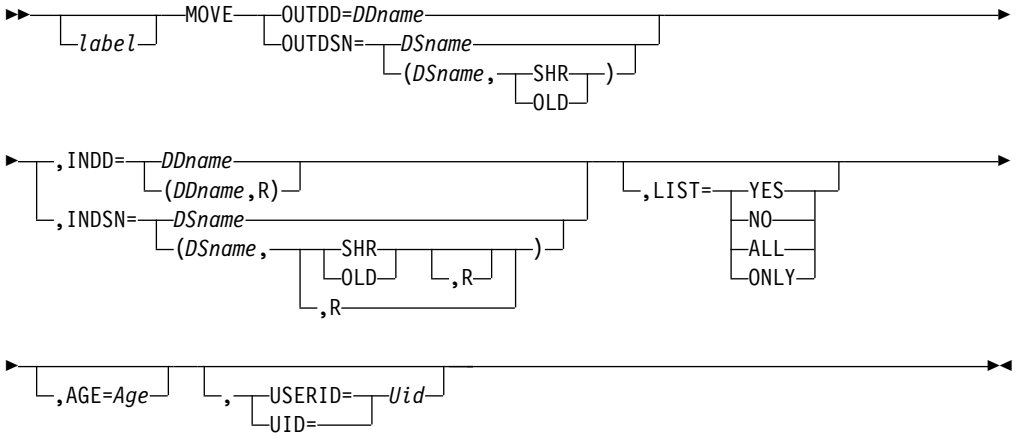
Usage notes for MAPPDS:

- The layout of each output record is described in the SYSPRINT report of the utility.

- Either OUTDD or OUTDSN keywords must be specified, but together they are mutually exclusive.
- Either INDD or INDSN keywords must be specified, but together they are mutually exclusive.
- This command may be used to simulate the results of a RECOVER operation against the input PDS library.

MOVE

The MOVE statement is used to begin a copy or unload operation of one or more members of a partitioned data set, followed by a deletion of all successfully copied members in the input data set.



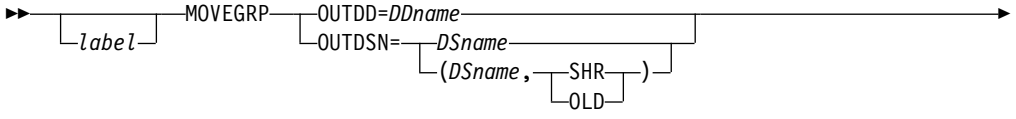
Where all keywords have the same meaning and syntax as for the COPY statement.

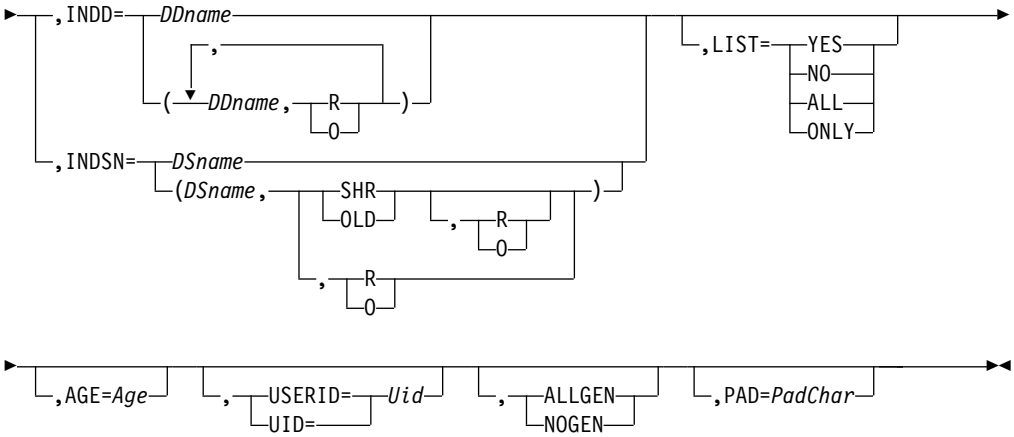
Usage notes for MOVE:

- MOVE automatically triggers the RC4NOREP EXEC PARM option, as well as a DELETE statement, with identical member filtering, against the input partitioned data set of the MOVE statement.
- Either OUTDD or OUTDSN keywords must be specified, but together they are mutually exclusive.
- Only a single input data set is allowed and must be specified via an INDD or INDSN keyword.
- The target member groups can be specified in one or more EXCLUDE or SELECT statements.

MOVEGRP

The MOVEGRP statement is used to copy or unload a group, and delete all successfully copied members in the input data set. A group consists of a member and all of its aliases.





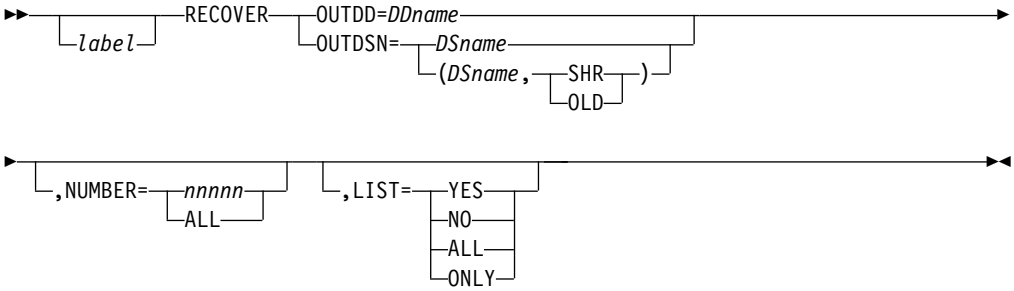
Where all keywords have the same meaning and syntax as for the COPYGRP statement.

Usage notes for MOVEGRP

- The MOVEGRP statement triggers the RC4NOREP EXEC PARM option and DELGRP statement with identical member filtering against the input partitioned data set.
- Either one of keywords OUTDD and OUTDSN must be specified. If both of the keywords are specified, they are mutually exclusive.
- Only a single input data set is allowed, and it must be specified via the INDD or INDSN keyword.
- The target members can be specified in one or more EXCLUDE or SELECT statements.

RECOVER

Use the RECOVER statement to recover deleted members of a PDS data set.



Where:

OUTDD=*DDname*
: Specifies the DDname of the target PDS data set.

OUTDSN={*DSname***|(***DSname***,SHR)|(***DSname***,OLD)}**
: Specifies the DSname of the cataloged target PDS data set. {SHR|OLD} specifies the disposition of the dynamically allocated data set. When this parameter is omitted, the default from the "OUTDISP=" EXEC PARM field applies. When both are omitted “SHR” is used.

NUMBER={*nnnnn***|ALL}**
: Specifies the number of deleted members to be recovered. The *nnnnn* value is specified as a decimal number between 0 and 99999 or the word ALL. A

0 is treated as an omitted parameter. ALL applies to all deleted members. When this parameter is omitted, the default from the "NUMBER=" EXEC PARM field applies. When both are omitted, one deleted member is recovered.

LIST={YES|NO}
Specifies whether the names of the recovered members are to be listed in the SYSPRINT data set. When this parameter is omitted, the default from the EXEC PARM field applies.

LIST=ALL
Same as LIST=YES with additional member pre-filtering related messages.

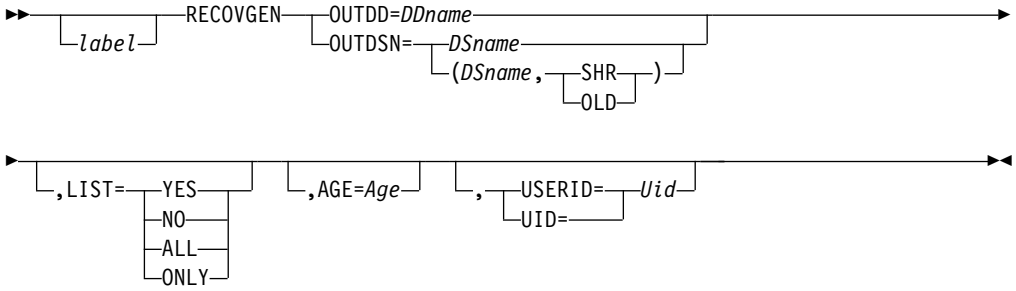
LIST=ONLY
Same as LIST=YES.

Usage notes for RECOVER:

- Either OUTDD or OUTDSN keywords must be specified, but together they are mutually exclusive.
- Previously deleted members cannot be recovered after a COMPRESS operation.
- The recovery process is performed by order of most recently saved (and deleted) members.
- Each recovered member gets an 8 character name of the format <9Z*tttttt*; where *tttttt* is a 6 digit (hexadecimal) location address (i.e., TTR) of the first data block of the member.
- Recovered members can be subsequently manipulated like any other members in the PDS data set.

RECOVGEN

Use the RECOVGEN statement to switch between most recent PDSE member generation and its primary version.



Where:

OUTDD=*DDname*
DDname specifies the ddname of the target PDSE library data set.

OUTDSN=[*DSname***|(***DSname***,SHR)|(***DSname***,OLD)]**
DSname specifies the dsname of the cataloged target PDSE library data set. {SHR|OLD} specifies the disposition of the dynamically allocated data set. When this parameter is omitted, the default from the "OUTDISP=" EXEC PARM field applies. When both are omitted "SHR" is used.

LIST={YES|NO}
Specifies whether the names of the recovered member generations are to be listed in the SYSPRINT data set. When this parameter is omitted, the default from the EXEC PARM field applies.

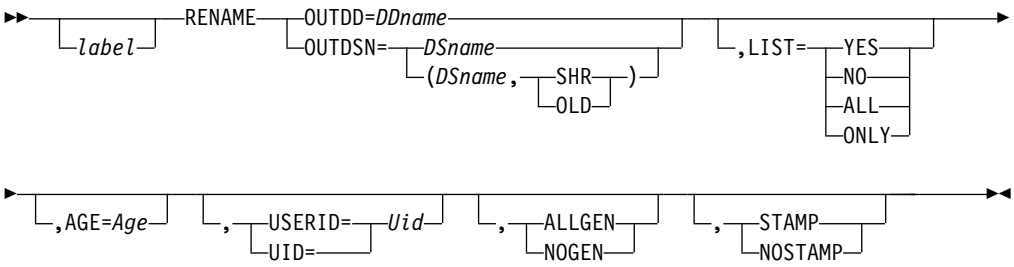
LIST=ALL
Same as LIST=YES with additional member pre-filtering related messages.

LIST=ONLY
Same as LIST=YES.

Usage notes for RECOVGEN:
- Either OUTDD or OUTDSN keywords must be specified, but together they are mutually exclusive.
- Each target recovered member must have at least one member generation.
- The selected member names may be specified in one or more EXCLUDE or SELECT statements following the RECOVGEN statement.
- A new member name or R (replace) parameter is not allowed in the MEMBER keyword parameter of a SELECT statement following the RECOVGEN statement.

RENAME

Use the RENAME (or REN abbreviation) statement to rename members of a partitioned data set.



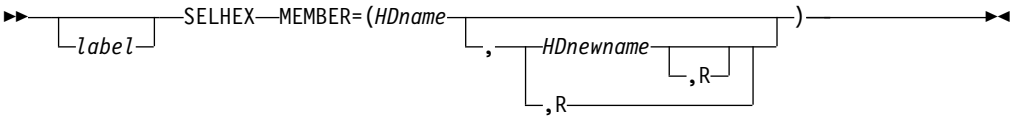
Where:

All keyword parameters have the same syntax as for the ALIAS statement.

Usage notes for RENAME:
- Either OUTDD or OUTDSN keywords must be specified, but together they are mutually exclusive.
- The target member group must be specified in one or more SELECT statements following this statement.
- All the MEMBER keyword entries of each SELECT statement must include a new member name parameter which becomes the target member name.
- If option STAMP is in effect, when you rename a non-load member, the original member title is inherited, and the ISPF Modification Date-Time stamp of the member is updated.
- If option ALLGEN is in effect, all associated PDSE member generations are to be renamed.

SELHEX

The SELHEX statement specifies a single member name and optionally a new member name with or without a REPLACE indicator. This member name should be included in the current operation.



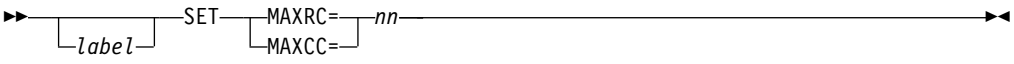
Where:

MEMBER=({*HDname* | *HDname*,*HDnewname***[,R]** | *HDname*,,**R})**
Specifies a 16 hexadecimal digits of a member name to be selected from input data set. *HDnewname* specifies a 16 hexadecimal digits new name for the selected member. R indicates an unconditional replace of target member.

Usage notes for SELHEX:
- This statement should be used, instead of a SELECT statement, for manipulating non-standard member names.
- The MEMBER parameter must be enclosed in a single set of parentheses.

SET

Use the SET statement to reset the maximum value of return code.



Where:

nn The maximum value of return code.

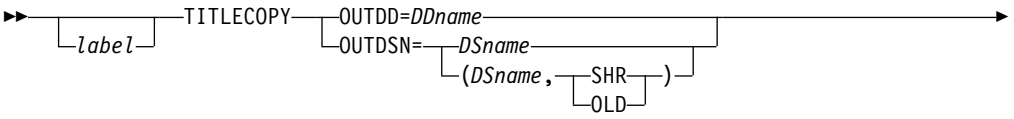
Note: The value of variable *nn* must be 0, 4, or 8.

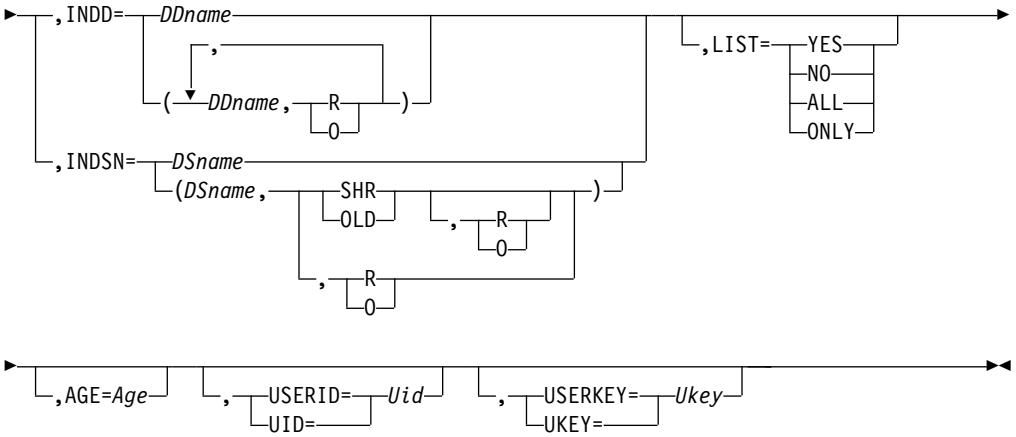
Usage notes for SET

- The sequence number of the SET control statement is contained by the new return code.

TITLECOPY

Use the TITLECOPY statement to select and copy DSC managed member titles from one partitioned data set to another.





Where:

OUTDD=*DDname*

DDname specifies the ddname of the output partitioned data set.

OUTDSN={*DSname***|(***DSname***,SHR)|(***DSname***,OLD)}**

- *DSname* specifies the dsname of the cataloged output partitioned data set.
- {SHR|OLD} specifies the disposition of the dynamically allocated data set. When this parameter is omitted, the default from the "OUTDISP=" EXEC PARM field applies. When both are omitted, “SHR” is used.

INDD={*DDname***|((***DDname***,{R|O}))}**

- *DDname* specifies the ddname of an input partitioned data set.
- R specifies that all member titles that are copied from this input data set are to replace any identically named member titles on the output partitioned data set.
- O specifies that only the titles of the target members that are older than the similarly named input members are to be replaced.

