

File Manager for z/OS V12R1



# Addenda to File Manager V12R1 documentation



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## About this document

This document provides details of all the APAR service fixes that impact upon documentation, for IBM File Manager for z/OS Version 12.1. The details include changes since the First Edition for each document. Where there is a Second Edition or later, earlier changes are integrated into these editions. The integration is indicated in the details for the APAR.

The most recent editions of the product manuals are are:

- Customization Guide (SC19-3673-02) - Third Edition
- User's Guide and Reference (SC19-3674-00) - First Edition
- User's Guide and Reference for DB2 Data (SC19-3675-01) - Second Edition
- User's Guide and Reference for IMS Data (SC19-3676-00) - First Edition
- User's Guide and Reference for CICS (SC19-3677-00) - First Edition

The Addendum document is divided into two parts:

- **Part One: PTF/APAR documentation changes**

This section lists the changes to the File Manager for z/OS Version 12 Release 1 documentation that are required to reflect new behavior resulting from the application of APAR fixes.

The fixes are listed by PTF number, in reverse date order, so that the most recently released fix appears at the beginning of the document. Each description shows:

- The set of PTF numbers in the release
- The date of the PTF release
- The APARs included in the released fix
- Details of those APAR changes that affect documentation
- Page references for the manuals affected by the change

**Note:**

1. This document does NOT describe those APAR fixes that do not have an impact upon documentation.
2. The enhancements and corrections described in this section are only available after applying the listed PTFs for the APAR.

- **General documentation changes**

This section describes enhancements, corrections and updates in the documentation for File Manager for z/OS Version 12 Release 1. These changes are not associated with PTF numbers, as they do not require the application of any code updates.

The changes are grouped by manual and listed within each section in reverse date order. That is, the most recent documentation change appears at the beginning of each manual section.

The page numbers referenced in this document are the page numbers in the latest version of the relevant PDF. The page number refers to the start of the section or subsection.





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## **Part 1. PTF/APAR documentation changes**



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## UI35643, UI35644, UI35645, UI35646, UI35647

Release Date: 1 March 2016

This set of PTFs contains these APAR fixes:

- PI44447

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### PI44447

#### Initial problem description

These problems relate to using an auxiliary edit MODEL dataset (Option 0.8) in a non-SMS managed data set environment.

1. If a Variable length data set is edited using a RRDS MODEL, then message Error creating aux file is produced along with IDCAMS error: IDC3506I A REQUIRED VOLUME LIST HAS BEEN OMITTED.
2. If a Fixed length data set is edited using a VRRDS model then the resulting Auxiliary dataset is incorrectly defined and editing cannot continue.

The Save PF3 key is ineffective and the edit session must be cancelled.

#### Outline of solution

File Manager has been updated to:

- Force the use of an RRDS MODEL when editing a fixed length data set.
- Force the use of a VRRDS MODEL when editing a variable length data set.

You can provide both RRDS and VRRDS models by specifying a model data set name that does not exist and represents a prefix for the data set name that will be used.

The model data set that File Manager uses is the name you provided suffixed with '.RRDS' for fixed and '.VRRDS' for variable length records.

#### Documentation impact

This APAR requires changes to:

- User's Guide and Reference (SC19-3674-00)

## Changes to the User's Guide and Reference

In Chapter 14 "Panels and fields", in the section "Set Temporary Data Set Allocation Options panel", *change* the descriptions of the Model Data Set Name and the Auxiliary Data Set Name fields (page 667). The change bars show the text that changes:

#### Model Data Set Name

A data set name to be used as the model file for defining the auxiliary data set for a full function edit session. The TSO prefix (as defined for your user ID) is used as the high-level qualifier for any name that is not enclosed in quotes.

A model file should be used to determine the volume placement of the auxiliary data set in a non-SMS environment. The model file must be a VSAM cluster. It should be defined as a RRDS or VRRDS depending on the attributes of the data set being edited. You can provide both RRDS and

| VRRDS models by specifying a model data set name that does not exist  
| and represents a prefix for the data set name that will be used.  
|  
| The model data set that File Manager uses is the name you provided  
| suffixed with “.RRDS” for fixed and “.VRRDS” for variable length records.

**Auxiliary Data Set Name**

| A data set name to be used as the auxiliary file for a full function edit  
| session. The TSO prefix (as defined for your user ID) is used as the  
| high-level qualifier for any name that is not enclosed in quotes.

| The auxiliary file must be a REUSEable RRDS file, whose record length  
| definitions must be compatible with the file being edited.

| If this field is left blank, a RRDS file is automatically defined for the edit  
| session and subsequently deleted.

| It should be defined as a RRDS or VRRDS depending on the attributes of  
| the data set being edited.

| You can provide both RRDS and VRRDS data sets by specifying a data set  
| name that does not exist and represents a prefix for the data set name that  
| will be used.

| The auxiliary data set that File Manager uses is the name you provided  
| suffixed with “.RRDS” for fixed and “.VRRDS” for variable length records.

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## PI53408

Release Date: 23 February 2016

### Initial problem description

The File Manager for z/OS User's Guide and Reference SC19-3674-00 does not document the requirement to specify the RECSIZE parameter when using the Data Set Generation (DSG) function for a tape data set.

### Outline of solution

Update document as outlined below.

### Documentation impact

This APAR requires changes to:

- User's Guide and Reference (SC19-3674-00)

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## Changes to the User's Guide and Reference

### Chapter 16. "Functions"

In the section "DSG (Data Set Generate)", *add* this note to the RECSIZE=*resize* option description (page 911):

**Note:** If the output data set resides on a tape then the RECSIZE parameter is required as File Manager cannot determine the record length.



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## **UI34771, UI34772, UI34773, UI34774, UI34775, UI34776, UI34777, UI34778, UI34779**

Release Date: 8 February 2016

This set of PTFs contains these APAR fixes:

- PI45964

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### **PI45964**

#### **Initial problem description**

There is a security vulnerability when File Manager batch jobs write audit records to SMF.

#### **Outline of solution**

The method of writing audit records has been reworked, to remove the security vulnerability. At the same time, the documentation has been rewritten, to clarify the different methods of writing audit records.

#### **Documentation impact**

This APAR requires changes to:

- Customization Guide (SC19-3673-01)

### **Changes to the Customization Guide**

All the changes required to SC19-3673-01 have been integrated directly into the new edition of this document, SC19-3673-02.





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## PI11460

Release Date: **12 March 2015**

### **Initial problem description**

In the File Manager Customization Guide SC19-3673-01, references to the SCRNAME for File Manager DB2 component are inconsistent.

### **Outline of solution**

Update document as outlined below.

### **Documentation impact**

This APAR requires changes to:

- Customization Guide (SC19-3673-01)

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## Changes to the Customization Guide

[These changes integrated into SC19-3673-02.]

### **Chapter 13. "Customizing the operating environment for FM/DB2"**

In the section "Defining FM/DB2 in an ISPF command table" (page 110), in the "Action:" paragraph, change the reference to the SCRNAME to FMDB2 (instead of FMNDB2). The Action paragraph should read:

```
Action: SELECT PANEL(FMN2ST00) OPT(&ZPARAM) SCRNAME(FMDB2)
SUSPEND NEWAPPL(FMN2)
```

Note that the SCRNAME parameter in the bottom line of Figure 7 (page 109) is correct.



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# UI22705, UI22706, UI22707, UI22708, UI22709, UI22710, UI22711, UI22712, UI22713, UI22714

Release Date: 4 November 2014

This set of PTFs contains this APAR fix:

- PI18378
- PI19978

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## PI18378

### Initial problem description

File Manager is unable to be DISABLED via Registration services (IFAPRDxx).

### Outline of solution

File Manager has been updated to use member IFAPRDxx for registration service so that if File Manager is specified in IFAPRDxx as STATE(DISABLED), File Manager processing terminates.

Sample FMNWIFA is provided as sample entries for IFAPRDxx.

### Documentation impact

This APAR requires changes to:

- Customization Guide (SC19-3673-01)

## Changes to the Customization Guide

[These changes integrated into SC19-3673-02.]

### Chapter 1. "Preparing to customize File Manager"

In the section "Checklist for installing and customizing File Manager" (page 3), in Table 1 (Summary of steps for customizing File Manager and the operating environment Description), *insert* a new step 3:

Table 1. Summary of steps for customizing File Manager and the operating environment

	Description
__ 3	Enable/Register File Manager (Optional) See "Enable/Register File Manager" [see further amendment].

*Renumber* all following Checklist points.

### Chapter 2. "Customizing the operating environment for File Manager"

*Add* the following as the first section in this chapter:

**Enable/Register File Manager (Optional):** You may optionally include an entry for File Manager in the IFAPRDxx parmlib member as follows:

```
PRODUCT OWNER('IBM CORP')  
NAME('IBM FILE MANAGER')  
ID(5655-W68)  
VERSION(*) RELEASE(*) MOD(*)  
FEATURENAME('IBM-FM')  
STATE(ENABLED)
```

Sample registration parmlib entry FMNWIFA, which contains the above statements, is provided in your hlq.SFMNSAM1 data set. Update your IFAPRDxx member with the information shown in one of the above listed sample registration parmlib entries.

After you have updated IFAPRDxx, issue the SET PROD=xx operator command. File Manager is then enabled in your z/OS environment.

File Manager execution may be disabled by changing STATE(ENABLED) to STATE(DISABLED). Again, after you have updated IFAPRDxx, issue the SET PROD=xx operator command. File Manager is then disabled in your z/OS environment.

## PI19978

### Initial problem description

1. FM/CICS can read, modify and change the status of CICS resources. For CICS regions without resource or SET processing security there is a requirement to control the functions or processes that can be run using FM/CICS.
2. File Manager hangs when adding records to an auxiliary TS queue and there is no space to add any more items.
3. FM/CICS isn't showing resources from remotely connected regions on a resource list or MSGFMNBB259 is being produced trying to access a remotely defined file.

### Outline of solution

1. File Manager has been enhanced to support resource security. This security is activated when a user has read or more access to the facility class profile:

```
FILEM.CICS.RESOURCE
```

If File Manager for CICS resource security has been activated then a XFACILIT class profile in the following form is used to determine whether a user is authorized to perform any given FM/CICS function against the resource.

```
FILEM.sysplex.applid.resource.resource_name
```

where

#### **sysplex**

The current sysplex name.

**applid** The VTAM applid of the CICS region

#### **resource**

FILE, TS, TD or ENQ, to identify resources File Manager can process.

#### **resource\_name**

The File name, TS queue name or TD queue name.

If this XFACILIT class profile is defined then READ access is required for READ only functions like view, print. Update is required for update functions like edit or FCH. CONTROL is required to perform SET processing - like opening and closing CICS files. For functions that read or update CICS files a data set check is also performed against the associated data set name to ensure the user has the READ for read functions and UPDATE for update functions.

See the associated documentation change for details on how this can be set-up.

2. File Manager has also been modified to report the NOSPACE condition when writing to a TS queue.
3. File Manager has been modified to ensure level change checking is correct for remote system access.

#### Documentation impact

This APAR requires changes to:

- Customization Guide (SC19-3673-01)

## Changes to the Customization Guide

### Chapter 32. "Customizing the FM/CICS audit facility (FMN3POPT controlled auditing)"

Add the following section at the end of Chapter 32 (page 279):

**Controlling FM/CICS processing:** File Manager has the ability to read, modify and change the status of CICS resources. If the resources are not protected in the CICS environment then there may be a requirement to control what functions File Manager for CICS users can perform.

If Security Server, RACF 1.9 (or later), or an equivalent security product, is active, the System Authorization Facility (SAF) with the File Manager enhanced security facility is used for access control and authorization verification. Authorization is controlled by File Manager-specific profiles in the FACILITY and XFACILIT class as follows.

*Activating FM/CICS resource checking:* The following facility class profile is used to determine whether File Manager checks access for any given CICS resource.

```
FILEM.CICS.RESOURCE
```

For example, activate FM/CICS resource checking:

```
RDEF FACILITY FILEM.CICS.RESOURCE AUDIT(NONE)      +
      UACC(READ) OWNER(TYRONED)
SETROPTS RACLIST(FACILITY) REFRESH
```

If this profile has been defined and the user has an access of read or more then FM/CICS performs resource security checking using the XFACILIT class profiles described below.

*Defining access to CICS resources:* Define XFACILIT class profiles in the form:

```
FILEM.sysplex_name.cics_applid.resource_type.resource_name
```

Where

#### **sysplex\_name**

The z/OS sysplex name.

#### **cics\_applid**

The CICS VTAM application id for the CICS region.

#### **resource\_typ**

One of the following values:

**FILE** CICS files

**TD** CICS transient data queues

**TS** CICS temporary storage queues

**ENQ** CICS enqueue resource name

**resource\_name**

The CICS file name, transient data queue name or temporary storage queue name. This level doesn't apply to the resource type ENQ.

File Manager checks the level of access as follows to determine what functions can be performed:

**READ** This allows read only functions like browse, print and view to run. The user is not allowed to modify a CICS resource.

**UPDATE**

This allows update functions like edit, data create, copy to, and the ability to delete TS queues and empty TD queues from the resource list displays.

**CONTROL**

This allows CICS SET function processing to change the status of a resource and the ability to purge tasks with outstanding enqueues for the XFACILIT class with resource\_type ENQ. If the user does not have CONTROL access then the status fields that were modifiable on the resource list panels are protected for resources they are not allowed to modify.

**Note:** If the XFACILIT class for CICS files has been defined and the user is performing a File Manager function that can read or update the data set, then an additional check is performed to validate whether the user has the required level of access to the data set name associated with the CICS file.

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# UI16399, UI16400, UI16401, UI16402, UI16403, UI16404, UI16405

Release Date: 27 March 2014

This set of PTFs contains this APAR fix:

- PI11458

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## PI11458

### Initial problem description

In File Manager DB2 component, the data set allocation values shown on the "Set Output Data Set Allocation Options" panel are not honored.

### Outline of solution

File Manager DB2 component has been updated to correct the problem.

### Documentation impact

This APAR requires changes to:

- User's Guide and Reference for DB2 Data (SC19-3675-01)

## Changes to the User's Guide and Reference for DB2 Data

### Chapter 15. "FM/DB2 panels and fields"

In the section "Set Output Data Set Allocation Options panel" on page 731, *add* the fields for the Trace data set. The panel should look like this:

<u>P</u> rocess	<u>O</u> ptions	<u>H</u> elp					
File Manager	Set Output Data Set Allocation Options						
Set processing options as desired and enter EXIT (F3) to save your changes. Enter RESET to restore installation defaults.							
Data set	Space Units	Primary Quantity	Secondary Quantity	Management Class	Storage Class	Data Class	Device Type
Audit Log	CYL	16	8				SYSALLDA
Print	CYL	64	32				SYSALLDA
Trace	CYL	64	32				SYSALLDA
SHOWSQL	TRK	20	20				SYSALLDA
Command ==>							
F1=Help	F2=Split	F3=Exit	F4=CRetriev	F6=Reset	F7=Backward		
F8=Forward	F9=Swap	F10=Actions	F12=Cancel				

Figure 1. Set Output Data Set Allocation Options panel

Immediately after this panel, *add* these two paragraphs:

File Manager DB2 may allocate data sets, depending on function. The allocation attributes for Audit Log, Print, Trace and SHOWSQL (used to display SQL) can be specified here. The Audit Log, Print and Trace data sets are always permanent

## PI11458

(catalogued) data sets. SHOWSQL data sets may be either temporary or permanent. Temporary data sets have a high level qualifier like SYSxxxxx and are deleted automatically when the FM/DB2 function ends.

Any allocation values specified on this panel might be changed by SMS as part of the allocation process, and temporary data sets might be allocated to VIO, depending on SMS and other system settings.



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## PI06046

Release Date: **11 December 2013**

This PTF is not associated with an APAR fix.

### Initial problem description

Specifying SAF\_SMFNO on FMNXPARM results in messages FMNBA091 and FMNBA094.

### Outline of solution

The File Manager for z/OS Customization Guide has been corrected.

### Documentation impact

This APAR requires changes to:

- Customization Guide (SC19-3673-01)

---

## Changes to the Customization Guide

[These changes integrated into SC19-3673-02.]

### Appendix D. "File Manager options specified in PARMLIB members"

In the section "File Manager Options specified in FMN0PARM" in the subsection "FMAUDIT" on page 423, *change* "SAF\_SMFNO" to "SMF\_NO" in the heading, syntax diagram, and description entry.

In the subsection "Facilities for customizing the FMN0PARM definitions" on page 424, in the first bullet point *change* "zOS" to "z/OS".

In the subsection "Included members" on page 427, *change* the paragraph:

Care should be used when selecting member names for included members, to avoid any conflicts with other member names that might exist in other libraries in the logical parmlib concatenation. This applies only when FMN0POPT controlled auditing (see "Defining the FMN0PARM member" on page 53 for more information) is used to add the FMN0PARM member to the logical parmlib concatenation.

To:

If you used Method 1 to add member FMN0PARM to the logical parmlib concatenation (see "Defining the FMN0PARM member" on page 53 for more information), be careful to avoid any conflicts between included member names and existing member names in the logical parmlib concatenation.

In the section "FM/IMS Options specified in FMN1PARM" on page 428, *delete* the paragraph

FM/IMS will not start unless the FMN1PARM PARMLIB member is present.

In the subsection "FMAUDIT" on page 429, *change* "SAF\_SMFNO" to "SMF\_NO" in the heading, syntax diagram, and description entry.

In the subsection “Facilities for customizing the FMN1PARM definitions” on page 430, in the first bullet point *change* “zOS” to “z/OS”.

In the subsection “Included members” on page 432, *change* the paragraph:

Care should be used when selecting member names for included members, to avoid any conflicts with other member names that might exist in other libraries in the logical parmlib concatenation. This applies only when FMN1POPT controlled auditing (see “Defining the FMN1PARM member” on page 239 for more information) is used to add the FMN1PARM member to the logical parmlib concatenation.

To:

If you used Method 1 to add member FMN1PARM to the logical parmlib concatenation (see “Defining the FMN1PARM member” on page 239 for more information), be careful to avoid any conflicts between included member names and existing member names in the logical parmlib concatenation.

In the “FM/DB2 Options specified in FMN2PARM” on page 434, *delete* the paragraph

FM/DB2 will not start unless the FMN2PARM PARMLIB member is present.

In the subsection “FMAUDIT” on page 434, *change* “SAF\_SMFNO” to “SMF\_NO” in the heading, syntax diagram, and description entry.

In the subsection “Facilities for customizing the FMN2PARM definitions” on page 435, in the first bullet point *change* “zOS” to “z/OS”.

In the subsection “Included members” on page 438, *change* the paragraph:

Care should be used when selecting member names for included members, to avoid any conflicts with other member names that might exist in other libraries in the logical parmlib concatenation. This applies only when FMN2POPT controlled auditing (see “Defining the FMN2PARM member” on page 138 for more information) is used to add the FMN2PARM member to the logical parmlib concatenation.

To:

If you used Method 1 to add member FMN2PARM to the logical parmlib concatenation (see “Defining the FMN2PARM member” on page 138 for more information), be careful to avoid any conflicts between included member names and existing member names in the logical parmlib concatenation.

In the “FM/CICS Options specified in FMN3PARM” on page 439, *delete* the paragraph

FM/CICS will not start unless the FMN3PARM PARMLIB member is present.

In the subsection “FMAUDIT” on page 440, *change* “SAF\_SMFNO” to “SMF\_NO” in the heading, syntax diagram, and description entry.

In the subsection “Facilities for customizing the FMN3PARM member” on page 441, in the first bullet point *change* “zOS” to “z/OS”.

In the subsection “Included members” on page 443, *change* the paragraph:

Care should be used when selecting member names for included members, to avoid any conflicts with other member names that might exist in other libraries in the logical parmlib concatenation. This applies only when FMN3POPT controlled auditing (see “Defining the FMN3PARM member” on page 287 for more information) is used to add the FMN3PARM member to the logical parmlib concatenation.

To:

If you used Method 1 to add member FMN3PARM to the logical parmlib concatenation (see “Defining the FMN3PARM member” on page 287 for more information), be careful to avoid any conflicts between included member names and existing member names in the logical parmlib concatenation.



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# UI12211, UI12212, UI12213, UI12214, UI12215, UI12216, UI12218

Release Date: 12 November 2013

This set of PTFs contains these APAR fixes:

- PM96902
- PM98030
- PM98627

---

## PM96902

### Initial problem description

FM/DB2 batch export receives message FMNDB101 DSNT404I SQLCODE =SQLCODE = 445, WARNING: VALUE <VALUE> HAS BEEN TRUNCATED

### Outline of solution

File Manager DB2 has been updated with new messages.

### Documentation impact

This APAR requires changes to:

- User's Guide and Reference for DB2 Data (SC19-3675-01)

## Changes to the User's Guide and Reference for DB2 Data

Add these new error messages into the FM/DB2 messages appendix (starting page 815).

---

**FMNDC020** *count* row(s) exported from DB2 object source DB2 object to file *file name*. The open returned SQLCODE *sqlcode*. *trunc\_count* rows had fetch SQLCODE +445 (truncation) warnings. *warn\_count* other rows had fetch warnings (SQLCODE>0, but not +445). (long).

**Explanation:** This message is issued at the end of an FM/DB2 export function, when at least one positive SQLCODE was received retrieving data from DB2. The number of rows exported, *count*; the DB2 object from which the rows were exported, *source DB2 object*; the output file name that contains the exported data, *file name*; the SQLCODE for the OPEN cursor, *sqlcode*; the number of rows fetched that had SQLCODE+445 warnings, *trunc\_count* and the number of rows fetched that gave positive SQLCODEs (but not +445), *warn\_count* are shown. SQLCODE+445 is a warning condition issued when data truncation occurs.

**User response:** For SQLCODE+445 warnings, examine the exported data to see if the data truncation has resulted in any unexpected consequences. Take action as appropriate. For other warning SQLCODEs: If the export operation was run on-line, repeat the operation using the batch execution option. Run the resulting job

and examine the messages produced. Look up the SQLCODEs reported in the DB2 for z/OS SQL Codes manual, for the appropriate version of DB2. Take action as appropriate.

---

**FMNDC021** *Row count* row(s) and column header row exported from DB2 object *object name* to file *data set name*. The open returned SQLCODE *sqlcode*. *trunc\_count* rows had fetch SQLCODE +445 (truncation) warnings. *warn\_count* other rows had fetch warnings (SQLCODE>0, but not +445). (long).

**Explanation:** This message is issued by the FM/DB2 export function, when at least one positive SQLCODE was received retrieving data from DB2 and is specific for an export with CSV format and the "Include column headers" option selected. The number of rows exported, *count*; the DB2 object from which the rows were exported, *source DB2 object*; the output file name that contains the exported data, *file name*; the SQLCODE for the OPEN cursor, *sqlcode*; the number of rows fetched that had SQLCODE+445 warnings, *trunc\_count* and the number of rows fetched that gave positive SQLCODEs (but not +445), *warn\_count* are shown. SQLCODE+445 is a warning condition issued

when data truncation occurs.

**User response:** For SQLCODE+445 warnings, examine the exported data to see if the data truncation has resulted in any unexpected consequences. Take action as appropriate. For other warning SQLCODEs: If the export operation was run on-line, repeat the operation using the batch execution option. Run the resulting job and examine the messages produced. Look up the SQLCODEs reported in the DB2 for z/OS SQL Codes manual, for the appropriate version of DB2. Take action as appropriate.

---

**FMNDC022** Rows row(s) exported from SELECT statement (user-specified) to file *data set name*. The open returned SQLCODE *sqlcode*. *trunc\_count* rows had fetch SQLCODE +445 (truncation) warnings. *warn\_count* other rows had fetch warnings (SQLCODE>0, but not +445). (long).

**Explanation:** This message is issued by the FM/DB2 Export function when at least one positive SQLCODE was received retrieving data from DB2. It shows the number of rows *rows* exported by the export function; the target data set is *data set name*; the SQLCODE for the OPEN cursor is *sqlcode*; the number of rows fetched that had SQLCODE+445 warnings is *trunc\_count* and the number of rows fetched that gave positive SQLCODEs (but not +445) is *warn\_count*. SQLCODE+445 is a warning condition issued when data truncation occurs. This message is specific to the export of data from a user-specified SELECT statement initially entered using FM/DB2 options 4.1-4.4.

**User response:** For SQLCODE+445 warnings, examine the exported data to see if the data truncation has resulted in any unexpected consequences. Take action as appropriate. For other warning SQLCODEs: If the export operation was run on-line, repeat the operation using the batch execution option. Run the resulting job and examine the messages produced. Look up the SQLCODEs reported in the DB2 for z/OS SQL Codes manual, for the appropriate version of DB2. Take action as appropriate.

---

**FMNDC023** Rows row(s) and column header row exported from SELECT statement (user-specified) to file *data set name*. The open returned SQLCODE *sqlcode*. *trunc\_count* rows had fetch SQLCODE +445 (truncation) warnings. *warn\_count* other rows had fetch warnings (SQLCODE>0, but not +445). (long).

**Explanation:** This message is issued by the FM/DB2 Export function when at least one positive SQLCODE was received retrieving data from DB2. It shows the

number of rows *rows* exported by the export function; the target data set is *data set name*; the SQLCODE for the OPEN cursor is *sqlcode*; the number of rows fetched that had SQLCODE+445 warnings is *trunc\_count* and the number of rows fetched that gave positive SQLCODEs (but not +445) is *warn\_count*.

SQLCODE+445 is a warning condition issued when data truncation occurs. This message is specific to the export of data in CSV format, with column header data, from a user-specified SELECT statement initially entered using FM/DB2 options 4.1-4.4.

**User response:** For SQLCODE+445 warnings, examine the exported data to see if the data truncation has resulted in any unexpected consequences. Take action as appropriate. For other warning SQLCODEs: If the export operation was run on-line, repeat the operation using the batch execution option. Run the resulting job and examine the messages produced. Look up the SQLCODEs reported in the DB2 for z/OS SQL Codes manual, for the appropriate version of DB2. Take action as appropriate.

---

**FMNDC026** Open cursor SQLCODE=*sqlcode*.

**Explanation:** This message is issued by the FM/DB2 export function, when executed in batch mode, when a positive SQLCODE is received from DB2 when the cursor is opened.

**User response:** Look up the SQLCODE reported in the DB2 for z/OS SQL Codes manual, for the appropriate version of DB2. Take action as appropriate.

---

**FMNDC027** Fetch SQLCODE=*sqlcode* for row row (data truncation).

**Explanation:** This message is issued by the FM/DB2 export function, when executed in batch mode, whenever an SQLCODE+445 is received when fetching a row of data from DB2. SQLCODE+445 indicates that data truncation occurred.

**User response:** Examine the exported data to see if the data truncation has resulted in any unexpected consequences. Take action as appropriate.

---

**FMNDC028** Fetch SQLCODE=*sqlcode* for row row (warning).

**Explanation:** This message is issued by the FM/DB2 export function, when executed in batch mode, whenever a positive SQLCODE other than +445 is received when fetching a row of data from DB2.

**User response:** Look up the SQLCODE reported in the DB2 for z/OS SQL Codes manual, for the appropriate version of DB2. Take action as appropriate.

---

## PM98030

**Initial problem description**

RECEIVE SQLCODE = -104, ERROR: ILLEGAL SYMBOL ".". from FM/DB2 export utility, function DBX.

**Outline of solution**

File Manager DB2 has been updated with new messages.

**Documentation impact**

This APAR requires changes to:

- User's Guide and Reference for DB2 Data (SC19-3675-01)

### Changes to the User's Guide and Reference for DB2 Data

*Add* these new error messages into the FM/DB2 messages appendix (starting page 815).

---

#### FMNDB094 OBJIN|OBJOUT DB2 object not found.

**Explanation:** This message is issued by FM/DB2 functions that are executed in batch, when a DB2 object name does not exist. OBJIN appears when an input DB2 object name does not exist, for example print, copy and export. OBJOUT appears when an output DB2 object name does not exist, for example copy, import and data create.

**User response:** Correct the DB2 object name, re-submit the batch job.

**Explanation:** This message is issued by FM/DB2 functions that are executed in batch, when a DB2 location, specified as part of a DB2 object name, does not exist. OBJIN appears when the location appears in an input DB2 object name, for example print, copy and export. OBJOUT appears when the location appears in an output DB2 object name, for example copy, import and data create.

**User response:** Determine the failing DB2 location value. Ensure that this DB2 location is accessible from the DB2 system specified in the PARM statement, re-submit the batch job.

---

#### FMNDB096 OBJIN|OBJOUT DB2 location not found.

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## PM98627

**Initial problem description**

Unable to specify a 5 digit port number in FMN3POPI.

**Outline of solution**

File Manager now supports a port numbers in the range 0-65535.

**Documentation impact**

This APAR requires changes to:

- Customization Guide (SC19-3673-00)

### Changes to the Customization Guide

*Change* the PORT option (on page 271, in the chapter *Customizing FM/CICS*, so that PORT=nnnnn, and change the explanation to read:

Specifies a 1-5 digit port number to be dedicated to the FM server task.





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## UK98689, UK98690, UK98691, UK98692, UK98693, UK98694

Release Date: 24 October 2013

This set of PTFs contains these APAR fixes:

- PM76965

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### PM76965

#### Initial problem description

Invalid job name is received when using START=BATCH and the variable &TERM in the jobname.

#### Outline of solution

File Manager CICS has been updated to uppercase the &TERM variable when used as a jobname.

#### Documentation impact

This APAR requires changes to:

- Customization Guide (SC19-3673-01)

### Changes to the Customization Guide

[These changes integrated into SC19-3673-02.]

#### **"Modifying and submitting FMN3INST" on page 264**

Change "&&USER" to "&USER", and change "&&TERM" to "&TERM", throughout the section.



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# UK97431, UK97432, UK97433, UK97434, UK97435, UK97436, UK97437

Release Date: 18 September 2013

This set of PTFs contains these APAR fixes:

- PM94819

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## PM94819

### Initial problem description

The fix for APAR PM75413 changed the behaviour of the Load (ILB) function. Some customers were relying on the pre-PM75413 behaviour.

### Outline of solution

The FM/IMS Load (ILB) has been modified to support a new parameter - USELCMD. When the USELCMD parameter is set to N, segments with no key or a non unique key are inserted according to the insert rule for the segment type - that is the pre-PM75413 behaviour. When the USELCMD parameter is set to Y or is not specified, segments with no key or a non unique key are inserted as the last occurrence - that is the post-PM75413 behaviour.

The FM/IMS Load dialog has been modified to include the 'Do not override insert rules' option. When this option is selected and there is a segment with an insert rule of FIRST or HERE in the primary database or a logically related database, the JCL generated by the dialog includes the card:

```
$$$FILEM      USELCMD=N,
```

When this option is not selected and there is a segment with an insert rule of FIRST or HERE in the primary database or a logically related database, the JCL generated by the dialog includes the card:

```
$$$FILEM      USELCMD=Y,
```

Otherwise, the dialog does not generate a USELCMD= card.

### Documentation impact

This APAR requires changes to:

- User's Guide and Reference for IMS Data (SC19-3676-00)

## Changes to the User's Guide and Reference for IMS Data

### "Load Entry panel" on page 279

Add "Do not override insert rules option" to the Load Entry Panel (figure 71):

<u>P</u> rocess	<u>O</u> ptions	<u>H</u> elp
FM/IMS	Load Entry Panel	
IMS:		
Subsystem name . . .	IF52	PSB name . . . LA19D (If static PSB)
Database name . . .	DJ1E	AGN name . . . (If BMP)
Processing Options:		
PSB type	Region type	Fetch DB dsnames from (if DLI)
<u>1</u> 1. Dynamic	<u>1</u> 1. DLI	<u>1</u> 1. User profile
2. Static	2. BMP	2. DFSMDA members
Load type	IMS log (if DLI)	Enter "/" to select option
- 1. No replace	- 1. Keep	- Skip DB data set panel (if DLI)
2. Replace	- 2. Delete	- Do not override insert rules
3. Initial	3. None	

Add the following field description immediately after the Skip DB data set panel description:

#### Do not override insert rules

Select this option if some of the segments you are loading have an insert rule of FIRST or HERE and you do not want the Load to override these insert rules. If you select this option, segments with no key or a non unique key are inserted according to the insert rule for the segment type.

