

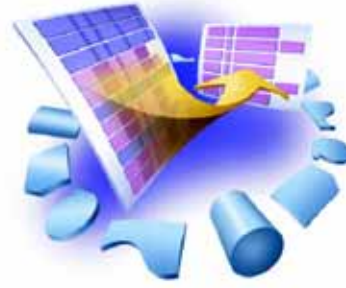


IBM Software Group

## IBM File Manager for z/OS IMS Feature

Program Number 5655-S14

### Tutorial



**ON** DEMAND BUSINESS

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Welcome to the tutorial for the IMS feature of IBM's File Manager for z/OS, one of the IBM zSeries problem determination tools.

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MVS	
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Welcome to the tutorial for the IMS feature of IBM's File Manager for z/OS, one of the IBM zSeries problem determination tools.



## File Manager IMS training: sections

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- Introduction
- Your File Manager options settings
- Browsing or editing an IMS Database
  - Starting browse
  - Database navigation
  - Display database information
  - Display formats without a template
- Edit and browse access modes
  - Using DLI or BMP access
  - Using a Dynamic or Static PSB



In this section, you will see examples of accessing IMS databases in both DLI mode and BMP mode. You will also see how to use both a dynamic PSB and a static PSB.



## DLI versus BMP mode

- **DLI mode versus BMP mode**
  - **DLI mode**
    - File Manager/IMS initializes a batch DLI region within the user's TSO/ISPF address space
      - Data sets required by IMS are allocated by File Manager/IMS before calling IMS services
  - **BMP mode**
    - File Manager running in the user's TSO address space connects to an IMS subsystem
    - IMS Databases and other data sets required by IMS are allocated to an IMS DC or DBCTL control region

The IMS database manager provides different ways for IMS databases to be accessed. DLI mode and BMP mode. This is the case for any application or address space that accesses IMS databases. File Manager can access data bases in either mode.

When an IMS database is accessed in DLI mode by File Manager, the data sets required by IMS, including the data sets that contain the databases, are allocated by File Manager. If you are using File Manager from TSO, for example, the IMS data sets are allocated to your TSO region to provide access. In DLI mode, you can specify the names of the data base data sets, so you can use your own data bases if required.

By contrast, when you access an IMS database in BMP mode, File Manager connects to an IMS subsystem. IMS databases and other data sets needed by IMS are allocated to the control region. In BMP mode, you can only use the data bases owned by the IMS control region.



## Access an IMS database in DLI mode

### Example:

- Start edit or browse in DLI mode

In the next example, an IMS database will be browsed in DLI mode.

Browse a database

Process Options Help

FM/IMS Primary Option Menu

Command ===> 1

0	Settings	Set processing options	User ID . . : DNET424
1	Browse	Browse data	System ID : DEMOMVS
2	Edit	Edit data	Appl ID . . : FMN1
3	Utilities	Perform utility functions	Version . . : 8.1.0
4	Templates	Template/view/criteria set utilities	Terminal. . : 3278A
X	Exit	Terminate FM/IMS	Screen. . . : 1
			Date. . . . : 2007/10/23
			Time. . . . : 09:31

F1=Help F2=Split F3=Exit F4=CRetriev F7=Backward F8=For  
F9=Swap F10=Actions F12=Cancel

Enter

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From the menu, the browse option is selected.



**Browse an IMS database**

```

Process  Options  Help
-----
FM/IMS      Browse : Database Data Set Specification
Command ==> _____ Scroll CSR

Subsystem IMSB Database USRSCN

DBD name  DD name  Data set name
USRSCN    USRSCN  ADLAB.USRSCN
USRSCNI   USRSCNI ADLAB.USRSCNI
**** End of data ****

Processing Options:
Fetch dsnames from
 1. Profile
 2. Dynamic Allocation data set

Enter "/" to select option
Save dsnames in profile

Press ENTER to confirm usage of the specified data set(s)

F1=Hel  F9=Swap  F10=Actions  F12=Cancel
  
```

When using DLI, you must enter database data set names, or get them from the dynamic allocation data set.

Hint: Save these names, so you do not have to enter them again! Files can have unique names in each IMS subsystem.