Note: “I=” is an acceptable abbreviation of “INDD=”.

INDSN={*DSname***|(***DSname***,{SHR|OLD}<,{R|O}>)|(***DSname***,,{R|O})}**

- *DSname* specifies the dsname of the cataloged input partitioned data set.
- {SHR|OLD} specifies the disposition of the dynamically allocated data set. When this parameter is omitted, the default from the "INDISP=" EXEC PARM field applies. When both are omitted, “SHR” is used.

Note: “IDS=” is an acceptable abbreviation of “INDSN=”.

LIST={YES|NO}

Specifies whether a member title list report is to be written into the SYSPRINT data set. When this parameter is omitted, the default from the EXEC PARM field applies.

LIST=ALL

Same as LIST=YES with additional member pre-filtering related messages.

LIST=ONLY

Same as LIST=YES.

AGE=*Age*

Specifies the maximum number of days since the most recent update date of a member. The value of variable *Age* can be either a decimal number that consists of up to seven digits, or one of the following keywords:

TODAY or T

Same as 0.

DAY or D
Same as 1.
WEEK or W
Same as 7.
MONTH or M
Same as 31.
QUARTER or Q
Same as 93.
YEAR or Y
Same as 365.

USERID=*Uid* **or UID=***Uid*
Specifies the user ID of the most recent update of a member. The value of variable *Uid* can be either a string that consists of up to seven characters, or a pattern mask.

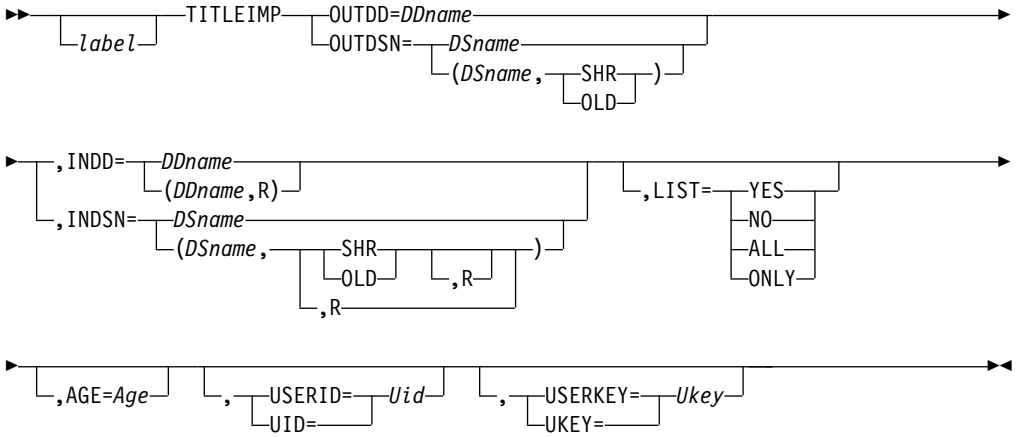
USERKEY=*Ukey* **or UKEY=***Ukey*
Replaces the user key value that is stored in every copied title record. The value of variable *Ukey* is a string that consists of up to 8 printable characters.

Usage notes for TITLECOPY

- The TITLECOPY statement must be followed by at least one SELECT statement. EXCLUDE statements are optional to be added. The MEMBER keyword entry of each SELECT statement might include a new member name parameter and an R or O option flag.
- You must specify either keyword OUTDD or keyword OUTDSN. If both of the keywords are specified, they are mutually exclusive.
- You must specify either keyword INDD or keyword INDSN. If both of the keywords are specified, they are mutually exclusive.
- The persistent member title list of a partitioned data set is stored by DSC in a dedicated member of the data set. It has a reserved name that can be defined via the DSC customization wizard. For example, Z999TITL.
- The TITLECOPY statement is not allowed to operate on load module data set libraries.

TITLEIMP

Use the TITLEIMP statement to import DSC-managed member titles from one partitioned data set to another partitioned data set.



Where:

OUTDD=*DDname*
Specifies the DDname of the output partitioned data set.

OUTDSN={*DSname* **| (***DSname***,SHR) | (***DSname***,OLD)}**
Specifies the DSname of the cataloged output partitioned data set. {SHR | OLD} specifies the disposition of the dynamically allocated data set. When this parameter is omitted, the default from the "OUTDISP=" EXEC PARM field applies. When both are omitted “SHR” is used.

INDD={*DDname* **| ((***DDname***,R))}**
Specifies the DDname of an input partitioned data set. R specifies that all member titles copied from this input data set are to replace any identically named member titles on the output partitioned data set.

“I=” is an acceptable abbreviation of “INDD=”.

INDSN={*DSname* **| (***DSname***,SHR[,R]) | (***DSname***,OLD[,R]) | (***DSname***,,R)}**
Specifies the DSname of the cataloged input partitioned data set. {SHR | OLD} specifies the disposition of the dynamically allocated data set. When this parameter is omitted, the default from the "INDISP=" EXEC PARM field applies. When both are omitted “SHR” is used.

“IDS=” is an acceptable abbreviation of “INDSN=”.

LIST={YES | NO}
Specifies whether a member title list report is to be written into the SYSPRINT data set. When this parameter is omitted, the default from the EXEC PARM field applies.

LIST=ALL
Same as LIST=YES with additional member pre-filtering related messages.

LIST=ONLY
Same as LIST=YES.

AGE=*Age*
Specifies the maximum number of days since the most recent update date of a member. The value of variable *Age* can be either a decimal number that consists of up to seven digits, or one of the following keywords:

TODAY or T
Same as 0.

DAY or D
Same as 1.

WEEK or W
Same as 7.

MONTH or M
Same as 31.

QUARTER or Q
Same as 93.

YEAR or Y
Same as 365.

USERID=*Uid* **or UID=***Uid*
Specifies the user ID of the most recent update of a member. The value of variable *Uid* can be either a string that consists of up to seven characters, or a pattern mask.

USERKEY=*Ukey* **or UKEY=***Ukey*
Replaces the user key value that is stored in every imported title record. The value of variable *Ukey* is a string that consists of up to 8 printable characters.

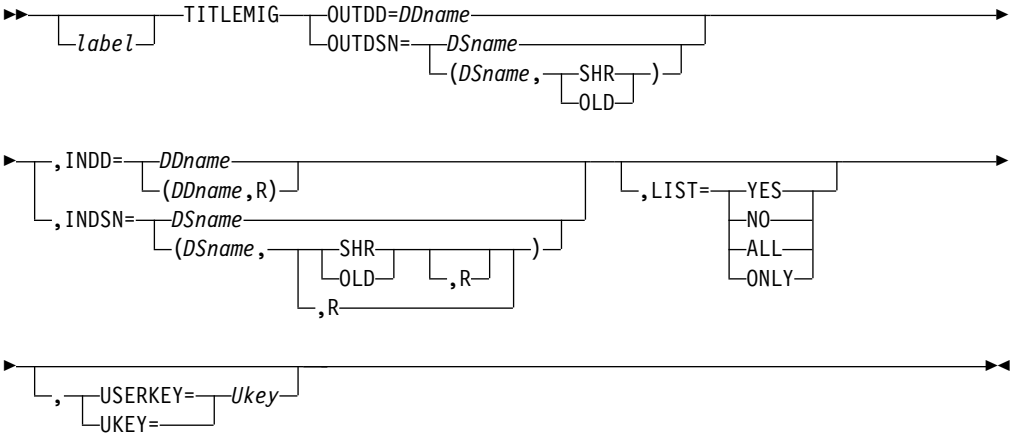
Usage notes for TITLEIMP:

- Either OUTDD or OUTDSN keywords must be specified, but together they are mutually exclusive.

- Either INDD or INDSN keywords must be specified, but together they are mutually exclusive.
- The persistent member title list, of a partitioned data set, is stored by DSC in a dedicated member of the data set. It has a reserved special name (such as "Z999TITL") that can be defined via the DSC customization wizard.
- TITLEIMP is not allowed to operate on load module data set libraries.

TITLEMIG

Use the TITLEMIG statement to create DSC-managed member titles from an input sequential data set.



Where:

OUTDD=*DDname*
: Specifies the DDname of the output partitioned data set.

OUTDSN={*DSname***|(***DSname***,SHR)|(***DSname***,OLD)}**
: Specifies the DSname of the cataloged output partitioned data set. {SHR|OLD} specifies the disposition of the dynamically allocated data set. When this parameter is omitted, the default from the "OUTDISP=" EXEC PARM field applies. When both are omitted “SHR” is used.

INDD={*DDname***|((***DDname***,R))}**
: Specifies the DDname of an input sequential data set. R specifies that all member titles copied from this input data set are to replace any identically named member titles on the output partitioned data set.

INDSN={*DSname***|(***DSname***,SHR[,R])|(***DSname***,OLD[,R])|(***DSname***,,R)}**
: Specifies the DSname of the cataloged input sequential data set. {SHR|OLD} specifies the disposition of the dynamically allocated data set. When this parameter is omitted, the default from the "INDISP=" EXEC PARM field applies. When both are omitted “SHR” is used.

LIST={YES|NO}
: Specifies whether a member title list report is to be written into the SYSPRINT data set.

LIST={ALL|ONLY}
: Same as LIST=YES.

  Note: When the LIST= parameter is omitted, the default setting from the EXEC PARM field applies.

USERKEY=*Ukey* **or UKEY=***Ukey*
: Replaces the user key value that is stored in every migrated title record. The value of variable *Ukey* is a string that consists of up to 8 printable characters.

Migrated title input record layout:

Columns 1 to 8
Member name (8 characters)

Columns 9 to 9
Blank separator (1 character)

Columns 10 to 59
Member title (50 characters)

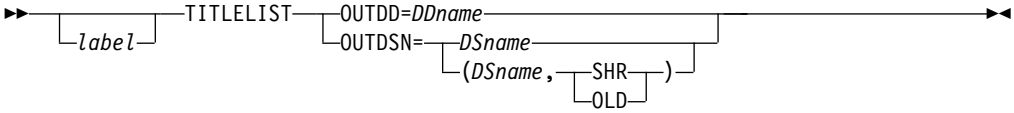
Columns 60 to 60
Blank separator (1 character)

Columns 61 to 68
Member user key (8 characters)

Usage notes for TITLEMIG:
- Either OUTDD or OUTDSN keywords must be specified, but together they are mutually exclusive.
- Either INDD or INDSN keywords must be specified, but together they are mutually exclusive.
- The input sequential data set may be a JES input file (like SYSIN).
- The persistent member title list, of a partitioned data set, is stored by DSC in a dedicated member of the data set. It has a reserved special name (such as "Z999TITL") that can be defined via the DSC customization wizard.
- TITLEMIG is not allowed to operate on load module data set libraries.
- Existing member titles, in the output data set, are replaced by migrated titles of identically named members.
- Member titles might contain double-byte-character strings (DBCS).

TITLELIST

Use the TITLELIST statement to report into SYSPRINT a listing of DSC-managed member titles.



Where:
OUTDD=*DDname*
Specifies the DDname of a partitioned data set.
OUTDSN={*DSname***|(***DSname***,SHR)|(***DSname***,OLD)}**
Specifies the DSname of a cataloged partitioned data set. {SHR|OLD} specifies the disposition of the dynamically allocated data set. When this parameter is omitted, the default from the "OUTDISP=" EXEC PARM field applies. When both are omitted “SHR” is used.

IQIBUTIL examples

Here are examples to show some of the uses of IQIBUTIL.

All the examples described in *Chapter 3. IEBCOPY (Library Copy) Program* of the document *DFSMSdfp Utilities* also apply to IQIBUTIL.

Example 1: Print IQIBUTIL User Guide Summary

```
//GUIDEME  JOB ...,
//         MSGCLASS=H
//JOBLIB   DD DISP=SHR,DSN=IQI.SIQILOAD
//JOBSTEP  EXEC PGM=IQIBUTIL,PARM=HELP
```

In this example:

- Both DD names IQIBUPRT and IQIBUDOC are dynamically allocated as JES output data sets of SYSOUT class H.
- The IQIBUPRT file contains the utility report that is normally written to SYSPRINT.
- The IQIBUDOC file contains the IQIBUTIL user guide summary (that is, the online version of this document).

If the DSC load library is not included in the system list of libraries (LINKLIST), it must be specified in a JOBLIB or STEPLIB DD statement.

Example 2: Copy and replace selected members of a data set

```
//COPY     JOB ...
//JOBLIB   DD DISP=SHR,DSN=IQI.SIQILOAD
//COPYSTEP EXEC PGM=IQIBUTIL,
// PARM='LIST=YES,INDISP=SHR,OUTDISP=OLD'
//IQIBUDFL DD DISP=SHR,DSN=IQI.SIQIPLIB
//SYSPRINT DD SYSOUT=H
//SYSIN    DD *
       COPY OUTDSN=MROTTER.TEST.ASM
         AGE=Q,USERID=MRO*
       INDSN=MROTTER.RELEASE.ASM
    SELECT MEMBER=((ABC*,X=Y=====,R))
    E M=(ABC12345,ABCDUMMY)
/*
```

In this example:

- The members that meet all the following conditions are copied from library MROTTER.RELEASE.ASM to library MROTTER.TEST.ASM:
  - Being created or updated in the last quarter (93 days).
  - Having a user ID that begins with "MRO".
  - Having a name that begins with "ABC".
  - Having a name that is not "ABC12345" or "ABCDUMMY".
- All member names matching the filtering criteria are renamed in the output library, with an “X” in the first character and “Y” in the third character of their original names.
- The IQIBUDFL file must point to a valid DSC panel library that contains the site-wide customization options specified via the DSC wizard.
- Input data set MROTTER.RELEASE.ASM is going to be dynamically allocated with a disposition SHR as specified in the EXEC PARM.
- Input data set MROTTER.TEST.ASM is going to be dynamically allocated with a disposition OLD as specified in the EXEC PARM.
- The names of all copied members are reported in the SYSPRINT output data set.

Example 3: Empty a partitioned and a sequential data set

```
//EMPTYIT  JOB ...
//STEP1    EXEC PGM=IQIBUTIL,PARM='CLASS=X'
//STEPLIB  DD DISP=SHR,DSN=IQI.SIQILOAD
//IQIBUDFL DD DISP=SHR,DSN=IQI.SIQIPLIB
//MYLIB    DD DISP=OLD,DSN=INTT125.DEV.LOADLIB
```

```
//SYSIN    DD *
       EMPTY O=MYLIB
   EMPTY ODS=(INTT125.DEV.LOG,OLD)
/*
```

In this example:

- All members of PDS library INTT125.DEV.LOADLIB are first deleted, followed by a COMPRESS operation of this library.
- In the second step, sequential data set INTT125.DEV.LOG is first dynamically allocated with a disposition OLD, followed by erasing all its data.
- Since DD name SYSPRINT is missing, IQIBUTIL replaces it with DD name IQIBUPRT, dynamically allocated to SYSOUT class X (specified via EXEC PARM). The IQIBUPRT file contains the IQIBUTIL output report.

Example 4: Delete members of a partitioned data set

```
//DELETEIT JOB ...
//DELETE   EXEC PGM=IQIBUTIL,PARM='RC4NODEL'
//STEPLIB  DD DISP=SHR,DSN=IQI.SIQILOAD
//IQIBUDFL DD DISP=SHR,DSN=IQI.SIQIPLIB
//MYLIB    DD DISP=OLD,DSN=INTT225.TEST.COBOL
//SYSPRINT DD SYSOUT=*
//SYSIN    DD *
      DELETE O=MYLIB,ALLGEN,AGE=3Y
   EXCLUDE M=A*,
            B*,
           C*
   SELECT MEMBER=(A123,B345,XYZ)
/*
```

In this example:

- The members that meet all the following conditions are to be deleted:
  - Being a member of partitioned data set INTT225.TEST.COBOL.
  - Being created or updated in the last 3 years.
  - Having a name that does not begin with "A", "B", or "C".