If this option is not selected, segments with no key or a non unique key are inserted as the last occurrence - this is irrespective of the insert rule for the segment type.

**Note:** If you are using the Extract (IXB) and Load (ILB) to extract data from one database and load it into another, and you want the twin segments in the loaded database to be in the same sequence as they were in the extracted database, then do not select this option.

### "Load (ILB)" on page 470

Add this snippet to the Syntax - part 1 diagram on page 473.



Add the following parameter description after the CHKPFREQ description:

#### USELCMD

Optional parameter. This option is only applicable when some of the segments you are loading have an insert rule of FIRST or HERE. Specifies whether or not the Load is to override these insert rules.

**Y** Segments with no key or a non unique key are inserted as the last occurrence - this is irrespective of the insert rule for the segment type.

N Segments with no key or a non unique key are inserted according to the insert rule for the segment type.

**Note:** If you are using the Extract (IXB) and Load (ILB) to extract data from one database and load it into another, and you want the twin segments in the loaded database to be in the same sequence as they were in the extracted database, then specify USELCMD=Y.



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# UK96427, UK96428, UK96429, UK96430, UK96431, UK96432, UK96433, UK96434, UK96435

Release Date: 5 August 2013

This set of PTFs contains these APAR fixes:

- PM87001

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## PM87001

### Initial problem description

In the File Manager DB2 component editor, trailing spaces at the end of a VARCHAR field are removed even when the "Remove trailing spaces" editor option is not selected.

### Outline of solution

File Manager DB2 component has been changed to correct the problem. This APAR provides a small enhancement to the FM/DB2 editor. The enhancement adds a new editor option that disables the processing associated with the "input string delimiter" for VARCHAR fields.

### Documentation impact

This APAR requires changes to:

- User's Guide and Reference for DB2 Data (SC19-3675-01)

## Changes to the User's Guide and Reference for DB2 Data

### "Editor Options (5 of 8) panel" on page 539

*Update* the panel. Rearrange the current four options in the "Varying Length Columns" options, and add a new option. The options now look like this:

Varying Length Columns:

Enter "/" to select option  
/ Disable input delimiter  
/ Show end of string  
/ Remove trailing spaces

String Delimiters:

Input . . . . . #  
Display . . . . . <

*Add* this new option description:

### Disable input delimiter

This option is used to disable processing for the Input string delimiter. By default this option is not selected. When a change is made to a varying field, FM/DB2 scans the entire varying field from left to right, looking for the first occurrence of the Input string delimiter character. If an occurrence is found, the field is truncated at the character before the location of the Input string delimiter.

Consider disabling the Input string delimiter when:

- The DB2 object being processed contains VARCHAR fields that cannot be displayed in full, without scrolling. In this situation a change to the field may trigger silent truncation when the input string delimiter is present in a part of the field that is not currently visible on the display.
- A VARCHAR field is used to store data other than readable text, for example binary data, or data that has an internal format. In this situation

## PM87001

the data may contain a character that matches the input string delimiter character, leading to unwanted truncation if the data in that field is changed.



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## UK95967, UK95980, UK95981, UK95982, UK96027, UK96028, UK96046, UK96047

Release Date: 26 July 2013

This set of PTFs contains these APAR fixes:

- PM84382
- PM87939
- PM89192
- PM90169
- PM92321

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### PM84382

#### Initial problem description

Problems 2 through 6 are FM/IMS only problems.

1. When the AUDITHLQ parameter specified in the FM installation options module is set to the &PREFIX symbol or a string that commences with the &PREFIX symbol, an FM base, FM/IMS or FM/DB2 batch function does not use the correct high-level qualifier for the Audit log data set that it creates. The user's TSO prefix should be used as the high-level qualifier. However the batch function uses the job's user ID instead.
2. When the TEMPHLQ parameter is set to the &PREFIX symbol or a string that commences with the &PREFIX symbol, an FM/IMS batch function does not use the correct high-level qualifier for the IMS log data set that it dynamically allocates. The user's TSO prefix should be used as the high-level qualifier. However, the batch function uses the job's user ID instead. Note: The TEMPHLQ parameter may be specified in the FM/IMS installation options module or the FMIMSIN input of the batch function.
3. When the TEMPHLQ parameter is set to the &PREFIX symbol or a string that commences with the &PREFIX symbol, the Extract (IXB) function does not use the correct high-level qualifier for the VSAM work data sets that it dynamically allocates. The user's TSO prefix should be used as the high-level qualifier. However, the Extract uses the job's user ID instead.
4. The JCL generated by the Batch Edit dialog does not include an IEFRDER DD statement.
5. When a user first enters the Set Output Data Set Allocation Options panel (option 0.8), the fields for the IMS log, Extract keys, Logical keys and Root keys are blank. The allocation parameters specified in the FM/IMS installation options module should be displayed.
6. The IEFRDER DD statement that the Load dialog generates is invalid. Required positional subparameters are missing from the SPACE parameter. The problem occurs when the IMS log fields on the 'Set Output Data Set Allocation Options' panel (option 0.8) are not specified by the user.

#### Outline of solution

File Manager has been modified as follows:

- The SET function has been enhanced to support the specification of the user's TSO prefix. When a SET function that specifies the user's TSO prefix is included in the SYSIN/FMIMSIN input of a batch function, the batch function uses the specified value for the user's TSO prefix, rather than the job's user ID.
- If the user's TSO prefix is not the same as the TSO user ID, then the SYSIN/FMIMSIN input of JCL generated by File Manager functions will include this card:

```
$FILEM SET TSOPREFIX=tsoprefix
```

where tsoprefix is the user's TSO prefix.

FM/IMS has been modified as follows:

- The Batch Edit dialog has been modified to generate JCL that includes an IEFRDER DD statement.
- When the allocation parameters for the IMS log, Extract keys, Logical keys and Root keys data sets are not found in the user's profile, FM/IMS uses the values specified in the FM/IMS installation options module.
- When the IMS log is only a temporary data set that will be deleted when the function finishes, FM/IMS no longer generates its name, so it gets a system generated name instead.

#### Documentation impact

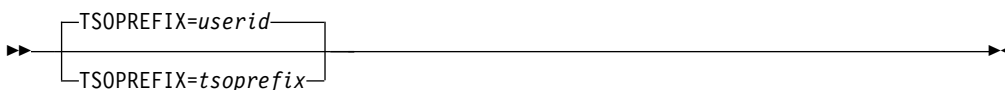
This APAR requires changes to:

- User's Guide and Reference (SC19-3674-00)
- User's Guide and Reference for IMS Data (SC19-3676-00)

## Changes to the User's Guide and Reference

### "SET (Set Processing Options)" on page 1061

Add the following to the syntax diagram:



Add the following parameter description after the TEMPHLQ description:

#### TSOPREFIX

This parameter allows you to specify the user's TSO prefix. The parameter is provided because functions run in batch mode cannot obtain the user's TSO prefix but sometimes they require it. Batch functions may require it when the &PREFIX symbol is specified in the TEMPHLQ or AUDITHLQ parameters in the File Manager Installation Options modules or the TEMPHLQ parameter of a SET function. The &PREFIX symbol represents the user's TSO prefix, so when File Manager functions encounter this symbol in any of the above parameters, they are supposed to substitute the user's TSO prefix. Batch functions can only do this, if this parameter is specified.

## Changes to the User's Guide and Reference for IMS data

### "Batch Edit Entry panel" on page 172

Add the IMS log option to Figure 23 "Batch Edit Entry panel" (page 173):

<u>P</u> rocess	<u>O</u> ptions	<u>H</u> elp
FM/IMS		
Batch Edit Entry Panel		
IMS:		
Subsystem name . . .	IF52	PSB name . . . _____ (If static PSB)
Database name . . .	DJIE	AGN name . . . _____ (If BMP)
View:		
Data set name . . .	*	_____
Member . . . . .	_____	
Processing Options:		
PSB type	Region type	Fetch DB dsnames from (if DLI)
<u>1</u> 1. Dynamic	<u>1</u> 1. DLI	<u>2</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>1</u> 1. Keep	- Skip DB data set panel (if DLI)
2. Existing	2. Delete	- Edit view
3. None	3. None	- Include template DD
Command ==>		
F1=Help	F2=Split	F3=Exit
F9=Swap	F10=Actions	F12=Cancel
	F4=CRetriev	F7=Backward
		F8=Forward
		Scroll PAGE

Figure 2. Batch Edit Entry panel

Add the following field description immediately after the View Usage description:

### IMS log

If you select "DLI" for Region type, enter:

#### 1. Keep

If you want the Batch Edit to use an IMS log data set and you want it kept when the job ends. FM/IMS includes in the generated JCL an IEFORDER DD statement that specifies DISP=(NEW,CATLG,CATLG).

#### 2. Delete

If you want the Batch Edit to use an IMS log data set and you want the it deleted if the job ends normally. FM/IMS includes in the generated JCL an IEFORDER DD statement that specifies DISP=(NEW,DELETE,CATLG).

#### 3. None

If you do not want the Batch Edit to use an IMS log data set. FM/IMS includes in the generated JCL an IEFORDER DD statement that specifies either a dummy data set (if the DBRC option on the DLI Mode Parameters panel (option 0.6.1) is set to 'Do not use DBRC') or DISP=(NEW,DELETE,CATLG) (otherwise).

**Note:** This field is ignored when you select BMP for the Region type.

## PM87939

### Initial problem description

User receives a field mapping error message when using DBCS items.

### Outline of solution

Numerous small adjustments to File Manager.

### Documentation impact

This APAR requires changes to:

- User's Guide and Reference (SC19-3674-00)

## Changes to the User's Guide and Reference

### "DSM (Data Set Compare)" function, on page 939

To the Usage Notes, *add* another point:

- To specify a field name containing lowercase or mixedcase characters, use the character literal form of the name surrounded by quotes and preceded with character C. For example, C'aBc'.

## PM89192

### Initial problem description

Numeric field compared to character field flagged as invalid on a File Manager compare.

### Outline of solution

- The compare function has been changed such that when comparing a character field to a numeric field if the character field does not contain a valid number, a character to character comparison will be done.
- The parameter INVDATA has been added to the FMN0RETC sample to allow the DSM 'Invalid data' batch return code to be customized.

### Documentation impact

This APAR requires changes to:

- Customization Guide (SC19-3673-01)

## Changes to the Customization Guide

[These changes integrated into SC19-3673-02.]

### "Customizing File manager batch return codes" on page 26

In "Figure 2. FMN0RETC macro statements as supplied by IBM", immediately following

INVDATA=8	Invalid data
add	
INVMAP=4	Invalid mapping

## PM90169

### Initial problem description

File Manager support for mapping SMF records using segmented template and distributed SMF assembler macros.

### Outline of solution

Two new functions have been provided to facilitate the mapping of SMF records using File Manager.

- SEGLEN('field\_name') has been created to set the current segment length to a value found in a previous segment.
- SEGOFF('adjustment value') is now available to test the current offset into the record being processed.

File Manager has been changed to interpret BL1, BL2, BL4, B18 and XL1 XL2, XL4, XL8 assembler declarations as binary fields to be consistent with the usage of these declarations in the supplied SMF macros.

### Documentation impact

This APAR requires changes to:

- User's Guide and Reference (SC19-3674-00)

## Changes to the User's Guide and Reference

### Chapter 4. "Creating and editing templates"

Immediately after the section "Segmented data templates" (page 133 to 136) *add* this new section:

**Mapping SMF data with segmented templates:** SMF records typically contain a header section with fields describing the following sections.

Typically three fields are used to tell you the offset, length and number of occurrences of a section. File Manager provides three functions that can be used in related identification criteria to aid in mapping these with a segmented template. The three segmented functions are SEGOFF(), SEGLEN() and SEGCNT().

A sample XML template illustrating the usage of these functions in mapping the SMF type 30 record can be found in your sample library (hlq.SFMNSAM1) in member FMNSMF3X. This sample XML refers to the assembler source member FMNSMF3S also found in your sample library. To use the sample XML template copy it and modify the `<library>hlq.SFMNSAM1</library>` to reflect the correct library data set for the source member at your site.

### "File Manager functions" on page 834

*Add* the following function definitions after the definition of SEGCNT (page 1155).

#### SEGLEN

##### Syntax

```
▶▶—SEGLEN(field_name)—————▶▶
```

**Can only be used in criteria for a segmented template.**

Returns the length in the associated field name. This result is used as the segment length for the identified segment if the value is greater than zero.

*field\_name*

Must be a valid field name for the current layout.

##### Note:

1. The field name is converted to a full word positive integer.
2. If the field is alphanumeric then it is assumed to contain a binary value. If it is longer than 4 bytes then the rightmost 4 bytes are used to obtain the binary value.
3. The last value returned by the SEGLEN function in successful identification criteria is used as the segment length. This takes precedence over the specification of a segment length field in a template definition.

For example, Consider the excerpt from an XML template with identification criteria for a section of the SMF 30 record SMF30PSS. The length of the section is

in the header section SMFRCD30 field SMF30SLN. When the identification criteria for section SMF30PSS is satisfied the segment length is set to the value contained in the header field SMF30SLN.

```
<layout name="SMFRCD30" offset="-4">
  <criteria type="RID" rname="SMF30PSS">
    <exp><![CDATA[
      segcnt('smf30pss') < #SMF30SON &
      segoff(4) >= #SMF30SOF &
      seglen('SMF30SLN') > 0
    ]]></exp>
  </criteria>
</layout>
```

## SEGOFF

### Syntax

►►—SEGOFF(*adjustment*)—◄◄

**Can only be used in criteria for a segmented template.**

Returns the current offset into the record during segmented identification processing.

*adjustment*

Default 0. This is a positive or negative number that is added to the offset value returned.

For example, consider the excerpt from an XML template with identification criteria for a section of the SMF 30 record SMF30PSS. The offset to the section is in the header section SMFRCD30 field SMF30SOF. We use related identification criteria with an adjustment of 4 because the header section includes the RDW which File Manager does not include when processing data. The header section is defined with an offset of minus 4 and we use SEGOFF(4) to adjust current offset in File Manager processing by 4 so the returned value can be compared with the offset value contained in the SMF30SOF field.

```
<layout name="SMFRCD30" offset="-4">
  <criteria type="RID" rname="SMF30PSS">
    <exp><![CDATA[
      segcnt('smf30pss') < #SMF30SON &
      segoff(4) >= #SMF30SOF &
      seglen('SMF30SLN') > 0
    ]]></exp>
  </criteria>
</layout>
```

---

## PM92321

### Initial problem description

1. When editing data in HEX mode without a template, and the CAPS ON option is in effect, only those characters which are changed are uppercased.
2. When editing data in LHEX mode without a template, and the CAPS ON option is in effect, the record will be uppercased when a change is made the the record.

**Outline of solution**

1. When editing data in HEX mode without a template, and the CAPS ON option is in effect, the record will be uppercased when a change is made to the record unless that change is made to the hexadecimal representation of the data.
2. When editing data in LHEX mode without a template, and the CAPS ON option is in effect, the record will not be uppercased when a change is made to the record unless that change is made to the hexadecimal representation of the data.

**Documentation impact**

This APAR requires changes to:

- User's Guide and Reference (SC19-3674-00)

**Changes to the User's Guide and Reference****"CAPS primary command" on page 737**

*Replace* the first bullet point with these two bullet points:

- In CHAR or HEX display format the entire record is translated to uppercase.

**Note:** For HEX display format the CAPS option has no effect when you only change the hexadecimal values.

- In LHEX display format the option has no effect.





---

## UK95246, UK95247, UK95248

Release Date: 21 June 2013

This set of PTFs contains these APAR fixes:

- PM81426
- PM87878

---

### PM81426

#### Initial problem description

Support for z/OS Enterprise COBOL Version 5.

#### Outline of solution

File Manager has been updated to provide the capability to compile COBOL copybooks to produce File Manager templates using the previously installed COBOL Version 5 Compiler.

These changes provide:

- Additional work dataset sets required for COBOL version 5.
- Internal changes to avoid FM conflict with the new COBOL compiler Language Environment requirements.

#### Documentation impact

This APAR requires changes to:

- User's Guide and Reference (SC19-3674-00)

## Changes to the User's Guide and Reference

### Appendix "File Manager messages"

Add the following message:

---

**FMNBE094** COBOL compile failed with Language Environment RC &RC and RSN &RSN

**Explanation:** When File Manager invokes COBOL compiler Version 5 (and above), it may terminate with a Language Environment Abend Code which may be found in the Language Environment publication. If Abend code is 4093 and Reason code X'1C' or 28, then

there is insufficient storage to run the compiler.

COBOL Version 5 requires at least 100MB of storage.

**User response:** The Language Environment abend and reason codes can be found in z/OS Language Environment Run-Time Messages manual.

---

### PM87878

#### Initial problem description

Provide a way to force the use of the File Manager internal COBOL compiler (that is, the compiler shipped with FM).

#### Outline of solution

File Manager has been updated to allow control over the usage of the File Manager internal compiler.

A new FACILITY class profile called FILEM.COBOL.INTERNAL can be defined.

If a userid has been granted access other than NONE then the File Manager internal compiler will be used, even if there is a customer installed COBOL compiler (IGYCRCTL) present on the system.

**Documentation impact**

This APAR requires changes to:

- Customization Guide (SC19-3673-01)

**Changes to the Customization Guide**

[These changes integrated into SC19-3673-02.]

**Chapter 2 "Customizing the operating environment for File Manager"**

**Subsection "Using the File Manager COBOL compiler" (page 15):** *Replace* the subsection with these paragraphs:

File Manager uses its internal COBOL compiler if one of these conditions applies:

- An //FMNCOB DD DUMMY has been defined (as described below).
- A user has a minimum of Read access to the SAF FACILITY class profile FILEM.COBOL.INTERNAL, as described in Chapter 4, section "Controlling the use of the COBOL compiler". [This is a new section, provided below.]

If a supported COBOL compiler is not available to File Manager, then File Manager uses the version of the COBOL compiler shipped with File Manager regardless.

If File Manager is to use this COBOL compiler, you should review the following sections for customization tasks you might need to perform. Not all the functions available using a supported COBOL compiler are available using the File Manager compiler, and for functions that are available, the customization might differ.

**Section "Adding the COBOL compiler library to the LINKLIST" (page 15):** *Replace* the subsection with these paragraphs:

The File Manager COBOL compiler load modules are shipped in FMN.SFMNMOD1. Therefore to make this COBOL compiler available in the LINKLIST, add FMN.SFMNMOD1 to your LINKLIST.

Furthermore, to enable File Manager to use this compiler you take of of these actions:

- Define a FACILITY class profile as described in Chapter 4, section "Controlling the use of the COBOL compiler". [This is a new section, provided below.]
- Allocate a DD statement

```
//FMNCOB DD DUMMY
```

You can allocate this DD statement dynamically, in your TSO logon procedure, or in a batch job. You must do this, whether or not you added FMN.SFMNMOD1 to the LINKLIST.

**Chapter 4 "Customizing the File Manager security environment"**

**Subsection "Setting up the security environment by using RACF or an equivalent security product" (page 31):** After the subsubsection "Controlling Bypass Label Processing (BLP)" on page 37, *add* this new subsection:

*Controlling the use of the COBOL compiler:* A FACILITY CLASS profile is provided to allow you to control access to the File Manager Internal COBOL compiler:  
FILEM.COBOL.INTERNAL

If a user ID running File Manager has READ access (or above) to this profile, then the File Manager Internal Compiler will always be used for compiling templates from COBOL copybooks. If this profile does not exist or if the user ID has ACCESS NONE to to this profile, then the usual rules determining which compiler is used are honored. See "Using a Supported COBOL compiler" on page 14 and "Using the File Manager COBOL Compiler" on page 15.

In order to achieve this, File Manager makes RACROUTE calls, with STATUS=ACCESS, to the FACILITY profiles.

When RACF is used, the STATUS=ACCESS request works as documented, and no security-related logging or abends are generated, even if you do not have access to the profile.

However, when non-RACF security products (such as ACF2) are used, an ABEND S047 may be issued in response to the above RACROUTE request. These users should consult the relevant product documentation and make changes accordingly.



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## UK94903, UK94904, UK94905, UK94906

Release Date: 7 June 2013

This set of PTFs contains these APAR fixes:

- PM71230
- PM86699

---

### PM71230

#### Initial problem description

Miscellaneous problems with Extract (IXB) and Load (ILB):

1. The Read and Rejected columns in the Database Extract Statistics Report do not provide much useful information. What information they do provide is poorly presented.
2. Not all the options that the Extract/Load uses are listed in the Extract/Load Summary Report.
3. An Extract using a criteria set that has a deselected relationship criteria subset chases logical relationships.
4. An Extract using a criteria set with a selection criteria subset that has the root segment deselected extracts some database records twice.
5. An Extract of a DEDB database with SDEP segments issues the message FMNIB426 'Function terminated' and terminates after extracting a small number of SDEP segments. The problem occurs when 'SDEP in timestamp order' processing has been requested and the Extract is using a criteria set with a selection criteria subset that does not have selection criteria on any of the dependent segments.

#### Outline of solution

FM/IMS has been modified to:

1. Provide more useful information in the Database Extract Statistics Report. The Read and Rejected columns have been replaced by the Phase 1 and Phase 2 columns. These columns show the number of segments extracted in each phase of the extract, where phase 2 is the phase in which the Extract resolves logical relationships and phase 1 is that part of the extract that precedes the resolution of logical relationships.
2. Provide the following additional information in the Extract/Load Summary report:
  - The type of PSB used.
  - (When a static PSB was used) the PSB name and library.
  - (When run in DLI mode) the IMS subsystem from/into which the data is extracted/loaded.
  - (Extract only) whether or not the 'SDEP in timestamp order' processing was performed.
  - (Extract using keys only) the total number of keys in the Key Values data set and the number of keys in the Key Values data set for which the root segment wasn't found.
3. Not chase logical relationships when the extract uses a criteria set that has a deselected relationship criteria subset.
4. Correct the multiple extraction of segments problem.
5. Correct the 'SDEP in timestamp order' problem.

**Documentation impact**

This APAR requires changes to:

- User's Guide and Reference for IMS Data (SC19-3676-00)

**Changes to the User's Guide and Reference for IMS Data****Chapter 6 "Managing data"**

**Section "Loading data":** *Replace* the "Load reports" subsection (page 150) with the following:

The Load produces these reports:

- The Database Load Summary
- The Database Load Statistics Report
- The Database Load Diagnostic Reports (only when diagnostics are issued)

The Database Load Summary reports the options and resources that the Load used. For information on the contents of this report, see the 'Database Load Summary' on page 477.

The Database Load Statistics Report provides load statistics including the number of occurrences of each segment type loaded into each database. For information on the contents of this report, see the 'Database Load Statistics Report' on page 476.

The Database Load Diagnostic Report provides the details of each segment occurrence that could not be loaded including its type, its concatenated key, its data and the IMS status code that the attempted insert received. For information on the contents of this report, see the 'Database Load Diagnostic Report' on page 478.

**Section "Extracting data":** *Replace* the "Extract reports" subsection (page 144) with the following:

The Extract produces two reports:

- The Database Extract Summary
- The Database Extract Statistics Report

The Database Extract Summary reports the options and resources that the Extract used. For information on the contents of this report, see the 'Database Extract Summary' on page nnn [new section, added with this APAR].

The Database Extract Statistics Report provides extract statistics including the number of occurrences of each segment type extracted from each database. For information on the contents of this report, see the 'Database Extract Statistics Report' on page 466.

**Chapter 11 "Batch reference"**

**Section "Extract (IXB)":** *Add* the the following subsection immediately before the "Database Extract Statistics report" (page 466):

*Database Extract Summary:*

IBM File Manager for z/OS IMS Component

Database Extract Summary

Page 1  
Date: 2013-05-27  
Time: 15.36.25

Extract from  
IMS subsystem: IFA2  
Primary database: DJ2E  
Extract to data set: FMN.IMS.EXTRACT.DJ2E

```

Processing Options
PSB type:          Static
Region type:      DLI
Use criteria:     Y
Use key values:   Y
Criteria set:     FMN. IMS. CRITERIA(DJ2E#CRT)
Key values data set: FMN.XKEY.DJ2E
Key Value Counts
Number read:      6
Number not found: 0
PSB name:         PUPA
PSB library:      FMN. IMS. IVP. PSBLIB
DBD
Data set name 1:  FMN. IMS. IVP. DBDLIB
Data set name 2:  IMSV910. FMI. DBDLIB

```

```

Databases Data Sets
-----
DBD name  DD name  Data set name
-----
DJ2E      DJ2E      FMN. IMS. IVP. DB. DJ2E
DJ2F      DJ2F      FMN. IMS. IVP. DB. DJ2F
DJ3E      DJ3E      FMN. IMS. IVP. DB. DJ3E
DJ3F      DJ3F      FMN. IMS. IVP. DB. DJ3F
DJ1E      DJ1E      FMN. IMS. IVP. DB. DJ1E
DJ1F      DJ1F      FMN. IMS. IVP. DB. DJ1F

```

### IMS Subsystem

The name of the IMS subsystem that the databases are defined in.

### Primary Database

The name of the primary database of the Extract.

### Extract to data set

The name of the data set in which the extracted data is stored.

### PSB type

The type of PSB that the Extract used to access the databases:

#### Dynamic

The Extract used a temporary PSB that it generated at the start of the batch job.

**Static** The Extract used an existing PSB.

### Region type

The type of region that the Extract ran in.

**DLI** The Extract ran in a DL/I batch processing region.

**BMP** The Extract ran in a BMP region.

### Use criteria

Whether or not the Extract used a criteria set.

### Use key values

Whether or not the Extract was limited to specified root key values or a root key range.

### SDEP timestamp order

When the primary database has a sequentially dependent (SDEP) segment, whether or not the timestamp for the SDEP segments is included in their extract records.

### Criteria set

The name of the data set that contains the criteria set that the Extract used.

### Key values data set

The name of the data set that contains the key values of the root segments of the records that were extracted.

### Key value counts

#### Number read

The number of keys specified in the Key values data set and/or the KEYLIST parameter.

#### Number not found

The number of specified keys for which the root segment wasn't found. The SYSPRINT output lists the key values that were not found.

### PSB name

(When the PSB type is Static) The name of the PSB that the Extract used.

**PSB library**

(When the PSB type is Static) The name of the library containing the PSB that the Extract used.

**DBD Data set names**

The names of the DBD libraries used by the Extract.

**Database Data Sets**

(When the Region type is DLI) the database data sets that the Extract used.

**DBD name**

This column contains the name of the primary database and the names of the databases that are logically related to the primary database.

**DD name**

The DD names for each database specified in the DBD name column.

**Data set name**

The data set that was allocated to the specified DD name.

Replace the "Database Extract Statistics report" subsection (page 466) with the following:

Database Extract Statistics Report

Database	Segment	Level	-Segm Length-		--Number of Segments		Extracted- Total	Logically Related DB
			Min	Max	Phase 1	Phase 2		
DJ2E	SUBURB	01	62	62	6	77	83	
	LINKSTR	02	28	28	509	3517	4026	DJ3E
	NSTREET	02	30	30	3	28	31	
	INSHIRE	02	20	20	6	77	83	DJ1E
	LETRBOX	02	34	34	2	28	30	
Subtotal	DJ2E				526	3727	4253	
DJ3E	STREET	01	32	32	0	3048	3048	
	INSUB	02	18	18	0	4026	4026	DJ2E
Subtotal	DJ3E				0	7074	7074	
DJ1E	SHIRE	01	53	53	0	10	10	
	SHIRENP	02	11	11	0	10	10	
	LINKSUB	02	18	18	0	85	85	DJ2E
Subtotal	DJ1E				0	105	105	
Grand total					526	10906	11432	

Phase 1 = Extract using keys      Phase 2 = Resolution of logical relationships  
 \*\*\* End of IMS Extract Report \*\*\*

The following is a description of each column in this report.

**Database**

This column contains the name of the primary database and the names of the databases that are logically related to the primary database.

**Segment**

This column contains the names of the segments in the primary and logically related databases.

**Level** The level of the segment.

**Segm Length**

**Min** The minimum length of the segment as defined in the DBD.

**Max** The maximum length of the segment as defined in the DBD.

For fixed-length segments, the minimum length and maximum length will be the same.

**Number of Segments Extracted**



**Phase 1**

The number of segment occurrences extracted during phase 1 of the Extract. Phase 1 is that part of the extract that precedes the resolution (or chasing) of logical relationships.

**Phase 2**

The number of segment occurrences extracted when resolving (or chasing) logical relationships.

**Total** The total number of segments occurrences extracted.

**Logically Related DB**

The database in which this segment's logical parent resides.

The following is a description of the rows in this report.

**Subtotal**

These rows contain totals for each database:

**Phase 1**

The total number of segment occurrences extracted from the database during phase 1.

**Phase 2**

The total number of segment occurrences extracted from the database during phase 2.

**Total** The total number of segment occurrences extracted from the database.

**Grand total**

This row contains the totals for the listed databases:

**Phase 1**

The total number of segment occurrences extracted from the listed databases during phase 1.

**Phase 2**

The total number of segment occurrences extracted from the listed databases during phase 2.

**Total** The total number of segment occurrences extracted from the listed databases.

Replace the "Example" (page 469) with the following:

Here is an example of an Extract using key values and criteria. The Extract is run in DLI mode and uses a static PSB.

```
//FMNIXTRT 'Static PSB extract'
//*
//FILEMAN EXEC PGM=FMN1IMSB
//STEPLIB DD DSN=FMN.SFMNMOD1,DISP=SHR
//SYSPRINT DD SYSOUT=*,RECFM=FBA,LRECL=133
//FMNTSPRT DD SYSOUT=*
//FMN1JIN DD DISP=SHR,DSN=FMN.SFMNSLIB
//FMIMSIN DD *
$$$FILEM IXB REGNTYPE=DLI,
$$$FILEM PSBTYPE=STATIC,
$$$FILEM PSBDSN=FMN.IMS.IVP.PSBLIB,
$$$FILEM PSBMEM=PUPA,
$$$FILEM PCBNUM=(3,2,1),
$$$FILEM DBDDSN=FMN.IMS.IVP.DBDLIB,
$$$FILEM DBDDSN2=IMSV910.FMI.DBDLIB,
$$$FILEM DBDMEM=DJ2E,
$$$FILEM CRITERIA=Y,
$$$FILEM IMSID=IFA2,
$$$FILEM RESLIB1=IMSV10.IFA2.SDFSRESL,
$$$FILEM RESLIB2=IMSV10.IFA2.USERLIB,
$$$FILEM DBRC=IMS,
$$$FILEM IRLM=N,
```

```

$$FILEM      DFSVSAMP=IMSVA10.IFB2.PROCLIB,
$$FILEM      VSMPMEM=DFSVMDB,
$$FILEM      LKUNIT=CYL,
$$FILEM      LKPQTY=20,
$$FILEM      LKSQTY=20,
$$FILEM      RKUNIT=CYL,
$$FILEM      RKPQTY=20,
$$FILEM      RKSQTY=20,
$$FILEM      KEYEXT=Y
/*
//REPORT DD SYSOUT=*
//KEYSFILE DD DSN=FMN.XKEY.DJ2E,DISP=SHR
//UNLOAD DD DSN=FMN.IMS.EXTRACT.DJ2E,
// DISP=(,CATLG,DELETE),
// SPACE=(CYL,(1,1,0),RLSE),
// DCB=(RECFM=VB,LRECL=00150,BLKSIZE=0)
/* -----
/* -- Database data sets --
/* -----
//DJ2E DD DSN=FMN.IMS.IVP.DB.DJ2E,DISP=SHR
//DJ2F DD DSN=FMN.IMS.IVP.DB.DJ2F,DISP=SHR
//DJ3E DD DSN=FMN.IMS.IVP.DB.DJ3E,DISP=SHR
//DJ3F DD DSN=FMN.IMS.IVP.DB.DJ3F,DISP=SHR
//DJ1E DD DSN=FMN.IMS.IVP.DB.DJ1E,DISP=SHR
//DJ1F DD DSN=FMN.IMS.IVP.DB.DJ1F,DISP=SHR

```

**Section "Load (ILB)":** Replace the "Database Load Summary report" subsection (page 477) with the following:

```

Database Load Summary
Date: 2013-05-27
Page 1
Time: 16.05.12

IBM File Manager for z/OS IMS Component

Load from:          FMNUSER.EXTRACT.DJ2E
Load
IMS subsystem:      IFA2
Primary database:   DJ2E
Processing Options
PSB type:           Dynamic
Region type:        DLI
Load type:          Replace
IMS log:            Keep
DBD
Data set name 1:    FMN.IMS.IVP.DBDLIB
Database Data Sets
DBD name  DD name  Data set name
-----
DJ2E      DJ2E      FMN.IMS.IVP.DB.DJ2E
DJ2F      DJ2F      FMN.IMS.IVP.DB.DJ2F
DJ3E      DJ3E      FMN.IMS.IVP.DB.DJ3E
DJ3F      DJ3F      FMN.IMS.IVP.DB.DJ3F
DJ1E      DJ1E      FMN.IMS.IVP.DB.DJ1E
DJ1F      DJ1F      FMN.IMS.IVP.DB.DJ1F

```

**Load from**

The name of data set that contains the data that was loaded.