Enter

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When you are in DLI mode, this panel is displayed next, the database data set specification panel. Provide the names of the database data sets. The number of files needed depends on what was defined in the DBD.

On some systems, file names can be defined in something called a “dynamic allocation data set”. If you want to retrieve the file names from the dynamic allocation data set, you can select option 2 in the “fetch dsnames from” setting, and press Enter.

Select the “save dsnames in profile” option to save the data set names in your profile. That can be important, because then you will not have to retype the same names the next time you use the same DBD. So be sure to select the “save dsnames” option unless you intend to retype the file names each time.

Press Enter to continue.



## Browse an IMS database

Process Options Help

---

FM/IMS Browse : Database Positioning

Command ==> \_\_\_\_\_ Scroll CSR

Subsystem IMSB Database USRSCN Key sequence Format CHAR

View None

Cmd	SXE	Level	Segment	Description	len	Key value
S	X	1	CUSTADDR		10	0003874923
	X	2	TOTUSE		6	.....
	X	3	PRMUSE		8	.....
	X	3	OFFUSE		8	.....
	X	4	OFFDTL		8	.....
	X	2	BALDUE		6	.....
	X	3	BALHIST		6	.....

\*\*\*\* E

Line commands:

**S** Position to segment

**X** Select / Clear

**K** Display key

**E** Edit view

F1=Help F2=Split F3=Exit F4=CRetriev F5=Key >= F7=Bad

F8=Forward F9=Swap F10=actions F12=retrieve

**PF5**

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Next the database positioning panel is displayed. Select a segment type with an S line command. Press Enter to position to a segment with a matching key value, or press PF5 to search for a segment with a key that is greater than or equal to the value specified.



## Browse an IMS database

```
Process  Options  Help
-----
FM/IMS          Browse : IMS Database USRSCN
Command ==>
Scope DB Col 1 Format CSR
Format CHAR
-----
Cmd Level Segment 1 2 3 4 5
**** Top of window ****
 1  CUSTADDR 00038749233273325564BILL B. UFFALO 666 PRARI
 2  TOTUSE 200303M...A .....
 3  PRMUSE 2003030100000002000000070000
 3  PRMUSE 2003030200000001000000035000
 3  PRMUSE 2003030300000000100000003500
 3  PRMUSE 2003030500000001500000052500
 3  PRMUSE 2003030600000001000000035000
 3  PRMUSE 200303070000000.0200000007000
 3  PRMUSE 2003030800000002000000070000
 3  PRMUSE 20030309000000002500000122500
 3  PRMUSE 2003031000000001000000035000
 3  PRMUSE 2003031100000001500000052500
 3  PRMUSE 2003031200000001000000035000
 3  PRMUSE 2003031300000002000000070000
 3  PRMUSE 2003031400000001100000038500
F1=Help F2=Format F3=Exit F4=CRetriev F5=RFind F6=RChange
F7=Up F8=Down F9=Swap F10=Left F11=Right F12=retrieve
```

You are positioned to the segment type and Key Value selected on the previous panel.

Keys are shown in black, and data in blue.

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And the browse panel is displayed. That was an example of using browse or edit to access a database in DLI mode.



## Access an IMS database in BMP mode

### Example:

- Start edit or browse in BMP mode

In the next example, an IMS database will be browsed in BMP mode.

Process Options Help

FM/IMS Primary Option Menu

Command === 1

0	Settings	Set processing options	User ID . : DNET424
1	Browse	Browse data	System ID : DEMOMVS
2	Edit	Edit data	Appl ID . : FMN1
3	Utilities	Perform utility functions	Version . : 8.1.0
4	Templates	Template/view/criteria set utilities	Terminal. : 3278A
X	Exit	Terminate FM/IMS	Screen. . : 1
			Date. . . : 2007/10/23
			Time. . . : 09:31

F1=Help F2=Split F3=Exit F4=CRetriev F7=Backward F8=For  
F9=Swap F10=Actions F12=Cancel

Enter

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From the menu, the browse option is selected.