  The EXCLUDE statement spans 3 control records.

  Since EXCLUDE takes precedence over SELECT, both “SELECT MEMBER=A123” and “SELECT MEMBER=B345” are going to be reported as “irrelevant filters”.

  If member XYZ is not found in the library, the DELETE operation sets a return-code 4 due to the RC4NODEL option specified in the EXEC PARM.
- If INTT225.TEST.COBOL is a PDSE with member generations, all selected member generations are also deleted.

Example 5: Move members from one partitioned data set to another

```
//MOVEMEMS JOB ...
//MOVE     EXEC PGM=IQIBUTIL
//STEPLIB  DD DISP=SHR,DSN=IQI.SIQILOAD
//IQIBUDFL DD DISP=SHR,DSN=IQI.SIQIPLIB
//SYSPRINT DD SYSOUT=*
//SYSIN    DD *
      MOVE ODS=(SPIFFY.RELEASE.SOURCE,OLD),
           LIST=YES
      IDS=(SPIFFY.TEST.SOURCE,OLD)
   S M=((MEM100,NEW100,R),
        (MEM200,NEW100,R),MEM300)
/*
```

In this example:
- Three members of partitioned data set SPIFFY.TEST.SOURCE are copied into partitioned data set SPIFFY.RELEASE.SOURCE.
- The same three members are then deleted from SPIFFY.TEST.SOURCE.

Both data sets are dynamically allocated.

If member MEM300 is already present in the output data set, a return-code 4 is generated due to an implicit PARM=RC4NOREP option triggered by the MOVE operation. As a result, none of the selected members are deleted.

Example 6: Add alias names to load module members

```
//MYJOB    JOB ...
//ALIASING EXEC PGM=IQIBUTIL,PARM='LIST=YES'
//STEPLIB  DD DISP=SHR,DSN=IQI.SIQILOAD
//IQIBUDFL DD DISP=SHR,DSN=IQI.SIQIPLIB
//MYLIB    DD DISP=SHR,DSN=SPIFFY.PDS.LLIB
//SYSPRINT DD SYSOUT=*
//SYSIN    DD *
   DELETE OUTDD=MYLIB
      S M=IPI*
   ALIAS O=MYLIB
      S M=((IQIMSL,IPIMSL),
           (IQIPLST,IPIPLST))
/*
```

In this example:
- All member names that begin with “IPI” from PDS library SPIFFY.PDS.LLIB are deleted.
- Then alias names IPIMSL and IPIPLST to are added to load module members IQIMSL and IQIPLST respectively.

  This does not work with a PDSE load module library.

Example 7: Rename selected members of a partitioned data set

```
//JOB007   JOB ...
//RENAMING EXEC PGM=IQIBUTIL
//STEPLIB  DD DISP=SHR,DSN=IQI.SIQILOAD
//IQIBUDFL DD DISP=SHR,DSN=IQI.SIQIPLIB
//SRC      DD DISP=OLD,DSN=MROTTER.TEST.SOURCE
//SYSPRINT DD SYSOUT=*
//SYSIN    DD *
   RENAME O=SRC,LIST=YES,UID=JOHNDOE
     SELECT MEMBER=((MEM%01,ZZZ===),
       (MEM201,NEW201),(MEM101,NEW101),
       (MEM501,NEW501),(MEM401,NEW401))
     EXCLUDE M=%%%5*
/*
```

In this example:
- The members that meet all the following conditions are to be renamed:
  - Being created or updated by user ID "JOHNDOE".
  - Having a six-character name from the one that begins with "MEM" and ends with "01", to the one that begins with "ZZZ" and ends with an identical suffix.
  - Having a name that is not "MEM501".

  The following filters are irrelevant:

```
"  SELECT MEMBER=((MEM101,NEW101)) "
"  SELECT MEMBER=((MEM201,NEW201)) "
"  SELECT MEMBER=((MEM401,NEW401)) "
"  SELECT MEMBER=((MEM501,NEW501)) "
```

EXCLUDE has priority over SELECT.

SELECT of a name pattern has priority over a SELECT of a distinct name.

Example 8: Recover deleted members of a PDS data set

```
//JOB008   JOB ...
//RECOVER  EXEC PGM=IQIBUTIL,
//         PARM='RC4NOREP,MAXRC=4,LIST=YES'
//STEPLIB  DD DISP=SHR,DSN=IQI.SIQILOAD
//IQIBUDFL DD DISP=SHR,DSN=IQI.SIQIPLIB
//FROMDD   DD DISP=SHR,DSN=MROTTER.RELEASE.SOURCE
//MYPDS    DD DISP=OLD,DSN=MROTTER.DEV.SOURCE
//SYSPRINT DD SYSOUT=*
//SYSIN    DD *
COPMEMS   C I=FROMDD,O=MYPDS
   S M=(MEM$$Z,MEM005,MEMX)
DELMEMS   DELETE OUTDD=MYPDS
   SELECT MEMBER=MEM*
RECMEMS   RECOVER O=MYPDS,NUMBER=3
/*
```

This example has these three steps:

- COPMEMS - Copy three members.
- DELMEMS - Delete the just-copied three members along with all members with same prefix names.
- RECMEMS - Recover the three members that have been copied in the first step and deleted in the second.

If one or more members cannot be copied in the first step, the job terminates due to the EXEC PARM combination of “RC4NOREP,MAXRC=4”.

Since the three members, copied in the first step are the most recently written members, after being deleted, they become the first candidates for recovery.

A recovered member name starts with “9Z” followed by a six character TTR of the member location. Assuming the recovered member names are “9Z01AB03”, “9Z01AB09” and “9Z01AC02”, they correspond to members “MEM$$Z”, “MEM005”, and “MEMX”.

Example 9: Expand the directory of a PDS data set

```
//JOB009   JOB ...
//EXPAND   EXEC PGM=IQIBUTIL
//STEPLIB  DD DISP=SHR,DSN=IQI.SIQILOAD
//IQIBUDFL DD DISP=SHR,DSN=IQI.SIQIPLIB
//SYSPRINT DD SYSOUT=*
//SYSIN    DD *
       EXPDIR ODS=INTT125.DEV.PLIB,
              N=5
/*
```

In this example:

- Five blocks are added to the directory of a PDS data set.

  The target data set INTT125.DEV.PLIB must be a cataloged PDS to be dynamically allocated with a disposition SHR (default).

Example 10: Consecutively copy multiple members to a sequential data set

```
//JOB0010  JOB ...
//MERGE    EXEC PGM=IQIBUTIL
//STEPLIB  DD DISP=SHR,DSN=IQI.SIQILOAD
//IQIBUDFL DD DISP=SHR,DSN=IQI.SIQIPLIB
//SYSPRINT DD SYSOUT=*
//INPDSE   DD DISP=SHR,DSN=INTT025.RELEASE.DOCLIB
//WORKDOC  DD DISP=OLD,DSN=INTT025.WORKDOC
//PRINTDOC DD SYSOUT=X
//SYSIN    DD *
S1 COPYSEQ I=((INPDSE,R)),O=WORKDOC
 S M=REPORT3,REPORT2,REPORT1,
   INTRO*
 EXCLUDE M=INTRO9*
S2 COPYSEQ O=PRINTDOC,
     INDSN=INTT025.WORKDOC
/*
```

In this example:

- All members with names that begin with "INTRO" are consecutively copied, except those that begin with "INTRO9".
- Then members REPORT1, REPORT2, and REPORT3 are copied.
- In the second step we print the copied members output data set INTT025.WORKDOC. Due to the REPLACE option, specified in the INDD parameter, the data set attributes RECFM, LRECL, and BLKSIZE of INTT025.WORKDOC are replaced with the same attributes of data set INTT025.RELEASE.DOCLIB.

The selected members are copied in ascending order of member name, regardless of their selection order.

Example 11: Update a DSC-managed member title list in a partitioned data set

```
//JOB0011  JOB ...
//DOTITLES EXEC PGM=IQIBUTIL,
//         PARM='TITLEMIG,REPLACE,L=YES'
//STEPLIB  DD DISP=SHR,DSN=IQI.SIQILOAD
//IQIBUDFL DD DISP=SHR,DSN=IQI.SIQIPLIB
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD DISP=OLD,DSN=PAYROLL.PROD.EMPLOYEE.LIB
//SYSUT1   DD *
 MemName| Member Title                                        |User Key|
 Employ#| Employee full name and address                     |LastName|
#------- ------------------------------------------------- --------
#1234567 Emily Pearl Jones, 75 First Ave., San Diego, CA    JONES
#0000201 Jonathan Goodman, 1 Kings Road, Newark, NJ         GOODMAN
/*
```

In this example:

- New titles are created (or existing ones replaced) for members "#1234567" and "#0000201", in partitioned data set PAYROLL.PROD.EMPLOYEE.LIB.

  The EXEC PARM options “TITLEMIG,REPLACE” implicitly generates a “TITLEMIG OUTDD=SYSUT2,INDD=((SYSUT1,R))” statement.

  The first three records of SYSUT1 are ignored by the TITLEMIG command, because they begin with unacceptable member names.

  Due to EXEC PARM “LIST=YES” option, a listing of all member titles of PAYROLL.PROD,EMPLOYEE.LIB is written to SYSPRINT.

In order to display PAYROLL.PROD.EMPLOYEE.LIB titles, you need to set your DSC Member Selection List (MSL) display mode to “SHOWTITL ON”.

Example 12: Import a DSC-managed member title list from one partitioned data set to another

```
//JOB0012  JOB ...
//DOTITLES EXEC PGM=IQIBUTIL
//STEPLIB  DD DISP=SHR,DSN=IQI.SIQILOAD
//IQIBUDFL DD DISP=SHR,DSN=IQI.SIQIPLIB
//SYSPRINT DD SYSOUT=*
//PRODLIB  DD DISP=OLD,DSN=PAYROLL.PROD.EMPLOYEE.LIB
//TESTLIB  DD DISP=SHR,DSN=PAYROLL.TEST.EMPLOYEE.LIB
//SYSIN    DD *
        TITLEIMP I=((TESTLIB,R)),USERKEY=VERSION8,
                 O=PRODLIB,
                 LIST=YES
/*
```

In this example:

- The member titles of those member names of data set PAYROLL.TEST.EMPLOYEE.LIB that also exist in data set PAYROLL.PROD.EMPLOYEE.LIB are copied (with replacing existing titles).
- The title user key of each imported title is replaced with "VERSION8".
- Due to the “LIST=YES” option, a listing of all member titles of PAYROLL.PROD,EMPLOYEE.LIB is written to SYSPRINT.
- In order to display PAYROLL.PROD.EMPLOYEE.LIB titles, you need to set your DSC Member Selection List (MSL) display mode to “SHOWTITL ON”.

Example 13: Print a listing of all DSC-managed member titles of a partitioned data set

```
//JOB0013  JOB ...
//SHOWTITL EXEC PGM=IQIBUTIL,PARM=TITLELIST
//STEPLIB  DD DISP=SHR,DSN=IQI.SIQILOAD
//IQIBUDFL DD DISP=SHR,DSN=IQI.SIQIPLIB
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD DISP=SHR,DSN=PAYROLL.PROD.EMPLOYEE.LIB
```

In this example:

- A report listing of all member titles of PAYROLL.PROD.EMPLOYEE.LIB is written onto SYSPRINT.

  The EXEC PARM option “TITLELIST” implicitly generates a “TITLELIST OUTDD=SYSUT2” statement.

Example 14: Manipulate non-standard member names

```
//JOB0014  JOB ...
//DOINHEX  EXEC PGM=IQIBUTIL,
//         PARM='MEMRULE=3,LIST=YES'
//IN       DD DISP=SHR,DSN=INTT025.TEST.SOURCE
//OUT      DD DISP=SHR,DSN=INTT025.PLAY.SOURCE
//SYSIN    DD *
STEP1 DELETE OUTDD=OUT
      S M=(9*,8*)
STEP2 COPY OUTDD=OUT,INDD=IN
        SELHEX MEMBER=(C1C2C34040404040,F9818283F1F2F3F4,R)
        SELHEX MEMBER=(E7E8E94040404040,F9A7A8A9C1C2C340)
STEP3 RENAME OUTDD=OUT
        S M=((9*,8=======))
        EXCLHEX M=(F9A7A8A9C1C2C340)
/*
```

This example has these steps:
- Deletes all member names that begin with "9" or "8", in INTT025.PLAY.SOURCE.
- Copies members “ABC” and “XYZ” from INTT025.TEST.SOURCE into INTT025.PLAY.SOURCE.

  The copied members are respectively renamed in the target library as “9abc1234” and “9xyzABC”.
- Renames all member names that begin with "9" into same names with "8" in the first character, except for member "9xyzABC".

The EXEC PARM "MEMRULE=3" is required to be able to manipulate non-standard member names.

DD statements JOBLIB and STEPLIB are omitted, implying that load module IQIBUTIL is residing in a LINKLIST library.

DD statement IQIBUDFL is omitted, implying that DSC customization member IQIDFLTS is residing in a PARMLIB library.

DD statements SYSPRINT and IQIBUPRT are omitted, resulting in a dynamic allocation of a SYSOUT data set with DD name IQIBUPRT. This data set will contain all the output normally intended for SYSPRINT.

Example 15: List ISPF Statistics of All Source Members Updated by one Programmer in Last 3 Months

```
//JOB0015  JOB ...
//SHOWWORK EXEC PGM=IQIBUTIL,
//         PARM='ALLGEN'
//STEPLIB  DD DISP=SHR,DSN=IQI.SIQILOAD
//IQIBUDFL DD DISP=SHR,DSN=IQI.SIQIPLIB
//SYSPRINT DD SYSOUT=*
//DEV      DD DISP=SHR,DSN=SPIFFY.V810.DEV.ASM
//INT      DD DISP=SHR,DSN=SPIFFY.V810.INT.ASM
//TEST     DD DISP=SHR,DSN=SPIFFY.V810.TEST.ASM
//LISTING  DD SYSOUT=X
//SYSIN    DD *
        LISTDIR  O=LISTING,LIST=YES,
                 AGE=QUARTER,USERID=MROTTER
        INDD=DEV,INT,TEST
/*
```

In this example we list the full ISPF statistics of all members updated by MROTTER in the last month, including all their previous generations. SPIFFY.V810.DEV.ASM is searched first, followed by SPIFFY.V810.INT.ASM and SPIFFY.V810.TEST.ASM.

Example 16: List Locations of the Data Extents of All Existing and Deleted Members in a PDS library

```
//JOB0016  JOB ...
//MAPIT    EXEC PGM=IQIBUTIL
//STEPLIB  DD DISP=SHR,DSN=IQI.SIQILOAD
//IQIBUDFL DD DISP=SHR,DSN=IQI.SIQIPLIB
//SYSPRINT DD SYSOUT=*
//MEMLIST  DD SYSOUT=X
//SYSIN    DD *
       MAPPDS   O=MEMLIST,
                IDS=SYS1.MACLIB
/*
```

In this example we list the locations and sizes of all existing and deleted members in PDS library SYS1.MACLIB.

Example 17: Copy and Replace Selected Members of a PDSE Data Set along with all their aliases as well as their previous versions

```
//COPYGRP  JOB ...
//JOBLIB   DD DISP=SHR,DSN=IQI.SIQILOAD
//COPYGENS EXEC PGM=IQIBUTIL,
// PARM='LIST=YES'
//IQIBUDFL DD DISP=SHR,DSN=IQI.SIQIPLIB
//SYSPRINT DD SYSOUT=H
//IPDSE    DD DISP=SHR,DSN=SPFE.TEST.SRC
//OPDSE    DD DISP=SHR,DSN=SPFE.TEST.SRC.BACKUP
//SYSIN    DD *
    COPYGROUP O=OPDSE,ALLGEN,
        UID=CURTIS,AGE=100,LIST=ALL
      INDD=((IPDSE,O))
      SELECT MEMBER=(IQI*,IQD*)
      EXCLUDE M=(IQIMSL,IQDCOMMA)
/*
```

In this example, the members that meet all the following conditions are copied from library SPFE.TEST.SRC to library SPFE.TEST.SRC.BACKUP, along with all their aliases and previously stored versions.