**IMS Subsystem**

The name of the IMS subsystem that the databases are defined in.

**Primary Database**

The name of the primary database of the Load.

**PSB type**

The type of PSB that the Load used to access the databases:

**Dynamic**

The Load used a temporary PSB that it generated at the start of the batch job.

**Static** The Load used an existing PSB.

**Region type**

The type of region that the Load ran in.

**DLI** The Load ran in a DL/I batch processing region.

**BMP** The Load ran in a BMP region.

**Load Type**

**No replace**

The Load did not replace existing segments in the database.

**Replace**

The Load replaced existing segments with the load segment.

**Initial** The Load used a load PSB (PROCOPT=L).

**IMS log**

(When the Region type is DLI)

**None** The Load did not use an IMS log data set.

**Keep** The Load used an IMS log data set and this data set was kept.

**Delete** The Load used an IMS log data set but if the Load ended normally this data set was deleted.

**PSB name**

(When the PSB type is Static) The name of the PSB that the Load used.

**PSB library**

(When the PSB type is Static) The name of the library containing the PSB that the Load used.

**DBD Data set names**

The names of the DBD libraries used by the Load.

**Database Data Sets**

(When the Region type is DLI) the database data sets that the Load used.

**DBD name**

This column contains the name of the primary database and the names of the databases that are logically related to the primary database.

**DD name**

The DD names for each database specified in the DBD name column.

**Data set name**

The data set that was allocated to the specified DD name.

**PM86699****Initial problem description**

New functionality for FM/IMS print and extract.

**Outline of solution**

Apply the provided PTF.

**Documentation impact**

This APAR requires changes to:

- User's Guide and Reference for IMS Data (SC19-3676-00)

**Changes to the User's Guide and Reference for IMS Data****Chapter 3 "Viewing your databases"**

**Section "Printing your database in batch" (page 55):** *Insert* the following text after the first paragraph:

You can print the entire database or some subset of your database. When you only want a subset of the database printed, you can use any combination of the following to control which segment occurrences are printed:

- A file containing the root segment key values of the database records you want printed. This file is called a keys file.
- A KEYLIST parameter specifying the root segment key values of the database records you want printed.

You can specify full and partial key values in this list. When you specify a partial key, the database records with root key values that match the partial key are printed.

- A KEYRANGE parameter specifying a range of root segment key values for which you want the database records printed.
- A view specifying criteria that a segment occurrence must satisfy for it to be printed.

The view can also be used to specify which fields of a segment are to be printed.

Ordinarily, you would use either a keys file, or the KEYLIST parameter or the KEYRANGE parameter to specify which database records you want the function to print and you would use the view to control which specific segment occurrences are to be printed.

*Insert* the following subsection immediately after the text inserted in the previous step:

*Creating a keys file:* One way to control the database records that are printed is to use a keys file that specifies the root key values of the required database records. The following describes one way you can create the keys file:

1. Use the Browse function (option 1) to browse the root segments of the database from which you want to print data.

To get the Browse function to display only the root segments, select New for View usage on the Browse Entry panel and deselect all the dependent segments on the Database Positioning panel.

2. On the IMS data panel, scroll to the root segment of the first database record that you want printed and issue the XKEY command. FM/IMS creates a sequential keys file with the name

```
temphlq.XKEY.Dyymmdd.Thhmmss.dbname
```

where:

- temphlq is the high level qualifier specified on the Set Temporary Data Set Allocation Options panel (option 0.7)
- yymmdd is the date the data set is created
- hhmmss is the time that the data set is created
- dbname is the name of the database that you are browsing

This file contains the key value of the root segment that you scrolled to and the key values of all the root segments that are after that root segment in the database.

3. Edit the keys file to remove any root key values for database records that you don't want printed.

*Insert* the following header before the steps that describe how to generate a batch job that prints data from an IMS database:

*Generating a batch job that performs a print:*

*Insert* the following step in between steps 4 and 5:

- If you want the print to use a keys file, enter / in the Use key values field.

*Insert* the following step in between steps 6 and 7:

- If you selected the Use key values option on the Print Entry panel, the Print Options panel is displayed.

On the Print Options panel, specify the name of your keys file in the Key Values fields and press Enter.

*Change step 7 to the following:*

- FM/IMS uses the data you specified in the dialog to generate JCL for the Print job. The JCL is displayed at the end of the dialog.

You can edit the JCL before submitting the job.

*Insert* the following subsection immediately after the steps that describe how to generate a batch job that prints data from an IMS database:

*Modifying the JCL to specify the KEYLIST, KEYRANGE and MAXROOTS parameters:* The previous subsection, describes how you can use the Print dialog to generate the JCL for a job that prints data from an IMS database.

There are, however, three parameters you can use that the Print dialog does not generate. These are the KEYLIST, KEYRANGE and MAXROOTS parameters.

The KEYLIST parameter allows you to specify a list of the root segment key values of the database records that you want printed. You can, of course, specify this list in a keys file, but this parameter provides you with an alternative way of specifying the key list. Unlike the keys file, however, the KEYLIST parameter also allows you to specify partial keys - if the length of a specified root key value is less than the key length of the root segment, the function considers it to be the first part of the key and prints all those database records with root key values that match the partial key value.

The KEYRANGE parameter allows you to specify the start and end of a range of root key values. The function prints those database records that have a root key value in the specified range.

The MAXROOTS parameter allows you to limit the number of database records that the function prints. When this parameter is specified, the function counts the number of database records that it has printed and terminates when it reaches the specified limit.

For information on how you code these parameters, see "Print (IPR)" on page 479.

*Add* the following subsection immediately after the "Modifying the JCL to specify the KEYLIST, KEYRANGE and MAXROOTS parameters" subsection:

*Print reports:* The Print function produces two reports:

- The Database Print Summary
- The Database Print Statistics Report

The Database Print Summary reports the options and resources that the Print used. For information on the contents of this report, see the "Database Print Summary" on page nnn [new section, added with this APAR].

The Database Print Statistics Report provides print statistics including the number of occurrences of each segment type printed. For information on the contents of this report, see the "Database Print Statistics Report" on page nnn [new section, added with this APAR].

## Chapter 6 "Managing data"

**Section "Extracting data" (page 130):** Add the following subsection immediately after the "Partial Extract using extract criteria" subsection (page 135):

*Modifying the JCL to specify the KEYLIST, KEYRANGE and MAXROOTS parameters:*

The previous three subsections describe how you can use the Extract dialog to generate the JCL for a job that extracts data from your IMS databases. There are, however, three parameters you can use that the Extract dialog does not generate.

These are the KEYLIST, KEYRANGE and MAXROOTS parameters.

The KEYLIST parameter allows you to specify a list of the root segment key values of the database records that you want extracted. You can, of course, specify this list in a keys file, but this parameter provides you with an alternative way of specifying the key list. Unlike the keys file, however, the KEYLIST parameter also allows you to specify partial keys - if the length of a specified root key value is less than the key length of the root segment, the function considers it to be the first part of the key and extracts all those database records with root key values that match the partial key value.

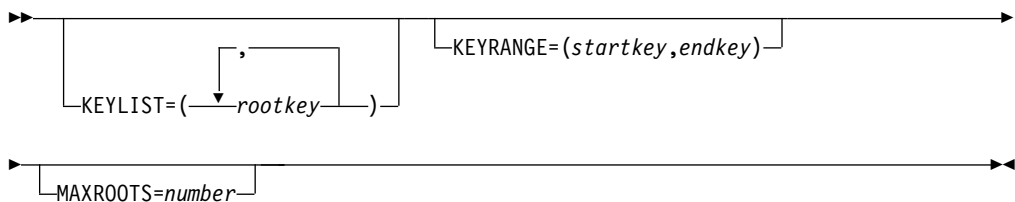
The KEYRANGE parameter allows you to specify the start and end of a range of root key values. The function extracts those database records that have a root key value in the specified range.

The MAXROOTS parameter allows you to limit the number of database records that the function extracts. When this parameter is specified, the function counts the number of database records that it has extracted and terminates when it reaches the specified limit.

For information on how you code these parameters, see "Extract (IXB)" on page 450.

## Chapter 11 "Batch reference"

**Section "Extract (IXB)":** Add the following snippet to the "Syntax - part 1" diagram (page 452):



Add the following parameter description entries after the "Syntax - part 6" diagram:

**KEYLIST**(rootkey1,rootkey2,...)

Optional parameter. Specifies a list of the root segment key values of the database records that you want extracted. If the length of a root key value is less than the key length of the root segment, then the function considers it to be the first part of the key and extracts all those database records with root key values that match the partial key value.

**KEYRANGE**(*startkey,endkey*)

Optional parameter. Specifies the start and the end of a range of root key values. The function extracts those database records that have a root key value in the specified range.

*startkey*

The start of the range of the root key values. If the length of the *startkey* value is less than the key length of the root segment then the function appends low values (X'00') to the specified value.

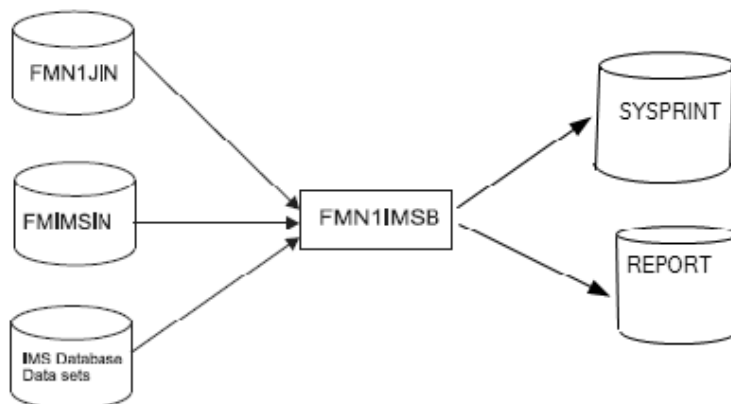
*endkey*

The end of the range of the root key values. If the length of the *endkey* value is less than the key length of the root segment then the function appends high values (X'FF') to the specified value.

**MAXROOTS**=*number*

Optional parameter. Limits the number of database records that the function extracts. When this parameter is specified, the function counts the number of database records that it has extracted and terminates when it reaches the specified limit.

**Section "Print (IPR)" (page 479):** *Modify* figure 123 to the following:

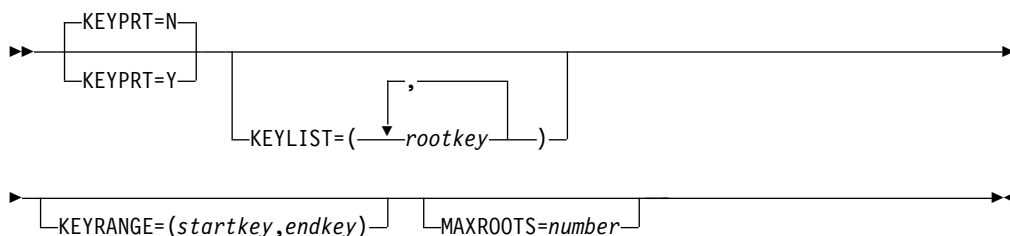


*Add* the following entry after the SYSPRINT description entry:

**REPORT**

Defines the output data set for the Database Print Summary and Database Print Statistics Report.

*Add* the following snippet to the "Syntax - part 1" diagram:



*Add* the following parameter description entries after the "Syntax - part 3" diagram:

**KEYPRT**

Optional parameter. Specifies whether or not the Print is restricted to those records that are specified in a key values data set.

- N The Print does not use a key values data set.
- Y The Print uses a key values data set. The key values data set contains the key values of the root segments of the records that you want printed.

You specify the key values data set in the KEYSFILE DD statement.

You may specify a sequential data set or a PDS(E) and member.

**KEYLIST**(*rootkey1,rootkey2,...*)

Optional parameter. Specifies a list of the root segment key values of the database records that you want printed. If the length of a root key value is less than the key length of the root segment, then the function considers it to be the first part of the key and prints all those database records with root key values that match the partial key value.

**KEYRANGE**(*startkey,endkey*)

Optional parameter. Specifies the start and the end of a range of root key values. The function prints those database records that have a root key value in the specified range.

*startkey*

The start of the range of the root key values. If the length of the *startkey* value is less than the key length of the root segment then the function appends low values (X'00') to the specified value.

*endkey*

The end of the range of the root key values. If the length of the *endkey* value is less than the key length of the root segment then the function appends high values to the specified value.

**MAXROOTS**=*number*

Optional parameter. Limits the number of database records that the function prints. When this parameter is specified, the function counts the number of database records that it has printed and terminates when it reaches the specified limit.

Add the following subsection immediately after the parameter description entries:

*Database Print Summary:*

IBM File Manager for z/OS IMS Component

Database Print Summary

Page 1  
Date: 2013-05-28  
Time: 14.07.11

```
Print from
IMS subsystem:   IFA2
Database:       DJ2E
Processing Options
PSB type:       Static
Region type:    DLI
Print format:   TABL
Use view:       Y
Use key values: Y
View data set:  FMN.IMS.VIEW(DJ2E#V1)
Key values data set: FMN.XKEY.DJ2E
Key Value Counts
Number read:    6
Number not found: 0
PSB name:       PUPA
PSB library:    FMN.IMS.IVP.PSBLIB
DBD
Data set name 1: FMN.IMS.IVP.DBDLIB
Data set name 2: IMSV910.FMI.DBDLIB
Database Data Sets:
```

DBD name	DD name	Data set name
DJ2E	DJ2E	FMN.IMS.IVP.DB.DJ2E
DJ2F	DJ2F	FMN.IMS.IVP.DB.DJ2F
DJ3E	DJ3E	FMN.IMS.IVP.DB.DJ3E
DJ3F	DJ3F	FMN.IMS.IVP.DB.DJ3F
DJ1E	DJ1E	FMN.IMS.IVP.DB.DJ1E
DJ1F	DJ1F	FMN.IMS.IVP.DB.DJ1F

**IMS Subsystem**

The name of the IMS subsystem that the database is defined in.



**Database**

The name of the database that was printed.

**PSB type**

The type of PSB that the Print used to access the database:

**Dynamic**

The Print used a temporary PSB that it generated at the start of the batch job.

**Static** The Print used an existing PSB.

**Region type**

The type of region that the Print ran in.

**DLI** The Print ran in a DL/I batch processing region.

**BMP** The Print ran in a BMP region.

**Print format****CHAR**

The data is printed in character format.

Non-printable characters are printed as spaces.

**HEX** The data is printed in hexadecimal format.

**SNGL** The data is printed in SNGL display format.

**TABL** The data is printed in TABL display format.

**Use view**

Whether or not the Print used a view.

**Use key values**

Whether or not the Print was limited to specified root key values or a root key range.

**View data set**

The name of the data set that contains the view that the Print used.

**Key values data set**

The name of the data set that contains the key values of the root segments of the records that were printed.

**Key value counts****Number read**

The number of keys specified in the Key values data set and/or the KEYLIST parameter.

**Number not found**

The number of specified keys for which the root segment wasn't found. The SYSPRINT output lists the key values that were not found.

**PSB name**

(When the PSB type is Static) The name of the PSB that the Print used.

**PSB library**

(When the PSB type is Static) The name of the library containing the PSB that the Print used.

**DBD Data set names**

The names of the DBD libraries used by the Print.

**Database Data Sets**

(When the Region type is DLI) the database data sets that the Print used.

**DBD name**

This column contains the name of the database that was printed and the names of the databases that are logically related to the printed database.

**DD name**

The DD names for each database specified in the DBD name column.

**Data set name**

The data set that was allocated to the specified DD name.

Add the following subsection immediately after the "Database Print Summary" subsection:

*Database Print Statistics Report:*

Database Print Statistics Report

Database	Segment	Level	-Segm Length-		Segments Printed
			Min	Max	
DJ2E	SUBURB	01	62	62	6
	LINKSTR	02	28	28	509
	NSTREET	02	30	30	3
	INSHIRE	02	20	20	6
	LETRBOX	02	34	34	2
Grand total DJ2E					526

Here is a description of each column in this report.

**Database**

This column contains the name of the database that was printed.

**Segment**

This column contains the names of the segments in the database that was printed.

**Level** The level of the segment.

**Segm Length**

**Min** The minimum length of the segment as defined in the DBD.

**Max** The maximum length of the segment as defined in the DBD.

For fixed-length segments, the minimum length and maximum length will be the same.

**Segments Printed**

The number of segment occurrences that the function printed.

The Grand total is the total number of segment occurrences printed.

Replace the Example with the following:

Here is an example of a Print using key values and a view. The Print is run in DLI mode and uses a static PSB. The segments are printed in TABL format.

```
//FMNIPRNT 'Static PSB Print'
//*
//FILEMAN EXEC PGM=FMN1IMSB
//STEPLIB DD DSN=FMN.SFMNMOD1,DISP=SHR
//SYSPRINT DD SYSOUT=*,RECFM=FBA,LRECL=133
//FMNTSPRT DD SYSOUT=*
//FMN1JIN DD DISP=SHR,DSN=FMN.SFMNSLIB
//FMIMSIN DD *
$$FILEM IPR REGNTYPE=DLI,
$$FILEM PSBTYPE=STATIC,
$$FILEM PSBDSN=FMN.IMS.IVP.PSBLIB,
$$FILEM PSBMEM=PUPA,
$$FILEM PCBNUM=(3,2,1),
$$FILEM DBDDSN=FMN.IMS.IVP.DBDLIB,
$$FILEM DBDDSN2=IMSV910.FMI.DBDLIB,
$$FILEM DBDMEM=DJ2E,
$$FILEM IMSID=IFA2,
$$FILEM RESLIB1=IMSVA10.IFA2.SDFSRESL,
$$FILEM RESLIB2=IMSVA10.IFA2.USERLIB,
$$FILEM DBRC=IMS,
$$FILEM IRLM=N,
$$FILEM DFSVSAMP=IMSVA10.IFB2.PROCLIB,
```

```
$$FILEM      VSMPMEM=DFSVSMDB,  
$$FILEM      VIEW=Y,  
$$FILEM      KEYPRY=Y,  
$$FILEM      PRTFORM=TABL  
/*  
//VIEWDD     DD DSN=FMN.IMS.VIEW(DJ2E#V1),DISP=SHR  
//REPORT DD SYSOUT=*  
//KEYSFILE DD DSN=FMN.XKEY.DJ2E,DISP=SHR  
/* -----  
/* -- Database data sets --  
/* -----  
//DJ2E DD DSN=FMN.IMS.IVP.DB.DJ2E,DISP=SHR  
//DJ2F DD DSN=FMN.IMS.IVP.DB.DJ2F,DISP=SHR  
//DJ3E DD DSN=FMN.IMS.IVP.DB.DJ3E,DISP=SHR  
//DJ3F DD DSN=FMN.IMS.IVP.DB.DJ3F,DISP=SHR  
//DJ1E DD DSN=FMN.IMS.IVP.DB.DJ1E,DISP=SHR  
//DJ1F DD DSN=FMN.IMS.IVP.DB.DJ1F,DISP=SHR
```



---

## UK94258, UK94259, UK94260

Release Date: 17 May 2013

This set of PTFs contains these APAR fixes:

- PM87063

---

### PM87063

#### Initial problem description

When copying data with templates using the File Manager copy utility and the receiving field has been assigned a CCSID, the data is not copied if the field being copied does not have a CCSID assigned to it.

#### Outline of solution

File Manager has been modified to correct the problem.

#### Documentation impact

This APAR requires changes to:

- User's Guide and Reference (SC19-3674-00)

## Changes to the File Manager User's Guide and Reference

### Appendix, "File Manager messages"

*Add* these two messages:

---

**FMNBF123** Converted UNICODE data too big for receiving field. Field *name* length *lllll*.

**Explanation:** The receiving field *name* is not large enough to hold the converted UNICODE field of length *lllll*.

**User response:** Increase the size of the receiving field in the template by either changing the copybook and regenerating the template or editing the dynamic template and changing the field size.

---

**FMNBF124** Return code *rc*, reason code *rsn* from CUNLCNV routine. Field *name*.

**Explanation:** The routine CNVLCNV could not convert the field *name*.

**User response:** For an explanation of the return code and reason code refer to the z/OS V1R11.0 Support for Unicode Using Unicode Services.



---

# UK92626, UK92627, UK92628, UK92629, UK92630, UK92631, UK92632, UK92633, UK92634, UK92635

Release Date: 22 March 2013

This set of PTFs contains these APAR fixes:

- PM80526
- PM80797

---

## PM80526

### Initial problem description

File Manager does not support COBOL National and PL/I WIDECHAR field attributes.

### Outline of solution

File Manager has been modified to support COBOL National and PL/I WIDECHAR field attributes. File Manager allows a CCSID to be associated with a template, record within a template and/or an alphanumeric (AN) field in a template.

### Documentation impact

This APAR requires changes to:

- Customization Guide (SC19-3673-00)
- User's Guide and Reference (SC19-3674-00)
- User's Guide and Reference for IMS Data (SC19-3676-00)

## Changes to the User's Guide

### Chapter 2, "Getting started with File Manager"

In the section "Setting your default processing options", subsection "Setting your System Processing Options (option 0.2)" (page 47), after the EOD paragraph, *add* this paragraph:

The CCSID option specifies the CCSID to be used when translating fields which have a associated CCSID when File Manager is run in batch.

### Chapter 3, "Viewing and changing data sets"

In the section "Manipulating the view of your data", subsection "Selecting a display format", sub-subsection "Display formats" (on page 70), *add* this command to the end of the list of commands available in SNGL mode (page 71):

#### CCSID

Displays or hides the CCSID column.

### Chapter 14, "Panels and Fields"

*Change* the Editor Options panel (on page 542) to include the CCSID Formatted display option.

```

Process Options Help
-----
File Manager Editor Options (all 3 panels combined)

Related command if applicable, shown in ()
Initial Display
1 1. Previous
 2. Table
 3. Single
 4. Character
 5. Hex
 6. LHex

Miscellaneous: Enter "/" to select option
/ Recognize and interpret ISPF packed data
- CAPS initially ON - translate changed data to uppercase (CAPS)

Related command if applicable, shown in ()
Grouping and Hiding options: Enter "/" to select option
Expose (do not group) records of types: (SHOW)
/ Not selected / Suppressed / Length error
See shadow lines (deselect to hide) for groups of: (SHADOW)
/ Not selected / Suppressed / Excluded

Multi-line display format options: (TABL/CHAR/HEX/LHEX)
/ Display prefix area (PREFIX on/off)
- Display prefix area on the right (PREFIX RIGHT)
A Prefix area width (A,6,7,8,9) (PREFIX _)
- Display record length (RECL on/off)
- Display record length on the right (RECL RIGHT)
A Record length width (A,3,4,5,6) (RECL _)
- Display RBA and Length when browsing VSAM (RBALEN on/off)

Related command if applicable, shown in ()
Formatted display options:
/ Field reference number (REF) / Field type and length values (TYPE)
- Picture clause (PIC) - Start location (SLOC)
- Structure (STR) - Left justify numeric fields (JUST)
/ Redefined fields (RDF) / CCSID (CCSID)

Command ==>
F1=Help F2=Split F3=Exit F7=Backward F8=Forward F9=Swap
F10=PrvPage F11=NxtPage F12=Cancel

```

Figure 3. Editor Options panel

Add the following to the bottom of the "Formatted display options" list (page 545).

**CCSID (CCSID)**

Change the session default to display the CCSID assigned to each field, if applicable, when in SNGL display or print mode. In an editor session, this display can also be turned on or off temporarily, by using the CCSID command.

Change the Field Attributes panel - alphanumeric fields (on page 548) to include the CCSID field description.



```

Process  Options  Help
-----
File Manager                               Field Attributes
Command ==>> _____ More:  +

Fixed Attributes:
      Field name  DATA2
      Type       AN
      Start      11
      Length     20

Use Attributes:
      Heading    _____
      Output width _____
      CCSID     _____ +

Create Attributes:
      Filler    _____
      Action    _____
      Start character -
      Pattern   -
      Repeat user pattern _____ YES or NO

Scrambling Options:
Scramble Type  Enter "/" to select option
- 1. Random    - Value   Column In _____ Out _____
- 2. Repeatab Dsn -
3. Translate
4. Exit

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

```

Figure 4. Field Attributes panel - alphanumeric fields

Add the following to the field descriptions:

### CCSID

Specifies the CCSID to be associated with this field.

Change the Record Type Selection panel (on page 632) to include the CCSID field (at the top of the panel).

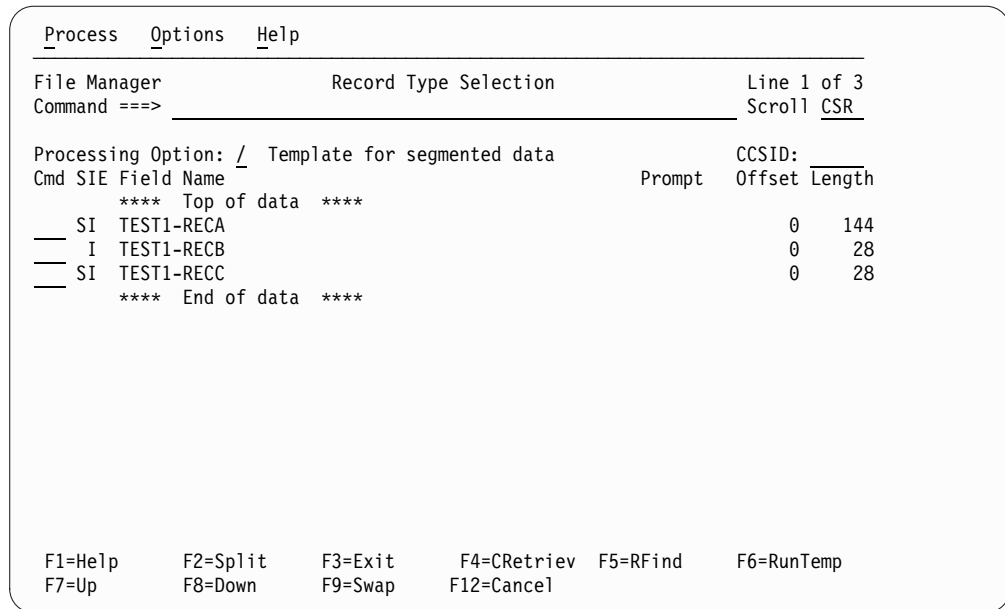


Figure 5. Record Type Selection panel

Add the following to the field descriptions:

**CCSID**

The CCSID to be associated with all alphanumeric fields in the template unless the field is in a record which has a CCSID associated with it. If this field is changed those alphanumeric fields in records which do not have an associated CCSID and have the same CCSID will have the CCSID associated with it changed.

Change the Field Selection/Edit panels (on page 562) to include a CCSID field in the top of the panel.

```

Process  Options  Help
-----
File Manager                Field Selection/Edit                Line 1 of 10

----- Criteria - Enter 1 or 2 to specify expression by field -----
1 Id : #2='02'
2 Sel:
Offset 0                      CCSID
Cmd Seq SHE Key Ref Field Name          Picture  Type Start Length
-----
          1 1 REC-TYPE01
          2 2 REC-TYPE                    XX      AN    1    2
          3 2 NAME                        X(20)   AN    3   20
          4 2 EMPLOYEE-NO                 9(4)    BI   23    2
          5 2 AGE                          9(4)    BI   25    2
          6 2 SALARY                       9(7)    PD   27    4
          7 2 MONTH OCCURS 12 TIMES       9(8)    BI   31    4
          8 2 FILLER                       XX      AN   79    2
          **** End of data ****

Command ==>
F1=Help   F2=Split   F3=Exit   F4=Expand   F5=RFind   F6=RunTemp
F7=Up     F8=Down    F9=Swap   F10=Left   F11=Right  F12=Cancel
    
```

Figure 6. Field Selection/Edit panel

```

Process  Options  Help
-----
File Manager                Field Selection/Edit                Line 1 of 6

---Criteria - Enter 0 - Related ID expression, 1 or 2 - expression by field---
0 Rid: SEG(HEADER-01):#5: TYPEREK  ='01'
1 Id :
2 Sel:
Offset 0                      Enter "/" to OR with related ID      CCSID
Cmd Seq SHE Ref  Field Name          Picture  Type Start Length
-----
          1 1 DETAIL-0101
          2 2 SUBTYPE-FIELD
          3 3 SUBTYPECONST              X(7)    AN    1    7
          4 3 TYPEREK                    X(2)    AN    8    2
          5 2 DETAILTEXT01
          6 3 DETAIL01-01                X(21)   AN   10   21
          **** End of data ****

Command ==>
F1=Help   F2=Split   F3=Exit   F4=Expand   F5=RFind   F6=RunTemp
F7=Up     F8=Down    F9=Swap   F10=Left   F11=Right  F12=Cancel
    
```

Figure 7. Field Selection/Edit panel - alternative format for a template for segmented data

Add the following into the field descriptions (page 563).

**CCSID**

The CCSID to be associated with all alphanumeric fields in the record unless the field has a CCSID associated with it. If this field is changed those alphanumeric fields in the record which have the same CCSID will have the CCSID associated with it changed.

Change the Set System Processing Options panel (on page 659) to include the CCSID field.