**Browse an IMS DB in BMP mode**

```

Process  Options  Help
-----
FM/IMS          Browse Entry Panel (Dynamic PSB)
Command ==> _____

DBD:
Data set name 1 . ADLAB.DBDLIB
Data set name 2 .
Member         . USRSCN

IMS:
Subsystem Name . IMSA
AGN Name       . DEVTAGN (*If BMP)

Processing Options:
Region Type    Enter "/" to select option
 2 1. DLI      _ Secondary index
   2. BMP      _ Use view
               _ Use dynalloc DB dsnames

F1=Help      F2=Split      F3=Exit      F4=CRetRiev  F7=Backward  F8=For
F9=Swap      F10=Actions   F12=Cancel   _____
  
```

Specify DBD lib and member

For BMP mode, the IMS subsystem is required. Leave it blank to display a list of subsystems.

The Application Group Name (AGN) might be required for your installation.

BMP mode

Enter

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To browse or edit a database, specify a DBD by providing the DBD library and member name. In the lower left area of the panel, specify 2 for BMP in the “region type” field. You must also specify an IMS subsystem name. Subsystem names are defined by a data base administrator. On some systems, you may also be required to enter an AGN, or application group name. AGNs are used on some systems for additional access security. Press Enter to continue.



## Browse an IMS DB in BMP mode

```
Process  Options  Help
-----  -
FM/IMS          Browse : Database Positioning
Command ==> _____ Scroll CSR

Subsystem IMSB Database USRSCN   Key sequence      Format CHAR
View      None
Cmd SXE Level Segment  Description      len  Key value
s  X  1    CUSTADDR          10  0003874923
  X  2    TOTUSE           6  .....
  X  3    PRMUSE           8  .....
  X  3    OFFUSE           8  .....
  X  4    OFFDTL           8  .....
  X  2    BALDUE           6  .....
  X  3    BALHIST          6  .....
**** End of d

Line commands:
S  Position to segment
X  Select / Clear
K  Display key
E  Edit view

F1=Help      F2=Split      F3=Exit      F4=CRetriev  F5=Key >=  F7=
F8=Forward   F9=Swap       F10=Actions  F12=retrieve
```

Enter or PF5

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The database positioning panel is displayed. Select a segment type with an S line command. Press Enter or PF5 to continue.



## Browse an IMS database

```
Process  Options  Help
-----
FM/IMS          Browse : IMS Database USRSCN
Command ==>
Scope DB Col 1 Format CHAR Scroll CSR
-----+-----1-----2-----3-----4-----5-----+-----
Cmd Level Segment
**** Top of window ****
 1  CUSTADDR 00038749233273325564BILL B. UFFALO 666 PRARI
 2  TOTUSE 200303M...A .....
 3  PRMUSE 2003030100000002000000070000
 3  PRMUSE 2003030200000001000000035000
 3  PRMUSE 2003030300000000100000003500
 3  PRMUSE 2003030500000001500000052500
 3  PRMUSE 2003030600000001000000035000
 3  PRMUSE 20030307000000.0200000007000
 3  PRMUSE 2003030800000002000000070000
 3  PRMUSE 2003030900000002500000122500
 3  PRMUSE 2003031000000001000000035000
 3  PRMUSE 2003031100000001500000052500
 3  PRMUSE 2003031200000001000000035000
 3  PRMUSE 2003031300000002000000070000
 3  PRMUSE 2003031400000001100000038500
F1=Help F2=Format F3=Exit F4=CRetrie v F5=RFind F6=RChange
F7=Up F8=Down F9=Swap F10=Left F11=Right F12=retrieve
```

You are positioned to the segment type and Key Value selected on the previous panel.

Keys are shown in black, and data in blue.

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And the browse panel is displayed. That was an example of using browse or edit to access a data base in BMP mode.



## File Manager IMS training: sections

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- Your File Manager options settings
- Browsing or editing an IMS Database
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  - Display database information
  - Display formats without a template
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  - Using DLI or BMP access
  - Using a Dynamic or Static PSB



Next you will learn how to use dynamic PSBs and static PSBs.