- Being created or updated by user ID "CURTIS" in the last 100 days.
- Having a name that begins with "IQI" or "IQD".
- Having a name that is not "IQIMSL" or "IQDCOMMA".

The IQIBUDFL file must point to a valid DSC panel library that contains the site-wide customization options specified via the DSC wizard.

Note:

- The existing members in the target library are only to be replaced by more recently updated members with the same names from the input library.
- Due to the "LIST=ALL" option and the "LIST=YES" report lines, a list of the preselected names of the members that are eligible for replacement is also to be furnished.

Example 18: Restore most recent previous version of selected members in a PDSE library

```
//RESTORE  JOB ...
//JOBLIB   DD DISP=SHR,DSN=IQI.SIQILOAD
//RECOVGEN EXEC PGM=IQIBUTIL
//SYSPRINT DD SYSOUT=H
//MYDEV    DD DISP=SHR,DSN=SPIFFY.DEV.SRC
//SYSIN    DD *
    RECOVGEN  O=MYDEV,LIST=YES
      SELECT MEMBER=(IQIMAIN,IQIPLST)
/*
```

In this example the previous versions of members "IQIMAIN" and "IQIPLST" are restored.

Note: DD statement IQIBUDFL is omitted, implying that DSC customization member IQIDFLTS is residing in a PARMLIB library.

Example 19: Copy and replace a selected group of DSC managed member titles from one partitioned data set to another

```
//JOB0018  JOB ...
//COPYTITL EXEC PGM=IQIBUTIL
//STEPLIB  DD DISP=SHR,DSN=IQI.SIQILOAD
//IQIBUDFL DD DISP=SHR,DSN=IQI.SIQIPLIB
//SYSPRINT DD SYSOUT=*
//PRODLIB  DD DISP=OLD,DSN=PAYROLL.PROD.EMPLOYEE.LIB
//TESTLIB  DD DISP=SHR,DSN=PAYROLL.TEST.EMPLOYEE.LIB
//SYSIN    DD *
       TITLECOPY I=TESTLIB,USERKEY=03/12/17,
                 O=PRODLIB,
                 LIST=YES,AGE=QUARTER
          SELECT M=((ABC*,XYZ=====,R))
          SELECT M=((MEM*,,O))
         EXCLUDE M=*IBM*
/*
```

In this example, the following operations are performed:

1. Select member titles from library PAYROLL.TEST.EMPLOYEE.LIB.

   The selected members must have been created or updated in the last 93 days, and their names do not contain "IBM".
2. Copy the selected members into library PAYROLL.TEST.EMPLOYEE.LIB. Existing members are replaced.
   - From the preceding selected group, the titles of the members with names that begin with "ABC" are copied as the titles of the target members with names that begin with "XYZ" and have an identical suffix.
   - From the preceding selected group, the titles of the input members with names that begin with "MEM" are copied as the titles of the similarly named target members when the input members are newer.
   - The title user key of each copied title is replaced with "03/12/17".

Note:

- Because option "LIST=YES" is in effect, a list of all the member titles of library PAYROLL.PROD,EMPLOYEE.LIB are written to library SYSPRINT.
- To display the titles of library PAYROLL.PROD.EMPLOYEE.LIB, set the display mode of your DSC Member Selection List to "SHOWTITL ON".

Example 20: Rename the selected members of a PDSE library and all their member generations

```
//JOB0018  JOB ...
//RENAMING EXEC PGM=IQIBUTIL,
//         PARM='STAMP,LIST=ALL'
//STEPLIB  DD DISP=SHR,DSN=IQI.SIQILOAD
//IQIBUDFL DD DISP=SHR,DSN=IQI.SIQIPLIB
//COBOL    DD DISP=SHR,DSN=MROTTER.PDSE2.COBOL
//SYSPRINT DD SYSOUT=*
//SYSIN    DD *
   RENAME O=COBOL
     SELECT MEMBER=((OLD123,NEW123))
     S M=((X*,Y=======))
/*
```

In this example, the following members are renamed:

- From member OLD123 to member NEW123.

- From the members with names that begin with "X" to the members with names that begin with "Y" and end with an identical suffix.

Note:

- Because option STAMP is in effect, the ISPF Modification Date-Time stamp is updated in generation 0 of the renamed members.
- All associated member titles and PDSE member generations are also copied.

Appendix A. Documenting a DSC failure for IBM level 2 support

In the unlikely event that you are having problems with DSC, DSC can create files of information that you can forward to IBM level 2 support for diagnosis.

Here is the suggested sequence you should use to trap relevant information:

1. Log on to DSC.
2. Enter `IDIAG TR`, which is the shortcut for `DSC DIAG TRACE ON` (and automatically forces `DSC DIAG LOG ON`).
3. Work through your scenario.
4. Enter `ISNAP`, which is the shortcut for `DSC SNAP`.
5. Download `DD(IQILOGPR)` and `DD(IQITRSNP)` of your TSO session and send them to me along with screen shots of every step of your failing scenario.

Please additionally supply the output generated by the `IVER` shortcut (`DSC VER`) or the `IMAINT` shortcut (`DSC MAINT`). This output shows the list of APARs applied against DSC.

For more information, see:

- "DIAG" on page 59
- "SNAP" on page 60
- "VER" on page 59
- "MAINT" on page 59

Documenting a DSC failure for IBM level 2 support

Appendix B. Controlling Data Set Commander processing (the SET command)

To display the panels controlling these options, enter the SET command.

The panel that is displayed depends on whether you Data Set Commander displays a panel like these:

```
-DSC- -----------------Member Selection List options--------------------------
COMMAND ===>

  Automatic preview (with LOCATE/FIND)         ==> Y (Y=Yes, N=No)
  Replace existing members (COPY/MOVE)         ==> O (Y=Yes, N=No, O=Target Older)
  Member list line command pad character       ==> _ (Blank,Dot,Quote,Underscore)
  Main menu option 1 default process           ==> B (B=Browse, V=View)
  Main menu option 1,2 @H display              ==> Y (Y=Olist, N=No)
  Default cursor position                      ==> M (M=Main command, L=Line cmd)
  Include member names in dataset history      ==> N (Y=Yes, N=No)
  Prompt with FIND command after a Global FIND ==> Y (Y=Yes, N=No)
  Support PDSE member generations (z/OS V2.1)  ==> N (Y=Yes, N=No)
  Support IEBCOPY member name convention       ==> Y (Y=Yes, N=No)
  Accept non standard (printable) member names ==> N (Y=Yes, N=No)
  Double-Byte-Character-Set (DBCS) support     ==> N (Y=Yes, N=No)
    If DBCS supported, use case-sensitive search strings    ==> N

  Commands executed by TAILOR command:
    ===> REF;SORT CHA;FIL CHA Q

 Press ENTER for options menu, END to exit, CANCEL for installation defaults.
```

Figure 45. The Member Selection List options panel

```
-DSC- ------------------OLIST - Object List Options----------------------------
COMMAND ===>

  Default command (when selecting an item)  ==> B  (B=Browse, E=Edit, V=View)
  Show VOLSER of cataloged data-sets       ==> Y  (Y=Yes, N=No)
  Check edit recovery when the list opens   ==> N  (Y=Yes, N=No)
  Provide a field for TSO command parms     ==> Y  (Y=Yes, N=No)
  Display mode (right column shows)         ==> C  (C=Class, V=Volume)
  Default cursor position                   ==> M  (M=Main command, L=Line cmd)
  Include member names in dataset history   ==> N  (Y=Yes, N=No)
  Native (generic) data-set name patterns   ==> Y  (Y=Yes, N=No)
  Double-Byte-Character-Set (DBCS) support  ==> N  (Y=Yes, N=No)
    If DBCS supported, use case-sensitive search strings    ==> N

 Press ENTER for options menu, END to exit, CANCEL for installation defaults.
```

Figure 46. The Object List Options panel

The rest of this Appendix explains each option.

MSL options

Line number for member list windows
Specify the line number (relative to the first entry in the MSL) at which the top of assist and preview windows is to be positioned, with a value from 1 to 24.

Automatic preview (with LOCATE/FIND)
Control the automatic preview of members found by LOCATE, FINDTEXT, or FIND:

Y Display a preview window of the member found.

N Don't display a preview window of the member found.

Display list of commands on the panel
Turn on or off the MSL automatic assist window:

Y Display the assist window at all times.

N Don't display the assist window unless requested.

Replace existing members (COPY/MOVE)
When you issue a COPY or MOVE command, the setting here controls the standard ISPF option of whether or not like-named members in the target should be replaced by those in the source:

Y Always replace members in the target that have the same name as those in the source.

N If a member in the target has the same name as one in the source, don't copy or move that member.

O Always replace members in the target, unless the time and date stamp of the target in the member is later than that of the source.

Prompt with FIND command after a Global FIND
When you issue a global find command, the setting here controls whether a FIND command (with the same parameter) is displayed on the Command line for the individual member.

Y The FIND command is displayed.

N The FIND command is not displayed.

Support PDSE member generations (z/OS V2.1)
This setting indicates whether you want DSC to provide support for PDSE member generations.

Y PDSE member generations are supported.

N PDSE member generations are not supported.

Support IEBCOPY member name convention
"Y" is the same as IQIBUTIL MEMRULE=2.

Accept non standard (printable) member names
"Y" is the same as IQIBUTIL MEMRULE=3. MEMRULE=3 includes MEMRULE=1 and MEMRULE=2, so when MEMRULE=3 is set, then MEMRULE=1 and MEMRULE=2 are automatically implied and set.

When "Support IEBCOPY member name convention" is set to "N" and "Accept non standard (printable) member names" is set to "N", then this is the same as IQIBUTIL MEMRULE=1.

Double-Byte-Character-Set (DBCS) support
Indicates whether you want to support DBCS.

Y DBCS is supported.

N DBCS is not supported.

If you indicate that DBCS is supported, you must also indicate if you want to use case-sensitive search strings.

Commands executed by TAILOR command
Specify one or more MSL commands (such as SORT, FILTER, and <->EXCLUDE) here to tailor the MSL to your liking. These MSL commands can be executed via the TAILOR command, and, optionally, automatically when an MSL is invoked via the EDIT, VIEW, or BROWSE Entry panel.

OLIST options

Default OLIST command
Specify the process to be invoked by default when an item on a OLIST is selected by number:

V The default process is VIEW.

B The default process is BROWSE.

E The default process is EDIT.

Check pending edit recovery in OLIST
Specify whether or not edit recovery is checked whenever OLIST is invoked:

Y Check for pending edit recovery whenever OLIST is invoked.

N Don't check for pending edit recovery whenever OLIST is invoked.

Display list of commands on the panel
Specify whether or not the OLIST panel should include a list of the OLIST commands:

Y Use the form of the panel that shows the commands.

N Don't use the form of the panel that shows the commands.

Provide a field for TSO command parms
Specify whether or not to display the OLIST panel should include a field on which to enter parameters to be appended to the command as issued:

Y Use the form of the panel that provides a parameter input field.

N Don't use the form of the panel that provides a parameter input field.

OLIST display mode
The right-most column of the OLIST panel can either display the object type or the volume. Specify which mode you want:

C Class

V Volume

When an OLIST is on display, the PF key defined as RCHANGE (usually PF6) toggles between the two forms of the display.

To accept the values shown and end the display of the options panels, press the END key. To display the second options panel, which contains the Member Selection List GLOBAL EDIT processing options, press Enter.

Data Set Commander displays a panel like the following and options are included afterwards.

```
-DSC- ----------------GLOBAL/FINDTEXT commands options-------------------------
COMMAND ===>

               MSL GLOBAL Control
  STOP AFTER   ===> 9999 (Number of items to process successfully)
  PROMPT AFTER ===> 50   (Number of items to process before prompt is issued)
  START COLUMN ===> 1     (Quick FIND starting column in target data record)
    END COLUMN ===> 99999 (Quick FIND end column in target data record)
  Specify Y (Yes) or N (No) for the following options:
  AUTOMATIC    ===> Y (Process without editing successful items?)
  LINK         ===> Y (Process each command only if previous command succeeds?)
  PRINT        ===> N (Generate listing of each member changed and saved?)
  EXCLUDE      ===> N (Exclude failing items from selection list?)

               OLIST FINDTEXT/MEMFIND Control
  STOP AFTER   ===> 10   (Number of items to process successfully)
  PROMPT AFTER ===> 10   (Number of items to process before prompt is issued)
  START COLUMN ===> 1     (Starting column in target data record)
    END COLUMN ===> 99999 (End column in target data record)
  Specify Y (Yes) or N (No) for the following options:
  AUTOMATIC    ===> N (Search without stopping at successful items?)
  EXCLUDE      ===> N (Exclude failing items from object list?)

 Press ENTER or END to exit. Enter CANCEL for installation defaults.
```

Figure 47. GLOBAL/FINDTEXT commands options

Native (generic) data-set name patterns
Determines how dots are treated in data set names when pattern matching:

Y Treat dots in the data set name as any other character when matching a pattern mask.

N Adhere to ISPF DSLIST data set pattern mask rules regarding dots and the number of qualifiers.

MSL GLOBAL command options

STOP AFTER
In global EDIT, this controls the number of members to be processed successfully before stopping. This allows you to stop after finding a single member that meets particular specifications. You can set this field to any number between 1 and 9999.

PROMPT AFTER
In global EDIT and FINDTEXT, this controls the number of members to be processed before a prompt is offered to you. The prompt gives you a chance to cancel the rest of the GLOBAL processing of the library, or to change the value in this field. You can set this field to any number between 1 and 9999.

AUTOMATIC
In global EDIT, this controls whether or not you are placed into an EDIT session of members for which the commands succeeded:

Y Don't invoke an EDIT session for each successfully processed member. Proceed immediately to the next member to be processed.

N Invoke EDIT for each member for which the global EDIT command succeeded. You can review the changes, perform further editing, or cancel the changes. You can also terminate all pending processing.

LINK This controls whether each of the commands you specify on the GLOBAL prompt panel are to be considered separate, or are to be treated as a group. If LINK is set to NO, any one of them may fail, and the other commands

are processed. If LINK is set to YES, each of them must terminate successfully for any of the rest to be processed. If any command fails, the EDIT session for the member is canceled, so the previous commands, if any, have no effect (unless one of the previous commands was SAVE).

The possible values are:

Y Process the commands as a group.

N Process the commands individually.

PRINT

This controls whether or not members modified (and saved) under global EDIT are to be printed as specified in the print options:

Y Print each successfully processed member.

N Don't print the successfully processed members.

EXCLUDE

This controls whether, when the global EDIT command has finished processing, members that were not successfully processed are still to be listed:

Y Exclude members that were not successfully processed.

N Don't change the member list.

To accept the values as displayed, press the END key.

To display the third options panel, which contains the print processing options, press Enter.