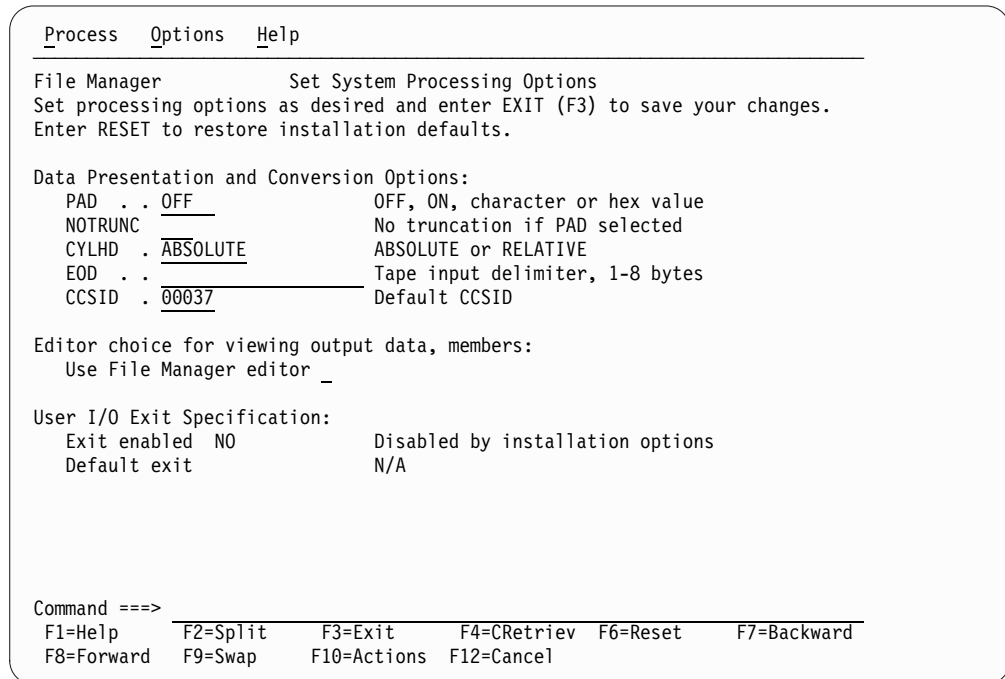


Figure 8. Set System Processing Options panel

Add the following to the field descriptions (page 659).

**CCSID**

Specifies the CCSID to be used as the default CCSID when File Manager is run in batch.

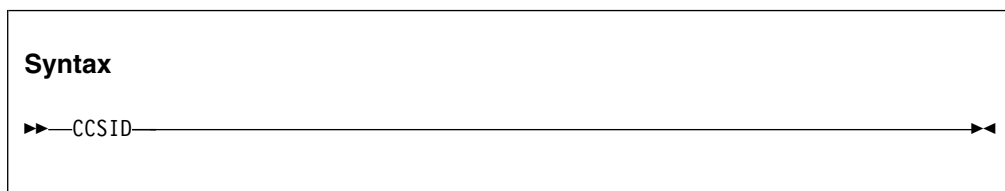
**Chapter 15, "Primary Commands"**

Add the CCSID primary command.

**CCSID primary command:**

In an editor session, the CCSID command toggles on and off the display of the CCSID assigned to each field, if applicable, when using SNGL display format.

**Syntax**



**Availability**

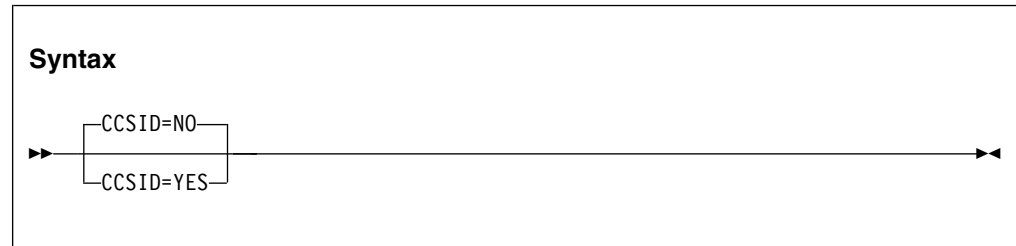
- "Browse panel" on page 450
- "Editor panel" on page 529

**Related tasks and examples**

- "Selecting a display format" on page 69

**Chapter 16, "Functions"**

Add this parameter to the DSP (Data Set Print) function on page 975:



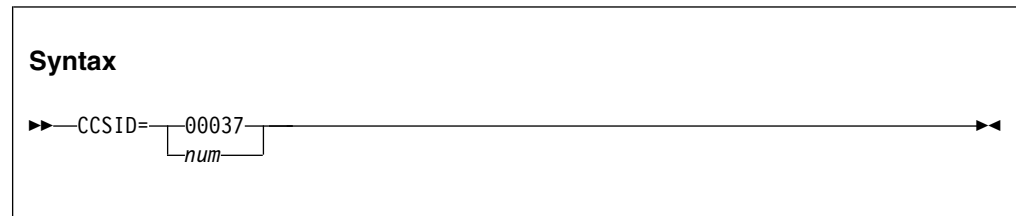
**CCSID=YES**

Show the CCSID assigned to each field, if applicable, on SNGL print.

**CCSID=NO**

Do not show the CCSID assigned to each field, if applicable, on SNGL print.

Add this parameter to the SET (Set Processing Options) function on page 1061:



**CCSID**

Specifies the CCSID to be used as the default CCSID when File Manager is run in batch. The CCSID specified should be a valid CCSID and a CCSID which is recognised by the Z/OS system which runs the batch job.

**Appendix, "Messages" (page 1175)**

Add these messages (page 1194):

---

**FMNBE808 CCSID not valid**

**Explanation:** The specified CCSID is not known by this Z/OS system.

**User response:** Change the CCSID to one that is known by this Z/OS system.

---

**FMNBE895 CCSID display off**

**Explanation:** The CCSID column is not displayed in single formatting.

**User response:** None

---

**FMNBE898 CCSID display on**

**Explanation:** The CCSID column is displayed in single formatting.

**User response:** None

---

**FMNBF003 Not enough space.**

**Explanation:** The data is displayed in the CCSID of the terminal, but is stored internally in UNICODE. After conversion to UNICODE there are not enough characters to pad the field with UNICODE spaces.

## CCSID primary command

User response: Remove one or more characters using HEX ON to see the characters in UNICODE.

## Changes to the IMS User's Guide

### Chapter 3, "Viewing your databases"

In section "Manipulating the view of your data" subsection "Selecting a display format" sub-subsection "Display formats" on page 62, *add* the following at the end of the list of commands available in SNGL mode:

#### CCSID

Displays or hides the CCSID column.

In the "To change the default settings for the IMS data panel:" list (on page 63), *add* a point to step 3 of the list:

- Show field CCSID on SNGL display.

### Chapter 9, "Panels and fields"

*Change* the Editor Options panel (page 246) to include the "Show CCSID" option.

<u>P</u> rocess	<u>O</u> ptions	<u>H</u> elp
FM/IMS	Editor Options	
Initial Settings:		
Enter "/" to select option		
-	Translate changed data to uppercase (CAPS ON)	<u>1</u> 1. Previous
-	Expose suppressed records (SHOW SUP ON)	2. TABL
-	Limit scope to current database record (SCOPE REC)	3. SNGL
-	Show field reference numbers on SNGL displays (REF)	4. CHAR
-	Show field picture clauses on SNGL displays (PIC)	5. HEX
-	Show record structure on SNGL displays (STR)	6. LHEX
<u>7</u>	Show redefined fields on SNGL and TABL displays (RDF)	
-	Show field type & length on SNGL displays (TYPE)	
-	Show field start locations on SNGL displays (SLOC)	
<u>7</u>	Show the CCSID associated with the field on SNGL displays (CCSID)	
-	Left justify numerics on SNGL displays (JUST)	
-	Prompt to save view when exiting edit/browse session	
<u>7</u>	Use * (any segment type) as default on NEXT and PREVIOUS commands	
Command ==>>>		
F1=Help	F2=Split	F3=Exit
F9=Swap	F10=Actions	F12=Cancel
	F4=CRetrieiv	F7=Backward
		F8=Forward

Figure 9. Editor Options panel

*Add* the field description information:

#### Show the CCSID associated with fields on SNGL displays (CCSID)

Select to show the CCSID, if one has been assigned when using SNGL display or print format. If this option is not selected the CCSID column is not displayed. The display of these fields can also be set in the editor dialog by means of the CCSID command.

*Change* the "Field Attributes panel - alphanumeric fields" panel (on page 259) to add the CCSID field.

Process	Options	Help
FM/IMS	Field Attributes	
Fixed Attributes:		
Field name	CONTRACTOR	
Type	AN	
Start	7	
Length	40	
Use Attributes:		
Heading	_____	
Output width	_____	
CCSID	_____	+
Create Attributes:		
Filler	_____	
Action	_____	
Start character	_____	
Pattern	_____	
Repeat user pattern	_____ YES or NO	
Scrambling Options:		
Scramble Type	Enter "/" to select option	
1. Random	Value	Column In _____ Out _____
2. Repeatable Dsn	_____	
3. Translate	_____	
4. Exit	_____	
Command ==>		
F1=Help	F2=Split	F3=Exit F4=CRetriev F7=Backward F8=Forward
F9=Swap	F10=Actions	F12=Cancel

Figure 10. Field Attributes panel - alphanumeric fields

Add this description:

**CCSID**

Specifies the CCSID to be associated with this field.

For the IMS Data panel, in the section “ Fields in Data area (SNGL format)” on page 263, add a description of the CCSID column, at the top of the column description list:

**CCSID**

The CCSID if one has been assigned to the field in the template.

To display or hide the CCSID column, use the CCSID primary command. To change the initial setting for an Edit session, select or deselect the Show the CCSID on the Editor Options panel (option 0.5).

Change the System Settings panel (on page 339) to include the CCSID field.

## CCSID primary command

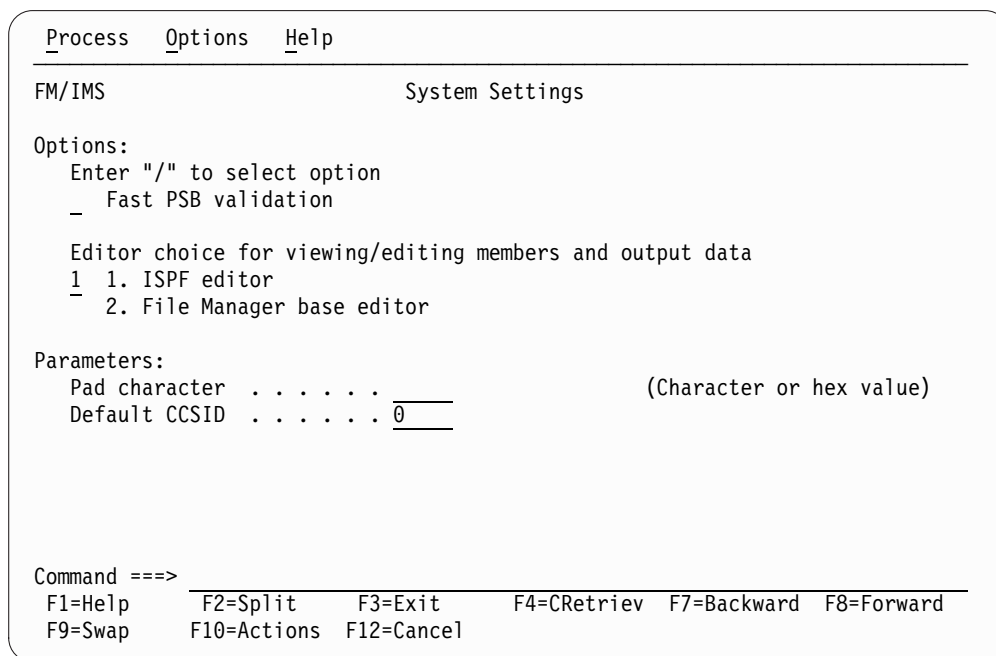


Figure 11. System Settings panel

Add this description to the *Parameters:* list:

### Default CCSID

Specify the CCSID to be used as the default CCSID for the FM/IMS batch print function IPR.

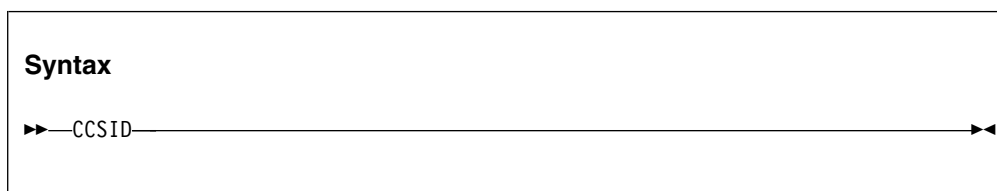
## Chapter 10, "Commands"

Add the CCSID primary command.

### CCSID primary command:

In an editor session, the CCSID command toggles on and off the display of the CCSID assigned to each field, if applicable, when using SNGL display format.

### Syntax



### Availability

- "IBM data panel" on page 257

### Related tasks and examples

- "Selecting a display format" on page 45
- "Editor Options panel" on page 230

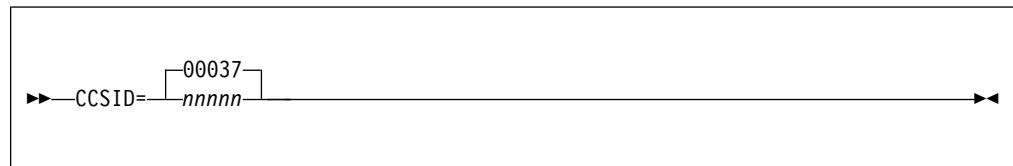
## Changes to the Customization Guide

[These changes integrated into SC19-3673-02.]



**Appendix A, "File Manager options" (page 313)**

Add the CCSID option:

**CCSID**

Specifies the CCSID to be used as the default CCSID when File Manager is run in batch. The CCSID specified should be a valid CCSID and a CCSID which is recognised by the Z/OS system the batch job will be run on. This option does not apply to FM/DB2.

**PM80797****Initial problem description**

File Manager does not provide a command to allow a field to be edited using a different record layout.

**Outline of solution**

The FMAP command has been developed to allow a field to be mapped using a different record layout.

**Documentation impact**

This APAR requires changes to:

- User's Guide and Reference (SC19-3674-00)
- User's Guide and Reference for DB2 Data (SC19-3675-00)
- User's Guide and Reference for IMS Data (SC19-3676-00)

**Changes to the User's Guide****Chapter 15, "Primary commands" (page 731)**

Add the FMAP command.

**FMAP primary command:** The FMAP command can be used to edit or view a field in a record using another template. If the field being mapped is shorter than the template mapping a warning message is issued when data is changed and any data which is beyond the end of the mapped field is ignored. The data type of the field being mapped is ignored.

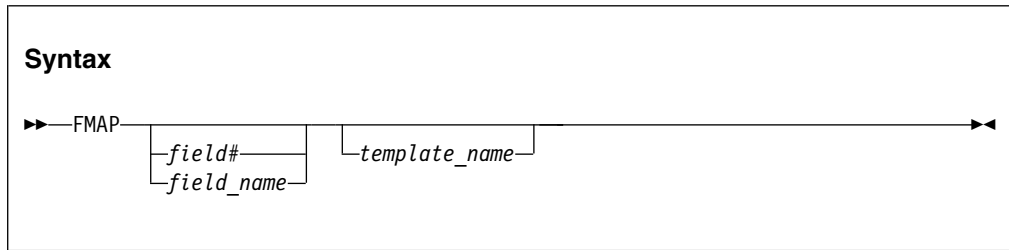
The record containing the field to be mapped must be at the top of the screen or the cursor may be positioned on the record when the FMAP command is issued. The record must be a selected record.

If the field identification parameter is not specified and the cursor is positioned on a field that field is used. Otherwise a Field List Selection panel is displayed.

If the template name is no specified a panel is displayed where this information can be supplied.

## FMAP primary command

*Syntax:*



*field#* The reference number of the field to be mapped.

*field\_name*

The name of the field to be mapped. The name may be qualified.

*template\_name*

The name of the template to be used to map the field. A partially or fully qualified data set name together with the member name can be specified.

*Availability:*

- “Browse panel” on page 450
- “Editor panel” on page 529

*Syntax:*

- “Selecting a display format” on page 69

### **Chapter 14, "Panels and fields" (page 429)**

Add the Field Selection List panel.

**Field Selection List panel:** The Field Selection List panel provides a list of fields in the current template. This panel is entered if no field is identified when the FMAP command is entered.

Panel and field definitions:

	Command ==>		Scroll CSR
-	Field Name	Start	Length
E	*		
C	1 FMAPV001	1	292
C	2 KEYDATA	1	8
R	2 len	9	2
	2 VARYING01	11	50
	2 DATA01	61	40
	2 DATA02	101	30
	2 DATA03	131	20
	2 DATA04	151	90
	3 DATA41	151	40
	3 DATA42	191	30
	3 DATA43	221	20
	2 len	241	2
	2 VARYING02	243	50
	**** End of data ****		
	F1=Help	F2=Split	F3=Exit
	F5=RFind	F7=Backward	F8=Forward
			F4=CRetriev
			F9=Swap

-----  
 ec 1 of 6  
 Scroll CSR  
 Format SNGL  
 of 30  
 length 292  
  
 \*\*\*\*\*  
 bbqqqqbbbbb  
  
 cc  
 F6=RChange  
 12=Cancel

Figure 12. Field Selection List panel

### Field Name

The fields in the current template.

**Start** The start column of the field.

**Length** The length of the field.

Parent panels:

- "Editor panel" on page 529
- "View panel" on page 699

Add the FMAP Copybook or Template panel.

**FMAP Copybook or Template panel:** This panel is entered if no template information is provided with the FMAP command.

Panel and field definitions:

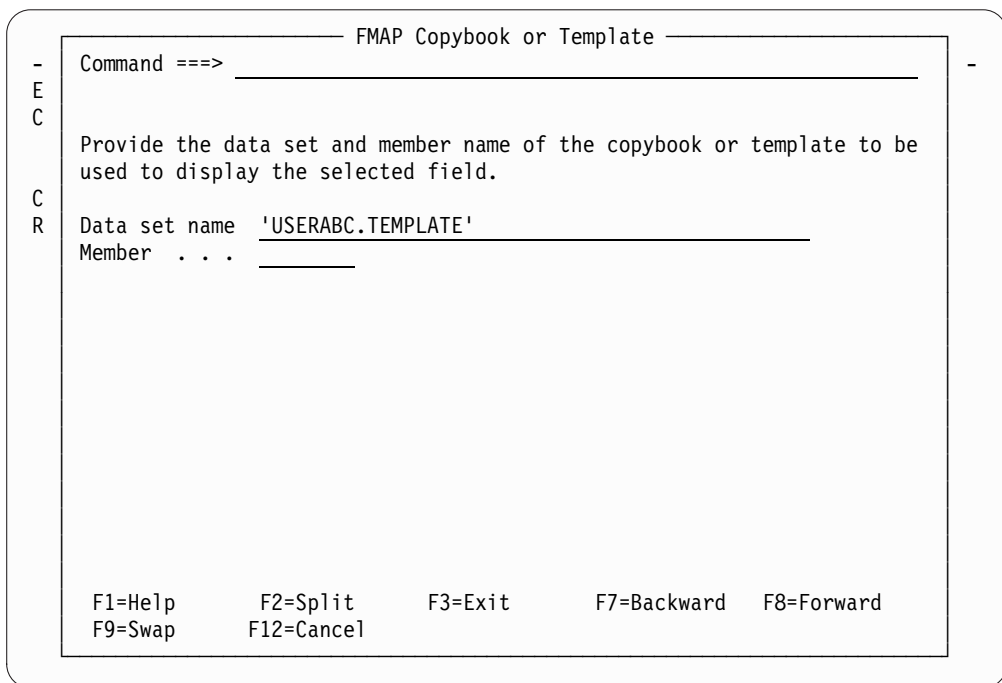


Figure 13. FMAP Copybook or Template panel

**Data set name**

Data set name of the template or copybook to be used to format your data.

**Member**

Member name of the template or copybook to be used to format your data.

**Appendix, "Messages" (page 1175)**

Add these messages (page 1194):

**FMNBE991 Not selected record**

**Explanation:** When the FMAP command has been entered the cursor is not positioned on a selected record or the record at the top of screen is not a selected record.

**User response:** Identify the record containing the field to be mapped by positioning the record at the top of the screen or position the cursor on the record when the FMAP command is entered.

**FMNBE992 No field selected**

**Explanation:** The field to be mapped has not been selected on the Field Selection List panel.

**User response:** Reissue the FMAP command and select a field from the list supplied in the Field Selection List panel.

**FMNBE993 No template provided**

**Explanation:** The template to be used to map the field has not been provided.

**User response:** Supply Template or Copybook details on the FMAP Copybook or Template panel

**FMNBE994 Data may be truncated**

**Explanation:** The template being used to map the field is larger than the field and data may be truncated.

**User response:** None

**FMNBE998 No column selected**

**Explanation:** The column to be mapped has not been selected on the Field Selection List panel.

**User response:** Enter the FMAP command and select the column to be mapped on the Field Selection List panel.

**FMNBE999 Field reference invalid**

**Explanation:** The field reference specified in the FMAP command cannot be found in the current template.

**User response:** Specify the correct field reference in the FMAP command.

## Changes to the User's Guide and Reference for IMS Data

### Chapter 10, "Commands" (page 381)

Add the FMAP command.

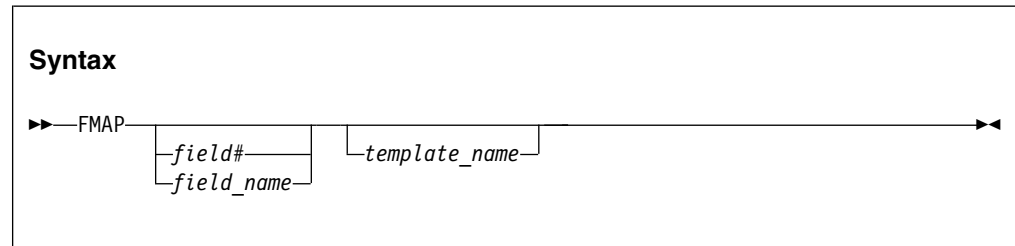
**FMAP primary command:** The FMAP command can be used to edit or view a field in a record using another template. If the field being mapped is shorter than the template mapping a warning message is issued when data is changed and any data which is beyond the end of the mapped field is ignored. The data type of the field being mapped is ignored.

The record containing the field to be mapped must be at the top of the screen or the cursor may be positioned on the record when the FMAP command is issued. The record must be a selected record.

If the field identification parameter is not specified and the cursor is positioned on a field that field is used. Otherwise a Field List Selection panel is displayed.

If the template name is no specified a panel is displayed where this information can be supplied.

*Syntax:*



*field#* The reference number of the field to be mapped.

*field\_name*

The name of the field to be mapped. The name may be qualified.

*template\_name*

The name of the template to be used to map the field. A partially or fully qualified data set name together with the member name can be specified.

*Availability:*

- "IMS data panel" on page 257

*Related tasks and examples:*

- "Selecting a display format" on page 45
- "Editor Options panel" on page 230

## Changes to the User's Guide and Reference for DB2 Data

### Chapter 16, "FM/DB2 commands" (page 803)

Add the FMAP command.

**FMAP primary command:** The FMAP command can be used to edit or view a column in a table using a template. If the column being mapped is shorter than the

## FMAP primary command

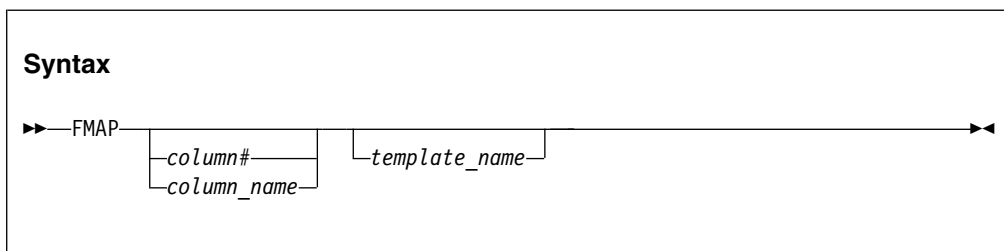
template mapping a warning message is issued when data is changed and any data which is beyond the end of the mapped field is ignored.

The row containing the column to be mapped must be at the top of the screen or the cursor may be positioned on the row when the FMAP command is issued.

If the column identification parameter is not specified and the cursor is positioned on a column that column is used. Otherwise a Field List Selection panel will be displayed.

If the template name is not specified a panel is displayed where this information can be supplied.

*Syntax:*



*column#*

The reference number of the column to be mapped.

*column\_name*

The name of the column to be mapped.

*template\_name*

The name of the template to be used to map the column. A partially or fully qualified data set name together with the member name can be specified.

*Availability:*

- "Table Browse panel" on page 758
- "Table Edit panel" on page 761
- "Table View panel" on page 770

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# UK91092, UK91093, UK91094, UK91095, UK91096, UK91097, UK91098, UK91099

Release Date: 22 January 2013

This set of PTFs contains these APAR fixes:

- PM70656
- PM75158
- PM77575

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## PM70656

### Initial problem description

FM'S VLM (View Load Module) function will stop processing PDS members if an error is encountered with one member.

### Outline of solution

The View Load Module function has been modified to continue processing the other members in the list when a Binder API error occurs accessing a load module.

### Documentation impact

This APAR requires changes to:

- User's Guide and Reference (SC19-3674-00)

## Changes to the File Manager User's Guide and Reference

### Appendix, "File Manager messages"

Add messages FMNBF427 and FMNBF434 (page 1194):

---

**FMNBF427** Program Binder does not recognize member as a Load Module / Program Object. Function=&fc RC=&rc reason=&rsn.

**Explanation:** The File Manager View Load Module utility encountered an Binder API error when accessing the module member. The &fc is an internal code to represent the IEWBIND function being executed. The Binder API returned return code &rc and reason code &rsn.

**User response:** Refer to the manual SA22-7644-xx

---

MVS Program Management: Advanced Facilities for an explanation of the Binder API return codes and reason codes.

---

**FMNBF434** The module member does not contain any CSECT names.

**Explanation:** The File Manager View Load Module utility found no CSECT names in the module member and therefore cannot provide any information.

**User response:** None.

---

## PM77575

### Initial problem description

When running File Manager in batch it is not possible to control the record length and block size of the SYSPRINT output when the WIDEPRY=YES option has been specified.

### Outline of solution

The options WBLKSIZE and WLRECL have been added to the FMNnPOPT

modules. These options are used for the to-be-allocated (new) print output data or the SYSPRINT allocation (in batch) if the WIDEPR=YES option has been specified.

**Documentation impact**

This APAR changes:

- Customization Guide (SC19-3673-00)

**Changes to the Customization Guide**

[These changes integrated into SC19-3673-01.]

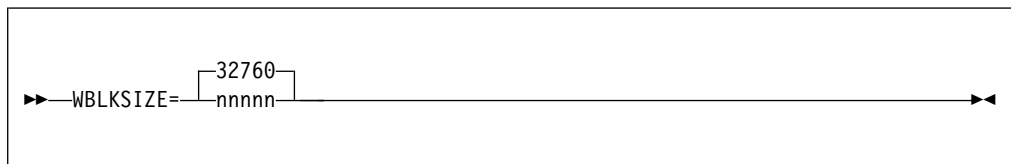
**Appendix A, "File Manager options"**

Add this sentence to the definition of WIDEPR (page 352), after the "YES" definition:

The maximum record length/block size can be overwritten by the WBLKSIZE and WLRECL File Manager options.

Add these two options to the Appendix:

**WBLKSIZE:**

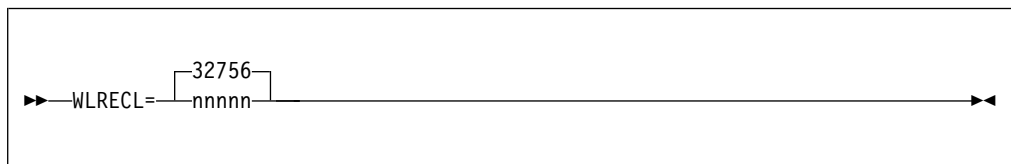


**WBLKSIZE**

Specifies the blocksize of the to-be-allocated (new) print output data sets (online) or for SYSPRINT allocation (in batch) if the WIDEPR=YES option is specified.

*nnnnn* For the to-be-allocated (new) print output data or the SYSPRINT allocation (in batch), File Manager uses the blocksize specified with a record format of VBA. The record size used is taken from the WLRECL option.

**WLRECL:**



**WLRECL**

Specifies the record size of the to-be-allocated (new) print output data sets (online) or for SYSPRINT allocation (in batch) if the WIDEPR=YES option is specified.

*nnnnn* For the to-be-allocated (new) print output data or the SYSPRINT allocation (in batch), File Manager will use the record size specified with a record format of VBA. The blocksize used will be taken from the WBLKSIZE option.



---

**PM75158****Initial problem description**

The VSAM attributes BWO, LOG and LOGSTREAMID cannot be altered using the Catalog Services utility Alter prefix command.

**Outline of solution**

The BWO, LOG and LOGSTREAMID attributes will be displayed when the INFO prefix command is entered against a VSAM data set on the Catalog Services Data Set list panel. These attributes can be changed when the ALTER prefix command is entered against the VSAM data set.

**Documentation impact**

This APAR changes:

- User's Guide and Reference (SC19-3674-00)

**Changes to the User's Guide and Reference****Chapter 14. "Panels and fields"**

*Add* these fields to the description of the VSAM Entry Detail panel (page 714):

**BWO**

Backup-while-open option of the VSAM data set. Valid values are Typepics, Typeims or No.

**Log**

Establishes whether the sphere to be accessed with VSAM RLS or DFSMStvs is recoverable or nonrecoverable. Valid values are None, Undo or All.

**Logstreamid**

Changes or adds the name of the forward recovery log stream. This must be a fully qualified name up to 26 characters, including separators.



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# UK90280, UK90281, UK90282, UK90283, UK90284, UK90285, UK90286

Release Date: 13 December 2012

This set of PTFs contains these APAR fixes:

- PM67624
- PM73512

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## PM67624

### Initial problem description

- No provision for including the MQ message descriptor was provided for functions DSC, DSM or DSP.
- No provision for reading messages destructively was provided for function DSC.

### Outline of solution

File Manager has been changed to provide for these conditions.

### Documentation impact

This APAR requires changes to:

- User's Guide and Reference (SC19-3674-00)

## Changes to the File Manager User's Guide and Reference

### Chapter 14, "Panels and fields"

**Section "Compare Utility : Load Module Options panel":** On page 471, Figure 135. Compare Utility : Load module options panel, *add* the field

MQ Processing  
/ Include descriptors

In the same section, add this description of this field:

#### MQ Processing Include descriptor

If this is selected (with the / character), the message descriptor data returned by the GET MQ API is added as a prefix to the record data, allowing this data to be examined in conjunction with the message data.

Otherwise only the message data is available for processing.

**Section "Copy From panel":** On page 487, Figure 142. Copy Utility: "From" panel, *add* the fields

MQ Include descriptor  
MQ Get destructive

In the same section, add these descriptions of the fields:

#### MQ Include descriptor

If this is selected (with the / character), the message descriptor data returned by the GET MQ API is added as a prefix to the record data, allowing this data to be examined in conjunction with the message data.

Otherwise only the message data is available for processing.

#### **MQ Get destructive**

If this is selected (with the / character), the input messages queue (if an MQ queue is specified) is opened in SHARE mode and the MQ API GET destructively reads each message.

Otherwise the queue is opened in BROWSE mode and messages are not removed from the queue. This is only effective for the DSC (Copy) function.

**Section "Print Utility panel":** On page 617, Figure 135. Print Utility panel, *add* the field

MQ Include descriptor

In the same section, add this description of the field:

#### **MQ Include descriptor**

If this is selected (with the / character), the message descriptor data returned by the GET MQ API is added as a prefix to the record data, allowing this data to be examined in conjunction with the message data.

Otherwise only the message data is available for processing.

## **Chapter 16, "Functions"**

**Section "DSC (Data Set Copy)":** On page 883, *update* the syntax diagram for DSC to include the optional parameters

```
INCLUDEMD=NO|YES
MQOPEN=BROWSE|SHARE
```

*Add*, on page 886, these parameter descriptions:

#### **INCLUDEMD**

This parameter determines what happens to the descriptor for an Websphere MQ message.

**YES** The descriptor is added as a prefix to the data being copied (YES).

**NO** Just the message data is copied. This is the default.

This parameter applies only when the input describes an MQ queue.

#### **MQOPEN**

This parameter determines if the Websphere MQ queue will be opened in browse or share mode and the messages from that queue read in a destructive manner.

