

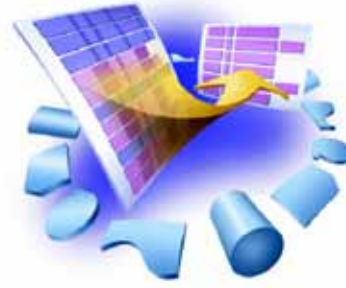


IBM Software Group

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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IBM	zSeries
IMS	
IMS/ESA	
Language Environment	
MVS	
MVS/ESA	

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

Page 1 of 4



- 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

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File Manager for z/OS Tutorial

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You can use this course to learn how File Manager IMS will help you work with IMS databases on z/OS systems.

By taking this tutorial, you will understand the various capabilities of File Manager IMS, and how you can use it to work more effectively with your IMS databases. File Manager IMS is designed to address the needs of application developers working with complex databases.

Take a look at how the course is structured. It is broken down into sections. If you have not already used File Manager IMS, you should take each section in order. But if you have already been using it and want to learn more about a particular topic, you might want to go directly to that section.

This is the introduction, and it will describe the most frequently used functions in File Manager and how to you can get the manuals from the IBM Web site.

View the next section, “Your File Manager options settings”, to understand the File Manager options that you can customize.

In the next section, “Browsing or editing an IMS database”, you will learn how to start the editor or viewer and you will see the basic commands. You will see how to navigate to see the segments and data in your database, how to get information about the database, and some of your choices for how you want to the data formatted.



File Manager IMS training: sections

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- **Creating templates**
 - About templates and views
 - Create and save a new Template
- **Browsing or editing an IMS database with a template**
 - Starting the editor
 - The display formats and zoom
 - Display different segment types
 - Find, change, scope, and locate data
 - Insert, repeat, repeat all, and delete segments
 - End, quit, save, undo, and cancel

View the “Creating Templates” section to see how to create a new template. Templates are used to format your segments into fields and control how data is displayed. You will learn how to map COBOL or PLI copybooks to segments to define the fields in the segments.

In the next section, “Browsing or editing an IMS database with a template”, you will learn more about how you can control how data is displayed by the File manager IMS browser and editor. You will also learn some helpful commands and features to help you work with your data.



File Manager IMS training: sections

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- Using a view
 - Selecting segment types to display
 - Selecting segments to display based on data content
 - Save a view
 - Customize how data is displayed
 - Use edit or browse to format and generate a report

In the next section, “Using a view”, you will learn how to use something called a “view” to select segments to be displayed and how you can further control how segment data is displayed in browse and edit.



File Manager IMS training: sections

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- Using the extract utility
 - Extract using a key values file
 - Working with criteria sets
 - Extract using a criteria set
- Using the load utility
 - Delete/define utility
 - Load utility

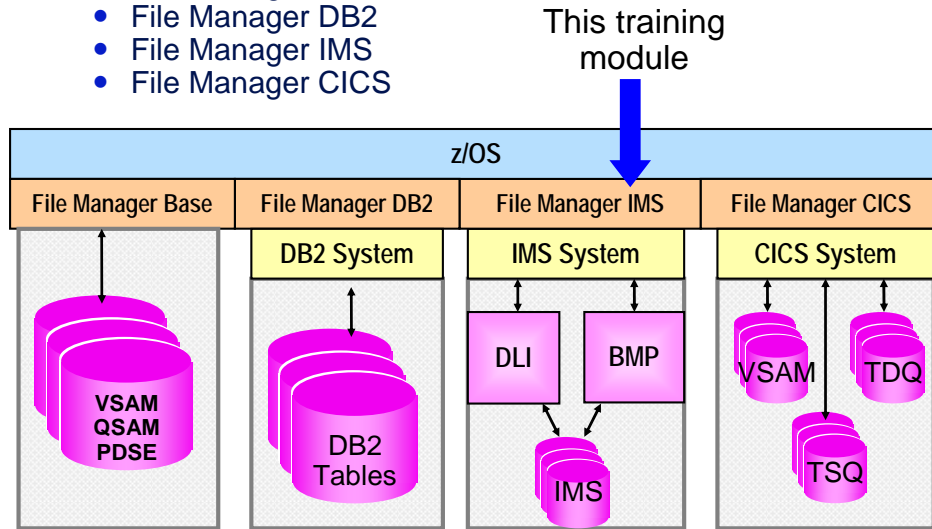
Take the section on the Extract utility to see how to use the File Manager IMS extract utility to copy segments from an IMS database to a file. There are topics that describe the various ways to select the segments to be extracted.

The Load utility section describes how you can use the load utility to read a data file created by the extract utility and copy segments from it into an IMS database.



What is File Manager?