Data Set Commander displays the following panel:

```
-DSC- -------------------------Print options-------------------------------------
 COMMAND ===>

   Suppress page formatting    ===> N (N=No, Y=Yes - file is already formatted)
   Print changed lines in bold ===> N (N=No, Y=Yes)
   Highlight program elements  ===> Y (N=No, Y=Yes - emphasize recognized items)
   Process mode                ===> G (I=print immediately)
                                      (G=Group requests for later printing)
                                      (L=print direct to the ISPF LIST data set)
   For process modes I and G:

     DESTINATION ID     ===>                 (Node-id<.User-id>)
     CLASS              ===> A        (or Sysout class)
     WRITER name        ===>          (Output WRITER)
     Number of copies   ===> 1        (How many?)
     Lines per page     ===> 60       (page size)
     Keep in HOLD queue ===> N        (Y=Yes, N=No)
     FORM number        ===>
     FCB name           ===>

   NOTE: Under process modes I and G, your USERID will be on the separator page.

  Press ENTER or END to exit. Enter CANCEL for installation defaults.
```

Figure 48. Print options panel

Print options

Print changed lines in bold
This specifies whether or not you want lines in the current modification level of each member (that is, lines changed in the last EDIT session) to be highlighted by printing in bold print. (This makes them very easy to find.) Options are:

Y Highlight lines in the current modification level.

N Do not highlight any lines.

Process mode
You can control how and where items you select for printing (such as individual members, the member list, and clipboards) are to be printed:

I (Immediate)
Each member or other item is printed to the printer separately, with separators between each.

G (Group)
Everything you specify for printing is accumulated in one print group until you issue the RELEASE command, issue the SET command and change the process mode to I or L, or end your session. The entire print group is printed together, without separators between individually printed items. For example, in GROUP mode, to get a list of all members starting with "PAY", followed by a print-out of each such member, you issue the commands:

```
FILTER PAY*
SAVE
P *
RELEASE
```

L (List)
The print-out is directed to the ISPF LIST data set.

Note: If you direct the print-out to the ISPF LIST data set, you can print it using the ISPF command LIST.

The following options apply only if you have specified process mode I or G:

CLASS
This specifies the SYSOUT class if you are printing to a printer.

DESTINATION ID
This specifies the SYSOUT destination ID (that is, the route code) of the printer. It may be either `Node-Id` or `Node-Id.User-Id`.

Number of copies
This specifies how many copies you want to be printed.

Lines per page
This specifies how many lines per page you want to print.

If Process mode is L (ISPF LIST data set), use ISPF option 0 (ISPF parameters) to control PAGESIZE of the ISPF LIST data set.

Keep in HOLD queue
This specifies whether or not you want the SYSOUT to be held:

Y Put the generated SYSOUT in the HOLD queue.

Note: Use the TSO OUT command, SDSF, or another output browser to release held SYSOUTs. The jobname is your TSO userid.

N The generated SYSOUT is immediately available (is released).

FORM number
This specifies the SYSOUT form number to be used for printing.

FCB name
This specifies the SYSOUT FCB code to be used for printing.

To accept the values as displayed, press ENTER or the END key.

Note: When invoking SET, you can specify which set of options you want to look at by specifying the parameter OLIST, MSL, OUTPUT (or PRINT), or GLOBAL. For example, display the third SET panel (which displays the options controlling print processing), you can enter the command `SET PRINT`.

Print options

Appendix C. Patterns

In a number of commands and fields where a name can be entered, Data Set Commander also accepts a pattern. For example, in MSL, when a line command is entered as a main command, a pattern can be used instead of a member name, so that the command acts on all names matching the pattern. A pattern contains one or more wildcard characters, which allow it to match more than one name. The wildcard characters are the percent sign ("%") and the asterisk "*". Any character in the data in the same position as a percent sign is considered to match it. (A blank in the data is not considered to match.) Any number of characters from the position of the asterisk to the right are considered to match the asterisk. The asterisk can be in any position. Trailing blanks match the asterisk. In addition, the underscore character ("_") is used to indicate a blank space. (Although blank spaces cannot appear in some fields, such as the member name field in an MSL, they can appear in the RENAME column of an MSL, where the feedback messages appear, and in load module attribute fields.)

The following examples illustrate how patterns work:

Table 10. Pattern matching definitions

Pattern	Contents of Field	Match	Reason
DEMO%0	DEMO10 DEMOZ0 DEMO DEMO	YES YES NO NO	 Nothing in position 5 Last character not "0"
AB%D*	ABCD ABCDE AB1D234 AB ABC ABBB	YES YES YES NO NO NO	 Nothing in position 3 Position 4 not "D" Position 4 not "D"
AB%	ABC AB1 AB ABCD BBB	YES YES NO NO NO	 Nothing in position 3 More than three characters Position 1 not "A"
*	ABCDEFG	YES	Matches any name
%	A	YES	Matches any single-character name
_	(empty)	YES	
A_C	A C ABC	YES NO	 Position 2 not blank
AB_	AB ABC	YES NO	 Position 3 not blank
A*C	ABC AC BC AB	YES YES NO NO	 Does not start with "A" Does not start with "C"

Table 10. Pattern matching definitions (continued)

Pattern	Contents of Field	Match	Reason
*A*B	AB	YES	
	$ABC	YES	
	ABEND	YES	
	A23B4	YES	
	CCBD	NO	No “A” in string preceding “B”
	ZAREA	NO	No “B” in string following “A”

Appendix D. MSL feedback messages

The RENAME field of the MSL displays descriptive information about the result of the process performed on the member. All feedback codes that start with "+" can be processed by the "tagged" commands, such as C+ and F+.

Table 11. MSL feedback messages

Message	Meaning	Process
-BROWSED	The member was browsed.	B
+COPIED	The member was copied.	COPY
-COPY ER	An error occurred during a COPY operation.	COPY
+DELETED	The member in your selection list was deleted by you or another user.	All
+EMPTY	The member was selected for printing but was empty.	PRINT
+ERROR	The last action could not proceed because there was an error when attempting it. member was selected for printing but was empty.	All
-FREED	The member was freed.	K
+G:ERROR	You entered an invalid command under GLOBAL and ended processing without correcting it.	GLOBAL
+G:FAIL	GLOBAL failed for this member.	GLOBAL
+G:INUSE	GLOBAL was unable to process this member because it was in use.	GLOBAL
+G:OK	GLOBAL succeeded for this member.	GLOBAL
+G:QUIT	GLOBAL terminated (QUIT executed).	GLOBAL
+G:SKIP	GLOBAL skipped this member generation.	GLOBAL
-IN USE	The member is in use by the indicated USERID.	E
-IN nnnn,	The member is in the library or libraries indicated.	H,WHERE
+INTERR	Unexpected error while accessing the member.	ALL
-INV NAM,	The member has an invalid name (it includes non-display characters).	All
-IO ERR	An input/output error occurred in reading the directory of the library or a member.	All
-MOVE ER	An error occurred during a MOVE operation.	MOVE
+MOVED	Member has moved.	MOVE
-NO AUTH	You have no authority to perform this operation.	All
+NOCOPY	Member was not copied.	COPY
+NOMOVE	Member was not moved.	MOVE
+NO-REPL	The member was not copied or moved because the member existed in the destination library and the REPLACE option was set to NO.	COPY, MOVE

Table 11. MSL feedback messages (continued)

Message	Meaning	Process
-NO SAVE	The member was not saved because CANCEL was issued or because no change was made to it.	E
+NO-STAT	The member was not copied or moved because statistics were not available for either the source or the target.	COPY, MOVE
+NOT-FND	The searched character string not found in member.	GLOBAL
+NOT-OLD	The member was not copied or moved because a member in the target library with the same name was not older than it.	COPY, MOVE
-NOT STD	The member has a non-standard directory entry.	All
+OTPERR	Copy of member generation failure.	COPY MOVE
-PRINT G	The member was printed in group mode.	PRINT
-PRINT I,	The member was printed in immediate mode.	PRINT
-PRINT L	The member was printed to the ISPF LIST data set.	PRINT
-PROMOTE	The member was promoted.	K
+PRTERR	This member could not be printed.	PRINT
+RECOVER	Member generation successfully recovered.	GENRECOV
+REVEAL	Member directory entry revealed in a higher level of library concatenation.	DELETE MOVE RENAME
-REVEALD	A member with the same name in a lower library was deleted from the list.	DELETE MOVE RENAME
+SAVED	The member was saved.	E
-STATS	The statistics of the member were created, removed, or changed.	STATS
-SUBMIT	The member was submitted as a batch job.	SUBMIT, U
+TXT-FND	The member contains the specified text string.	FINDTEXT
+TXT-SKP	Member generation skipped.	FINDTEXT
-VIEWED	The member was viewed.	V
old-name	The original member name.	RENAME
Text	The text specified by the TAG command.	TAG
-function	The ISPF function called.	ISPEXEC
-command	The TSO command executed.	T

Appendix E. MSL keywords, and default sorting order

The FILTER, LOCATE, and SORT commands operate on the fields displayed on the MSL panel. The keywords used to specify the fields are the corresponding column headings on the MSL panel. In addition, a few synonyms are acceptable for some fields.

MSL provides two different member selection list panels, one for text file libraries (that is, all types of libraries except load module libraries), and one for load module libraries.

Text File Library panel

The field names, alternative acceptable names, meanings, and default sorting order are shown in the following table.

Field Name	Synonyms	Meaning	Default Sort Order
NAME	MEMBER M N	Member name	Ascending
RENAME		Contents of RENAME field (feedback messages, old names of renamed members, and tags)	Ascending
LIB	LIBRARY	Library number in concatenation sequence	Ascending
VV	VERSION	Version number	Ascending
MM	LEVEL	Modification level	Ascending
CREATED	CRE	Date of creation	Descending
CHANGED	CHA	Date and time of last modification	Descending
SIZE		Number of lines currently in member	Descending
GENER		Member relative generation number	Ascending
INIT		Number of lines initially in member.	Descending
MOD		Number of lines changed in member	Descending

Load Library panel

The load library panel field names, alternative acceptable names and meanings are shown in the following table:

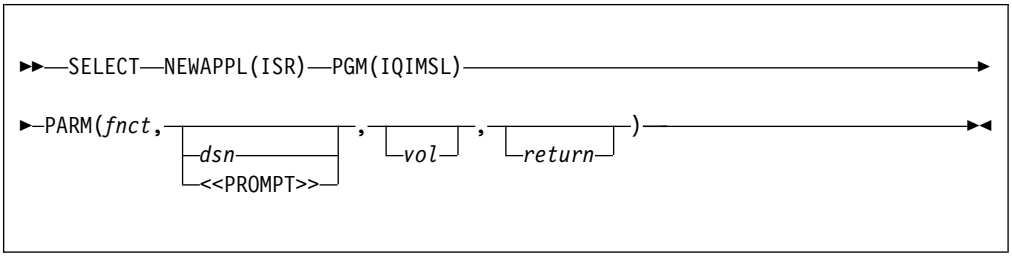
Field Name	Synonyms	Meaning	Default Sort Order
NAME	MEMBER M N	Member name	Ascending

Field Name	Synonyms	Meaning	Default Sort Order
RENAME		Contents of RENAME field (feedback messages, old names of renamed members, and tags)	Ascending
LIB	LIBRARY	Library number in concatenation sequence	Ascending
SIZE		Size of load module (hexadecimal)	Descending
ALIAS-OF	ALIAS	Name of member to which this member is aliased	Ascending
TTR		Relative track/record of start of load module	Ascending
AC	APF	APF authorization code	Ascending
AM	AMODE	Addressing mode	Ascending
RM	RMODE	Residency mode	Ascending
SSI		Load module system status index	Ascending
RENT		Reentrant	YES first
LOAD		Only loadable	YES first
REFR		Refreshable	Ascending
PAGE		Load on page boundary	YES first
NXEC		Not executable	YES first
TEST		Ready for TSO TEST	Ascending

Note: For the load module attributes RENT, REFR, TEST, OVLY, LOAD, NXEC, SCTR, PAGE, and EDIT, blank is equivalent to “NO”. For the load module attributes AMOD and RMOD, a blank value means that the linkage editor did not specify a value for this field. The underscore character (“_”) can be used (with commands such as FILTER) to indicate a blank in these fields.

Appendix F. Invoking MSL from an application or CLIST

MSL can be invoked by an application or CLIST. It must be called from a valid ISPF environment, using the ISPF Dialog Manager SELECT service. The format of the command should be as follows:



What	How
When an error occurs while invoking Data Set Commander, you need Data Set Commander to give you a return code of 8 instead of displaying the EDIT entry panel.	`ISPEXEC SELECT PGM(IQIMSL) PARM(E,'JONES.TEST.COBOL',,Y)` 'JONES.TEST.COBOL' is a library.

However invoked, on termination, control returns to the invoking application or CLIST.

The following is the description of the operands in the SELECT command:

fnct This is the function code. It defines the default process. The values for the process are:

E EDIT (This is the default value for the default process.

V VIEW

B BROWSE

dsn This is the data set name. If specified as <<PROMPT>> (including the greater-than and less-than symbols as shown), the entry panel is always displayed. If it is not specified, a prompt is displayed unless the cursor is on a valid Data Set Commander object name. The data set name can be specified in one of the following ways:

- PAYROL.JONES.COBOL, as a fully qualified name
- JONES.COBOL, as a partially qualified name

If this is a library, it invokes a member list of the library. If this is a sequential file, it simply invokes that file.

In a library name with a member name, for example, 'PAYROLL.JONES.COBOL(ACCTMAIN)', it invokes the member ACCTMAIN in the library PAYROLL.JONES.COBOL. This form can be used with partially qualified library names.

In a library name with a pattern, for example, 'PAYROLL.JONES.COBOL(ACCT*)', it invokes a filtered member list of the library listing all members whose names start with 'ACCT'.

In a member name 'PAYROLL', it invokes the member PAYROLL in the current library, or the last library processed (or, if the screen has been split, the last library processed in the split).

In a pattern 'PAY', it invokes a filtered listing of the members matching the pattern in the current library, or the library processed (or, if the screen has been split, the last library processed in this split).

Note: Access to cataloged data sets by DD name is fully supported when MSL is invoked in an application or CLIST. You can invoke an MSL on a pattern on the particular level of the current PANELLIB concatenation by specifying dsn as: @@DD.PANELLIB.#2(ACCT*).

vol This is the volume serial number. If it is specified, MSL looks for the data set only on the specified volume. Otherwise, it consults the catalog to find the data set.

return This operand decides whether or not to return to the calling application with a return code of 8 if an error occurs when invoking Data Set Commander:

N Display the entry panel if an error occurs. This is the default.

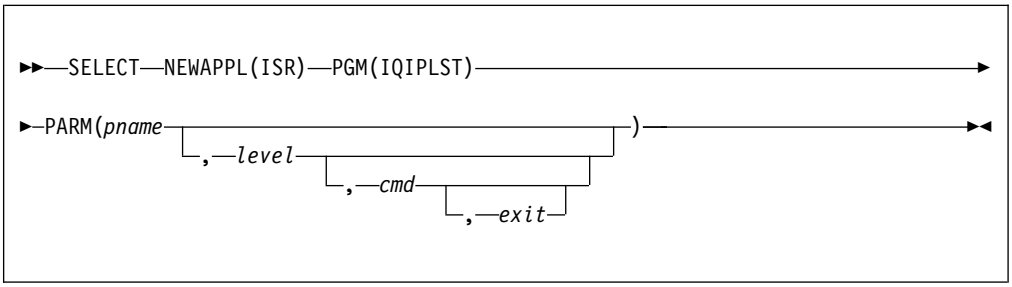
Y Return to the calling application with a return code of 8 if an error occurs.

Appendix G. Invoking OLIST from an application or CLIST

You can invoke OLIST from an application or CLIST. It must be called from a valid ISPF environment, using the ISPF Dialog Manager SELECT service.

You can create and display a temporary OLIST or a permanent OLIST. You can also display an existing OLIST, the default OLIST, or a selection list of OLISTs.

The SELECT command has this syntax:



The operands are:

pname The OLIST is to be displayed or created.
***** to display the List of Referenced Object Lists
TEMP
to create a temporary OLIST.

If "*" or "_TEMP" is omitted, the default OLIST is displayed.

level This is a fully or partially qualified data set level. The first level of a generic data set specification must be fully specified, but the following levels can be specified using the wildcards "%" and "*" freely. If an existing OLIST is specified, the level is ignored.