##### **BROWSE**

The Websphere MQ queue is opened in browse mode. Messages are not removed from the queue as they are read. This is the default.

##### **SHARE**

The Websphere MQ queue is opened in share mode. Messages are removed from the queue as they are read (the queue is read in a destructive manner).

This applies only when the input describes an MQ queue.

**Section "DSM (Data Set Compare)":** On page 942, *update* the syntax diagram for DSM to include the optional parameter

INCLUDEMD=NO|YES

*Add*, on page 948, this parameter description:

**INCLUDEMD**

This parameter determines what happens to the descriptor for an Websphere MQ message.

**YES** The descriptor is added as a prefix to the data being copied (YES).

**NO** Just the message data is copied. This is the default.

This parameter applies only when the input describes an MQ queue.

**Section "DSP (Data Set Print)":** On page 978, *update* the syntax diagram for DSM to include the optional parameter

INCLUDEMD=NO|YES

*Add*, on page 980, this parameter description:

**INCLUDEMD**

This parameter determines what happens to the descriptor for an Websphere MQ message.

**YES** The descriptor is added as a prefix to the data being copied (YES).

**NO** Just the message data is copied. This is the default.

This parameter applies only when the input describes an MQ queue.

## PM73512

**Initial problem description**

File Manager may abend ABENDS0C1 or ABEND999 when attempting to access an OAM directory (option 6.1).

**Outline of solution**

File Manager has been modified to correct the problem.

**Documentation impact**

This APAR requires changes to:

- User's Guide and Reference (SC19-3674-00)

## Changes to the File Manager User's Guide and Reference

### Appendix, "File Manager messages"

On page 1189, *add* message FMNBA516.

**FMNBA516 SSSARSN reason code &RC returned from IEFSSREQ Service request**

**Explanation:** A nonzero reason code has been returned from the IEFSSREQ service function SSOBSSMS. The reason code is documented in the IBM-supplied IEFSSSA macro.

**User response:** Contact your systems programmer.



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## UK83654, UK83655, UK83656, UK83657, UK83658

Release Date: 21 November 2012

This set of PTFs contains these APAR fixes:

- PM68835

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### PM68835

#### Initial problem description

1. The SQLDA entry for the constant '#1 ' (3 characters) is 4 bytes in length when using CCSID 1147.
2. The default for the editor 'Commit after data fetch' option is selected (the documentation states the default is not selected).

#### Outline of solution

1. The File Manager DB2 component has been updated to correct the problem. Note that this APAR introduces a change in behaviour to the "Basic SELECT Prototyping" function. The change is to replace the use of the '#' in any table correlation references (for example, #1, #2) displayed by the function. A capital letter is now used (for example, T1, T2).
2. The File Manager DB2 component documentation has been changed to reflect the correct default value for the editor "Commit after data fetch" option.

#### Documentation impact

This APAR requires changes to:

- User's Guide and Reference for DB2 Data (SC19-3675-00)

## Changes to the File Manager User's Guide and Reference for DB2 Data

### Chapter 12 "Working with SQL statements"

Replace section "Using basic SQL prototyping" (page 321) with this text:

Basic SELECT prototyping uses two panels: you use the primary panel to specify the table (or tables) that contain the data you want to retrieve (FROM clause), and the secondary panel to specify the columns you want to show, any qualifying information (WHERE clause), and the sequence in which you want the data to be shown (ORDER BY clause).

To display the primary Basic SELECT Prototyping panel, select option 1 (Basic) on the SQL Prototyping, Execution and Analysis panel.

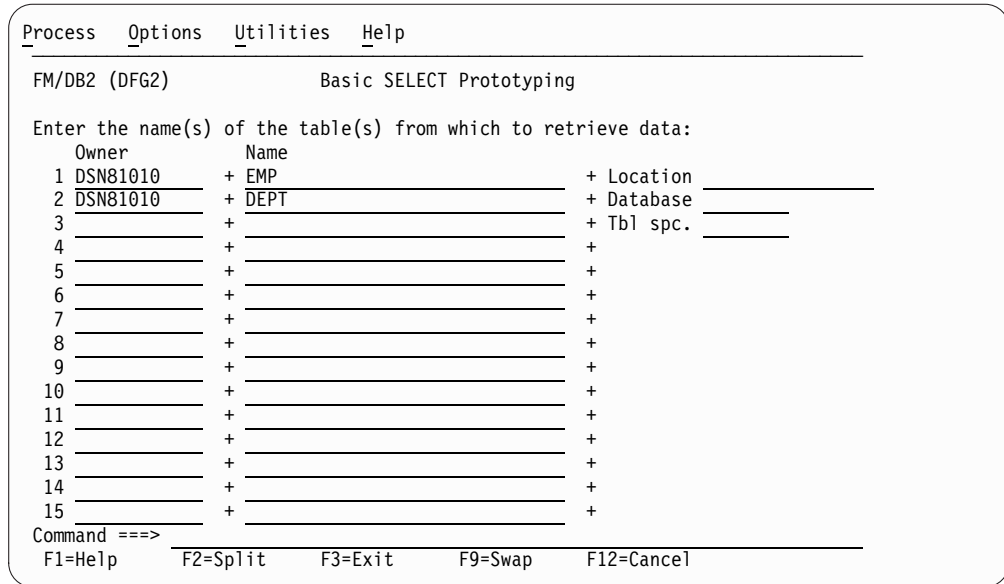


Figure 14. Primary Basic SELECT Prototyping panel

On this panel you can specify up to 15 tables, views, synonyms, or aliases that can be part of the SELECT statement being prototyped. If you specify more than one object, the columns for all objects specified are shown on the secondary Basic SELECT Prototyping panel when you press enter - see Figure 15 on page 89.

You cannot modify the entry-line numbers at the left of the panel (1, 2, and so on). The purpose of the entry-line number is to provide a suffix for the correlation name used to identify the DB2 object. DB2 correlation names are discussed in detail in the *SQL Reference*. The complete DB2 correlation name is shown in the "Tab" column on the secondary Basic SELECT Prototyping panel when you press enter. The complete correlation name will be a capital letter, followed by the entry-line number. The capital letter will usually be 'T', but may be another letter if any of the DB2 object names start with 'T'. The Basic Prototyper ensures that the letter selected for the correlation name reference is not the same as the first letter of any DB2 object name included on the primary Basic SELECT Prototyping panel.

The columns and rows included in the result table are determined by the SELECT and WHERE clauses specified on the secondary Basic SELECT Prototyping panel, which is displayed when you specify the objects and press Enter. The examples in this section use the tables DSN81010.EMP and DSN81010.DEPT.

Tables and views are specified by optionally entering values in the **Location**, **Database**, **Tbl spc.** (table space), and **Owner** fields, and entering values in the **Name fields**. Synonyms are specified by entering values in the **Name fields**. If a value is entered in the **Owner** field for a synonym, it must be the current SQLID. All of the fields support catalog searches by specifying a pattern in the field. After you have specified the table names on the primary Basic SELECT Prototyping panel, press Enter to display the secondary Basic SELECT Prototyping panel.



```

Process  Options  Utilities  Help
-----  -
FM/DB2 (DFG2)          Basic SELECT Prototyping          Row 1 of 19

SELECT ?
FROM ?
WHERE ?
ORDER BY ?

Row count 0          Number of rows to display

Select columns (S/A/D) or enter predicates to build the SELECT statement:

S LOp ( Tab Column Name      + Data Type(length) + Op Value      )
-----
- - - - T1 EMPNO              CHAR(6)
- - - - T1 FIRSTNAME         VARCHAR(12)
- - - - T1 MIDINIT           CHAR(1)
- - - - T1 LASTNAME          VARCHAR(15)
- - - - T1 WORKDEPT          CHAR(3)
- - - - T1 PHONENO           CHAR(4)

Command ==>          Scroll PAGE
F1=Help      F2=Split  F3=Exit   F6=Execute F7=Backward F8=Forward
F9=Swap      F12=Cancel

```

Figure 15. Secondary Basic SELECT Prototyping panel

When initially displayed, the secondary Basic SELECT Prototyping panel shows all of the columns for the DB2 objects entered on the primary panel. You can scroll up or down if there are more columns than will fit on the display. The SQL statement being prototyped is shown at the top of the panel as 4 clauses (SELECT, FROM, WHERE and ORDER BY). An empty clause is indicated by a “?”.

FM/DB2 automatically updates one or more of these clauses as you enter either primary or line commands. Each of the clause fields is an ISPF expandable field. If the field is too short to display all of the clause then a “+” will be shown at the end of the field. You can position the cursor anywhere in the field and press the ISPF EXPAND key to show the complete clause in a pop-up window.

To limit the number of rows returned in the result set when the SQL statement is executed, specify the maximum number of rows in the **Row count** field.

The following primary commands are available when you use basic SELECT prototyping:

**ALL** Use this command to select all columns for a DB2 object. You can specify an optional parameter #*n* to include only the columns of the *n*th DB2 object displayed.

**CANCEL**

Use this command to return to the primary Basic SELECT Prototyping panel

**EXECUTE**

Use this command to run the SQL statement being prototyped

**RESET**

Use this command to abandon all changes to the SQL statement. All clauses are returned to empty status.

**SQL**

Use this command to show the complete SQL statement in an ISPF editor session

**UNDO**

Use this command to back-out the last change made.

The following line commands can be entered against any column:

- S or /  
 You type either S or / against the entry for a column to add that column to the list of columns for the SQL statement. Data from the column will be included in the result table when the statement is executed.  
 You can select multiple columns at once, however your entries are processed from top to bottom, so you might need to select columns individually if the order of columns in the result table is important.
- A and D  
 You type either A or D against the entry for a column to add an ORDER BY clause for that column. If the specified column does not exist in the column list, the column is also added to the column list. Data from the column will be included in the result table when the statement is executed, and rows will be sorted in ascending or descending order on that data.  
 Entering a A results in the ORDER BY clause including the column name without modification, this defaults to ascending (ASC keyword).  
 Entering a D results in the ORDER BY clause including the column name followed by the DESC keyword, this indicates the result table should be sorted in descending order based on the data for the column.
- U  
 You type U against the entry for a column to remove the last column reference from the list of columns in the result table. When the column is removed and the column is no longer specified in the list of columns:
  - All ORDER BY clause references to the column are also removed.
  - All predicate references to the column are also removed.
 If the column has been added to the column list multiple times, use the U command repeatedly to remove all references.
- UO  
 You type UO against the entry for a column to remove the last ORDER BY reference.  
 Removing an ORDER BY reference for the column does not remove the column from the column list, nor does it remove any predicates referencing the column from the WHERE clause.  
 If the column has been added to the ORDER BY clause multiple times, use the UO command repeatedly to remove all references.
- UW  
 You type UW against the entry for a column to remove the last predicate that references the column.  
 Removing a WHERE clause reference for the column does not remove the column from the column list, nor does it remove any references for the column from the ORDER BY clause.  
 If there are multiple predicates containing the column, use the UW command repeatedly to remove all references.

**Specifying a predicate:** You specify a predicate (for example EMPNO = '000010') by typing the comparison operator ("=") in the Op field, and the comparison value ("000010") in the Value field. To specify a join predicate, include the correlation reference for the table containing the join column in the value field.

For example, to specify a join between DSN81010.EMP.WORKDEPT and DSN81010.DEPT.DEPTNO:

- Type "=" in the **Op** field for column WORKDEPT.
- Type "T2.DEPTNO" in the **Value** column for WORKDEPT.

Figure 16 shows an example of specifying the join, and Figure 17 shows the result of the join predicate.

```

Process  Options  Utilities  Help
-----  -
FM/DB2 (DFG2)          Basic SELECT Prototyping          Row 1 of 19

SELECT T1.*
  FROM "DSN81010"."EMP" T1
 WHERE ?
 ORDER BY ?

Row count  100          Number of rows to display

Select columns (S/A/D) or enter predicates to build the SELECT statement:

S LOp ( Tab Column Name      + Data Type(length)  + Op Value          )
-----
  T1 EMPNO                   CHAR(6)              _____
  T1 FIRSTNME                VARCHAR(12)          _____
  T1 MIDINIT                 CHAR(1)              _____
  T1 LASTNAME                VARCHAR(15)          _____
  T1 WORKDEPT                CHAR(3)              = T2.DEPTNO
  T1 PHONENO                 CHAR(4)              _____

Command ==> _____ Scroll PAGE
F1=Help   F2=Split   F3=Exit   F6=Execute F7=Backward F8=Forward
F9=Swap   F12=Cancel

```

Figure 16. Specifying a join predicate

```

Process  Options  Utilities  Help
-----  -
FM/DB2 (DFG2)          Basic SELECT Prototyping          Row 1 of 19

SELECT T1.*
  FROM "DSN81010"."EMP" T1 "DSN81010"."DEPT" T2
 WHERE "WORKDEPT" = T2.DEPTNO
 ORDER BY ?

Row count  100          Number of rows to display

Select columns (S/A/D) or enter predicates to build the SELECT statement:

S LOp ( Tab Column Name      + Data Type(length)  + Op Value          )
-----
  T1 EMPNO                   CHAR(6)              _____
  T1 FIRSTNME                VARCHAR(12)          _____
  T1 MIDINIT                 CHAR(1)              _____
  T1 LASTNAME                VARCHAR(15)          _____
  T1 WORKDEPT                CHAR(3)              _____
  T1 PHONENO                 CHAR(4)              _____

Command ==> _____ Scroll PAGE
F1=Help   F2=Split   F3=Exit   F6=Execute F7=Backward F8=Forward
F9=Swap   F12=Cancel

```

Figure 17. The result of the join predicate shown in the previous figure

## Chapter 15. "FM/DB2 Panels and Fields"

In the description of the "Editor Options (7 of 7) panel" on page 593, in the first paragraph describing the **Commit after data fetch** option, *replace* the last sentence ("By default, this option is not selected.") with this sentence:

By default, this option is selected.



---

## UK83148, UK83149, UK83150, UK83151, UK83152, UK83153, UK83154, UK83155, UK83156, UK83157

Release Date: 2 November 2012

This set of PTFs contains the following APAR fixes:

APAR #	APAR Abstract	Doc Impact
PM69989	Receive compile errors when attempting to create a template from a PL/I copybook.	<ul style="list-style-type: none"><li>• Customization Guide (SC19-3673-00)</li><li>• User's Guide and Reference (SC19-3674-00)</li><li>• User's Guide and Reference for DB2 Data (SC19-3675-00)</li><li>• User's Guide and Reference for IMS Data (SC19-3676-00)</li></ul>

---

### PM69989

This APAR enhances File Manager to support XML templates. For a comprehensive description of the changes to the documentation that this entails, see "XML templates" on page 95.



---

## XML templates

*The information in this chapter is provided altogether, to further your understanding of XML templates, and how to import and export them. When this information is inserted into the relevant File Manager User Guide, it will be split into parts, which will then be individually inserted into their appropriate chapters.*

A File Manager template can be exported to an external XML format using the Template Export utility. An XML form of the template can be imported into the product using the Template Import utility. The import process can either create or update an existing template using the template definition in its XML format.

You can use an XML version of the template anywhere you can specify a copybook or template.

To use the foreground utility to export a File Manager template, select one of these options:

- Option 7.6 from the File Manager for z/OS Primary Options menu.
- Option 7.2 from the File Manager/DB2 for z/OS Primary Options menu.
- Option 4.8 from the File Manager/IMS for z/OS Primary Options menu.

With the foreground Template Export utility, you can display a member list with all types of templates supported. You can also invoke a template edit against any type of template using the E prefix command from the member list.

The batch utility for exporting a File Manager template is TPEXP.

To use the foreground utility to import a File Manager template, select one of these options:

- Option 7.5 from the File Manager for z/OS primary options menu.
- Option 7.1 from the File Manager/DB2 for z/OS primary options menu.
- Option 4.7 from the File Manager/IMS for z/OS primary options menu.

The batch utility for importing a File Manager template is TPIMP.

### **Note:**

- To import a DB2 template you must be running the import utility from a File Manager/DB2 session, whether foreground or batch. The DB2 object referred to in the template XML must exist in the current subsystem for the File Manager/DB2 session.
- To import an IMS template, view or criteria set you must be running the import utility from a File Manager/IMS session, whether foreground or batch.
- You can export any type of template from any type of File Manager session. The export utility is available from all template menus for convenience.

All aspects of a template can be represented in an XML form. The XML can be created manually by specifying the elements and attributes described in the appendix, or by exporting an existing template. An XML template can be used directly within the product as long as the XML provides all the elements required

## XML templates

to create a new template. A good way to determine the XML required to create a template is to use the Template Export Utility to export a similarly defined template.

---

### Sample XML for BASE template

The following XML defines a template that is created from two copybooks, COPY01 and COPY02, that can be found in data set FMN.COPY. The example shows how to provide an 01 field and its name (name01="type01"), and how to specify redefines and range specifications. It also shows how to provide identification criteria.

```
<template lang="COBOL" type="BASE">
  <copybooks>
    <library>FMN.COPY</library>
    <member name="COPY01" name01="type01">
      <redefine level="3"/>
      <sourcerange fromstmt="2"/>
    </member>
    <member name="COPY02" name01="type02">
      <redefine level="3"/>
      <sourcerange fromstmt="2"/>
    </member>
  </copybooks>
  <layout copybook="COPY01">
    <criteria type="ID">
      <exp><![CDATA[#2 = '01']]></exp>
    </criteria>
  </layout>
  <layout copybook="COPY02">
    <criteria type="ID">
      <exp><![CDATA[#2 = '02']]></exp>
    </criteria>
  </layout>
</template>
```

---

### Sample XML for IMS template

```
<template lang="COBOL" type="IMS">
  <dbd>DJ1E</dbd>
  <dbdlib>FMIMS.XTEST.DBDLIB</dbdlib>
  <copybooks>
    <library>FMN.IMS.IVP.COPYLIB.COBO</library>
    <member name="SHIRE" lib="1" segname="SHIRE">
    </member>
    <member name="SHIRENP" lib="1" segname="SHIRENP">
    </member>
    <member name="LINKSUB" lib="1" segname="LINKSUB">
    </member>
    <cobol maxrc="4">
    </cobol>
  </copybooks>
  <layout name="SHIRE" copybook="SHIRE" segment="SHIRE">
    <criteria type="ID">
      <exp><![CDATA[#4 = '1']]></exp>
    </criteria>
  </layout>
  <layout name="SHIRE-TOWN" copybook="SHIRE" segment="SHIRE">
    <criteria type="ID">
      <exp><![CDATA[#4 = '2']]></exp>
    </criteria>
  </layout>
  <layout name="SHIRE-CITY" copybook="SHIRE" segment="SHIRE">
    <criteria type="ID">
      <exp><![CDATA[#4 = '3']]></exp>
    </criteria>
  </layout>
</template>
```



```

    </criteria>
  </layout>
<layout name="SHIRE-NON-PUBLIC" copybook="SHIRENP" segment="SHIRENP">
</layout>
<layout name="SHIRE-SUBURB" copybook="LINKSUB" segment="LINKSUB">
</layout>
</template>

```

---

## Sample XML for DB2 template

```

<template type="DB2">
  <ssid>DFB2</ssid>
  <db2object>DSN8810.EMP</db2object>
  <db2rel>815</db2rel>
  <layout>
    <criteria>
      <exp><![CDATA[
        WHERE "FIRSTNME" = 'Bob' AND "MIDINIT" = 'C'
      ]]></exp>
    </criteria>
  </layout>
</template>

```

---

## Using the foreground interface to export XML templates

Here is an example of exporting an XML template using the base option 7.6.

```

  _Process  _Options  _Help
  -----
File Manager          Template Export Utility
Command ==> _____

Template:
Data set name . 'FMN.SAMPLE.TEMPLATE'
Member . . . . (Blank or pattern for member list)
Filter . . . . _____

Export Data set:
Data set name . 'FMN.XML.EXAMPLE'
Member mask . . _____

Processing Options:
Enter "/" to select option          Enter "/" to select option
- Batch execution                    / Replace members
- Advanced member selection          / Copybook and criteria only
- Skip member list                   / Stats On

```

Only copybook and criteria information is exported. This means that field or column data like hold, selection, create or alternate heading are not included. Just the basic definition and any criteria included in the template.

## Using the foreground interface to export XML templates

```

Process Options Help
-----
File Manager          Template Member Selection          Row 00001 of 00013
Command ==>          Scroll CSR

Input data set FMN.SAMPLE.TEMPLATE
Export data set FMN.XML.EXAMPLE

      Name      Prompt      Type Created      Updated      Lang      Ver Descr _
      *         *         *      *         *         *         *         *
s      ABEND      *         BASE 2004/02/11 2011/11/28 12:39:09 COBOL 2 This
s      AODAO140      DYN 2011/12/19 2012/09/11 11:32:30 NONE 3
s      CONVT1      DB2 2012/03/02 2012/09/19 09:16:41 NONE 3
      COPY01B      BASE 2012/09/12 2012/09/12 06:23:29 PL/I 3
s      DJIE      IMS 2008/08/15 2012/08/07 16:53:34 COBOL 3
      DJIECR1      CRIT 2008/01/12 2009/06/29 16:57:12 PL/I 3
s      DJIECR2      CRIT 2008/01/12 2009/06/29 16:57:12 PL/I 3
      DJIECR3      CRIT 2008/01/12 2009/06/29 16:57:12 PL/I 3
s      DJIEVW      VIEW 2004/02/12 2012/08/03 17:37:53 COBOL 3
      EMPBASE      DB2 2009/03/10 2012/09/10 21:13:15 NONE 3
      EMPDB2      DB2 2009/06/29 2012/09/10 21:11:43 NONE 3
      TEST0102      BASE 2012/01/11 2012/08/07 06:09:56 COBOL 3
      THOGAN      BASE 2004/08/09 2009/05/18 14:25:55 COBOL 2
**** End of data ****

```

From this member list you can use the E or U prefix command to edit a template. You can use EX or VX command to edit or view the XML member of the same name in the export data set.

Press Enter after selecting various templates to be exported.

```

Process Options Help
-----
File Manager          Template Member Selection          Row 00001 of 00013
Command ==>          Scroll CSR

Input data set FMN.SAMPLE.TEMPLATE
Export data set FMN.XML.EXAMPLE

      Name      Prompt      Type Created      Updated      Lang      Ver Descr _
      *         *         *      *         *         *         *         *
      ABEND      *ExpRepl BASE 2004/02/11 2011/11/28 12:39:09 COBOL 2 This
      AODAO140 *ExpRepl DYN 2011/12/19 2012/09/11 11:32:30 NONE 3
      CONVT1 *ExpRepl DB2 2012/03/02 2012/09/19 09:16:41 NONE 3
      COPY01B BASE 2012/09/12 2012/09/12 06:23:29 PL/I 3
      DJIE *ExpRepl IMS 2008/08/15 2012/08/07 16:53:34 COBOL 3
      DJIECR1 CRIT 2008/01/12 2009/06/29 16:57:12 PL/I 3
      DJIECR2 *ExpRepl CRIT 2008/01/12 2009/06/29 16:57:12 PL/I 3
      DJIECR3 CRIT 2008/01/12 2009/06/29 16:57:12 PL/I 3
      DJIEVW *Exportd VIEW 2004/02/12 2012/08/03 17:37:53 COBOL 3
      EMPBASE DB2 2009/03/10 2012/09/10 21:13:15 NONE 3
      EMPDB2 DB2 2009/06/29 2012/09/10 21:11:43 NONE 3
      TEST0102 BASE 2012/01/11 2012/08/07 06:09:56 COBOL 3
      THOGAN BASE 2004/08/09 2009/05/18 14:25:55 COBOL 2
**** End of data ****

```

You can use the foreground utility to generate the batch JCL to run the export.

## Using the foreground interface to import XML templates

Here is an example of importing using the base option 7.5.

```

Process  Options  Help
-----
File Manager          Template Import Utility
Command ==> _____

XML Input:
Data set name . 'FMN.XML.EXAMPLE'
Member . . . . _____ (Blank or pattern for member list)

Import Template:
Data set name . 'FMN.IMP.NEW'
Member mask . . _____

Processing Options:
Enter "/" to select option          Enter "/" to select option
  _ Batch execution                   / Replace - No update
  _ Advanced member selection        _ Skip member list
    
```

Press Enter to display the member list.

```

Process  Options  Help
-----
File Manager          XML Template Member Selection          Row 00001 of 00009
Command ==> _____          Scroll CSR

XML      data set FMN.XML.EXAMPLE
Template data set FMN.IMP.NEW

      Name      Prompt  Alias-of Lib  Size  Created  Changed
      *         *      *         *      *      *
-----
s     ABEND          10 2012/09/19 2012/09/19 09:22:12
s     AODAO140       31 2012/09/19 2012/09/19 09:22:12
s     CONVT1         20 2012/09/19 2012/09/19 09:22:12
s     COPY01B        11 2012/09/19 2012/09/19 08:23:00
s     DJIE           64 2012/09/19 2012/09/19 09:22:12
s     DJIECR2        64 2012/09/19 2012/09/19 09:22:12
s     DJIEVW         24 2012/09/19 2012/09/19 09:22:12
s     EMPBASE         7 2012/09/19 2012/09/19 08:23:12
s     TEST0102       24 2012/09/19 2012/09/19 08:23:30
**** End of data ****
    
```

Running under the base product, it is only possible to import dynamic and base templates,

## Using the foreground interface to import XML templates

```

  _Process  _Options  _Help
-----
File Manager          XML Template Member Selection          Template saved
Command ==>          Scroll  CSR

XML      data set FMN.XML.EXAMPLE
Template data set FMN.IMP.NEW

      Name      Prompt      Alias-of Lib      Size      Created      Changed
      *          *          *          *          *          *
-----
      ABEND      *ImpRep1      *          *          10 2012/09/19 2012/09/19 09:22:12
      AODAO140  *ImpRep1      *          *          31 2012/09/19 2012/09/19 09:22:12
      CONVT1      *          *          *          20 2012/09/19 2012/09/19 09:22:12
      COPY01B      *          *          *          11 2012/09/19 2012/09/19 08:23:00
      DJ1E      *          *          *          64 2012/09/19 2012/09/19 09:22:12
      DJ1ECR2      *          *          *          64 2012/09/19 2012/09/19 09:22:12
      DJ1EVW      *          *          *          24 2012/09/19 2012/09/19 09:22:12
      EMPBASE      *          *          *          7 2012/09/19 2012/09/19 08:23:12
      TEST0102  *ImpRep1      *          *          24 2012/09/19 2012/09/19 08:23:30
      **** End of data ****

```

You can use the foreground utility to generate the batch JCL to run the import.

## Examples of the batch interface

**Example 1.** Import - all XML members on FMN.XMLINP to FMN.IMPORT.TEMPLATE

```
//FMBAT EXEC PGM=FILEMGR
//STEPLIB DD DISP=SHR,DSN=HLQ.SFMNMOD1
//SYSPRINT DD SYSOUT=*
//SYSIN DD *
$$FILEM TPIMP DSNIN=FMN.XMLINP,
$$FILEM MEMBER=*,
$$FILEM DSNOUT=FMN.IMPORT.TEMPLATE,
$$FILEM REPLACE=YES
/*
```

**Example 2.** Import - same as example 1 except using default input and output ddnames. Note keywords INPUT, and OUTPUT can be used to point to different DD names.

```
//FMBAT EXEC PGM=FILEMGR
//STEPLIB DD DISP=SHR,DSN=HLQ.SFMNMOD1
//DDIN DD DISP=SHR,DSN=FMN.XMLINP
//DDOUT DD DISP=SHR,DSN=FMN.IMPORT.TEMPLATE
//SYSPRINT DD SYSOUT=*
//SYSIN DD *
$$FILEM TPIMP MEMBER=*,REPLACE=YES
/*
```

**Example 3.** Import from XML that is inline in the jobstream into one member

```
//FMBAT EXEC PGM=FILEMGR
//STEPLIB DD DISP=SHR,DSN=HLQ.SFMNMOD1
//SYSPRINT DD SYSOUT=*
//SYSIN DD *
$$FILEM TPIMP DSNOUT=FMN.TEMPLATE(CBL1),INPUT=*
<template lang="COBOL" type="BASE">
  <copybooks>
  <library>FMN.COBOLE</library>
  <member name="COPY01"/>
  <member name="COPY02"/>
</copybooks>
```

```

<layout copybook="COPY01">
  <criteria type="ID">
    <exp><![CDATA[#2 = '01']]></exp>
  </criteria>
</layout>
<layout copybook="COPY02">
  <criteria type="ID">
    <exp><![CDATA[#2 = '02']]></exp>
  </criteria>
</layout>
</template>
/*

```

**Example 4.** Export all template members in a PDS - Replace output members, ISPF statistics and only produce XML for copybook and criteria.

```

//FMBAT EXEC PGM=FILEMGR
//STEPLIB DD DISP=SHR,DSN=HLQ.SFMNMOD1
//SYSPRINT DD SYSOUT=*
//SYSIN DD *
$$FILEM TPEXP DSNIN=FMN.IMPORT.TEMPLATE,
$$FILEM MEMBER=*,
$$FILEM DSNOUT=FMN.XMLOUT.NEW,
$$FILEM COPYCRIT=YES,
$$FILEM STATS=YES,
$$FILEM REPLACE=YES
/*

```

**Example 5.** Export same as example 4 except using default DD names for input and output. Keywords INPUT, and OUTPUT could also be used.

```

//FMBAT EXEC PGM=FILEMGR
//STEPLIB DD DISP=SHR,DSN=HLQ.SFMNMOD1
//SYSPRINT DD SYSOUT=*
//DDIN DD DISP=SHR,DSN=FMN.IMPORT.TEMPLATE
//DDOUT DD DISP=SHR,DSN=FMN.XMLOUT.NEW
//SYSIN DD *
$$FILEM TPEXP MEMBER=*,
$$FILEM COPYCRIT=YES,
$$FILEM STATS=YES,
$$FILEM REPLACE=YES
/*

```

**Example 6.** Export single member to producing XML output on SYSOUT

```

//FMBAT EXEC PGM=FILEMGR
//STEPLIB DD DISP=SHR,DSN=HLQ.SFMNMOD1
//SYSPRINT DD SYSOUT=*
//XMLDD DD SYSOUT=*
//SYSIN DD *
$$FILEM TPEXP DSNIN=FMN.TEMPLATE,MEMBER=COPY0102,COPYCRIT=YES,
$$FILEM OUTPUT=XMLDD
/*

```

**Example 7.** Run a compare job using XML dynamic templates specified in the JCL to perform column compares. This compares columns 1 to 5 input file with columns 8 to 12 of the output file , and columns 6 to 10 of the input file with columns 13 to 17 of the output file.

```

//FMBAT EXEC PGM=FILEMGR
//SYSPRINT DD SYSOUT=*
//DDOLD DD DISP=SHR,DSN=FMN.DATA(COMP1OLD)
//DDNEW DD DISP=SHR,DSN=FMN.DATA(COMP1NEW)
//TDOLD DD DATA
<template type="DYNAMIC">
  <layout>
    <symbol name="comp1" start="1" length="5" type="AN"/>

```

## Examples of the batch interface

```
    <symbol name="comp2" start="6" length="5" type="AN"/>
  </layout>
</template>
/*
//TDNEW DD DATA
<template type="DYNAMIC">
  <layout>
    <symbol name="comp1" start="8" length="5" type="AN"/>
    <symbol name="comp2" start="13" length="5" type="AN"/>
  </layout>
</template>
/*
//SYSIN DD *
$$FILEM DSM TYPE=FORMATTED,LIST=DELTA
/*
```

**Example 8.** Print sample file using XML dynamic template - multiple layouts and ID criteria.

```
//FMBAT EXEC PGM=FILEMGR
//SYSPRINT DD SYSOUT=*
//DDIN DD DISP=SHR,DSN=h1q.SFMNSAM1(FMNCDATA)
//TDDIN DD DATA
<template type="DYNAMIC">
  <layout name="rec-type01">
    <symbol name="type" start="1" length="2" type="AN"/>
    <symbol name="name" start="3" length="20" type="AN"/>
    <symbol name="empno" start="23" length="2" type="BI"/>
    <symbol name="age" start="25" length="2" type="BI"/>
    <symbol name="salary" start="27" length="4" type="PD"/>
    <criteria type="ID">
      <exp><![CDATA[#type = '01']]></exp>
    </criteria>
  </layout>
  <layout name="rec-type02">
    <symbol name="type" start="1" length="2" type="AN"/>
    <symbol name="name" start="3" length="20" type="AN"/>
    <symbol name="title" start="23" length="14" type="AN"/>
    <symbol name="addr1" start="37" length="20" type="AN"/>
    <symbol name="addr2" start="57" length="20" type="AN"/>
    <symbol name="postcode" start="77" length="4" type="AN"/>
    <criteria type="ID">
      <exp><![CDATA[#type = '02']]></exp>
    </criteria>
  </layout>
</template>
/*
//SYSIN DD *
$$FILEM DSP FORMAT=SNGL
/*
```

**Example 9.** Run a DB2 import job that either creates or updates a DB2 template specifying new headings for fields. Note we have the XML inline - the input could come from a member.

```
//FMNDB2 EXEC PGM=FMNDB2,PARM=('SSID=ssss,SQID=userid')
//SYSPRINT DD SYSOUT=*
//SYSTEM DD SYSOUT=*
$$FILEM TPIMP DSNOUT=h1q.TEMPLATE(EMPHD),
$$FILEM REPLACE=YES,
$$FILEM INPUT=*
<template type="DB2">
  <db2object>DSN8810.EMP</db2object>
  <layout>
    <symbol name="empno">
      <heading>Employee</heading>
    </symbol>
```

```

<symbol name="FIRSTNAME">
  <heading>First Name</heading>
</symbol>
<symbol name="MIDINIT">
  <heading>Middle</heading>
</symbol>
<symbol name="LASTNAME">
  <heading>Last Name</heading>
</symbol>
<symbol name="BIRTHDATE">
  <heading>Birth Date</heading>
</symbol>
</layout>
</template>

```

## Template Export Utility panel

The Template Export Utility panel provides a means of exporting templates to external XML templates.