- One product, four features
 - File Manager Base
 - File Manager DB2
 - File Manager IMS
 - File Manager CICS



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File Manager is a single product with four features, each of which can be configured separately. File Manager is just one product, but all four parts come with it. This tutorial describes the functions of File Manager IMS, which helps you work with IMS databases.

File Manager base gives you functions for working with z/OS data sets, such as VSAM and sequential files, PDSes, and tapes. Another feature called File Manager/DB2 gives you functions to work with data in DB2 databases and tables. And File Manager/CICS lets you work with files and queues in CICS.



What is the File Manager IMS feature?

- A set of tools for working with data in IMS databases
- **Edit and browse**
 - Interactively work with IMS databases
 - Insert, update, and delete IMS segments
 - Find and fix data
 - Audit changes you make while editing
 - **Easy to learn!:**
 - Use familiar ISPF editor / browser commands
 - **Powerful!:**
 - Edit or browse IMS physical or logical databases
 - Use a dynamic or static PSB
 - Access IMS databases in either DLI or BMP mode
 - Optionally use a secondary index

File Manager IMS edit and browse allow you to interact, review, and modify data in IMS segments. You can update, insert, and delete segments, find and fix data, and it can even keep an audit log of your changes.

It is designed to use many of the same commands as the ISPF editor, so you will find it easy to learn. It provides powerful features that let you work with either logical or physical databases. You can use your own PSB to control the segments you work with, or it can automatically generate its own PSB to let you work with all segments in a database. You can use either the DLI or BMP access mode, and it can use your secondary indexes.



What is the File Manager IMS feature?

- Database extract and load utilities
 - Copy the contents of an IMS database to file
 - Load the extract file into an IMS database
 - Select segments to be copied
 - Modify / reformat segments during the extract
 - Reload the data to another IMS database
- Print utility
 - Print selected data or entire databases
 - Choose from several report formats
 - Customize fields and headings

The File Manager IMS extract and load utilities are easy to use panel-driven utilities that walk you through creating an IMS database and populating it with all or a subset of data from a similar IMS database. You can quickly create a new database by modeling an existing one. You can copy all of the segments, or select segments to be extracted.

The print utility lets you print data from IMS database segments. You can choose different report formats, and you can select specific fields and segments.



About IMS

- **IMS/ESA is an IBM software product that provides database and transaction management**
- **IMS DB is a hierarchical database manager**
 - File Manager IMS provides utilities to work with IMS DB
 - The IMS Database Manager supports:
 - databases using IMS's own hierarchic database model
 - multiple tasks (batch and online) to access and update databases, while retaining data integrity
 - recoverability of databases
 - Database data is stored on disk using normal operating system access methods
- **IMS TM is a message-based transaction processor**
 - File Manager / IMS does not require IMS TM

Before getting into more detail about File Manager IMS, here is a brief introduction to IMS. IMS/ESA is a family of IBM software products that provide database and transaction management functions.

IMS/DB is the database feature of IMS. It provides for the management and access of hierarchical databases. File Manager IMS is designed to work with these IMS databases. Multiple tasks or jobs can access the same database with integrity, and extensive recovery capabilities are provided. IMS databases are typically stored on disk volumes in z/OS files.

IMS/TM is the transaction manager feature of IMS, and it is a message-based transaction manager. File Manager IMS does not require IMS/TM.



DLI and BMP modes in FM/IMS

- From FM/IMS, you can access an IMS database in either:
 - DLI (Data Language One) mode, or
 - BMP (Batch Messaging Processing) mode
- DLI mode
 - FM/IMS allocates the IMS database data sets in the TSO address space
 - DLI mode is often used when working in a test environment and you want to have your own copies of the databases
 - If you use the Internal Resource Lock Manager (IRLM), multiple users can update the same databases
 - The installation process provides default DLI mode settings, which can be overridden by the user

IMS databases can be accessed in either DLI mode or BMP mode. File Manager IMS can access databases in either mode, and you can control which mode it uses.

When DLI mode is used, File Manager allocates the IMS database datasets to your TSO address space. DLI mode can, in theory, be used for any type of database. It can be used in test environments to allow you to use your own copies of the databases.



DLI and BMP modes in FM/IMS

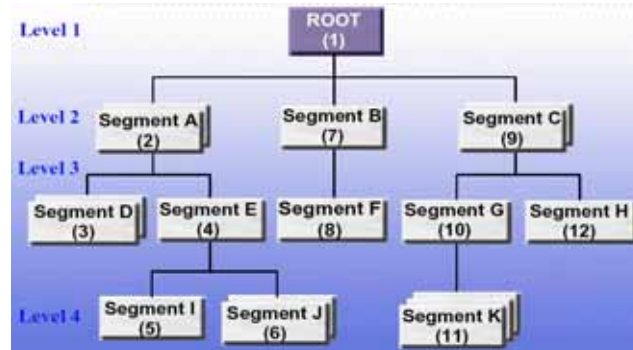
- **BMP mode**
 - In BMP mode, FM/IMS connects to an IMS subsystem, which connects to an IMS “control region”
 - Database data sets are allocated to the control region, allowing multiple users to access the same databases
 - BMP mode is often used in a “live” or production environment with shared databases
 - Your FM/IMS system administrator must provide IMS subsystem information during the FM/IMS installation
 - Control regions:
 - DB/DC control region
 - Required for the IMS/TM transaction manager
 - Used when both the transaction manager and database manager components are installed
 - DBCTL control region
 - Used when only the database manager component installed