## Dynamic and Static PSBs

- **Dynamic PSB**
  - Created automatically by FM, based on the DBD
  - Provides access to all segments in the DBD
  - Advantages
    - You do not have to specify a PSB
    - You do not have to find or create a PSB that fits your needs
    - You can be authorized to use Dynamic PSBs
- **Static PSB**
  - A "standard" PSB that is available on your system
  - Advantages:
    - Processing options can limit access
    - For added security, AGN groups can be used with static PSBs
      - IMS can check that you are authorized to use the static PSB
    - The PSB can be used for IMS batch backout, if needed

When a program accesses an IMS database, it uses a PSB, or program specification block, to communicate with IMS and map the segments that it can access. In File Manager, you can either use a dynamic or static PSB.

A dynamic PSB is a PSB created automatically by File Manager. It is based on the DBD, and gives you access to all segments in the DBD. There are some advantages to using a dynamic PSB. First, you do not have to identify or create a PSB that fits your needs and gives you access to the right segments. And you do not have to specify a PSB to File Manager.

A static PSB is a PSB that is available on your system; it could be a PSB that is used by your application programs. The advantages are that options in the PSB can limit access to certain segments. AGN groups can be used with static PSBs for added security. And the PSB can be used for IMS batch backout, if required.



## Dynamic and Static PSBs

- Installation customization
  - Your installation might allow *only* static or dynamic PSBs for some IMS subsystems
- All examples so far have used a dynamic PSB
- The next example will use a static PSB

Be aware that your installation might allow the use of only static or dynamic PSBs for some IMS subsystems. All of the examples that have been shown so far have used a dynamic PSB. The next example will show how to use a static PSB.

**Select the "Static PSB" system option**

```

Process  Options  Help
-----
FM/IMS  2. System settings
Command

0 Setti  4. Compiler language selection
1 Brows  5. COBOL compiler specifications
2 Edit   6. PL/I compiler specifications
3 Utili  7. Editor options
4 Templ  8. DLI mode settings
X Exit   9. BMP mode settings
         10. Temporary Data Set Allocations
         11. Output Data Set Allocations
         12. ISPF settings

User ID . : DNET424
System ID : DEMOMVS
Appl ID  : FMN1
Version  : 8.1.0
ies      Terminal. : 3278A
Screen.  : 1
Date.   . : 2007/10/23
Time.   . : 12:22

F1=Help    F2=Split    F3=Exit    F4=CRetriev  F7=Backward  F8=
F9=Swap    F10=Action  F12=Cancel

Enter
  
```

Bring down the Options menu,  
and select "System settings".

**Enter**

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You control whether to use a dynamic or static PSB in your File Manager IMS options. One way to get to the options panels is from the Options menu. First, put your cursor on the word Options in the menu, and press Enter. On the pull-down panel, select "system settings". Enter.



## Select the "Static PSB" system option

```
Process  Options  Help
-----
FM/IMS                               System Settings
Command ==> _____

Options:
  Enter "/" to select option
  _ Fast PSB validation

PSB type
2 1. Dynamic
  2. Static

Parameters:
  Pad character . . . . . _____ (Character or hex value)

F1=Help    F2=Split    F3=Exit    F4=CRetriev  F7=Backward  F8=For
F9=Swap    F10=actions  F12=Cancel

PF3
```

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In the system settings, set the PSB type to 2 for static. PF3 to return to the menu.



## Start browse or edit


Process Options Help

---

FM/IMS Primary Option Menu

Command === 1\_

0	Settings	Set processing options	User ID . . : DNET424
1	Browse	Browse data	System ID : DEMOMVS
2	Edit	Edit data	Appl ID . . : FMN1
3	Utilities	Perform utility functions	Version . . : 8.1.0
4	Templates	Template/view/criteria set utilities	Terminal. . : 3278A
X	Exit	Terminate FM/IMS	Screen. . . : 1
			Date. . . . : 2007/10/23
			Time. . . . : 12:25



F1=Help    F2=Split    F3=Exit    F4=CRetriev    F7=Backward    F8=Forward  
F9=Swap    F10=Actions    F12=Cancel

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From the menu, the browse option is selected.