### Panel and field definitions

```

  _Process  _Options  _Help
  _____
File Manager          Template Export Utility
Command ==> _____

Template:
  Data set name . 'FMN.IMP.EXAMPLE'
  Member . . . . _____ (Blank or pattern for member list)
  Filter . . . . _____

Export Data set:
  Data set name . 'FMN.XML.EXAMPLE'
  Member mask . . _____

Processing Options:
  Enter "/" to select option          Enter "/" to select option
  - Batch execution                    - Replace members
  - Advanced member selection          - Copybook and criteria only
  - Skip member list                   - Stats On

```

Figure 18. Template Export Utility entry panel

#### (Template) Data set name (required)

A fully qualified or generic data set name that is used to identify the data set where the template(s) to be exported reside

#### Member

You can enter a member name, or pattern, or leave blank. If you select advanced member selection, then this name constitutes the first name on the member range panel.

**Filter** Enter up to 4 member names or patterns that are used as a filter for the template selection list that is displayed. The filter name is created as a copybook name for base and IMS templates. For IMS views and criteria it is treated as an originating template. Any other type of template is skipped if a filter is specified.

#### (Export Data set) Data set name (Required)

A fully qualified or generic data set name that is used to identify the XML template data set where the exported XML templates are stored.

## Template Export Utility panel

### Member mask

This is a rename mask and allows the exported templates to be stored under an alternative name.

Specify a pattern to rename members in the output partitioned data set based on the member names in the input partitioned data set. A member name pattern can consist of any characters that are valid in a member name and two special pattern characters: the asterisk (\*) and the percent sign (%).

- \* A place-holding character that means multiple characters with no change. Only one asterisk should appear in the mask. Any subsequent asterisk characters are treated as percent signs. For example, if you enter ABC\* the renamed members all begin with "ABC" followed by the remainder of the old member name.
- % A place-holding character that means a single character with no change. As many percent symbols as necessary may appear anywhere in a member name. For example, if you enter %%%A%M the first three characters of the renamed members remain unchanged, the fourth character is replaced with the letter "A", and the remainder of the old member name are unchanged.

### Batch execution

Allows you to edit batch JCL to run the function in batch.

### Advanced member selection

Allows you to specify a range of members to be selected, rather than a specific or generic member name.

### Skip member list

Runs without showing the member selection list. This option bypasses the member list panel and processes all the qualifying members.

### Replace members

Replaces like-named members in an output partitioned data set.

### Copybook and criteria only

Restrict the output XML to only the copybook and criteria tags.

### Stats On

Always update or create ISPF statistics for exported members.



```

Process Options Help
-----
File Manager          Template Member Selection          Row 00001 of 00002
Command ==>          _____          Scroll CSR

Input data set FMN.IMP.EXAMPLE
Export data set FMN.XML.EXAMPLE

      Name      Prompt      Type Created      Updated          Lang      Ver Descr _
      *         *         *      *         *         *         *         *
-----
CONVT1          _____ DB2  2012/09/19 2012/09/19 11:40:56 NONE      3
DJIE            _____ IMS  2012/09/19 2012/09/19 10:44:11 COBOL     3
**** End of data ****

```

Figure 19. Template Member Selection export member list

**Sel** Prefix area. You can enter the following prefix commands:

- B** Performs an ISPF BROWSE command against the member. The member is displayed using the ISPF Browse panel, not the File Manager Browse panel.
- E** Invoke template editing.
- S** Select for template update.
- U** Invoke the template source definition edit and update process for the template.

**Name** Name of the member.

**Prompt** Status values relevant to the action being performed.

**Created** The date the template was created.

**Updated** For templates, this is the last changed date. For IMS views and extract criteria, this is the last time this was updated from its originating template

**Lang** The original language of the copybooks from which the fields in the template were derived.

**Ver** The version or level of the template.

**Description**  
 (To view, scroll right with the Right function key, F11.) The first line of the description that can be entered using the DESCRIBE command during template editing.

## Template Export Utility panel

```
Process Options Help
-----
File Manager          Template Member Selection          Row 00001 of 00002
Command ==>          Scroll CSR

Input data set FMN.IMP.EXAMPLE
Export data set FMN.XML.EXAMPLE

-   Name      SSID Owner   Object name      DBD data set      -
   *         *     *       *               *
--- CONVT1   DFB2 DSN8810 EMP
--- DJ1E                                FMIMS.XTEST.DBDLIB(DJ1E)
**** End of data ****
```

Figure 20. Scrolling right on the member list

**SSID** Subsystem ID for DB2 template

**Owner DB2**

Object owner for DB2 template

**Object name**

DB2 object name for DB2 template

**DBD data set**

DBD data set name for IMS template, view or criteria set

```
Process Options Help
-----
File Manager          Template Member Selection          Row 00001 of 00002
Command ==>          Scroll CSR

Input data set FMN.IMP.EXAMPLE
Export data set FMN.XML.EXAMPLE

-   Name      Template data set (Views and Criteria)
   *         *
--- CONVT1
--- DJ1E
**** End of data ****
```

Figure 21. Scrolling further right on the member list

**Template data set**

Originating template data set for IMS view or criteria set.

---

## Template Import Utility panel

The Template Import Utility panel provides a means of importing external XML templates.

## Panel and field definitions

```

Process  Options  Help
-----
File Manager          Template Import Utility
Command ==>>> _____

XML Input:
Data set name . 'FMN.XML.EXAMPLE'
Member . . . . _____ (Blank or pattern for member list)

Import Template:
Data set name . 'FMN.IMP.EXAMPLE'
Member mask . . _____

Processing Options:
Enter "/" to select option          Enter "/" to select option
- Batch execution                    - Replace - No update
- Advanced member selection          - Skip member list

```

Figure 22. Template Import Utility entry panel

### (XML Input) Data set name (Required)

A fully qualified or generic data set name that is used to identify the XML input data set.

### Member

You can enter a member name, or pattern, or leave blank. If you select advanced member selection, then this name constitutes the first name on the member range panel.

### (Import Template) Data set name (Required)

A fully qualified or generic data set name that is used to identify the template data set where the imported templates is stored.

### Member mask

This is a rename mask and allows the exported templates to be stored under an alternative name.

Specify a pattern to rename members in the output partitioned data set based on the member names in the input partitioned data set. A member name pattern can consist of any characters that are valid in a member name and two special pattern characters: the asterisk (\*) and the percent sign (%).

\* A place-holding character that means multiple characters with no change. Only one asterisk should appear in the mask. Any subsequent asterisk characters are treated as percent signs. For example, if you enter ABC\* the renamed members all begin with "ABC" followed by the remainder of the old member name.

% A place-holding character that means a single character with no change. As many percent symbols as necessary may appear anywhere in a member name. For example, if you enter %%%A\* the first three characters of the renamed members remain unchanged, the fourth character is replaced with the letter "A", and the remainder of the old member name are unchanged.

### Batch execution

Allows you to edit batch JCL to run the function in batch.

## Template Import Utility panel

### Advanced member selection

Allows you to specify a range of members to be selected, rather than a specific or generic member name.

### Replace - No update

Replaces like-named members in an output partitioned data set. If this option is not selected and the member exists, it is updated with the XML template information.

### Skip member list

Runs without showing the member selection list. This option bypasses the member list panel and processes all the qualifying members.

---

## TPEXP (Export template to XML)

### Purpose

Export one or more templates to an XML format.

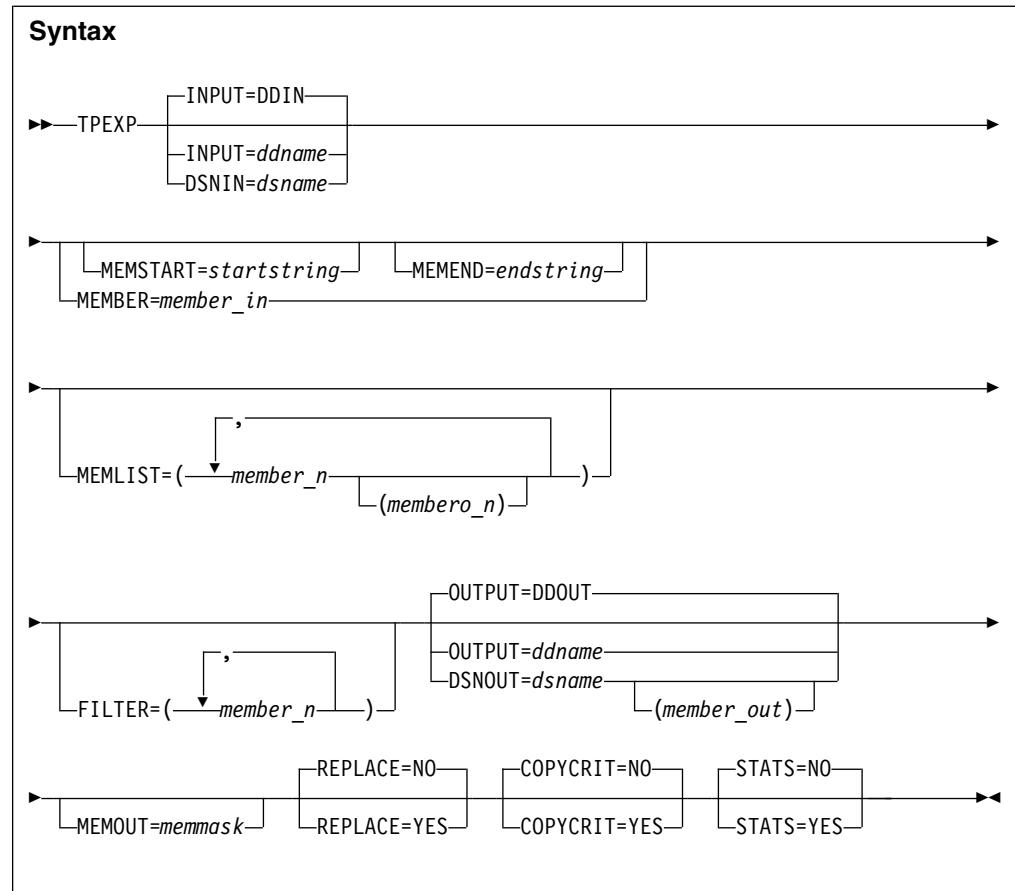
### Usage Notes

You can filter the templates selected for processing by providing a filter member names or member masks. This ensures for base or IMS templates built using copybooks that only templates that reference matching copybooks are selected for processing. For IMS views and criteria sets the filter is used to match the originating template name. Any other type of template is skipped if you provide a filter.

### Related functions

#### TPIMP

Template import

**INPUT=ddname**

This points to the input DD name which can have one or more associated data sets that must be valid template data sets. If you do not specify INPUT or DSN parameters, then the DD DDIN is used as a default DD name for the input data sets. You can specify concatenated data sets.

**DSNIN=dsname**

Data set name where templates reside.

**MEMBER=member\_in**

The name of a single member in a PDS, or a member name pattern representing one or more members in a PDS to be processed. A member name pattern can consist of any characters that are valid in a member name and two special pattern characters: the asterisk (\*) and the percent symbol (%).

\* represents any number of characters. As many asterisks as required can appear anywhere in a member name pattern. For example, if you enter a member name pattern of \*d\*, all members in the PDS whose name contains "d" are processed.

% is a place holding character that means a single character. As many percent symbols as necessary can appear anywhere in a member name pattern. For example, if you enter a member name pattern of %%%%, all members in the PDS whose name is four characters in length are processed. member\_in is ignored if the data set is not a PDS.

**MEMSTART=startstring**

Is used to specify the start of a range of member names to be included. If

## Function reference: TPEXP

MEMSTART is specified but MEMEND is omitted, all members of the PDS(E) from the startstring value onwards are included. startstring can have the same values, including wild cards, as for the member\_in parameter of the MEMBER keyword.

### **MEMEND=endstring**

Is used to specify the end of a range of member names to be included. If MEMEND is specified but MEMSTART is omitted, all members of the PDS(E) up to the endstring value onwards are included. endstring can have the same values, including wild cards, as for the member\_in parameter of the MEMBER keyword.

### **FILTER**

Allows you to specify a list of member names or patterns used to filter so that only templates referencing those copybooks, or copybooks that match the patterns for base and IMS templates built using copybooks. For IMS views and criteria sets the filter is taken to represent an originating template name. Any other type of template is skipped if a filter is specified.

### **MEMLIST**

Allows you to specify a list of member names with optional associated output XML template names. If you do not specify the output member name File Manager uses the input name or the name as identified by the MEMOUT mask, memmask.

### **member\_n**

The name of the member to be processed. Generic name masks are allowed.

### **membero\_n**

Exported member name If unspecified, the exported member is not renamed.

### **OUTPUT=ddname**

Identifies the DD card which points to the import template data set in which the exported template is/are stored or replaced. It must refer to a PDS, PDSE, or sequential data set.

### **DSNOUT=dsname**

Defines the data set name where exported templates are created/replaced. It must be a PDS, PDSE, or sequential data set. You can further describe this data set, as follows: (member-out) Where DSNOUT=dsname specifies a PDS and you want to send the output to a specific member within this data set, this defines the output member name.

### **MEMOUT=memmask**

Where a number of input members have been specified, you can specify a member name pattern for the exported templates, allowing you to rename your templates as they are created. The member name pattern can consist of any characters that are valid in a member name and two special pattern characters: the asterisk (\*) and percent sign (%).

#### **Asterisk (\*)**

The asterisk is a place-holding character that means multiple characters with no change. Only one asterisk should appear in the mask. Any subsequent asterisk characters are treated as percent signs. For example, if you enter ABC\* the renamed members all begin with "ABC" followed by the remainder of the old member name.

**Percent sign (%)**

The percent sign is a place-holding character that means a single character with no change. As many percent symbols as necessary may appear anywhere in a member name. For example, if you enter “%%A\*” the first three characters of the renamed members remain unchanged, the fourth character is replaced with the letter “A” and the remainder of the old member name remains unchanged.

**REPLACE**

Specifies whether or not File Manager replaces like-named templates in an output partitioned data set.

**NO** Like-named XML templates are not replaced.

**YES** Like-named XML templates in the output partitioned data set are replaced.

**COPYCRIT**

Specifies whether or not to limit the output XML to copybook definitions and criteria. This option is ignored when processing dynamic template as <symbol> elements are required to import a dynamic template.

**NO** All XML elements describing the template are produced.

**YES** XML is limited to the elements required to create the template and criteria.

**STATS**

Specifies ISPF member statistics are to be either created or updated by the export process.

**NO** Do not update or create ISPF statistics for the exported member(s).

**YES** ISPF statistics are updated or created for the exported member(s).

**Example:** Base export of all templates with member names starting with D through to members starting with C. The exported members are renamed to start with X.

```
//FMBAT EXEC PGM=FILEMGR
//SYSPRINT DD SYSOUT=*
//SYSIN DD *
$$$FILEM TPEXP DSNIN=FMN.TEMPLATE.EXAMPLE,
$$$FILEM MEMSTART=D*,
$$$FILEM MEMEND=C*,
$$$FILEM MEMOUT=X*,
$$$FILEM DSNOUT=FMN.XML.TEMPLATE,
$$$FILEM COPYCRIT=YES,
$$$FILEM STATS=YES,
$$$FILEM REPLACE=YES
```

It produces this report:

Template	Template	Export	Report	Status
	New name	Type		
DJ1E	XJ1E	IMS		Exported
DJ1ECR2	XJ1ECR2	IMS CRIT		Exported
DJ1EVW	XJ1EVW	IMS VIEW		Exported
CTEMP1	XTEMP1	BASE		Exported
CTEMPDYN	XTEMPDYN	DYNAMIC		Exported
CTEMP3	XTEMP3	BASE		Exported
FMNBA631 6 members read 6 Exported 0 Export replaced 0 Errors				

## Function reference: TPEXP

Table 2. Export status and action

Status	Explanation	Action
Exported	Template successfully exported to XML format.	None
Exported replaced	Template successfully exported to XML format and existing member replaced	None
Not replaced	Output member exists and REPLACE=NO is specified.	If you want to replace the member specify REPLACE=YES
Corrupt template	The input template could not be loaded because it is corrupt.	Recreate the input template and rerun the job.
Template allocate error	The input template data set could not be allocated, possibly not found.	Correct the input data set name and rerun the job.
Not found	The input member name could not be found on the input template data ser.	Correct the member name or data set name and rerun the job.
Unexpected error	There should be previous error messages describing the error that occurred.	Look at the preceding error messages and address accordingly

---

## TPIMP (Import template from XML)

### Purpose

Import one or more templates from an XML format.

### Usage Notes

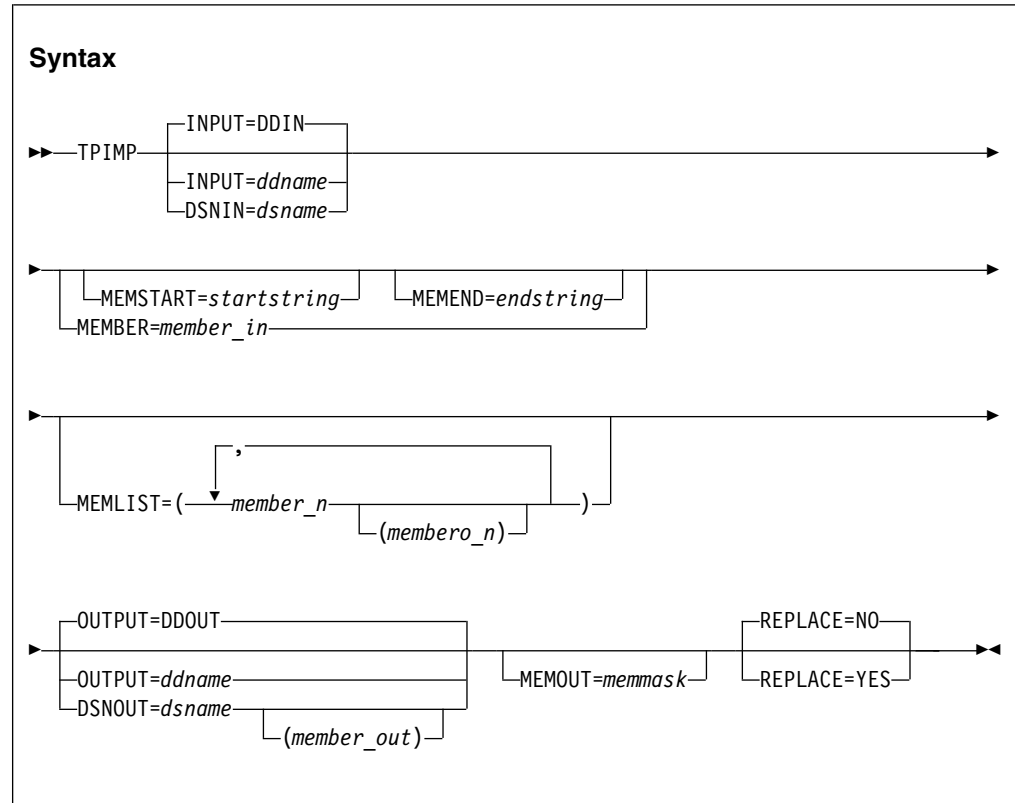
The executed program to import an IMS template, view or criteria set must be FMNIMS. The executed program to import a DB2 template must be FMNDB2. For DB2 templates you must specify the SSID on the execute PARM, and the DB2 object referred to in the XML <db2object> element must exist in the DB2 subsystem for the import to be successful.

### Related functions

#### TPEXP

Template export



**INPUT=ddname**

This points to the input DD name which can have one or more associated data sets that must be valid XML template data sets. If you do not specify INPUT or DSN parameters, then the DD DDIN is used as a default DD name for the input data sets. You can specify concatenated data sets.

**DSNIN=dsname**

Data set name where templates reside.

**MEMBER=member\_in**

The name of a single member in a PDS, or a member name pattern representing one or more members in a PDS to be processed. A member name pattern can consist of any characters that are valid in a member name and two special pattern characters: the asterisk (\*) and the percent symbol (%).

\* represents any number of characters. As many asterisks as required can appear anywhere in a member name pattern. For example, if you enter a member name pattern of \*d\*, all members in the PDS whose name contains "d" are processed.

% is a place holding character that means a single character. As many percent symbols as necessary can appear anywhere in a member name pattern. For example, if you enter a member name pattern of %%%%, all members in the PDS whose name is four characters in length are processed. member\_in is ignored if the data set is not a PDS.

**MEMSTART=startstring**

Is used to specify the start of a range of member names to be included. If MEMSTART is specified but MEMEND is omitted, all members of the

## Function reference: TPIMP

PDS(E) from the startstring value onwards are included. startstring can have the same values, including wild cards, as for the member\_in parameter of the MEMBER keyword.

### **MEMEND=endstring**

Is used to specify the end of a range of member names to be included. If MEMEND is specified but MEMSTART is omitted, all members of the PDS(E) up to the endstring value onwards are included. endstring can have the same values, including wild cards, as for the member\_in parameter of the MEMBER keyword.

### **FILTER**

Allows you to specify a list of member names or patterns used to filter so that only templates referencing those copybooks, or copybooks that match the patterns for base and IMS templates built using copybooks. For IMS views and criteria sets the filter is taken to represent an originating template name. Any other type of template is skipped if a filter is specified.

### **MEMLIST**

Allows you to specify a list of member names with optional associated output template names. If you do not specify the output member name File Manager uses the input name or the name as identified by the MEMOUT mask, memmask.

### **member\_n**

The name of the member to be processed. Generic name masks are allowed.

### **membero\_n**

Imported member name If unspecified, the imported member is not renamed.

### **OUTPUT=ddname**

Identifies the DD card which points to the import template data set in which the imported template is/are stored or replaced. It must refer to a PDS, PDSE, or sequential data set.

### **DSNOUT=dsname**

Defines the data set name where imported templates are created/updated. It must be a PDS, PDSE, or sequential data set. You can further describe this data set, as follows: (member-out) Where DSNOUT=dsname specifies a PDS and you want to send the output to a specific member within this data set, this defines the output member name.

### **MEMOUT=memmask**

Where a number of input members have been specified, you can specify a member name pattern for the imported templates, allowing you to rename your templates as they are created. The member name pattern can consist of any characters that are valid in a member name and two special pattern characters: the asterisk (\*) and percent sign (%).

#### **Asterisk (\*)**

The asterisk is a place-holding character that means multiple characters with no change. Only one asterisk should appear in the mask. Any subsequent asterisk characters are treated as percent signs. For example, if you enter ABC\* the renamed members all begin with "ABC" followed by the remainder of the old member name.

#### **Percent sign (%)**

The percent sign is a place-holding character that means a single

character with no change. As many percent symbols as necessary may appear anywhere in a member name. For example, if you enter %%%A\* the first three characters of the renamed members remain unchanged, the fourth character is replaced with the letter "A" and the remainder of the old member name remains unchanged.

**REPLACE**

Specifies whether or not File Manager replaces like-named templates in an output partitioned data set.

**NO** Like-named templates are updated with the XML definitions.

**YES** Like-named templates in the output partitioned data set are replaced.

**Example 1.** Base import of all template with member names beginning with a and renaming the output member names to all begin with Z.

```
//FMBAT EXEC PGM=FILEMGR
//SYSPRINT DD SYSOUT=*
//SYSIN DD *
$$$FILEM TPIMP DSNIN=FMN.XML.EXAMPLE,
$$$FILEM MEMBER=A*,
$$$FILEM MEMOUT=X*,
$$$FILEM DSNOUT=FMN.IMP.EXAMPLE,
$$$FILEM REPLACE=YES
```

It produces this report:

Template Import Report			
Template	New name	Type	Status
ABEND	XBEND	BASE	Import replaced
AODAO140	XODAO140	DYNAMIC	Import replaced
ASMTEST	XSMTEST	BASE	Import replaced
FMNBA635	3 members read 0 Imported 3		Import replaced 0 Errors

**Example 2.** Import an IMS template, criteria set and a view specifying member names

```
//FMBAT EXEC PGM=FMNIMS
//SYSPRINT DD SYSOUT=*
//FMIMSIN DD *
$$$FILEM SET HEADERPG=YES,PAGESIZE=60
$$$FILEM TPIMP DSNIN=FMN.XML.EXAMPLE,
$$$FILEM MEMLIST=(DJ1E,
$$$FILEM          DJ1ECR2,
$$$FILEM          DJ1EVW),
$$$FILEM DSNOUT=FMN.IMP.EXAMPLE,
$$$FILEM REPLACE=YES
```

It produces this report:

Template Import Report			
Template	New name	Type	Status
DJ1E		IMS	Import replaced
DJ1ECR2		IMS CRIT	Imported
DJ1EVW		IMS VIEW	Imported
FMNBA635	3 members read 2 Imported 1		Import replaced 0 Errors

## Function reference: TPIMP

Table 3. Import status and action

Status	Explanation	Action
Imported	Template successfully imported from XML format.	None
Import replaced	Template successfully imported from XML format and existing member replaced	None
Import updated	Template successfully imported from XML format and existing member updated.	None.
Not found	The input member name could not be found on the input template data ser.	Correct the member name or data set name and rerun the job.
Unexpected error	There should be previous error messages describing the error that occurred.	These are normally errors in the XML definitions. The error messages should indicate the failing line and reasons. Correct the XML and rerun the job. (See appendix nn for XML reference.

---

## Menus changed as a result of the XML API

This section displays existing menus that are updated to cater for the exporting and importing templates.

FM Option 7 menu has "5 Import" and "6 Export" added.

```
  _Process  _Options  _Help
-----
File Manager      Copybook and Template Utility functions
Command ==> -----
1 Workbench      Create, edit or update single templates
2 Print          View or print copybooks or templates
3 Build          Compile copybook(s) into template(s)
4 Update         Update template(s)
5 Import         Import template(s)
6 Export         Export template(s)
```

## Menus changed as a result of the XML API

F1 Option 4 menu has "7 Import" and "8 Export" added.

```

Process Options Help
-----
FM/IMS Template/View/Criteria Set Menu
Command ==>

1 Templates Create or update template
2 Views Create, edit, or update view
3 Criteria Sets Create, edit or update criteria set
4 Template update Update template(s) utility
5 View update Update view(s) utility
6 Criteria update Update criteria set(s) utility
7 Import Import template view or criteria
8 Export Export template view or criteria
```

F2 Primary Options Menu now has "7 Template" option added.

```

Process Options Help
-----
FM/DB2 Primary Option Menu SSID DFB2 not active
Command ==>

0 Settings Set processing options User ID . : USER1
1 View View DB2 object System ID : TSD3
2 Edit Edit DB2 object App1 ID . : FMN2
3 Utilities Perform utility functions Version . : 12.1.0
4 SQL Prototype, execute and analyze SQL Terminal : 3278
5 DB2I Start DB2 Interactive Screen . : 1
6 Command Enter and execute a DB2 Command Date . . : 2012/10/11
7 Template Template utilities Time . . : 16:01
X Exit Terminate FM/DB2

DB2 SSID . DFB2
SQL ID . . USER1
```

F2 option 7 is a new panel, with "1 Import" and "2 Export" options .

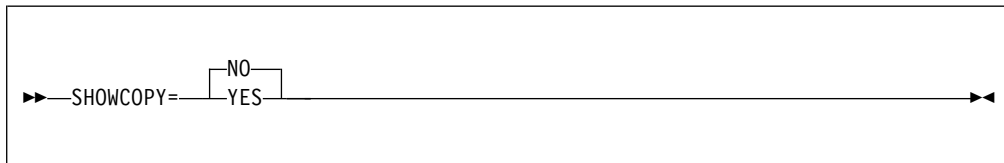
## Menus changed as a result of the XML API



## New customization option

There is one new customization option to cater for XML templates.

### SHOWCOPY



### SHOWCOPY

Specifies whether the copybook name for a record layout is made visible during template edit and for an edit, view or browse session where a copybook or template is being used.

