



This is the tutorial for the IMS™ feature of IBM's File Manager for z/OS®, one of the IBM zSeries® problem determination tools.

- **Introduction**
- **File Manager IMS option settings**
 - Option settings
- **Edit and browse access modes**
 - Using BMP or DLI access
 - Using a dynamic or static PSB
- **Browsing or editing an IMS database**
 - Starting browse
 - Database navigation
 - Display database information
 - Display formats without a template



In this section, you will see how to access IMS databases in DLI and BMP access modes.

Access an IMS database in one of two ways:



- Access databases that are under the control of an IMS Control Region
 - **BMP mode**
 - File Manager is running in the user's TSO address space, and connects to an IMS subsystem
 - IMS databases and other data sets required by IMS are allocated to an IMS DC or DBCTL control region
 - **DLI mode**
 - File Manager is running in the user's TSO address, but does not connect to an IMS subsystem
 - IMS databases and other data sets required by IMS are allocated by File Manager IMS before calling IMS services

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

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.

By contrast, when an IMS database is accessed in DLI mode, 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.

BMP mode



- Databases are allocated to an IMS subsystem
 - BMP provides strict controls that are suited to live production environments
 - IMS controls such things as multi-user access to the segment data and automatic back-outs
- Either a dynamic or static PSB can be used
 - A database administrator may optionally require use of a static PSB to control segment access and processing options
- Changes made to data are typically logged in the IMS online log data set
- It is common for users who update data in a production environment to access a database in BMP mode

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In BMP mode, databases are allocated to an IMS subsystem. BMP provides strict controls that are suited to live production environments. Either a dynamic or static PSB can be used. But database administrators can optionally require the use of a static PSB, which allows them to control which segments can be edited or browsed, or if they want to control processing options.

IMS controls such things as multi-user access to the segment data and automatic back-out. Changes to the database are typically logged in the log data set owned by the subsystem.

It is common for users who update data in a production environment to access a database in BMP mode.

Select Edit from the main menu



```
Process  Options  Help
-----
FM/IMS                                     Primary Option Menu
Command ==>> 2
-----
0 Settings      Set processing options      User ID . . : DNET845
1 Browse        Browse data                  System ID  : DEMOMVS
2 Edit          Edit data                    Appl ID   : FMN1
3 Utilities     Perform utility functions   Version . . : 10.1.0
4 Templates     Template/view/criteria set utilities
X Exit          Terminate FM/IMS            Terminal . : 3278
                                           Screen . . : 1
                                           Date . . . : 2010/01/09
                                           Time . . . : 20:39

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

Enter
```

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Starting from the File Manager IMS primary option menu, type option "2" on the command line for Edit, and press Enter.

Select BMP mode **IBM**

Process Options Help

FM/IMS Edit Entry Panel

Command ==>

IMS:

Subsystem name . . . IMSB PSB name . . . USRSCN (If static PSB)
 Database name . . . USRSCN AGN name . . . _____ (If BMP)

View:

Data set name . . . _____
 Member _____

Processing Options:

PSB type	Region type	Fetch DB dsnames from (if DLI)
<u>2</u> 1. Dynamic	<u>2</u> 1. DLI	<u>1</u> 1. User profile
2. Static	2. BMP	2. DFSMDA members

View usage IMS log (if DLI) Enter "/" to select option

<u>1</u> 1. New	<u>3</u> 1. Keep	- Secondary index (if dynamic PSB)
2. Existing	2. Delete	- Create audit trail
3. None	3. None	- Skip DB data set panel (if DLI)

F1=Hel Note: File Manager supports both static and dynamic PSBs CRetriev F7=Backward F8=Fo **Enter**

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The "Edit entry panel" is displayed. This panel will be described in more detail in an upcoming section. In this example, BMP access mode is selected by setting the "Region type" field to "2" for BMP, and Enter is pressed to continue.