## Specify the PSB on the browse or edit panel

```
Process  Options  Help
-----  -
FM/IMS          Browse Entry Panel (Static PSB)
Command ==> _____

PSB:
Data set name . . . ADLAB.PSBLIB ←
Member . . . . . USRSCNG

DBD:
Data set name 1 . . ADLAB.DBDLIB
Data set name 2 . .
Member . . . . . USRSCN

IMS:
Subsystem Name . . IMSA
AGN Name . . . . . DEVTAGN (If BMP)

Processing Options:
Region Type      Enter "/" to select option
 2 1. DLI        - Use view
   2. BMP        - Use dynalloc DB dsnames

F1=Help   F2=Split   F3=Exit   F4=CRetriev  F7=Backward  F8=Forward
F9=Swap   F10=Actions F12=Cancel

Enter
```

Specify the PSB library and member name. You must use a PSB/PCB with the segments and access that you need.

If there are multiple PCBs in the PSB, a selection list is displayed.

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And the Browse Entry panel is displayed. Notice that now there are fields on this panel for the PSB. These fields did not appear when the PSB type option was set to dynamic. Enter the name of the PSB library and PSB member.

Specify a DBD by providing the DBD library and member name. Also specify the IMS subsystem name and region type as required. Enter to continue.



## Browse with a static PSB

```
Process  Options  Help
-----
FM/IMS          Browse : Database Positioning
Command ==> _____ Scroll CSR

Subsystem IMSB Database USRSCN  Key sequence      Format CHAR
View      None
Cmd SXE Level  Segment  Description      len  Key value
s  X  1      CUSTADDR          10  0003874923
  X  2      TOTUSE            6   .....
  X  3      PRMUSE           8   .....
  X  3      OFFUSE           8   .....
  X  4      OFFDTL           8   .....
**** End of data ****
```

Only the segments defined by the PCB are available.

The rest of the panels are the same as with a dynamic PSB.

F1=Help    F2=Split    F3=Exit    F4=CRetriev    F5=Key >=    F7=Bad  
F8=Forward    F9=Swap    F10=Actions    F12=retrieve

**Enter**

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If there are multiple PCBs (program control blocks) in the PSB, you will be prompted with a list where you can select a PCB. In this example, there was only one PCB in the PSB, so it was selected automatically. The database positioning panel is displayed. Select a segment type with an S line command. Press Enter or PF5 to continue.



## Browse with a static PSB

Process		Options		Help	
FM/IMS		Browse : IMS Database USRSCN			
Command ==>		Scope DB		Col 1	Scroll CSR
		Format		CHAR	
Cmd	Level	Segment	1	2	3
**** Top of window ****					
1		CUSTADDR	00038749233273325564BILL B. UFFALO		666 PRARI
2		TOTUSE	200303M...A .....		
3		PRMUSE	2003030100000002000000070000		
3		PRMUSE	2003030200000001000000035000		
3		PRMUSE	2003030300000000100000003500		
3		PRMUSE	2003030500000001500000052500		
3		PRMUSE	2003030600000001000000035000		
3		PRMUSE	20030307000000.0200000007000		
3		PRMUSE	2003030800000002000000070000		
3		PRMUSE	2003030900000002500000122500		
3		PRMUSE	2003031000000001000000035000		
3		PRMUSE	2003031100000001500000052500		
3		PRMUSE	2003031200000001000000035000		
3		PRMUSE	2003031300000002000000070000		
3		PRMUSE	2003031400000001100000038500		
F1=Help		F2=Format	F3=Exit	F4=CRetriev	F5=RFind
F7=Up		F8=Down	F9=Swap	F10=Left	F11=Right
				F12=retrieve	

Your access is restricted by the segments and options coded in the PCB.

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And the browse panel is displayed. You will only see segments that are defined in the PSB, and your access may be restricted depending on the processing options in the PSB. That was an example for using browse or edit to access a database using a static PSB.

That is the end of this section, edit and browse access modes.





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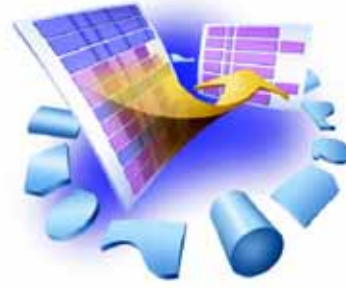


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## IBM File Manager for z/OS IMS Feature

Program Number 5655-S14

### Tutorial



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