**YES** The copybook name if applicable is visible.

**NO** The copybook name is not visible. The default is NO.

## Changed Compiler Language selection panel

In File Manager Base, the Compiler Language selection panel changes, to look like this:

```

Process Options Help
-----
File Manager          Compiler Language Selection

Language Selection:
Specify Default Compiler
4 1. COBOL           Use the COBOL compiler
 2. PL/I            Use the PL/I compiler
3. Auto detect      Determine which compiler to use
4. HLASM           Use the HLASM compiler

Processing Options:
Enter "/" to select option
/ Override compiler options for template update
- Preserve copybook library
- Show copybook name with record type field name

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

New option:

### Show copybook name with record type field name

Select this option to make the copybook name for a record layout visible during template edit and for an edit, view or browse session where a copybook or template is being used.

**Note:** For the editor session where the layout name is specified it is prefixed with the name of the associated copybook. This may cause the layout name to be truncated, depending on its length.

The same update applies to the Compiler Language panel in FM/DB2 and FM/IMS.

## Appendix nn. XML definitions for a template

Table 4. XML definitions for a template

Lvl	Element	Attribute	Type	Description
1	template	lang	BASE IMS	For templates derived from copybooks.  Values: <ul style="list-style-type: none"> <li>• COBOL</li> <li>• PLI</li> <li>• ASM</li> </ul>

## XML definitions for a template

Table 4. XML definitions for a template (continued)

Lvl	Element	Attribute	Type	Description
		type	All	Type of template.  Values: <ul style="list-style-type: none"> <li>• BASE</li> <li>• IMS</li> <li>• IMSVIEW</li> <li>• IMSCRIT</li> <li>• DB2</li> <li>• DYNAMIC</li> </ul>
		segmented	BASE	Applies to base templates only and is a Boolean value to indicate the template is segmented or not.  Values: <ul style="list-style-type: none"> <li>• 0</li> <li>• 1</li> <li>• true</li> <li>• false</li> </ul>
2	describe		all	This is a template description. You can provide up to five occurrences of this element and it equates to five description lines. Maximum length is 54 characters per description line.
2	db2object		DB2	This is the DB2 object in the form owner.name.objectname.
2	ssid		DB2	This is the four character DB2 subsystem. This value has no effect for import which uses the SSID of the DB2 session for which it is run.
2	db2rel		DB2	The DB2 release for the template object. This is for information purposes only.
2	dbd		IMS IMSVIEW IMSCRIT	This is the DBD name. It is used as the originating template name for view and extract criteria, when an import is being performed.
2	imstp		IMS IMSVIEW IMSCRIT	This is the IMS template data set name. This overrides the default template data set names provided in the options when importing a view or extract criteria.
2	dbdlib		IMS IMSVIEW IMSCRIT	This is the IMS DBDLIB that is used to build the IMS template. You can specify this element up to six times to provide more than one DBD library to be searched.
2	relcrit	max	IMSCRIT	Relation criteria definitions.  max="mmm" Integer  Enter a number to be used as the default maximum number of target database records to be selected per source database record for the listed logical and application relationships.  If you do not specify, there is no default maximum selections per database record.



Table 4. XML definitions for a template (continued)

Lvl	Element	Attribute	Type	Description
		sel		Boolean Values: 1 Selected 0 Not selected
3	reldb	name		name="DBD name" Source DBD name
		seg		seg="segment name" Source Segment
		targ		targ="DBD name" Target DBD name
		bidir		Boolean and appears on export (bidir="1") if the relationship is bidirectional.
		sel		Boolean Values: 1 Selected 0 Not selected
		max		max="nmm" Integer  Enter a number to be used as the maximum number of target database records to be selected per source database record for the listed logical and application relationships.  If you do not specify, the relcrit max value is used if specified. If both are unspecified then there is no limit. It is recommended that a value of 2 or 3 is used for bidirectional logical relationships.
2	cset	subset	IMSCRIT	Criteria set subset number.
		sel	IMSCRIT	Boolean. Values: 1 Selected 0 Not selected
		desc	IMSCRIT	Optional description.
2	copybooks		BASE IMS	Group element for copybook definitions.
3	library			Data set name where a copybook can be found. This element can be repeated up to 12 times.
3	syslib			Data set name where nested copybooks can be found. This element can be repeated up to ten times.
3	member	name		Copybook member name.
		lib		This specifies the library element number from which this copybook must be taken. If not specified the first occurrence in the library data sets specified.
		name01		01 name to be inserted by File Manager.
		segname	IMS only	Associated IMS segment name.
4	segdesc		IMS only	Segment description.

## XML definitions for a template

Table 4. XML definitions for a template (continued)

Lvl	Element	Attribute	Type	Description
4	redefine	offset		Boolean. Set to "1" to tell File Manager to automatically adjust the offset value for each layout so that the starting location is the redefines, union or org field start location.
		chglvl		<p>Boolean. Set to "1" if required. COBOL level change.</p> <p>This is a COBOL ONLY option which changes the way the level value (specified below) is processed. If you set this option then every occurrence of the specified level value is changed to 01 before the compile step, irrespective of whether the data item has a redefines clause. This option should be used with care as it may result in incorrect offsets to data items, or compile errors as the structure is changed from its intended programmable form.</p>
		level		<p>Source level value that is used to identify redefines or union level clauses that are to generate new record layouts.</p> <p>This value is used when you have a structure that has defined multiple layouts using COBOL redefines or PL/I unions. File Manager creates a separate record layout or each redefines clause at the given level. After the first matching redefines is found, File Manager creates new layouts for the next and subsequent redefines for the same level and start location. Header and trailing data items are included in each record layout. This field is ignored for Assembler copybooks.</p>
		name		<p>Field Name: This specifies the target field name of the redefines (COBOL), Union (PL/I) or ORG (Assembler) clause.</p> <p>File Manager uses this value to determine the redefines, union or org statements that are to be represented in a new layout. This is an alternative way of identifying redefines, union and org statements that require new layouts to be generated. You can specify both Level and Field name values and File Manager checks both when generating new layouts.</p>
4	sourcerange	fromstr		From string. File Manager searches each source statement for the specified string. The first statement with a matching string starts the extract process. If the From statement is specified (not the default value), then it is used if the string is not found first.

## XML definitions for a template

Table 4. XML definitions for a template (continued)

Lvl	Element	Attribute	Type	Description
		tostr		To string. File Manager searches each source statement for the specified string. The first statement with a matching string ends the extract process. If the To statement is specified, then the first statement that matches either the To statement value or contains the To string ends the extract.
		fromstmt		From Statement: Start source line number. This tells File Manager the starting statement for extract. If not specified the default start location is statement 1.
		tostmt		To Statement: End source line number. This tells File Manager the ending statement for extract. If not specified the default end location is the last source statement.
3	cobol	dbcs	BASE IMS	Boolean. Set DBCS="1" if the DBCS COBOL compiler option is required.
		maxrc		Maximum acceptable compiler RC, 0-20.
		mixedcase		Boolean. Set mixedcase="1" to retain the original case of the field name as coded in the COBOL copybooks. This feature is only available if you are running with the File Manager COBOL compiler or a minimum compiler level of Enterprise COBOL V4R1.
		dpc		Boolean. Set dpc="1" to use the Decimal-point is comma SPECIAL-NAMES paragraph when compiling COBOL copybooks.
		arith		Boolean. Set arith="1" to use the Arith(extend) COBOL compile option when compiling COBOL copybooks.
4	replace			Group element to provide COBOL replacing strings.
5	repfrom			COBOL replace from string. There should be a matching repto element. Up to five replace from elements supported
5	repto			COBOL replace to string. Should be one for every repfrom string specified.
4	cbladdop			Additional COBOL compiler options which is added via the CBL statement when a COBOL compile is run to build or update a template. These options are validated during the compile process. To avoid compile errors please ensure the syntax is correct and that any additional data sets required by these options are allocated prior to invoking File Manager. Do not exceed 50 bytes. <cbladdop>compiler options</cbladdop>
3	pli	graph	BASE IMS	Boolean. Set graph="1" to use the GRAPHIC PL/I compiler option.
		maxrc		Maximum acceptable compiler RC: 0-20.

## XML definitions for a template

Table 4. XML definitions for a template (continued)

Lvl	Element	Attribute	Type	Description
		bin63		Boolean. Set bin63="1" to use the LIMITS(FIXEDBIN(63)) PL/I compiler option.
		fixdec		Boolean. Set fixdec="1" to use the LIMITS(FIXEDDEC(31)) PL/I compiler option.
		unalign		Boolean. Set unalign="1" to add the statement DEFAULT RANGE(*) UNALIGNED;. This changes the default for structure alignments.
4	pliaddopp			Additional PL/I compiler options which are added via the *PROCESS statement when a PL/I compile is run to build or update a template. These options are validated during the compile process. To avoid compile errors please ensure the syntax is correct and that any additional data sets required by these options are allocated prior to invoking File Manager. Do not exceed 50 bytes. <pliaddopp>compiler options</pliaddopp>
3	asm	dbcs	BASE IMS	Boolean. Set ducs="1" to use the DBCS assembler compiler option.
		noalign		Boolean. Set noalign="1" to use the NOALIGN assembler compiler option.
4	asmaddopp			Additional HLASM compiler options which are added via the *PROCESS statement when a assembler is run to build or update a template. These options are validated during the assembly process. To avoid assembly errors please ensure the syntax is correct and that any additional data sets required by these options are allocated prior to invoking File Manager. Do not exceed 50 bytes. <asmaddopp>compiler options</asmaddopp>
2	layout	name	Not DB2	01 layout name - not applicable to DB2 templates
		copybook	BASE IMS	The name of the copybook where this 01 layout originated.
		sel	Not DB2	Boolean. The default value is "1". Specify sel="0" to deselect the layout.
		segment	IMS IMSVIEW IMSCRIT	Segment name
		segssel	IMS IMSVIEW IMSCRIT	Boolean. The default value is "1". This is segment selection - it only has value when used for Views and Criteria sets - Typically you can use this to turn off segment selection by setting segssel="0".
		offset	not DB2	offset="nnnn" The default value is 0. The start location of all fields in the layout is adjusted by the value provided, which must be in the range -32760 to 32760.

## XML definitions for a template

Table 4. XML definitions for a template (continued)

Lvl	Element	Attribute	Type	Description
3	criteria	type	Not DB2	Specify: <b>type="ID"</b> Identification criteria <b>type="SEL"</b> Selection criteria <b>type="RID"</b> Related identification criteria
		byfield		Boolean. The default value is "0". Specify byfield="1" if expressions are specified using byline elements as opposed free format. <exp>expressions</exp> values are ignored if you specify byfield="1".
		or	segmented	Boolean. The default value is "0" Specify or="1" to OR this criteria with related 01 criteria.
		rname	segmented	The name of related 01 layout. This is only valid if type="RID" is also specified.
		cset	IMSCRIT	cset=nnn The subset number this criteria belongs to. The subset number is defined on the cset element subset attribute described above.
4	exp		ALL	This is a free format expression or a where clause for DB2 templates. Note: As expressions generally contain special XML characters it is advisable to specify using CDATA as follows: <exp><![CDATA[ my expression]]></exp>
4	byline		ALL	Use the byline and child elements to describe your expression by field. The elements described here map to the by field representation entered through the ISPF interface to provide an expression by field. byfield="1" must be specified on the layout to specify these elements.
		seq		This is the sequence number starting from 1 and incrementing by 1 for each subsequent byline.
		lparen		Specify lparen="(" to insert a left parenthesis before the expression defined by this element.
		rparen		Specify rparen=")" to insert a right parenthesis after the expression defined by this element
		conn		How this expression is to be connect to subsequent expressions. Specify conn="AND" or conn="OR".
		name		The name of the field this expression is to use as the left hand side operand.

## XML definitions for a template

Table 4. XML definitions for a template (continued)

Lvl	Element	Attribute	Type	Description
5	oper		not DB2	The arithmetic relational operation. See the operators described for the dynamic template panel in this manual for a full description. As operators generally contain special XML characters it is advisable to specify using CDATA as follows: <oper><![CDATA[ < ]></oper>
	oper2		DB2	This is the DB2 operator as described in the <i>FM/DB2 Users Guide</i> , see "Row Selection Criteria" and the supported operators.  As operators generally contain special XML characters it is advisable to specify using CDATA as follows: <oper2><![CDATA[ < ]></oper2>
	byval		ALL	This specified the right hand or second operand which must be a valid value for the specified operator and field or column referenced.  It must not exceed 255 characters.
3	symbol		all	This element, with its attributes and child elements are used to specify the formatting, create, scrambling and for dynamic templates the field definition itself.
		name		This is the field or column name.
		sel		Boolean. The default value is "1". Specify sel="0" to deselect the column or field.
		seq	not DB2	This is a number representing the display order. Lowest number appears first. For example, seq="1".
		hold		Boolean. The default value is "0". Specify hold="1" if you want this field or column to be held in a edit, view or browse session.
		lzero		Boolean. The default value is "0". Specify lzero="1" for numeric fields where the formatting is to include leading zeros
		width		Numeric. This specified an alternate display width for "TABL" formatting of the data.  For example, width="10" sets a display width of 10.
		start	dynamic	Defines the start column for a field definition in a dynamic template.
		length	dynamic	Defines the length for a field definition in a dynamic template
		type	dynamic	Defines the type of field. See the types described for the dynamic template panel in this manual for a full description.

Table 4. XML definitions for a template (continued)

Lvl	Element	Attribute	Type	Description
		keyseq		Integer. keyseq='nnnn'  Specify this value to provide a key sequence number used to define the composite key field for data set comparison.
		db2ord	DB2	Integer. db2ord='nnnn'  This is a sequence number for DB2 templates that indicates how to order the data based on the data values for the column, when the data is retrieved from DB2.
		db2AD	DB2	Integer. Ascending or Descending indicator. (db2AD="A")  This is only valid when db2ord is specified and indicates whether the data retrieved from DB2 is to be in A(ascending) or D(descending) order.
		ref		Integer.  This is the field or column reference number and is used to identify the field. <b>Note:</b> A field can also be identified by the name="field name". If this value is provided it takes precedence in identifying the field or column.
4	heading		ALL	Alternate heading <heading>Myfield name</heading>
4	lenfld		segmented	Tells us that the associated parent symbol is a length field for determining the length of the actual segment. This element should only be provided once for any given layout.
		excl		Boolean. Default value is "0". Specify excl="1" to say the length of the segment is the length provided in this field plus the length of the field.  If not specified or "0" then the length of the segment is the length value provided in this field.

## XML definitions for a template

Table 4. XML definitions for a template (continued)

Lvl	Element	Attribute	Type	Description
4	createN	start	ALL	<p>The default value is 0. Start="nnnn", where nnn is numeric.</p> <p>Specifies the initial value you want a field to contain, before being adjusted by the increment you specify. The value must be a number that, when converted to the appropriate numeric data type, the field can hold, and, for a field with decimal places, must not specify more decimal integers than the number of decimal places in the field definition.</p> <p>If you specify a negative number, the sign is honored, even if the field is unsigned.</p> <p>If the field is a floating-point field, the start value can be specified as a floating-point number consisting of a mantissa and an exponent (such as -1.14579E01). The mantissa consists of an optional sign (+ or -) followed by 1 to 16 digits. The mantissa can also contain a decimal point. The exponent consists of the letter E, an optional sign (+ or -), and 1 or 2 digits.</p>
		end		<p>The default value is the largest positive or negative number the field can contain. end="nnnn"</p> <p>Specifies the maximum value (if the increment is a positive number) or minimum value (if the increment is a negative number) you want a field to contain. See rules for start attribute in specifying the number.</p>
		inc		<p>The default value is 0. inc="nnnn"</p> <p>Specifies a positive or negative number by which you want the value in the field adjusted for each record (or cycle of records). See rules for start attribute in specifying the number.</p>
		cycle		<p>The default value is 1. cycle="nnnn"</p> <p>Specifies the number of output records that are to be generated before the increment value is applied to the field value. For example, if you specify a field start value of 100, an increment value of 10, and a cycle value of 3, the field in the first three records contains 100, 110 in next three records, 120 in the next three records, and so on.</p> <p>If cycle is zero, the value in the field is always set to the start value.</p>



Table 4. XML definitions for a template (continued)

Lvl	Element	Attribute	Type	Description
4	createDT	value	DB2	<p>createdt="dd/mm/yy etc"</p> <p>Specify a date value to be used when creating a new row. The creation attribute is only used for those functions where FM/DB2 is to create rows, for example the create utility. You can specify a date value in the same format shown in the Format field. You can specify an = to indicate that the current date is to be used. When you specify this the current value is retrieved and replaces the = in the field. The value retrieved is a constant, so that if a create utility is run later, the same value is always used to populate the column.</p> <p>You can specify * to indicate that the current date when the row is created should be used to populate the column. Specifying * indicates a variable value for the column when a create utility is run, since the value is the date on which the create utility is executed.</p>
		inc		<p>inc="nnnn"</p> <p>Specify an increment value to be used when creating multiple rows. Valid values are integers. A value of 1 indicates that each subsequent row should have a date value one day later than the previous date value. A value of -1 indicates that each subsequent row should have a date value one day earlier than the previous date value.</p>
4	createC		ALL	Use this to populate field with various patterns.
		act		Action. Specifies how the contents of the field are to be varied for each record. For more information. For example, act="FX". For details of each action, see "Options for "act"" on page 134.
		repeat		<p>The default is NO. repeat="YES"</p> <p>Repeat user pattern. Specify YES if you have provided a user-supplied pattern that is shorter than this field and you want the pattern to be repeated as many times as necessary to fill the field. By default, File Manager uses the fill character to pad the receiving field when the user-supplied pattern is shorter than the field. This option has no effect when the RA action is specified.</p> <p>IBM-supplied patterns are always repeated in a field, as necessary.</p>

## XML definitions for a template

Table 4. XML definitions for a template (continued)

Lvl	Element	Attribute	Type	Description
5	filler		ALL	<p>&lt;filler&gt;cccc&lt;/filler&gt;</p> <p>Specifies a value that is to be placed in each byte of the field before any other operation in the construction of the field. Can be one of:</p> <p><b>char</b> A character such as 0 to be written in each byte.</p> <p><b>X'cc'</b> A hexadecimal value, such as X'FF' to be written in each byte.</p>
5	start			<p>&lt;start&gt;cccc&lt;start&gt;</p> <p>Start character</p> <p>Sets the starting character to be used when you specify an IBM-supplied pattern (AL, AN, or CO) or a user-supplied pattern (with the exception of RO, WV, and FX). The specified character must be one of the characters in the IBM-supplied pattern or user-supplied pattern.</p> <p>Default: First character in IBM-supplied pattern or user-supplied pattern.</p>

Table 4. XML definitions for a template (continued)

Lvl	Element	Attribute	Type	Description
5	pattern			<p>&lt;pattern&gt;cccc&lt;/pattern&gt;</p> <p>Specifies the pattern to be used when generating data for this field. You can specify either an IBM-supplied pattern indicator or a user-supplied pattern. The user-supplied pattern can be either a character string or a hexadecimal string. A character string must be enclosed in quotes, while a hexadecimal string must be enclosed in quotes and be preceded by a X. The hexadecimal string must contain an even number of valid hexadecimal characters. The IBM-supplied patterns you can specify are:</p> <p><b>AL</b>     Alphabetic - characters A-Z, inclusive.</p> <p><b>AN</b>     Alphanumeric - characters A-Z, 0-9 inclusive.</p> <p><b>AX</b>     Alphanumeric displayed in long hexadecimal.</p> <p><b>CO</b>     Collating sequence - all printable characters in the range X'40' - X'F9'.</p> <p>If you provide a user-supplied pattern that is longer than the field, for actions other than RA and RP the pattern is first truncated on the right to fit the receiving field before the specified action is performed. For the RA action, characters are randomly selected from the entire user-supplied pattern. For the RP action, the entire pattern is rippled for each record before it is truncated to fit the receiving field. If you provide a user-supplied pattern that is shorter than the field, you can specify that you want the pattern to be repeated to fill the field.</p> <p>Default: None</p>
4	scramble		ALL	Use the scramble element to specify all the scrambling type options for the associated parent symbol.

## XML definitions for a template

Table 4. XML definitions for a template (continued)

Lvl	Element	Attribute	Type	Description
		type		<p>For example, type="1" Scramble Type. Specify one of these values:</p> <p><b>Blank</b> No scrambling is performed.</p> <p>Value or range specifications are saved but ignored for the associated function.</p> <p><b>1 (Random)</b> Performs random scrambling.</p> <p>The same input value produces different output values on subsequent invocations.</p> <p><b>2 (Repeatable)</b> Performs repeatable scrambling.</p> <p>The same input value produces the same output value on subsequent invocations.</p> <p><b>3 (Translate)</b> Performs translation.</p> <p>The value data set is searched to find a matching input value. If a match is found, then the output value is taken from the output column of the matching record.</p> <p><b>4 (Exit)</b> Invokes a scrambling user exit.</p> <p>File Manager displays a panel where you can specify the user exit name and user exit parameters and options.</p>
5	translate	incol		<p>incol="nnn"</p> <p>Defines the start location of the input field value on the value data set, and is used when the translate process is run during a copy operation to match the input field with a value on the value data set. The length of the field is set to the length of the input field that is mapped to this field during the copy process.</p>

Table 4. XML definitions for a template (continued)

Lvl	Element	Attribute	Type	Description
		outcol		<p>outcol="nnn"</p> <p>Defines the start location of the output field value on the value data set, and is used as follows during a copy operation:</p> <p><b>For scramble type Translate</b> If an input field value is matched on the value data set, then the corresponding output value is used.</p> <p><b>For scramble types Random or Repeatable</b> The input value is used to randomly or repeatably select an output value from the value data set.</p> <p>The length of the field is the current field length as displayed on this panel.</p> <p>This value is required when you select the scramble type Translate. If you select Random or Repeatable, and also select Value, then the start location defaults to 1 if a value data set name (Dsn) has been provided.</p>
		dsn		<p>dsn="data set name"</p> <p>Defines the value data set. It can be any catalogued sequential, partitioned or VSAM data set containing data that is used to determine the output field value during a copy process.</p>
5	range			<p>This restricts scrambling values to a range of numbers between the min and max values provided on the attributes. You must provide a min and max value</p>
		min		<p>Minimum value. Must be less than the maximum value and greater than or equal to -2GB.</p>
		max		<p>Maximum value. Must be greater than the minimum value and less than or equal to 2GB</p>
5	value	outcol		<p>outcol="nnn"</p> <p>Defines the start location of the output field value on the value data set, and is used as follows during a copy operation:</p> <p><b>For scramble type Translate</b> If an input field value is matched on the value data set, then the corresponding output value is used.</p> <p><b>For scramble types Random or Repeatable</b> The input value is used to randomly or repeatably select an output value from the value data set.</p>

## XML definitions for a template

Table 4. XML definitions for a template (continued)

Lvl	Element	Attribute	Type	Description
		dsn		dsn="data set name"  Defines the value data set. It can be any cataloged sequential, partitioned or VSAM data set containing data that is used to determine the output field value during a copy process.
6	sval			<sval>field value</sval>  The values you provide are randomly or repeatably selected depending on your scrambling option to populate the output field during the scrambling operation. The field value must be valid data for the associated parent symbol.
5	exitprog	name	all	Enter a 1 to 8 character valid load module member name to identify the scramble exit that is invoked during a copy operation for this output field. Any exit you provide must be in the form of a load module, in any load library available to File Manager at the time of the copy process, either by a STEPLIB DD statement, or in LINKLIST, or LPALIST.
		parm		You can specify a constant value that is passed to the exit for each call type by entering a non blank value in this field.
		format		Boolean. Default value is "0". Specify format="1" to format the field value passed to the exit as display numeric with leading zeros suppressed.
		lzero		Boolean. Default value is "0". Specify lzero="1" to format the field value passed to the exit as display numeric with leading zeros.

### Options for "act"

Here are the possible values for "act" (which specifies how the contents of the field are to be varied for each record):

- FX** The contents of the field are to remain fixed.
- RA** The contents of the field are to be generated from characters selected at random from the specified pattern. A different set of characters is selected for each record.
- RO** The contents of the field are to be rolled. The pattern you specify is shifted left one byte for each record until the first non-blank character of the pattern is in the first byte of the field. Then, the pattern is shifted right one byte for each output record until it returns to its original position in the field. RO can only be used with a user-supplied pattern, not with an IBM-supplied pattern.

The pattern must start with a blank, or the result is the same as FX. The roll only occurs within the length of the pattern.

- RP** The contents of the field are to be rippled. The pattern you specify is shifted left one byte for each record and the truncated character is appended to the right hand end of the pattern.
- SL** The contents of the field are to be shifted left for each record. The pattern you specify is shifted left one character and filled to the right with a space. When all characters in the pattern have been shifted out, the original pattern is restored and the process is repeated.
- SR** The contents of the field are to be shifted right for each record. The pattern you specify is shifted right one character and filled to the left with a space. When all characters in the pattern have been shifted out, the original pattern is restored and the process is repeated.
- TL** The contents of the field are to be truncated on the left for each record. The pattern you specify is left truncated (the leftmost character replaced with a space) one character at a time until all characters in the pattern have been truncated. Then, the original pattern is restored and the process is repeated.
- TR** The contents of the field are to be truncated on the right for each record. The pattern you specify is right truncated (the rightmost character replaced with a space) one character at a time until all characters in the pattern have been truncated. Then, the original pattern is restored and the process is repeated.
- WV** The contents of the field are to be waved. The pattern you specify is shifted left one byte for each record until the first non-blank character of the pattern is in the first byte of the field. Then, the original pattern is restored and the process repeated. WV can only be used with a user-supplied pattern, not with an IBM-supplied pattern.
- The pattern must start with a blank, or the result is the same as FX. The roll only occurs within the length of the pattern.

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## Messages

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### FMNBA191 Invalid element

**Explanation:** The File Manager XML parser has detected one of the following:

- Invalid XML where it was expecting to find an element definition.
- An element definition that isn't valid for the current XML schema.

**User response:** None.

**Programmer response:** This message is followed by FMNBA665 or FMNBA666 and FMNBA667, which display the line number and line text where the error occurred. Correct the XML input and retry.

---

### FMNBA192 Invalid attribute for element <&ELEM>

**Explanation:** The File Manager XML parser has detected one of the following:

- Invalid XML where it was expecting to find an attribute definition.

- An attribute definition that isn't valid for the current XML schema.

**User response:** None.

**Programmer response:** This message is followed by FMNBA665 or FMNBA666 and FMNBA667, which display the line number and line text where the error occurred. Correct the XML input and retry.

---

### FMNBA193 Duplicate attribute &ATTR specified for element &ELEM

**Explanation:** The attribute &ATTR has been specified more than once for element &ELEM at the offset &nn.

**User response:** None.

**Programmer response:** This message is followed by FMNBA665 or FMNBA666 and FMNBA667, which display the line number and line text where the error occurred. Correct the XML input and retry.

---

### FMNBA194 End tag missing for element &ELEM

**Explanation:** Invalid XML - the expected end tag was not specified for element &ELEM.

**User response:** None.

**Programmer response:** This message is followed by FMNBA665 or FMNBA666 and FMNBA667, which display the line number and line text where the error occurred. Correct the XML input and retry.

---

**FMNBA195 End tag invalid for element &ELEM**

**Explanation:** Invalid XML - an incorrect endtag for the specified element was found.

**User response:** None.

**Programmer response:** This message is followed by FMNBA665 or FMNBA666 and FMNBA667, which display the line number and line text where the error occurred. Correct the XML input and retry.

---

**FMNBA196 Invalid data beyond final end tag**

**Explanation:** Invalid XML - data found beyond final end tag.

**User response:** None.

**Programmer response:** This message is followed by FMNBA665 or FMNBA666 and FMNBA667, which display the line number and line text where the error occurred. Either the length of the XML or XML sent is in error. Correct the XML input and retry.

---

**FMNBA197 Severe internal error processing XML**

**Explanation:** This message is preceded by other messages that indicate what the severe error was. This is most likely to be an insufficient memory issue.

**User response:** None.

**Programmer response:** This message is followed by FMNBA665 or FMNBA666 and FMNBA667, which display the line number and line text where the error occurred. Analyse the preceding messages and action appropriately. You may need to contact your IBM support centre.

---

**FMNBA198 Data around error: '&DATA'**

**Explanation:** This is an informational message to display the XML where the error was detected. It is followed by FMNBA199 which has a vertical bar to the current position the parser was processing when the error occurred.

**User response:** None.

**Programmer response:** This message is followed by FMNBA199 which indicates where the error occurred. Analyse the preceding messages and action appropriately. You may need to contact your IBM support centre.

---

**FMNBA199 Error occurred: '&DATA'**

**Explanation:** This informational message follows the FMNBA198 message to indicate the exact location of the error.

**User response:** None.

**Programmer response:** This message is preceded by FMNBA198, which displays data around where the error occurred. Analyse the preceding messages and action appropriately. You may need to contact your IBM support centre.

---

**FMNBA230 Invalid element <&ELEM.> value: &VAL**

**Explanation:** Either an attribute value or the data value for the specified element are invalid.

**User response:** None.

**Programmer response:** This message is followed by FMNBA665 or FMNBA666 and FMNBA667, which display the line number and line text where the error occurred. It may be preceded by messages giving more detail as to the specific problem. Correct the XML input and retry.

---

**FMNBA231 Invalid CDATA ']]>' missing <&ELEM.>**

**Explanation:** A CDATA tag has been provided but no end CDATA string was found.

**User response:** None.

**Programmer response:** This message is followed by FMNBA665 or FMNBA666 and FMNBA667, which display the line number and line text where the error occurred. Correct the XML input and retry.

---

**FMNBA232 Child element <&ELEM.> with wrong parent**

**Explanation:** The element specified is a child element, but has been specified with the wrong parent element.

**User response:** None.

**Programmer response:** This message is followed by FMNBA665 or FMNBA666 and FMNBA667, which display the line number and line text where the error occurred. Correct the XML input and retry.

---

**FMNBA233 <&ELEM.> not specified**

**Explanation:** A required element has not been specified.

**User response:** None.

**Programmer response:** This message is followed by FMNBA665 or FMNBA666 and FMNBA667, which display the line number and line text where the error occurred. Correct the XML input and retry.



---

**FMNBA234** Library number &no exceeds number of <library> elements

**Explanation:** A <member lib="&no" ...> value has been specified where the library number exceeds the number of <library>data set name </library> value provided previously.

**User response:** None.

**Programmer response:** This message is followed by FMNBA230 to identify the element, and by messages FMNBA665 or FMNBA666 and FMNBA667 which display the line number and line text where the error occurred. Correct the XML input and retry.

---

**FMNBA235** Attribute &ATTR invalid value &VAL

**Explanation:** The attribute value specified is invalid for the current element.

**User response:** None.

**Programmer response:** This message is followed by FMNBA230 to identify the element, and by messages FMNBA665 or FMNBA666 and FMNBA667 which display the line number and line text where the error occurred. Correct the XML input and retry.

---

**FMNBA236** Template could not be updated - criteria would be lost

**Explanation:** During template editing an update was requested by providing the <copybooks> ... </copybooks> tags. The copybooks provided deleted fields that were referenced previously in criteria in the template and the template cannot be updated without this criteria information being lost.

**User response:** None.

**Programmer response:** Change the template to remove the field references that have been deleted in the latest version of the copybooks or change the copybooks to include the required field references and retry the update. Alternatively you can specify the REPLACE=YES option to override the existing template.

---

**FMNBA237** id attribute not specified or invalid symbol number - &ID

**Explanation:** The <layout> id attribute is either missing or the value specified is not a valid 01 symbol reference number in the template.

**User response:** None.

**Programmer response:** This message is followed by FMNBA230 to identify the element, and by messages FMNBA665 or FMNBA666 and FMNBA667 which display the line number and line text where the error occurred. Correct the XML input and retry.

---

**FMNBA238** related01="&ID." attribute specified invalid symbol number

**Explanation:** The related01 attribute specifies a value that is not a valid 01 symbol reference number in the template for related ID. A related 01 must be a symbol reference of an 01 layout other than the current layout.

**User response:** None.

**Programmer response:** This message is followed by FMNBA230 to identify the element, and by messages FMNBA665 or FMNBA666 and FMNBA667 which display the line number and line text where the error occurred. Correct the XML input and retry.

---

**FMNBA239** type attribute not specified or invalid - &TYPE

**Explanation:** The <criteria > tag has been specified without the required type attribute or the type attribute does not specify one of the following values: ID, RID or SEL.

**User response:** None.

**Programmer response:** This message is followed by FMNBA230 to identify the element, and by messages FMNBA665 or FMNBA666 and FMNBA667 which display the line number and line text where the error occurred. Correct the XML input and retry.

---

**FMNBA240** byfield="1" required for dynamic template

**Explanation:** The <criteria > tag must specify byfield="1" attribute value for a dynamic template.

**User response:** None.

**Programmer response:** This message is followed by FMNBA230 to identify the element, and by messages FMNBA665 or FMNBA666 and FMNBA667 which display the line number and line text where the error occurred. Correct the XML input and retry.

---

**FMNBA241** Only type="SEL" allowed for dynamic template.

**Explanation:** The <criteria> tag must specify type="SEL". Any other type value is invalid.

**User response:** None.

**Programmer response:** This message is followed by FMNBA230 to identify the element, and by messages FMNBA665 or FMNBA666 and FMNBA667 which display the line number and line text where the error occurred. Correct the XML input and retry.

---

**FMNBA242 Expression exceeds allowable length.**

**Explanation:** The specified expression causes the template segment block to exceed the maximum allowed 32760 bytes.

**User response:** None.

**Programmer response:** Reduce the expression length. This message is followed by FMNBA230 to identify the element, and by messages FMNBA665 or FMNBA666 and FMNBA667 which display the line number and line text where the error occurred. Correct the XML input and retry.

---

**FMNBA243 Expression error around offset &nn.**

**Explanation:** The specified expression is invalid. The offset provided is the byte location into the expression where the error was detected.

**User response:** None.

**Programmer response:** Check any preceding error message and correct the expression. This message is followed by FMNBA230 to identify the element, and by messages FMNBA665 or FMNBA666 and FMNBA667 which display the line number and line text where the error occurred. Correct the XML input and retry.

---

**FMNBA244 Symbol ref=&REF is invalid for current layout - Should be in range &LOW to &HIGH.**

**Explanation:** The reference number specified on the <symbol> tag is invalid for the current layout. Must be a number in the range shown in the message.

**User response:** None.

**Programmer response:** Correct the reference number. This message is followed by FMNBA230 to identify the element, and by messages FMNBA665 or FMNBA666 and FMNBA667 which display the line number and line text where the error occurred. Correct the XML input and retry.

---

**FMNBA245 Symbol ref=&ref out of order**

**Explanation:** When you are creating a dynamic template the symbols references must be provided in sequence starting from 2.

**User response:** None.

**Programmer response:** Correct the reference number. This message is followed by FMNBA230 to identify the element, and by messages FMNBA665 or FMNBA666 and FMNBA667 which display the line number and line text where the error occurred. Correct the XML input and retry.

---

**FMNBA246 Symbol ref=&ref start value required**

**Explanation:** When you are creating a dynamic template the start attribute must be specified.

**User response:** None.

**Programmer response:** Specify the start value. This message is followed by FMNBA230 to identify the element, and by messages FMNBA665 or FMNBA666 and FMNBA667 which display the line number and line text where the error occurred. Correct the XML input and retry.

---

**FMNBA247 Symbol ref=&ref start value cannot be zero**

**Explanation:** When you are creating a dynamic template the start attribute value cannot be zero for non offset start values.

**User response:** None.

**Programmer response:** Provide a positive integer value for start or specify offset="1" on the <symbol > tag. This message is followed by FMNBA230 to identify the element, and by messages FMNBA665 or FMNBA666 and FMNBA667 which display the line number and line text where the error occurred. Correct the XML input and retry.

---

**FMNBA248 Symbol ref=&ref Invalid type attribute.**

**Explanation:** When you are creating a dynamic template the type attribute must be one of these values:

- C** Alphanumeric
- AN** Alphanumeric
- AX** Alphanumeric displayed in long hexadecimal
- VC** Varying character
- ZC** Varying character null terminated
- B** Binary
- BI** Binary
- P** Packed decimal
- PD** Packed decimal
- ZD** Zoned decimal
- FE** External floating point
- FP** Internal floating point
- BT** Bit string
- VB** Varying bit
- G** Graphic string
- VG** Varying graphic

**User response:** None.

**Programmer response:** Specify a valid type attribute. This message is followed by FMNBA230 to identify the element, and by messages FMNBA665 or FMNBA666 and FMNBA667 which display the line number and line text where the error occurred. Correct the XML input and retry.

---

---

**FMNBA249** Symbol ref=&ref Invalid length attribute.

**Explanation:** When you are creating a dynamic template the length attribute must be one of these values:

- PD** Must be between 1 and 16.
- BI** Must be 1, 2, 4 or 8.
- ZD** Must be between 1 and 32.
- FP** Must be 4 or 8.
- FE** Must be >6 and <24. The precision is the length minus 6. The scale is the precision minus 1.

**DBCS strings**

Must be an even number of bytes.

**User response:** None.

**Programmer response:** Specify a valid length attribute. This message is followed by FMNBA230 to identify the element, and by messages FMNBA665 or FMNBA666 and FMNBA667 which display the line number and line text where the error occurred. Correct the XML input and retry.

---

**FMNBA260** Symbol ref=&ref heading too long.

**Explanation:** The <heading> value cannot exceed 20 bytes in length.

**User response:** None.

**Programmer response:** Specify a shorter heading. This message is followed by FMNBA230 to identify the element, and by messages FMNBA665 or FMNBA666 and FMNBA667 which display the line number and line text where the error occurred. Correct the XML input and retry.

---

**FMNBA261** Symbol ref=&ref <createn> element invalid for non numeric symbol.

**Explanation:** The <createn> value should not be specified for the current symbol because its not numeric.

**User response:** None.

**Programmer response:** Remove the <createn> element. This message is followed by FMNBA230 to identify the element, and by messages FMNBA665 or FMNBA666 and FMNBA667 which display the line number and line text where the error occurred. Correct the XML input and retry.

---

**FMNBA262** element value too long

**Explanation:** The value specified for the element exceeds the allowable length for this element.

**User response:** None.

**Programmer response:** Correct the length of the element data. This message is followed by FMNBA230

to identify the element, and by messages FMNBA665 or FMNBA666 and FMNBA667 which display the line number and line text where the error occurred. Correct the XML input and retry.

---

**FMNBA263** Element in conflict with previously specified elements or type

**Explanation:** The element specified in the following FMNBA230 message cannot be specified here because it is dependant on specific attributes being set in a parent or it has exceeded the allowed occurrence number for this element. Here is a list of possible problems:

Template <scramble> specifications

- <translate> has been specified without <scramble type="3"> being specified.
- <range> has been specified and conflicts with <scramble> type or a dsn attribute.
- <value> has been specified and conflicts with the <scramble> type or previous <range> specification.
- <sval> has been specified when a value list is not expected. Normally indicates a <scramble> dsn attribute was specified.

Editor <hex> specification

- <hex> tag has been specified more than once.

**User response:** None.

**Programmer response:** This message is followed by FMNBA230 to identify the element, and by messages FMNBA665 or FMNBA666 and FMNBA667 which display the line number and line text where the error occurred. Correct the XML input and retry.

---

**FMNBA264** Required attributes not specified.

**Explanation:** The element requires certain attributes to be specified as documented in the associated schema:

- <translate> has been specified without incol, outcol or dsn attributes.
- <range> has been specified without min or max attributes.

**User response:** None.

**Programmer response:** This message is followed by FMNBA230 to identify the element, and by messages FMNBA665 or FMNBA666 and FMNBA667 which display the line number and line text where the error occurred. Correct the XML input and retry.

---

**FMNBA265** Scramble translate attribute requires translate element.

**Explanation:** <scramble type="3"> has been specified and a <translate> element is then expected to specify the translate options. The <translate> element has not been specified.

**User response:** None.

**Programmer response:** This message is followed by

FMNBA230 to identify the element, and by messages FMNBA665 or FMNBA666 and FMNBA667 which display the line number and line text where the error occurred. Correct the XML input and retry.

---

**FMNBA267** <criteria> must specify byfield="1" for <byline> to be valid

**Explanation:** A <byline> element requires <criteria byfield="1"> and this has not been specified on the parent <criteria> element.

**User response:** None.

**Programmer response:** This message is followed by FMNBA230 to identify the element, and by messages FMNBA665 or FMNBA666 and FMNBA667 which display the line number and line text where the error occurred. Correct the XML input and retry.

---

**FMNBA268** <describe> exceeds maximum 5 elements.

**Explanation:** Too many <describe> elements have been specified.

**User response:** None.

**Programmer response:** This message is followed by FMNBA230 to identify the element, and by messages FMNBA665 or FMNBA666 and FMNBA667 which display the line number and line text where the error occurred. Correct the XML input and retry.

---

**FMNBA269** template required - command cannot be processed.

**Explanation:** A <describe> or <layout> element is being processed for a non-dynamic template and the TMPX session was invoked without a template.

**User response:** None.

**Programmer response:** This message is followed by FMNBA230 to identify the element, and by messages FMNBA665 or FMNBA666 and FMNBA667 which display the line number and line text where the error occurred. Correct the XML input and retry.

---

**FMNBA271** <copybooks> can only be specified for a copybook template

**Explanation:** You have specified the <copybooks> element for a non-copybook or dynamic template.

**User response:** None.

**Programmer response:** Remove the <copybooks> element and children. This message is followed by FMNBA230 to identify the element, and by messages FMNBA665, or FMNBA666 and FMNBA667 which display the line number and line text where the error occurred. Correct the XML input and retry.

---

**FMNBA273** related01="&ID." attribute specified without type="RID" attribute

**Explanation:** A <criteria > element has been specified incorrectly. The type="RID" attribute must be specified if a related01 attribute has been specified.

**User response:** None.

**Programmer response:** Correct the XML to specify type="RID" attribute. This message is followed by FMNBA230 to identify the element, and by messages FMNBA665 or FMNBA666 and FMNBA667 which display the line number and line text where the error occurred. Correct the XML input and retry.

---

**FMNBA278** Element has exceeded maximum occurrences

**Explanation:** The element value as described in the following FMNBA230 message exceeds the maximum occurrences allowed for this element. See relevant schema.

**User response:** None.

**Programmer response:** This message is followed by FMNBA230 to identify the element, and by messages FMNBA665 or FMNBA666 and FMNBA667 which display the line number and line text where the error occurred. Correct the XML input and retry.

---

**FMNBA279** Required element or child element not specified.

**Explanation:** Either the element value or a required child element has not been specified. This is issued for the <replace> element when either <repfrom> or <repto> are missing, or when <repfrom> or <repto> element is specified without any data.

**User response:** None.

**Programmer response:** This message is followed by FMNBA230 to identify the element, and by messages FMNBA665 or FMNBA666 and FMNBA667 which display the line number and line text where the error occurred. Correct the XML input and retry.

---

**FMNBA620** XML input data set must be sequential.

**Explanation:** This is issued when the XML input is not on a sequential data set or not a member in PDS or PDSE. The data set organization is not supported.

**User response:** None.

**Programmer response:** Change the XML input so it is coming from a sequential data set or a member of a PDS or PDSE and rerun the job.

---

**FMNBA621** name=&NAM attribute error. Invalid 01 name

**Explanation:** Either the <layout name='value'> or the <criteria rname='value'> have referred to a field name that cannot be matched to an 01 layout name in the current template.

**User response:** None.

**Programmer response:** Change the name or rname value to be a valid 01 name for the current template.

---

**FMNBA622** copybook=&CPY attribute error. Name cannot be matched or previously processed

**Explanation:** The copybook attribute of the <layout> element refers to a 1 - 8 byte copybook member name. This member must be a valid copybook that was used to build the template. The <layout copybook='&CPY'> can only be repeated for the number of 01s in the referenced copybook. You have either specified a copybook name that isn't referenced in this template or you have repeated the definition more times than the number of 01 layouts referenced in this copybook.

**User response:** None.

**Programmer response:** If you are updating an old template (REPLACE=NO) and you haven't specified <copybooks> then you may need to rebuild this template so the copybook names can be used for the <layout>. Do this by specifying the relevant <copybook> elements. Otherwise correct the copybook name or remove the excessive <layout> elements and rerun the process.

---

**FMNBA623** name=&NAM attribute error. Field name cannot be matched

**Explanation:** The name attribute value specifies a field name that cannot be located in the current template.

**User response:** None.

**Programmer response:** Correct the field name and rerun the process.

---

**FMNBA628** A fully qualified member name is required

**Explanation:** You have specified either an output member mask or not specified an output member name when the input data set is sequential or you have specified an output sequential file without a blank or generic input member name.

**User response:** None.

**Programmer response:** Specify a valid member name and rerun the process.

---

**FMNBA629** Template exported to XML successfully

**Explanation:** Successful completion of an export function.

**User response:** None.

**Programmer response:** None.

---

**FMNBA630** &MEMCNT members read &UPCNT Exported &REPCNT Not replaced &ERRCNT Errors

**Explanation:** Statistical summary message for export template function

**User response:** None.

**Programmer response:** None.

---

**FMNBA631** &MEMCNT members read &UPCNT Exported &REPCNT Export replaced &ERRCNT Errors

**Explanation:** Statistical summary message for export template function

**User response:** None.

**Programmer response:** None.

---

**FMNBA634** &MEMCNT members read &UPCNT Imported &REPCNT Import Updated &ERRCNT Errors

**Explanation:** Statistical summary message for import template function

**User response:** None.

**Programmer response:** None.

---

**FMNBA635** &MEMCNT members read &UPCNT Imported &REPCNT Import replaced &ERRCNT Errors

**Explanation:** Statistical summary message for import template function

**User response:** None.

**Programmer response:** None.

---

**FMNBA661** Template imported from XML successfully

**Explanation:** Successful completion of an import function.

**User response:** None.

**Programmer response:** None.

---

**FMNBA665 XML error occurred on line &LINE at offset &OFFSET**

**Explanation:** This message provides the line number and line offset where the XML error occurred.

**User response:** None.

**Programmer response:** Look at the previous messages to determine the type of error, correct the XML line referenced and rerun the process.

---

**FMNBA666 XML error occurred on line &LINE**

**Explanation:** This message provides the line number where the XML error occurred.

**User response:** None.

**Programmer response:** Look at the previous messages to determine the type of error, correct the XML line referenced and rerun the process.

---

**FMNBA667 Line:&line value**

**Explanation:** This message displays the line where the XML error occurred.

**User response:** None.

**Programmer response:** Look at the previous messages to determine the type of error, correct the XML line referenced and rerun the process.

---

**FMNBA668 Function must be run with File Manager for IMS to process IMS template, views or criteria sets.**

**Explanation:** You cannot create or update an IMS template view or criteria set when running the import function under the base product. It must be run from the FM/IMS template options if running in full screen mode or using the program FMNIMS for batch processing.

**User response:** None.

**Programmer response:** Rerun the function in an FM/IMS environment.

---

**FMNBA669 Function must be run with File Manager for DB2 to process DB2 templates..**

**Explanation:** You cannot create or update a DB2 template when running the import function under the base product. It must be run from the FM//DB2 template options if running in full screen mode or using the program FMNDB2 for batch processing.

**User response:** None.

**Programmer response:** Rerun the function in an FM/DB2 environment.

---

**FMNBA670 XML template type does not match the existing target template to be updated.**

**Explanation:** You are trying to import a template from XML with REPLACE=NO meaning the XML is used to update the existing template. The existing template is as different type to the XML template being imported.

**User response:** None.

**Programmer response:** Either change the type on the <template type='value'> element to match the template to be updated or change the import to specify REPLACE=YES.

---

**FMNBA671 Element <&ELEM.> exceeds the maximum occurrence of &NO.**

**Explanation:** The XML element is repeated more than the allowed number of occurrences for that element.

**User response:** None.

**Programmer response:** Correct the XML to remove the unnecessary element definitions and rerun the process.

---

**FMNBA672 Element <&ELEM.> invalid for &TYPE template.**

**Explanation:** The element is not valid for the type of template being processed.

**User response:** None.

**Programmer response:** Remove the element definition or correct the <template type='value'> to reflect the correct template type for the element.

---

**FMNBA673 Copybook <member> element has not been found for segment=&seg.**

**Explanation:** You are trying to import a IMS template from XML and you have not provided copybook definitions to describe all the segments defined to the corresponding data base.

**User response:** None.

**Programmer response:** Provide <member name='name' segname='segment'> values for all segments in the referenced DBD.

---

**FMNBA674 One of the IMS template libraries is not a PDS or PDS/E data set.**

**Explanation:** The associated template data set for a view or criteria set import is not a PDS or PDSE data set. This could have been specified using the <imstp>data set name</imstp> element. The data set name may also be obtained from the existing view or criteria set for REPLACE=NO, or the existing template definitions for FM/IMS found either on the panels or in the options module definition.

**User response:** None.

**Programmer response:** Correct the IMS template library definitions and rerun the process.

---

**FMNBA675 Template &TP for View or Criteria set was not found.**

**Explanation:** The associated template member for a view or criteria set cannot be found in the current template libraries. The template member name is obtained from the <dbd>name</dbd> definition or for REPLACE=NO can be obtained from the existing view or criteria set definition.

**User response:** None.

**Programmer response:** Ensure the associated template member can be found. This may require providing <imstp>data set name</imstp> elements to identify the location of the template member.

---

**FMNBA676 Template &TP for View or Criteria set is corrupted.**

**Explanation:** The associated template member for a view or criteria set cannot be loaded because it contains invalid data for an FM/IMS template.

**User response:** None.

**Programmer response:** Recreate the template member or correct the template data sets (<imstp> definitions) and ensure the associated template member being loaded is a valid FM/IMS template.

---

**FMNBA677 Cannot create a template of type: &type**

**Explanation:** The import routine cannot create the template for one of the following reasons.

- The template is a BASE or IMS template and <copybook> elements have not been supplied to create the template.
- The template is a DB2 template and <db2object> element has not been provided.
- The template is an IMS view or criteria and <imstp> and <dbd> elements have not been provided.
- The template you are trying to import is an IMS extract template - this type of template can only be updated. REPLACE=NO must be specified and the template must exist.

**User response:** None.

**Programmer response:** Provide the <copybooks> elements so the template can be created.

---

**FMNBA678 Attribute &ATTR invalid for &TYPE template.**

**Explanation:** The attribute specified is not allowed for the type of template being processed.

**User response:** None.

**Programmer response:** Either remove the attribute or

change the template type to a type that supports the attribute referenced in the message.

---

**FMNBA679 <dbd> element is require for &TYPE template.**

**Explanation:** You are trying to create a FM/IMS view or criteria set and you have not specified <dbd>name</dbd> which is required to create a view or criteria set.

**User response:** None.

**Programmer response:** Provide the associated DBD name via the <dbd>name</dbd> elements and rerun the process.

## Messages



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## UK81584, UK81585, UK81586, UK81587, UK81588, UK81589, UK81590, UK81591, UK81592, UK81593, UK80537, UK80538

Release Date: 12 September 2012

This set of PTFs contains the following APAR fixes:

APAR #	APAR Abstract	Doc Impact
PM69896	Receive compile errors when attempting to create a template from a PL/I copybook.	<ul style="list-style-type: none"><li>• User's Guide and Reference (SC19-3674-00)</li><li>• User's Guide and Reference for DB2 Data (SC19-3675-00)</li><li>• User's Guide and Reference for IMS Data (SC19-3676-00)</li></ul>
PM69902	File Manager CICS change to prevent ICH408I RACF messages when checking for CICS menu options.	<ul style="list-style-type: none"><li>• Customization and Reference Guide (SC19-3673-00)</li></ul>

---

### PM69896

#### Initial problem description

Receive compile errors when attempting to create a template using a PL/I copybook, which includes the clause SQL TYPE IS XML AS.

#### Outline of solution

File Manager now supports a 50 byte freeform options field for each of the compilers supported which, when populated, will be passed to the language compiler when compiling a copybook to generate a template. These options will be validated during the compile process. To avoid compile errors ensure the syntax is correct and that any additional data sets required by these options are allocated prior to invoking File Manager.

#### Documentation impact

This APAR changes:

- User's Guide and Reference (SC19-3674-00)
- User's Guide and Reference for DB2 Data (SC19-3675-00)
- User's Guide and Reference for IMS Data (SC19-3676-00)

### Changes to the User's Guide

#### Chapter 4, "Creating and editing templates"

In the section "Managing templates", subsection "Setting your template processing options", subtopic "Setting your COBOL processing options" (page 144), add another point:

- 9. Supply any additional compiler options which will be added via the CBL statement.

Change the existing point 9 to point 10.

In subtopic "**Setting your HLASM processing options**" (page 145), add the point:

- 5. Additional compiler options which will be added via the \*PROCESS statement.

Renumber existing points 5 and 6.

In subtopic "**Setting your PL/I processing options**" (page 146), add the point:

- 7. Additional compiler options which will be added via the \*PROCESS statement.

Renumber existing points 7 and 8.

## Chapter 14 "Panels and fields"

The layout of the processing options panels set out in the list below has been changed and needs to be updated:

A new field '**Additional options**' has been added to each panel. The description for the field can be obtained from the field level help and is different for each panel.

- "Set COBOL Processing Options" panel (page 646)
- "Set HLASM Processing Options" panel (page 649)
- "Set PL/I Processing Options" panel (page 652)

## Chapter 16 "Functions"

New keyword parameters have been added to each of the compiler options for the functions:

- BTB (page 841)
- DSB (page 871)
- DSC (page 879)
- DSE (page 903)
- DSEB (page 911)
- DSG (page 927)
- DSM (page 939)
- DSP (page 975)
- DSU (page 992)
- DSV (page 1005)
- PBK (page 1051)

For the COBOL options the keyword is CBLADDOP which should be shown as:

►► CBLADDOP=options ◀◀

The description should be:

### **CBLADDOP**

Additional COBOL compiler options which will be included in a CBL statement when compiling COBOL copybooks.

For PL/I options the keyword is PLIADDOP which should be shown as:

PLIADDOP=options

The description should be:

### PLIADDOP

Additional PL/I compiler options which will be included in a \*PROCESS statement when compiling PL/I copybooks.

For HLASM options the keyword is ASMADDOP which should be shown as:

ASMADDOP=options

The description should be:

### ASMADDOP

Additional HLASM compiler options which will be included in a \*PROCESS statement when compiling COPY and MACRO members.

## Changes to the File Manager/IMS Data User's Guide

### Chapter 2, "Getting started"

In section "Setting processing options", subtopic "COBOL processing options" (page 27), add another point:

- Additional compiler options which will be added via the CBL statement.

In section "Setting processing options", subtopic "HLASM processing options" (page 27), add another point:

- Additional compiler options which will be added via the \*PROCESS statement.

In section "Setting processing options", subtopic "PL/I processing options" (page 27), add another point:

- Additional compiler options which will be added via the \*PROCESS statement.

### Chapter 9 "Panels and fields"

The layout of the processing options panels set out in the list below has been changed and needs to be updated:

A new field 'Additional options' has been added to each panel. The options in the Set COBOL Processing Options panel have also been reorganized. The description for the field can be obtained from the field level help and is different for each panel.

- "Set COBOL Processing Options" panel (page 318)
- "Set HLASM Processing Options" panel (page 320)
- "Set PL/I Processing Options" panel (page 324)

The compiler options are also included in Chapter 11 "Batch reference", section "IMS Template Update (ITU)" (page 431).

## Changes to the File Manager/DB2 Data User's Guide

### Chapter 15, "FM/DB2 panels and fields"

A new field "Additional options" has been added to each panel. The options in the Set COBOL Processing Options panel have also been reorganized. The description for the field can be obtained from the field level help and is different for each panel.

- "Set COBOL Processing Options" panel (page 727)
- "Set HLASM Processing Options" panel (page 729)
- "Set PL/I Processing Options" panel (page 733)

## PM69902

### Initial problem description

When a new File Manager CICS session uses RACF to check whether Base, IMS or DB2 selections are to be added to the FM/CICS menu, MsgICH408I INSUFFICIENT ACCESS AUTHORITY is issued on the joblog if the request fails.

### Outline of solution

File Manager has been updated to change the RACROUTE call used to check whether the user has the required READ authority to the FACILITY class profiles (FILEM.CICS.BASE,IMS and DB2) It now uses the STATUS=ACCESS form of the RACROUTE so that no logging of authorization failures is done for these profiles.

Non-RACF users such as ACF2 may encounter AbendS047 failures with this form of the RACROUTE. These users should consult the relevant documentation and make the necessary definitions to the security subsystem.

RACF users do not need to make any additional changes.

### Documentation impact

This APAR changes:

- Customization and Reference Guide (SC19-3133-03)

## Changes to the Customization and Reference Guide

### Chapter 4, "Customizing the File Manager security product"

**Section "Setting up the security environment by using RACF or an equivalent security product":** After the following paragraph (on page 32):

If a userid running FM/CICS has read access to any of these groups, then the associated function (FM, FM/IMS or FM/DB2) will appear on the FM/CICS primary option menu and the user can invoke these functions, if they are installed.

*Insert* these paragraphs:

In order to achieve this, File Manager makes RACROUTE calls, with STATUS=ACCESS, to the CICS SAF FACILITY profiles. When RACF is used, the STATUS=ACCESS request works as documented, and no security-related logging or abends are generated, even if you do not have access to the profile.

However, when non-RACF security products (such as ACF2) are used, S047 ABENDS047 may be issued in response to the above RACROUTE request. These users should consult the relevant product documentation and make changes accordingly.



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# UK80270, UK80271, UK80272, UK80273, UK80274, UK80275, UK80276, UK80277, UK80278, UK80279, UK80280, UK80281

Release Date: 13 February 2012

This set of PTFs contains these APAR fixes:

- PM64839

---

## PM64839

### Initial problem description

Receive message TSOLNK RC=20 (DEC) REASON CODE=24 (DEC), when running IMS batch with SAF-controlled auditing to SMF active.

### Outline of solution

File Manager has been changed to use BPX1SMF UNIX interface to write SMF log records.

### Documentation impact

This APAR requires changes to:

- Customization Guide (SC19-3673-00)
- User's Guide and Reference (SC19-3674-00)
- User's Guide and Reference for DB2 Data (SC19-3675-00)
- User's Guide and Reference for IMS Data (SC19-3676-00)

## Changes to the Customization Guide

[These changes integrated into SC19-3673-01.]

### Chapter 1, "Preparing to customize File Manager"

In the section "Planning for running File Manager with or without APF-authorization" (page 6):

*Change* the paragraph which begins 'If you plan to use SMF...' as follows:

If you plan to use SMF to record audit trail information for File Manager base function, or for the DB2 or CICS components, and you do not want to establish a SAF FACILITY class profile BPX.SMF you must make File Manager APF-authorized. See "Using System Management Facilities (SMF) for audit logging" on page 49 for more information.

### Chapter 2, "Customizing the operating environment for File Manager"

In the subsection "Troubleshooting problems with APF-authorization" (page 21):

*Remove* the last two paragraphs which refer to FMNSMF.

### Chapter 5, "Customizing the File Manager audit facility (FMN0POPT controlled auditing)"

In the section "Using System Management Facilities (SMF) for audit logging" (page 49):

*Remove* the first two bullet points referring to FMNSMF.

*Add* a bullet point:

- Ensure that File Manager is APF-authorized or users to be audited have read access to the SAF FACILITY class profile BPX.SMF to be authorized to write records to the SMF data set using the BPX1SMF interface.

**Example using RACF:**