The database positioning panel is displayed



```
Process  Options  Help
-----  -
FM/IMS          Edit : Database Positioning      Chkpt FM000001 taken
Command ==> |                               Scroll CSR

Subsystem IMSA Database USRSCN   Key sequence      Format CHAR
View      None
Cmd SXE Level Segment Description Key Key value
s SX 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 data ****

Position to a segment
in the database

Enter

F1=Help F3=Exit F10=Actions F12=Cancel
```

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In BMP mode, the "Database positioning" panel is the next panel shown. To enter the editor, select a segment and press Enter.

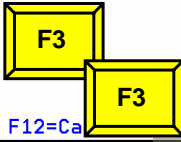
The database editor is displayed



```
Process  Options  Help
-----  -
FM/IMS                               Edit : IMS Database USRSCN
Command ==> █                               Scroll CSR
        CHKPID FM000001 Autosave ON          Scope DB Col 1 Format CHAR
Cmd Level Segment  -----10-----2-----3-----4-----5-----
        **** Top of window ****
 1  CUSTADDR 00038749233273325564BILL BUFFALO JR          666 PRARI
 2  TOTUSE  200303Z.....
 3  PRMUSE  2003030100000002000000070000
 3  PRMUSE  2003030200000001000000035000
 3  PRMUSE  2003030300000002000000035000
 3  PRMUSE  2003030500000001500000052500
 3  PRMUSE  2003030600000001000000035000
 3  PRMUSE  20030307000000030000
 3  PRMUSE  20030308000000020000
 3  PRMUSE  200303090000000250000
 3  PRMUSE  2003031000000001000000035000
 3  PRMUSE  2003031100000001500000052500
 3  PRMUSE  2003031200000001000000035000
 3  PRMUSE  2003031300000002000000070000
 3  PRMUSE  2003031400000001100000038500
 3  PRMUSE  2003031500000001200000041500
F1=Help      F2=Format      F3=Exit      F5=RFind      F6=RChange      F12=Ca

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```

The editor looks the same in either DLI or BMP mode



And then the editor is shown. Once the editor is displayed, it looks the same whether you are accessing the database in DLI or BMP mode. That was an example of accessing a database in BMP mode. Next, a database will be accessed in DLI mode. The F3 key is pressed a couple of times to exit the editor and return.

DLI mode



- Data sets are allocated to the TSO address space
 - specify the data sets to access
 - Security can be controlled at the data set level
 - This type of access is typically used by developers, in development IMS environments
- Either a dynamic or static PSB can be used
- Changes made to data can optionally be written to an IMS log data set
- It is common for users who access data in a test or development environment to access the database in DLI mode using a dynamic PSB

When a database is accessed in DLI mode, you must specify the names of the files that contain the database, and those files will be opened in your TSO session. Security is controlled at the data set level, and you will require access to the database files.

DLI access is commonly used by developers, when accessing test data in development IMS environments. DLI access mode gives developers the ability to create and use their own personal database data sets.

Either a dynamic or static PSB can be used in DLI access mode, but using a dynamic PSB is typically simpler for the user, since they are not required to specify a PSB.

Any changes that are made to data can optionally be logged to an IMS log data set, and that is controlled by either the administrator or user in the File Manager DLI mode options.

It is common for users who access data in a test or development environment to access the database in DLI mode using a dynamic PSB.

Or ... select DLI mode



```
Process  Options  Help
-----
FM/IMS                                     Edit Entry Panel
Command ===> _____

IMS:
Subsystem name . . IMSB      PSB name . . . _____ (If static PSB)
Database name . . USRSCN   AGN name . . . _____ (If BMP)
View:
Data set name . . ADLAB.VIEW
Member . . . . . USRSCN

Processing Options:
PSB type          Region type          Fetch DB dsnames from (if DLI)
 1 1. Dynamic      1 1. DLI              1 1. User profile
 2 2. Static       2 2. BMP              2 2. DFSMDA members