When you access a database in BMP mode, File Manager connects to something called an IMS subsystem to communicate with an IMS control region. The database data sets are owned by the control region. This mode is often used in live or production environments because it ensures that all users are accessing the same data. To use BMP mode, File Manager must be configured by the installer to use it, and the IMS control regions have to be up and running.



IMS definition of terms

- **DBD – Database Descriptor Block**
 - A DBD defines the physical or logical definition of an IMS database
 - Resides in a DBD library



There are a few IMS terms that you need to know to get the most out of File Manager IMS. The first one is DBD, or database descriptor block. A DBD is often set up by a database administrator. It defines the physical or logical definition for an IMS database. A DBD describes each of the segments in a database, and their relationship to each other. It resides in a DBD library.



IMS definition of terms

- **PSB: Program Specification Block**
 - Is used by an application program or File Manager to access databases
 - Contains one or more PCBs
- **PCB: Program Communication Block**
 - defines a subset of segments of a DBD
 - also defines the processing options (Get, Insert, Update, etc)
- **STATIC PSB**
 - a pre-defined PSB
- **DYNAMIC PSB**
 - a PSB automatically generated by File Manager from a DBD

The next IMS term is PSB. This is the program specification block. It is also often set up by a database administrator. An application program uses a PSB to access an IMS database. A PSB contains one or more PCBs.

A PCB, or program communication block, defines a subset of segments in a database. An application program uses a PCB as a “map” of the segments in the database. A PCB also defines the processing options that are allowed, such as get, insert, or update.

Just like other programs, File Manager uses PSBs to access databases and see a map of segments. If you already have a PSB that you want to use with File Manager, you can. When you provide your own PSB, File Manager calls that a “static” PSB.

However, it can be easier to make File Manager use a dynamic PSB. That way, you do not have to provide a PSB. File manager will automatically generate its own PSB with access to every segment in the database.



IBM PD Tools (including File Manager) information is on the Web

<http://www.ibm.com/software/awdtools/deployment/>

The screenshot shows the IBM website's navigation bar with the IBM logo and a search bar. Below the navigation bar, the page title is "z/OS Problem Determination Tools". The main content area is divided into several sections: "Library", "News", "How to buy", "Training and certification", "Services", and "Support". There is also a "Related software" section listing various tools like "Application Performance Analyzer for z/OS" and "File Manager for z/OS". A "Select a product" pull-down menu is visible, with a red arrow pointing to it and a callout box that says "Select File Manager from the list". The footer of the page contains copyright information for IBM Corporation, the page title "File Manager for z/OS Mentor Workshop", the page number "15", and the text "zSeries PD Tools".

You can get more information about File Manager, and all of the IBM problem determination tools, on the Web. Direct your browser to this URL:
www.ibm.com/software/awdtools/deployment .

To get to the File Manager page, select File Manager from the “Select a product” pull-down.



You can get the File Manager manuals
from the IBM Web site

<http://www.ibm.com/software/awdtools/filemanager/library/>

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You can view or download manuals from the Web site. From the File Manager page, there is a link to the File Manager library. Just click on the word library on the left side of the screen to get there. From the library page, you can view a manual by clicking a link either in the PDF or Book Manager column, or you can download a manual by right clicking the link in the PDF column.



You can view or download manuals

IBM File Manager for z/OS



User's Guide and Reference

Version 8 Release 1

File Manager manuals:

- Users Guide and Reference (base feature)
- Users Guide and Reference for DB2 Data
- **Users Guide and Reference for IMS Data**
- Users Guide and Reference for CICS
- Program Directory
- Customization Guide

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There are several File Manager manuals. There are separate User's Guides for the base feature, and for the DB2, IMS, and CICS features. If you are responsible for installing File Manager, then you will also want the Customization Guide.

That is the end of this section, an introduction to the File Manager IMS feature.



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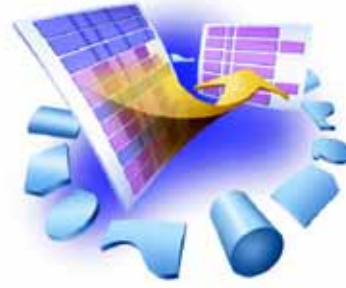


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