If level is omitted, pname is checked to see if it occurs as a first-level qualifier. If it occurs as a first-level qualifier, it creates an OLIST prefilled with a list of all data sets using pname as the first-level qualifier. If it does not, it creates an OLIST with the ISPF libraries on the user's EDIT entry panel.

cmd The values for the command are as follows:
B BROWSE
E EDIT
V VIEW

If the values are omitted, the default process is defined as on the user's Data Set Commander Options panels.

This command can be specified as the following:

- PAYROL.JONES.COBOL, as a fully qualified name
- JONES.COBOL, as a partially qualified name

If this is a library, this command invokes a member list of the library. If this is a sequential file, it simply invokes that file.

In a library name with a member name, for example, 'PAYROLL.JONES.COBOL(ACCTMAIN)', the command invokes the member ACCTMAIN in the library PAYROLL.JONES.COBOL. This form can be used with partially qualified library names.

In a library name with a pattern, for example, 'PAYROLL.JONES.COBOL(ACCT*)', this command invokes a filtered member list of the library listing all members whose names start with 'ACCT'.

In a member name 'PAYROLL', this command invokes the member PAYROLL in the current library, or the last library processed (or, if the screen has been split, the last library processed in the split).

In a pattern 'PAY', this command invokes a filtered listing of the members matching the pattern in the current library, or the library processed (or, if the screen has been split, the last library processed in this split).

Note: Access to cataloged data sets by DD name is fully supported when MSL is invoked in an application or CLIST. You can invoke an MSL on a pattern on the particular level of the current PANELLIB concatenation by specifying dsn as: @@DD.PANELLIB.#2(ACCT*).

exit It allows you to decide whether or not OLIST should be terminated on error:

Y On error, return to the caller.

N On error, remain in OLIST, where the user is able to correct the error (possibly by specifying a different OLIST). This is the default.

Here are some examples of invoking OLIST:

What	How
Invoking the default OLIST with the default process	`ISPEXEC SELECT NEWAPPL(ISR) PGM(IQIPLST)`
Invoking the default OLIST with the process returning to the calling program on error	`ISPEXEC SELECT NEWAPPL(ISR) PGM(IQIPLST) PARM(,,,Y)`
Invoking the default OLIST with the default process of BROWSE	`ISPEXEC SELECT NEWAPPL(ISR) PGM(IQIPLST) PARM(,,,B)`
Creating and displaying a new OLIST named SYS1, listing all data sets starting with 'SYS1'	`ISPEXEC SELECT NEWAPPL(ISR) PGM(IQIPLST) PARM(SYS1)`
Creating and displaying a new OLIST named NEWLIST, listing all data sets starting with SYS1	`ISPEXEC SELECT NEWAPPL(ISR) PGM(IQIPLST) PARM(NEWLIST,SYS1)`
Displaying a temporary OLIST of all data sets starting with SYS1	`ISPEXEC SELECT NEWAPPL(ISR) PGM(IQIPLST) PARM(SYS1.*)` or, `ISPEXEC SELECT NEWAPPL(ISR) PGM(IQIPLST) PARM(_TEMP_,SYS1)`
Displaying a selection list of existing OLISTs	`ISPEXEC SELECT NEWAPPL(ISR) PGM(IQIPLST) PARM(*)`
Creating and displaying an OLIST named NEWLIST of all data sets to match the specification 'ACCOUNTS.%PAY*.COB*' with a default process of VIEW and with OLIST being terminated and returned to the caller on error	`ISPEXEC SELECT NEWAPPL(ISR) PGM(IQIPLST)ISPEXEC SELECT NEWAPPL(ISR) PGM(IQIPLST)PARM(NEWLIST,ACCOUNTS. %PAY*.COB*,VIEW,Y)`

Appendix H. Invoking user commands from MSL

The "%" line command in MSL is used to invoke user-written commands. It invokes CLISTs, REXX execs, or other TSO commands accessible from ISPF. The name of the command is specified in the RENAME column.

```
  File  Display  Library  SCLM  Settings  Menu  Utilities  Test  Help  Exit
-------------------------------------------------------------------------------
-DSC--EDIT L1------ INTT025.DSC.MSGS ----------------------ROW 00001 OF 00004
COMMAND  ===>                                               SCROLL ===> CSR
HOTBAR: REFRESH  FLIP     GLOBAL   INFO     COMPRESS EXPDIR   TAILOR   TOTALS
                                                 ON VOLUME USR004
   NAME    RENAME   LIB VV.MM CREATED     CHANGED      SIZE  INIT   MOD USERID
% NEWSTUFF MAILIT     1 01.01 07/01/26 07/01/26 13:52    23    21     2 SUPPORT
  RESTORE             1 01.01 07/01/26 07/01/26 13:52    13    14     0 SUPPORT
  SYSTEMS             1 01.01 07/01/26 07/01/26 13:52     6     8     0 SUPPORT
  TRAINS              1 01.01 07/01/26 07/01/26 13:52    19    16     3 SUPPORT
   --END--
```

Figure 49. Entering the "%" line command in MSL

The MAILIT command is used on the NEWSTUFF member. MAILIT must be available to ISPF for processing (SYSPROC, SYSEXEC, linklist TSO command, etc.). Data Set Commander invokes the command with the data set name and the member name as the first parameter. In this example, the command is invoked as follows:

```
ISPEXEC SELECT CMD(MAILIT 'SAMPLE.TEST.MSGS(NEWSTUFF)')
```

In addition, Data Set Commander stores in the shared pool several ISPF variables that can be used by the invoked application. See Appendix K, "Adding your own commands to MSL," on page 357 for the list of available variables and their usage.

Appendix I. Invoking user commands from OLIST

When a line command entered in OLIST is not a built-in line command, OLIST assumes it is a TSO command or CLIST/REXX exec. The invoked command is passed the data set name (with the member name, if specified) as a parameter. The user may also specify other parameters. If the command is preceded by a question mark, or SHOWCMD is set to ON, Data Set Commander displays a prompt screen showing the command buffer before execution. The ? command prefix overrides built-in line commands, allowing you to execute installation commands with names like B, E, I etc.

When creating your own commands to be called from OLIST, remember that these must be available to ISPF (via SYSPROC/SYSEXEC or other normal module concatenation libraries).

An example of a command that uses the TSO XMIT command to transmit data sets is:

```
CLIST NAME: DSNSENU

PROC 1 DSNAME TO(JONES01)
XMIT (&TO) DATASET(&DSNAME)
```

The command is invoked from OLIST as shown below:

```
  File  Edit  Find  Display  Populate  Settings  Menu  Util  Test  Help  Exit
-------------------------------------------------------------------------------
-DSC- OLIST (B) ----------- ALLOCATION LIST FOR "ISPPLIB" -- Row 1 to 15 of 26
Command    ===>                                              SCROLL ===> CSR
Hotbar: OPRINT   REFRESH  CLRVOL   FILLVOL  UTIL     UPDATE   CUT      FLIP
                                                              *TEMPORARY LIST*
TSO PARMS  ===>
Command   Member   Numbr Data Set Names / Objects                      Class
--------- -------- ----- ------------------------------------------- -------
DSNSEND   IQI@PRIM     1 'SPFE.IBM.RLSE590.PLIB'
                       2 'ISP.SISPPENU'
                       3 'FMN.V6R1M0.SFMNPENU'
                       4 'PP.XDC.Z16.XDCPLIB'
                       5 'AUZ.SAUZPENU'
```

To override the destination parameter in the CLIST, the TO(...) parameter can be specified in the TSO PARMS field as follows:

```
  File  Edit  Find  Display  Populate  Settings  Menu  Util  Test  Help  Exit
-------------------------------------------------------------------------------
-DSC- OLIST (B) ----------- ALLOCATION LIST FOR "ISPPLIB" -- Row 1 to 15 of 26
Command    ===>                                              SCROLL ===> CSR
Hotbar: OPRINT   REFRESH  CLRVOL   FILLVOL  UTIL     UPDATE   CUT      FLIP
                                                              *TEMPORARY LIST*
TSO PARMS  ===>  TO(JERRY)
Command   Member   Numbr Data Set Names / Objects                      Class
--------- -------- ----- ------------------------------------------- -------
DSNSEND   IQI@PRIM     1 'SPFE.IBM.RLSE590.PLIB'
                       2 'ISP.SISPPENU'
                       3 'FMN.V6R1M0.SFMNPENU'
                       4 'PP.XDC.Z16.XDCPLIB'
                       5 'AUZ.SAUZPENU'
```

Appendix J. Calling enhanced EDIT, VIEW, or BROWSE from dialogs

You can dynamically invoke the Data Set Commander enhanced EDIT, VIEW, or BROWSE function from a dialog.

To invoke EDIT with the Data Set Commander enhancements, do one of the following:

- Specify !IQIEMAC as the initial macro on the ISPEXEC EDIT statement.
- If you already have an initial macro on the ISPEXEC EDIT statement, issue ISREDIT !IQIEMAC in your own initial macro.

To invoke VIEW, do one of the following:

- Specify !IQIVMAC as the initial macro on the ISPEXEC EDIT statement.
- If you already have an initial macro on the ISPEXEC EDIT statement, issue ISREDIT !IQIVMAC in your own initial macro.

Note: If you are not using the Data Set Commander Librarian or Panvalet support and if you invoke EDIT on non-standard libraries (for example, Librarian files) or use the EDIF EDIT interface, use !IQIPMAC instead of !IQIEMAC or !IQIVMAC.

To invoke BROWSE, use the parameter PANEL(IQIBROB) on the ISPEXEC BROWSE statement.

Appendix K. Adding your own commands to MSL

The T (TSO) command is a convenient vehicle to add more commands to MSL. You can create Assembler Language TSO commands, CLISTs, or REXX EXECs that accept a data set name (with a member) as a first parameter to perform a number of different functions on a member, such as compiling a member or downloading or uploading a member to or from a PC.

When a user enters a T command, MSL issues a command to TSO in the format

```
command 'library-name(member)'
```

where command is as specified in the rename field (if T is issued as a line command), or is the second parameter of the T main command.

The following ISPF dialog variables are stored in the SHARED pool and are available to the TSO command, CLIST, or REXX EXEC being called:

Variables always available

ZLLIB	Position of member in concatenation hierarchy
MEMBER	Member name
DIRTYPE	Type of member: S - ISPF statistics are available N - ISPF statistics are not available L - Load module
TYPE	Data set type (last qualifier)
IPIDSN1	Name of library 1 in concatenation hierarchy
IPIDSN2	Name of library 2 in concatenation hierarchy
IPIDSN3	Name of library 3 in concatenation hierarchy
IPIDSN4	Name of library 4 in concatenation hierarchy

Variables available if ISPF statistics are available

ZLVERS	Version number
ZLMOD	Modification level
ZLCDATE	Creation date
ZLMDATE	Last modification date
ZLMTIME	Last modification time
ZLCNORC	Current number of records
ZLINORC	Beginning number of records
ZLMNORC	Number of records modified
ZLUSER	Used ID of user that last modified member

Variables available for load modules

ILMSIZE	Load module size
ILMAPF	Load module authorization code (AC)

Variables available for load modules

ILMRENT	YES if reentrant
ILMREFR	YES if refreshable
ILMREUS	YES if reusable
ILMTEST	YES if link-edited with the TEST attribute
ILMAMOD	Load module AMODE
ILMRMOD	Load module RMODE

When entered as a main command, the T command requires a member name or pattern. If a TSO command, CLIST, or REXX EXEC creates a new member, MSL adds it to the member list. For example, if you create a TSO command, CLIST, or REXX EXEC called UPLOAD, you can issue the following command to upload a file from the PC into a new member called NEWNAME:

```
T NEWNAME UPLOAD
```

The essential elements of such a CLIST or REXX EXEC looks like this:

```
PROC 1 DSNAME
ALLOC REUSE FILE(OUT) SHR DA(&DSNAME)   /* ALLOCATE OUTPUT FILE
*/
CALL 'DEMO.LOAD(DOUPLOAD)' 'UPLOAD'   /* ASSUME THIS IS THE UPLOAD
PROGRAM */
FREE FILE(OUT)                /* FREE THE OUTPUT DDNAME */
```

When entered as a main command, the T command accepts patterns. You may want to QUIT the processing of members not yet processed if a return code from a TSO command, CLIST, or REXX EXEC indicates a severe error. To do so, it's necessary to issue the appropriate ISPEXEC command, like this:

```
PROC 1 DSNAME
ALLOC REUSE FILE(OUT) SHR DA(&DSNAME)   /* ALLOCATE OUTPUT FILE
*/
CALL 'DEMO.LOAD(DOUPLOAD)' 'UPLOAD'   /* ASSUME THIS IS THE UPLOAD
PROGRAM */
IF (&MAXCC>8) THEN DO            /* HANDLE SEVERE ERRORS */
   WRITE SEVERE ERROR (RETURN CODE IS &MAXCC)
   ISPEXEC SELECT PGM(IQIQUIT) PARM(N)  /* ISSUE MSL 'QUIT' */
END                     /* END DO */
FREE FILE(OUT)                /* FREE THE OUTPUT DDNAME */
```

Appendix L. Adding your own point-and-shoot general commands

You can add general commands to ISPF. If you use the TSO shell provided by Data Set Commander, the commands you add can make use of the point-and- shoot interface. For example, if you have (or create) a CLIST that compiles a data set, users are able to specify the data set to be compiled simply by typing the command name on the command line, putting the cursor on the data set name, and pressing Enter. If a PF key is set to the command name, users are able to invoke the command simply by placing the cursor on the data set name and pressing the PF key.

To add a general command, add an entry in ISPCMDS (the ISPF command table) or in an application command table (xxxxCMDS, where xxxx is the application ID). For example, assume that the CLIST named COMPILE accepts a source data set name as its first parameter. Add an entry like the following to the command table:

ZCTVERB	**ZCTTRUNC**	**ZCTACT**
COMPILE	0	SELECT PGM(IQITSO) PARM(-, %COMPILE /)

Data Set Commander replaces the slash ("/") in the command parameter with the data set name that the cursor is on. (If the cursor is not on a valid name, no substitution is performed, and the slash is passed to the application.)

Appendix M. Persistent Table Library

Persistent Table Library is a personal library that serves as a repository for Data Set Commander persistent objects. Persistent Table Library can be dynamically allocated or disabled.

To view the options, enter `ISET L`. The Persistent Table Library Options are displayed:

```
-DSC- ----------------Persistent Table Library Options-------------------------
COMMAND ===>

  IBMDSC uses DD(IPITBLIB) for specifying a personal library as a
  repository of persistent tables, such as CUT/PASTE clipboards and
  the TSO-SHELL command lists. This library may be dynamically allocated
  or disabled by electing one of the following actions:

   A Allocate an existing or a new library for this purpose.

   B Backup the current table library and allocate space for a new one.

   T Temporarily disable its use for this session. At the next IBMDSC startup
       you will be prompted again to elect how to use this facility.

   P Permanently disable its use. This facility will be disabled until you
       explicitly use the SET command to change this status.

   A <=== Elect persistent table library action.

Press ENTER or END to exit. Enter CANCEL for installation defaults.
```

Allocating a library

Data Set Commander recommends a dedicated PDSE library for storing its persistent tables. You may either specify an existing library or allocate a new library for this purpose. When you allocate a valid library, its name is stored in your profile and is automatically used as long as DD(IPITBLIB) is not included in your LOGON procedure.

Data Set Commander suggests you use the library name of the existing permanent OLIST library, or if DD(PLSTLIBW) is missing, use a name and volume derived from your PROFILE library name.