View usage        IMS log (if DLI)      Enter "/" to select option
 1 1. New          3 1. Keep             - Secondary index (if dynamic PSB)
 2 2. Existing    2 2. Delete           - Create audit trail
 3 3. None        3 3. None             - Skip DB data set panel (if DLI)

F1=Help          F2=Retrieve F3=Forward F4=Backward F5=Forward F6=Backward
F9=Swap          F7=Backward F8=Forward F9=Swap

Note: File Manager supports both static and dynamic PSBs

Enter
```

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The "Edit entry" panel is displayed again. This time, DLI access mode is selected by setting the "Region type" field to "1" for DLI. Enter is pressed to continue.

In DLI mode, this panel is displayed where you must specify the names of the database data sets



```
Process  Options  Help
-----
FM/IMS          Edit : 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      Enter "/" to select option
 1 1. User profile       / Save dsnames in profile
 2 2. DFSMDA members

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

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

In DLI mode, the "Database data set specification" panel is displayed next. It was not displayed in BMP mode. It prompts you for the names of the database data sets. The names of the files that contain the database that you want to access must be specified here.

Notice that there are some different ways to specify the dataset names. First, if you know what they are you can just type them into the "data set name" fields. If the database administrator has defined them in the IMS subsystem's dynamic allocation members, you can type option "2" in the "Fetch DSnames from" field and press Enter. This will retrieve the file names automatically.

Also notice the "Save DSnames in profile" field. If you set this option on, by typing a slash, then the file names that you enter or retrieve will be automatically saved by File Manager. Then the next time you access this database, you can have the file names retrieved automatically from your personal File Manager profile, by specifying the "1" (User profile) option in the "Fetch DSnames from" field.

In this example, the file names are typed in, and Enter is pressed.

The database positioning panel is displayed



```
Process  Options  Help
FM/IMS          Edit : Database Positioning      Chkpt FM000001 taken
Command ==> |                                     Scroll CSR
Subsystem IMSA Database USRSCN   Key sequence      Format CHAR
View      None                                     Key
s SXE Level Segment Description len Key value
--- 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 data ****

Position to a segment
in the database

Enter

F1=Help F3=Exit F10=Actions F12=Cancel
```

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The "Database positioning" panel is displayed. To enter the editor, select a segment and press Enter.

The database editor is displayed



```
Process  Options  Help
-----  -
FM/IMS                               Edit : IMS Database USRSCN
Command ==> █                               Scroll CSR
        CHKPID FM000001 Autosave ON          Scope DB Col 1 Format CHAR
Cmd Level Segment  -----10-----2-----3-----4-----5-----
        **** Top of window ****
___ 1   CUSTADDR 00038749233273325564BILL BUFFALO JR          666 PRARI
___ 2   TOTUSE  200303Z.....
___ 3   PRMUSE  2003030100000002000000070000
___ 3   PRMUSE  2003030200000001000000035000
___ 3   PRMUSE  2003030300000002000000035000
___ 3   PRMUSE  2003030500000001500000052500
___ 3   PRMUSE  2003030600000001000000035000
___ 3   PRMUSE  20030307000000030000
___ 3   PRMUSE  20030308000000020000
___ 3   PRMUSE  200303090000000250000
___ 3   PRMUSE  2003031000000001000000035000
___ 3   PRMUSE  2003031100000001500000052500
___ 3   PRMUSE  2003031200000001000000035000
___ 3   PRMUSE  2003031300000002000000070000
___ 3   PRMUSE  2003031400000001100000038500
___ 3   PRMUSE  2003031500000001200000041500
F1=Help      F2=Format      F3=Exit      F5=RFind      F6=RChange      F12=Cancel
```

The editor looks the same in either DLI or BMP mode

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The database editor is shown. Once the editor is displayed, it looks the same whether you are accessing the database in BMP or DLI mode. That was an example of accessing a database in DLI mode.

That is the end of this section, accessing a database in either DLI or BMP access mode.

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