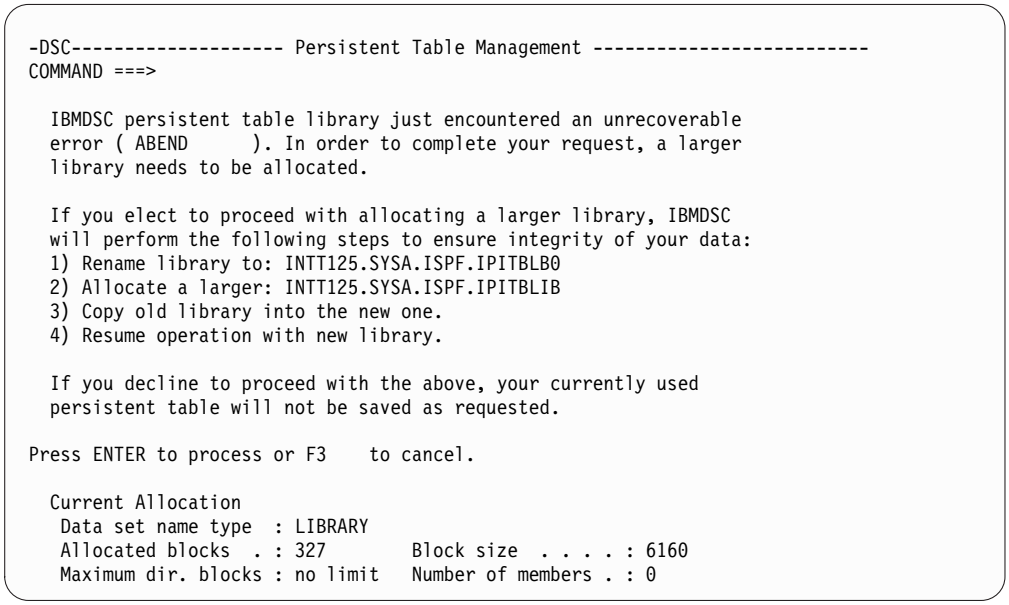
You can disable the library or select a library by using the following commands in the main Command line:

Command	Remarks
D	Disable the current library.
S	Select a library. This is a default setting.

Backing up the table library

Data Set Commander allows you to back up your persistent table library or allocate a larger library when your current library is running out of space. Data Set Commander provides the following options:

Figure 50. Persistent Table Management panel



Appendix N. IQIMONTR operator commands

Here are the commands that an operator can enter to modify the IQIMONTR. They are listed here for completeness. It is preferable to control IQIMONTR using the menu-driven application.

For compactness, the commands are shown in "brackets-and-braces" syntax commands.

<t4> is time field up to a length of 4. It can consist of up to three digits and a time unit, for example, "nnns" for nnn seconds, "nnnm" for nnn minutes, and "nnnh" for nnn hours. So "5h" is five hours. If the value only contains digits, the unit defaults to seconds.

LLA ADD, LLA ACT, and LLA ACTIVATE

Use these commands to activate the monitoring of an LLA group or a specific library.

```
LLA ADD,GRP={<xy>|CSVLLAxy|-LNKLST-}...
        {,SYS={sysname|*|*ALL|*OTHER}|,NODE={sysname|*|*ALL|*OTHER}}
LLA ACT,GRP={<xy>|CSVLLAxy|-LNKLST-}...
        {,SYS={sysname|*|*ALL|*OTHER}|,NODE={sysname|*|*ALL|*OTHER}}
LLA ACTIVATE,GRP={<xy>|CSVLLAxy|-LNKLST-}...
        {,SYS={sysname|*|*ALL|*OTHER}|,NODE={sysname|*|*ALL|*OTHER}}

LLA ADD,{{LINKLIST}|{LNKLST}}...
        {,SYS={sysname|*|*ALL|*OTHER}|,NODE={sysname|*|*ALL|*OTHER}}
LLA ACT,{{LINKLIST}|{LNKLST}}...
        {,SYS={sysname|*|*ALL|*OTHER}|,NODE={sysname|*|*ALL|*OTHER}}
LLA ACTIVATE,{{LINKLIST}|{LNKLST}}...
        {,SYS={sysname|*|*ALL|*OTHER}|,NODE={sysname|*|*ALL|*OTHER}}

LLA ADD,DSN=<dsn>{,VOL=<vol>}...
        {,SYS={sysname|*|*ALL|*OTHER}|,NODE={sysname|*|*ALL|*OTHER}}
LLA ACT,DSN=<dsn>{,VOL=<vol>}...
        {,SYS={sysname|*|*ALL|*OTHER}|,NODE={sysname|*|*ALL|*OTHER}}
LLA ACTIVATE,DSN=<dsn>{,VOL=<vol>}...
        {,SYS={sysname|*|*ALL|*OTHER}|,NODE={sysname|*|*ALL|*OTHER}}
```

LLA DEL, LLA DELETE, LLA DEA, and LLA DEACTIVATE

Use these commands to suspend the monitoring of an LLA group or a specific library.

```
LLA DEL,GRP={<xy>|CSVLLAxy|-LNKLST-}...
        {,SYS={sysname|*|*ALL|*OTHER}|,NODE={sysname|*|*ALL|*OTHER}}
LLA DELETE,GRP={<xy>|CSVLLAxy|-LNKLST-}...
        {,SYS={sysname|*|*ALL|*OTHER}|,NODE={sysname|*|*ALL|*OTHER}}
LLA DEA,GRP={<xy>|CSVLLAxy|-LNKLST-}...
        {,SYS={sysname|*|*ALL|*OTHER}|,NODE={sysname|*|*ALL|*OTHER}}
LLA DEACTIVATE,GRP={<xy>|CSVLLAxy|-LNKLST-}...
        {,SYS={sysname|*|*ALL|*OTHER}|,NODE={sysname|*|*ALL|*OTHER}}

LLA DEL,{{LINKLIST}|{LNKLST}}...
        {,SYS={sysname|*|*ALL|*OTHER}|,NODE={sysname|*|*ALL|*OTHER}}
LLA DELETE,{{LINKLIST}|{LNKLST}}...
        {,SYS={sysname|*|*ALL|*OTHER}|,NODE={sysname|*|*ALL|*OTHER}}
LLA DEA,{{LINKLIST}|{LNKLST}}...
        {,SYS={sysname|*|*ALL|*OTHER}|,NODE={sysname|*|*ALL|*OTHER}}
```

```
LLA DEACTIVATE,{{LINKLIST}|{LNKLST}}...
        {,SYS={sysname|*|*ALL|*OTHER}|,NODE={sysname|*|*ALL|*OTHER}}

LLA DEL,{{LINKLIST}|{LNKLST}}...
        {,SYS={sysname|*|*ALL|*OTHER}|,NODE={sysname|*|*ALL|*OTHER}}
LLA DELETE,{{LINKLIST}|{LNKLST}}...
        {,SYS={sysname|*|*ALL|*OTHER}|,NODE={sysname|*|*ALL|*OTHER}}
LLA DEA,{{LINKLIST}|{LNKLST}}...
        {,SYS={sysname|*|*ALL|*OTHER}|,NODE={sysname|*|*ALL|*OTHER}}
LLA DEACTIVATE,{{LINKLIST}|{LNKLST}}...
        {,SYS={sysname|*|*ALL|*OTHER}|,NODE={sysname|*|*ALL|*OTHER}}

LLA DEL,DSN=<dsn>{,VOL=<vol>}...
        {,SYS={sysname|*|*ALL|*OTHER}|,NODE={sysname|*|*ALL|*OTHER}}
LLA DELETE,DSN=<dsn>{,VOL=<vol>}...
        {,SYS={sysname|*|*ALL|*OTHER}|,NODE={sysname|*|*ALL|*OTHER}}
LLA DEA,DSN=<dsn>{,VOL=<vol>}...
        {,SYS={sysname|*|*ALL|*OTHER}|,NODE={sysname|*|*ALL|*OTHER}}
LLA DEACTIVATE,DSN=<dsn>{,VOL=<vol>}...
        {,SYS={sysname|*|*ALL|*OTHER}|,NODE={sysname|*|*ALL|*OTHER}}
```

LLA REF and LLA REFRESH

These commands direct the Monitor to look for updates to members of an LLA managed library or of an LLA group of libraries, and trigger an LLA refresh for the updated members. The FORCE parameter triggers an LLA refresh of all members regardless of their update status.

```
LLA REF,GRP={<xy>|CSVLLAxy|-LNKLST-}...
        {,SYS={sysname|*|*ALL|*OTHER}|,NODE={sysname|*|*ALL|*OTHER}}
LLA REFRESH,GRP={<xy>|CSVLLAxy|-LNKLST-}...
        {,SYS={sysname|*|*ALL|*OTHER}|,NODE={sysname|*|*ALL|*OTHER}}

LLA REF,{{LINKLIST}|{LNKLST}}...
        {,SYS={sysname|*|*ALL|*OTHER}|,NODE={sysname|*|*ALL|*OTHER}}
LLA REFRESH,{{LINKLIST}|{LNKLST}}...
        {,SYS={sysname|*|*ALL|*OTHER}|,NODE={sysname|*|*ALL|*OTHER}}

LLA REF,DSN=<dsn>{,VOL=<vol>}...
        {,SYS={sysname|*|*ALL|*OTHER}|,NODE={sysname|*|*ALL|*OTHER}}
LLA REFRESH,DSN=<dsn>{,VOL=<vol>}{,FORCE}...
        {,SYS={sysname|*|*ALL|*OTHER}|,NODE={sysname|*|*ALL|*OTHER}}

LLA REF,{,MEM=(<mempatt1>{,<mempatt2>}...)}...
        {,SYS={sysname|*|*ALL|*OTHER}|,NODE={sysname|*|*ALL|*OTHER}}
LLA REFRESH,{,MEM=(<mempatt1>{,<mempatt2>}...)}...
        {,SYS={sysname|*|*ALL|*OTHER}|,NODE={sysname|*|*ALL|*OTHER}}
```

LOG

These commands control the diagnostics log output file.

```
LOG {{ON}|{OFF}|{SPIN}}{,ALL}{,CLASS=c1}
LOG {{ON}|{OFF}|{SPIN}}{,ALL}{,CLS=c1}
```

Specify “SPIN” to close and re-open the output file.

MSG

These commands control Monitor message output file.

```
MSG {{ON}|{OFF}|{SPIN}}{,CLASS=c1}...
    {,SYS={sysname|*|*ALL|*OTHER}|,NODE={sysname|*|*ALL|*OTHER}}
MSG {{ON}|{OFF}|{SPIN}}{,CLS=c1}...
    {,SYS={sysname|*|*ALL|*OTHER}|,NODE={sysname|*|*ALL|*OTHER}}
```

Specify "SPIN" to close and re-open the output file.

PAUSE

These commands suspend all monitor operations for a given period of time.

```
PAUSE {PAUSE=t4}...
      {,SYS={sysname|*|*ALL|*OTHER}|,NODE={sysname|*|*ALL|*OTHER}}
PAUSE=t4...
      {,SYS={sysname|*|*ALL|*OTHER}|,NODE={sysname|*|*ALL|*OTHER}}
```

RESUME

This command signals to a previously paused monitor to resume normal operation.

```
RESUME  {,SYS={sysname|*|*ALL|*OTHER}|,NODE={sysname|*|*ALL|*OTHER}}
```

STATS

This command writes out into the Monitor message file a short statistics report.

```
STATS
```

TIMER

This command modifies the various timer related settings of the Monitor.

```
TIMER {{TIMER=t4}|{INTVL=t4}|{INTERVAL=t4}}{,DELAY=t4}...
      {{,AUTO=t4}|{,AUTOREF=t4}}{,REFTIME=t8}...
      {,SYS={sysname|*|*ALL|*OTHER}|,NODE={sysname|*|*ALL|*OTHER}}
TIMER=t4{,DELAY=t4}{{,AUTO=t4}|{,AUTOREF=t4}}{,REFTIME=t8}...
      {,SYS={sysname|*|*ALL|*OTHER}|,NODE={sysname|*|*ALL|*OTHER}}
```

SHUTDOWN

This command directs the Monitor to terminate processing and release all of its system control areas.

```
SHUTDOWN{,SYS={sysname|*|*ALL|*OTHER}|,NODE={sysname|*|*ALL|*OTHER}}
```

STOP

This command directs the Monitor to terminate processing leaving all of its system control areas for following execution.

```
STOP{,SYS={sysname|*|*ALL|*OTHER}|,NODE={sysname|*|*ALL|*OTHER}}
```

XCF ACT and XCF ACTIVATE

These commands enable incoming and outgoing cross SYSPLEX Monitor messages.

```
XCF ACT{,{IN|INPUT}}{,{OUT|OUTPUT}}{,ALL}...
       {,SYS={sysname|*|*ALL|*OTHER}|,NODE={sysname|*|*ALL|*OTHER}}
XCF ACTIVATE{,{IN|INPUT}}{,{OUT|OUTPUT}}...
       {,SYS={sysname|*|*ALL|*OTHER}|,NODE={sysname|*|*ALL|*OTHER}}
XCF ACT{,{IN|INPUT}}{,{OUT|OUTPUT}}{,ALL}...
       {,SYS={sysname|*|*ALL|*OTHER}|,NODE={sysname|*|*ALL|*OTHER}}
XCF ACTIVATE{,{IN|INPUT}}{,{OUT|OUTPUT}}{,ALL}...
       {,SYS={sysname|*|*ALL|*OTHER}|,NODE={sysname|*|*ALL|*OTHER}}
```

XCF DEA and XCF DEACTIVATE

These commands disable incoming and outgoing cross SYSPLEX Monitor messages.

```
XCF DEA{,{IN|INPUT}}{,{OUT|OUTPUT}}{,ALL}...
        {,SYS={sysname|*|*ALL|*OTHER}|,NODE={sysname|*|*ALL|*OTHER}}
XCF DEACTIVATE{,{IN|INPUT}}{,{OUT|OUTPUT}}{,ALL}...
        {,SYS={sysname|*|*ALL|*OTHER}|,NODE={sysname|*|*ALL|*OTHER}}
XCF DEA{,{IN|INPUT}}{,{OUT|OUTPUT}}{,ALL}...
        {,SYS={sysname|*|*ALL|*OTHER}|,NODE={sysname|*|*ALL|*OTHER}}
XCF DEACTIVATE{,{IN|INPUT}}{,{OUT|OUTPUT}}{,ALL}...
        {,SYS={sysname|*|*ALL|*OTHER}|,NODE={sysname|*|*ALL|*OTHER}}
```

Appendix O. Searching with command FindText

In this sample scenario, members that match two specified search criteria are searched for. The following tasks are performed:

- Specifying the first search criterion to OLIST command FindText for immediate search with no report and filtering out of relevant libraries.
- From the filtered list of relevant libraries, selecting one library for a detailed search.
- Specifying the first search criterion to MSL command FindText for a detailed report and an additional search criterion.
- Examining the FindText detailed report from an EDIT session.
- Exiting the report to a filtered MSL display of all relevant members.

Searching procedure

1. Enter command `OL SYS1LIBS`, and then press enter to open permanent object list SYS1LIBS. See Figure 51 for illustration.

```
  Menu  Utilities  Compilers  Options  Status  Help
══════════════════════════════════════════════════════════════════════════════
                          z/OS Primary Option Menu
Option ===> OL SYS1LIBS

0  Settings      Terminal and user parameters         User ID . : MROTTER
1  View          Display source data or listings      Time. . . : 11:48
2  Edit          Create or change source data         Terminal. : 3278
3  Utilities     Perform utility functions            Screen. . : 2
4  Foreground    Interactive language processing      Language. : ENGLISH
5  Batch         Submit job for language processing   Appl ID . : ISR
6  Command       Enter TSO or Workstation commands    TSO logon : DSCBETA
7  Dialog Test   Perform dialog testing               TSO prefix: MROTTER
```

Figure 51. Opening permanent OLIST SYS1LIBS from the Primary Option Menu

2. Enter command `FT`, and then press enter to display the FindText options menu. See Figure 52 for illustration.

```
  File  Edit  Find  Display  Populate  Settings  Menu  Util  Test  Help  Exit
-------------------------------------------------------------------------------
-DSC- OLIST (B) ----------- *** SYSTEM LIBRARIES *** --------- Row 1 to 7 of 7
Command    ===>  FT                                          SCROLL ===> CSR
Hotbar:
Open list  ===> SYS1LIBS (or BLANK for reference list)    *EXEC*PERMANENT LIST*
Command   Member   Numbr Data Set Names / Objects                       Class
--------- -------- ----- --------------------------------------------- -------
                       1 !*** SYSTEM LIBRARIES ***
                       2 'SYS1.LINKLIB'                                 PDS
                       3 'SYS1.MACLIB'                                  PDS
                       4 'SYS1.MIGLIB'                                  PDS
                       5 'SYS1.PARMLIB'                                 PDS
                       6 'SYS1.SAMPLIB'                                 PDS
                       7 'SYS1.VTAMLIB'                                 PDS
                        ---------------- END OF LIST ----------------
```

Figure 52. Opening FindText options menu from the display of object list SYS1LIBS

3. In the OLIST Text Search Settings panel, enter the settings that are used in Figure 53 on page 368, and then press enter:


```
-DSC-                      OLIST Text Search Settings
COMMAND ===>


Specify string to search within the OLIST objects
 SEARCH string ===> 'ABEND%*0C4'
          mode ===> M   W (Word) or M (Mask) or N (Normal)
   WITH string ===> ABEND
          mode ===> W   W (Word) or M (Mask) or N (Normal)
WITHOUT string ===> ABENDED
          mode ===> N   W (Word) or M (Mask) or N (Normal)
Specify search range in target data records:
  START COLUMN ===> 1      END COLUMN ===> 99999
Specify how many objects to process before being prompted to resume:
    STOP AFTER ===> 999    Number of objects to process successfully
  PROMPT AFTER ===> 12345  Number of objects to process before a prompt
Specify Y (Yes) or N (No) for the following options:
     AUTOMATIC ===> Y Process until reaches success limit?
       EXCLUDE ===> Y Exclude mismatched objects from displayed list?
   PACKED DATA ===> N Expand ISPF packed data format?
   FIND PROMPT ===> Y Prompt with FIND command upon selecting an object?
   FULL REPORT ===> N Report all found records with multiple search criteria?

Press ENTER for more search criteria or the END key to cancel

Note: use " (double quote) to search for ' (single quote) characters
Note: use C'... or c'... for case sensitive search strings
      use X'... or x'... for hexadecimal search strings
Note: use * for a pattern mask "any character string or none" indicator
      use % for a pattern mask "any single character" indicator
```

Figure 53. Specifying a single OLIST search criterion to be immediately executed

4. In the search result panel, all mismatched data sets are excluded. Enter line command `B` on the line of library SYS1.MACLIB, and then press enter to select and browse the library. See Figure 54 and Figure 55 for illustration.

```
  File  Edit  Find  Display  Populate  Settings  Menu  Util  Test  Help  Exit
-------------------------------------------------------------------------------
-DSC- OLIST (B) ----------- *** SYSTEM LIBRARIES *** -------- Search completed
Command    ===>                                              SCROLL ===> CSR
Hotbar:
Open list  ===> SYS1LIBS (or BLANK for reference list)    *EXEC*PERMANENT LIST*
Command   Member   Numbr Data Set Names / Objects             *EXCLUDE* Class
--------- -------- ----- ------------------------------------------- -------
-TXT FND- APIPPINV     2 'SYS1.LINKLIB'                               PDS
-TXT FND- ERBSTGST     3 'SYS1.MACLIB'                                PDS
-TXT FND- GIMDM64      4 'SYS1.MIGLIB'                                PDS
-TXT FND- EDGCVRSX     6 'SYS1.SAMPLIB'                               PDS
                          ---------------- END OF LIST ----------------
```

Figure 54. OLIST FindText search results

```
  File  Edit  Find  Display  Populate  Settings  Menu  Util  Test  Help  Exit
-------------------------------------------------------------------------------
-DSC- OLIST (B) ----------- *** SYSTEM LIBRARIES *** ------------ Row 2 from 7
Command    ===>                                              SCROLL ===> CSR
Hotbar:
Open list  ===> SYS1LIBS (or BLANK for reference list)    *EXEC*PERMANENT LIST*
Command   Member   Numbr Data Set Names / Objects             *EXCLUDE* Class
--------- -------- ----- ------------------------------------------- -------
-TXT FND- APIPPINV     2 'SYS1.LINKLIB'                               PDS
B                      3 'SYS1.MACLIB'                                PDS
-TXT FND- GIMDM64      4 'SYS1.MIGLIB'                                PDS
-TXT FND- EDGCVRSX     6 'SYS1.SAMPLIB'                               PDS
                          ---------------- END OF LIST ----------------
```

Figure 55. Selecting a specific OLIST object by its sequence number

5. Enter command FT, and then press enter to display the FindText options menu. See Figure 56 for illustration.

Figure 56. Opening FindText options menu from the MSL panel of library SYS1LIBS

```
   File  Display  Library  Settings  Menu  Utilities  Test  Help  Exit
 ------------------------------------------------------------------------------
 -DSC--BROWSE L1---- SYS1.MACLIB ----------------------------ROW 00001 OF 02005
 COMMAND  ===> FT                                            SCROLL ===> CSR
HOTBAR?
               *SORT*SHOW*                          ON VOLUME: IPLC23
   NAME     RENAME   LIB VV.MM      CHANGED      SIZE  INIT   MOD USERID
   ABEND               1
   ACB                 1
   ACBVS               1
   ACI                 1
   ACYAPHDH            1
   ADRDEX01            1
   ADREID0             1
   ADRMCLVL            1
   ADSR                1
   ADYDSTAT            1
   ADYENF              1
   AHLFFAP             1
   AHLMCWRC            1
   AHLWKAL             1
   AHLZGTO             1
   AHLZGTS             1
   ALESERV             1
   AMDSADMP            1
   ANFUEXTP            1
   ANTFEAT             1
   ANTFQMAP            1
   ANTPFCCI            1
   ANTPQMAP            1
   ANTPQMP2            1
```

6. In the MSL Text Search Settings panel, enter the settings that are used in Figure 57 on page 370, and then press enter:

```
-DSC-                      MSL Text Search Settings
COMMAND ===>


Specify string to search within the MSL members
 SEARCH string ===> 'ABEND%*0C4'
          mode ===> M   W (Word) or M (Mask) or N (Normal)
   WITH string ===> ABEND
          mode ===> W   W (Word) or M (Mask) or N (Normal)
WITHOUT string ===> ABENDED
          mode ===> N   W (Word) or M (Mask) or N (Normal)
Specify search range in target data records:
  START COLUMN ===> 1      END COLUMN ===> 99999
Specify how many members to process before being prompted to resume:
    STOP AFTER ===> 999    Number of members to process successfully
  PROMPT AFTER ===> 12345  Number of members to process before a prompt
Specify Y (Yes) or N (No) for the following options:
     AUTOMATIC ===> Y Process until reaches success limit?
       EXCLUDE ===> Y Exclude mismatched members from displayed list?
   PACKED DATA ===> N Expand ISPF packed data format?
   FIND PROMPT ===> Y Prompt with FIND command upon selecting an member?
   FULL REPORT ===> Y Report all found records with multiple search criteria?
                      DETAILED ===> Y Break down by search criteria?

Press ENTER for more search criteria or the END key to cancel

Note: use " (double quote) to search for ' (single quote) characters
Note: use C'... or c'... for case sensitive search strings
      use X'... or x'... for hexadecimal search strings
Note: use * for a pattern mask "any character string or none" indicator
      use % for a pattern mask "any single character" indicator
```

Figure 57. Specifying the first MSL search criterion to be executed with a detailed search report

7. In the FINDTEXT Search Criteria panel, enter the settings that are used in Figure 58, and then press enter to specify a secondary search criterion for a detailed search report:

```
-DSC-                      FINDTEXT Search Criteria          Row 1 to 4 of 4
COMMAND ===>

Specify string to search within the MSL members
 SEARCH string ===> c'Symptom%*Record'
          mode ===> M  W (Word) or M (Mask) or N (Normal)
   WITH string ===> NAME
          mode ===> W  W (Word) or M (Mask) or N (Normal)
WITHOUT string ===>
          mode ===> N  W (Word) or M (Mask) or N (Normal)
Specify search range in target data records:
  START COLUMN ===> 2      END COLUMN ===> 71

Press ENTER to process or END key to start search or main command CANCEL

 No --- Criteria -- -------------------- Search strings --------------------
<01>   SEARCH Mask: 'ABEND%*0C4'
         WITH Word: ABEND
    WITHOUT String: ABENDED
 Search data RANGE: START=1     END=99999
****************************** Bottom of data ********************************
```

Figure 58. Specifying a secondary search criterion with a detailed search report

8. Press the END key (PF3) to confirm the search criteria and execute the searching. See Figure 59 on page 371 for illustration.

```
-DSC-                      FINDTEXT Search Criteria          Row 1 to 8 of 8
COMMAND ===>

Specify string to search within the MSL members
 SEARCH string ===>
          mode ===> N  W (Word) or M (Mask) or N (Normal)
   WITH string ===>
          mode ===> N  W (Word) or M (Mask) or N (Normal)
WITHOUT string ===>
          mode ===> N  W (Word) or M (Mask) or N (Normal)
Specify search range in target data records:
  START COLUMN ===> 1      END COLUMN ===> 99999

Press ENTER to process or END key to start search or main command CANCEL

 No --- Criteria -- -------------------- Search strings --------------------
<01>   SEARCH Mask: 'ABEND%*0C4'
         WITH Word: ABEND
    WITHOUT String: ABENDED
 Search data RANGE: START=1     END=99999
<02>   SEARCH Mask: c'Symptom%*Record'
         WITH Word: NAME
    WITHOUT String:
 Search data RANGE: START=2     END=71
****************************** Bottom of data ********************************
```

Figure 59. FindText search criteria confirmation panel

Search results

The following figures illustrate the searching results of this scenario:

```
-DSC- EDIT L1----- ......MSL_FINDTEXT_HITS_REPORT........ COLUMNS 00001 00072
COMMAND ===>                                                 SCROLL ===> CSR
****** ***************************** Top of Data ******************************
000001 7 HITS IN 5 MEMBERS OUT OF 2399939 RECORDS IN 2005 MEMBERS
000002
000003 ****** MEMBER:SYS1.MACLIB(ADSR)                                      VOL
000004 <02>   SEARCH Mask:c'Symptom%*Record'
000005          WITH Word:NAME
000006     WITHOUT String:
000007  Search data RANGE:START=2     END=71
000008 RECNO:12      DATA:*/*  Descriptive Name: Symptom Record
000009
000010 ****** MEMBER:SYS1.MACLIB(ERBSTGST)                                   VOL
000011 <01>   SEARCH Mask:'ABEND%*0C4'
000012          WITH Word:ABEND
000013     WITHOUT String:ABENDED
000014  Search data RANGE:START=1     END=99999
000015 RECNO:112     DATA:*'/*  WB: ABEND 0C4, corrects number of DDBs
000016 RECNO:121     DATA:*'/* WBA: ABEND 0C4 in ERBMFDCQ after activate of dyn
000017
000018 ****** MEMBER:SYS1.MACLIB(IARST64)                                    VOL
000019 <01>   SEARCH Mask:'ABEND%*0C4'
000020          WITH Word:ABEND
000021     WITHOUT String:ABENDED
000022  Search data RANGE:START=1     END=99999
000023 RECNO:977     DATA:*                           abend with an 0C4, but if
000024
000025 ****** MEMBER:SYS1.MACLIB(IWM4ECRE)                                  VOL
000026 <01>   SEARCH Mask:'ABEND%*0C4'
000027          WITH Word:ABEND
000028     WITHOUT String:ABENDED
000029  Search data RANGE:START=1     END=99999
000030 RECNO:1112    DATA:*                                       result in a
000031
000032 ****** MEMBER:SYS1.MACLIB(SYMRBLD)                                    VOL
000033 <01>   SEARCH Mask:'ABEND%*0C4'
000034          WITH Word:ABEND
000035     WITHOUT String:ABENDED
000036  Search data RANGE:START=1     END=99999
000037 RECNO:1215    DATA:*                             ABEND_C DC XL2'00C4'
000038 <02>   SEARCH Mask:c'Symptom%*Record'
000039          WITH Word:NAME
000040     WITHOUT String:
000041  Search data RANGE:START=2     END=71
000042 RECNO:7       DATA:*01* DESCRIPTIVE NAME:  Symptom Record Build
000043
****** *************************** Bottom of Data ***************************
```

Figure 60. Display of MSL FindText detailed report from an ISPF EDIT session

```
  File  Display  Library  Settings  Menu  Utilities  Test  Help  Exit
-------------------------------------------------------------------------------
-DSC--BROWSE L1---- SYS1.MACLIB -------------------------- Text found in:ADSR
COMMAND  ===>                                              SCROLL ===> CSR
HOTBAR?
      *EXCLUDE*SORT*SHOW*  2000 HIDDEN*             ON VOLUME: IPLC23
  NAME     RENAME   LIB VV.MM      CHANGED      SIZE  INIT   MOD USERID
  ADSR     +TXT-FND +-----------------------------------------------Preview -+
  ERBSTGST +TXT-FND | ....+....1....+....2.. ADSR .3....+....4....+....5...   |
  IARST64  +TXT-FND | *        %GOTO SRPLS1;             /* BILINGUAL MAPPING |
  IWM4ECRE +TXT-FND |          MACRO                                          |
  SYMRBLD  +TXT-FND |          ADSR                                           |
   --END--          |          AGO   .SRBAL               ** SKIP PLS MACRO S |
                    | *%SRPLS1:;                          /* BAL/PLS HEADER   |
                    | .SRBAL ANOP                                             |
                    | *                                                       |
                    | */***************** Start of Specifications ***********  |
                    | */*                                                     |
                    | */*  Macro name: ADSR                                   |
                    | */*                                                     |
                    | */*  Descriptive Name: Symptom Record                   |
                    | */*                                                     |
                    | */* PROPRIETARY STATEMENT:                              |
                    | */* 5655-068                                           |
                    | */* THIS MODULE IS "RESTRICTED MATERIALS OF IBM"        |
                    | */* (C) COPYRIGHT IBM CORP. 1980,1994                   |
                    | */* LICENSED MATERIALS - PROPERTY OF IBM                |
                    +---------------------------------------------------------+
```

Figure 61. Filtered member list with a window view of the first hit

```
  File  Display  Library  Settings  Menu  Utilities  Test  Help  Exit
-------------------------------------------------------------------------------
-DSC--BROWSE L1---- SYS1.MACLIB ----------------------------ROW 00001 OF 00005
COMMAND  ===>                                              SCROLL ===> CSR
HOTBAR?
      *EXCLUDE*SORT*SHOW*  2000 HIDDEN*             ON VOLUME: IPLC23
  NAME     RENAME   LIB VV.MM      CHANGED      SIZE  INIT   MOD USERID
  ADSR     +TXT-FND  Found:   Descriptive Name: Symptom Record
  ERBSTGST +TXT-FND  Found: *'/*  WB: ABEND 0C4, corrects number of DDBs
  IARST64  +TXT-FND  Found:                    abend with an 0C4, but if the
  IWM4ECRE +TXT-FND  Found:              result in a ABEND 0C4       * 00111200
  SYMRBLD  +TXT-FND  Found:  DESCRIPTIVE NAME:  Symptom Record Build
   --END--
```

Figure 62. Final display of the filtered member list without a window view of the first hit

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