```
RDEFINE FACILITY (BPX.SMF) UACC(NONE)
PE BPX.SMF CLASS(FACILITY) ID(userid) ACC(READ)
```

## **Chapter 12, "Preparing to customize FM/DB2"**

*Remove* the section "Planning for running FM/DB2 with APF-authorization" (page 104).

## **Chapter 15, "Customizing the FM/DB2 audit facility (FMN2POPT controlled auditing)"**

In the section "Using System Management Facilities (SMF) for audit logging" (page 132):

*Remove* the first two bullet points referring to FMNSMF

*Add* a bullet point:

- Ensure that FM/DB2 is APF-authorized or users to be audited have read access to the SAF FACILITY class profile BPX.SMF to be authorized to write records to the SMF data set using the BPX1SMF interface.

**Example using RACF:**

```
RDEFINE FACILITY (BPX.SMF) UACC(NONE)
PE BPX.SMF CLASS(FACILITY) ID(userid) ACC(READ)
```

## **Chapter 19, "Preparing to customize FM/IMS"**

*Remove* the section "Planning for running FM/IMS with APF-authorization" (page 193).

## **Chapter 22, "Customizing the FM/IMS security environment"** Section "Security Exit Parameters"

In Table 47, "Parameters - Exit Type I" on page 223:

*Change* the description of the parameter **PSB Name** to "The name of the Program Specification Block (static PSB)."

## **Chapter 23, "Customizing the FM/IMS audit facility (FMN1POPT controlled auditing)"**

In the section "Using System Management Facilities (SMF) for audit logging" (page 225):

*Remove* the first two bullet points referring to FMNSMF.

*Add* a bullet point:

- Users to be audited must have read access to the SAF FACILITY class profile BPX.SMF to be authorized to write records to the SMF data set using the BPX1SMF interface.

**Example using RACF:**

```
RDEFINE FACILITY (BPX.SMF) UACC(NONE)
PE BPX.SMF CLASS(FACILITY) ID(userid) ACC(READ)
```



## Chapter 32, "Customizing the FM/CICS audit facility (FMN3POPT controlled auditing)"

In the section "Using System Management Facilities (SMF) for audit logging" (page 277):

*Remove* the first two bullet points referring to FMNSMF.

*Add* a bullet point:

- Users to be audited must have read access to the SAF FACILITY class profile BPX.SMF to be authorized to write records to the SMF data set using the BPX1SMF interface.

### Example using RACF:

```
RDEFINE FACILITY (BPX.SMF) UACC(NONE)
PE BPX.SMF CLASS(FACILITY) ID(userid) ACC(READ)
```

## Changes to the File Manager User's Guide and Reference

### Appendix, "File Manager messages"

*Add* message FMNBE805 (page 1194):

---

**FMNBE805 SMF logging error. Value returned by BPX1SMF: RC=&rc Reason Code=&RSN(Dec)**

**Explanation:** File Manager is set up to write audit records to SMF for the current function. A failure occurred while attempting to write an audit record to SMF. The BPX1SMF call resulted in return code &rc and reason code &RSN, both expressed in decimal. The current function may be terminated.

**User response:** This error usually indicates a set-up

problem. Possible reason for an auditing failure to SMF are:

1. The userid does have READ access to the SAF FACILITY class profile BPX.SMF.
2. The FMN0POPT module does not have a valid number specified for the SMFNO parameter.

Consult the systems programmer for assistance in resolving the cause of the error.

## Changes to the User's Guide and Reference for DB2 Data

### Appendix" FM/DB2 messages"

*Remove* message FMNDB518 (page 927).

*Change* message FMNDB519 (page 928):

---

**FMNDB519 Audit failure (short) Auditing to SMF failed - function terminated. BPX1SMF RC=return code (Dec) REASON CODE=reason code (Dec)**

**Explanation:** FM/DB2 is set-up to write audit records to SMF for the current function. A failure occurred while attempting to write an audit record to SMF. The BPX1SMF call resulted in return code *return code* and reason code *reason code*, both expressed in decimal. The current FM/DB2 function is terminated.

**User response:** This error usually indicates a set-up problem. Possible reason for an auditing failure to SMF are:

1. The userid does have READ access to the SAF FACILITY class profile BPX.SMF.
2. The FMN2POPT module does not have a valid number specified for the SMFNO parameter.

Consult the systems programmer for assistance in resolving the cause of the error.

## Changes to the User's Guide and Reference for IMS Data

### Appendix "File Manager IMS Messages"

*Add* message FMNIB532 (page 559):

## FMNIB532

---

**FMNIB532** Function terminated because auditing to SMF failed, BPX1SMF call returned RC=&RC Reason Code=&RC(Dec)

**Explanation:** FM/IMS is set up to write audit records to SMF for the current function. A failure occurred while attempting to write an audit record to SMF. The BPX1SMF call resulted in return code &RC and reason code &RC, both expressed in decimal. The current function may be terminated.

**User response:** This error usually indicates a set-up problem. Possible reason for an auditing failure to SMF are:

1. The userid does have READ access to the SAF FACILITY class profile BPX.SMF.
2. The FMN1POPT module does not have a valid number specified for the SMFNO parameter.

Consult the systems programmer for assistance in resolving the cause of the error.

---

## Part 2. General documentation changes

This section describes enhancements and updates in the documentation for File Manager for z/OS Version 12 Release 1. These changes are not associated with individual APAR or PTF numbers, as they do not require the application of any code updates.

The changes are grouped by manual and listed within each section in reverse date order. That is, the most recent documentation change appears at the beginning of each manual section.



---

## Customization Guide (SC19-3673-00)

---

### Change #1 December 2012

#### Appendix B, "FM/DB2 options"

For the option EDIT\_MAX\_ROWS, on page 361, in the syntax diagram, *change* keyword "AUDITBROWSE" to "EDIT\_MAX\_ROWS".



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## User's Guide and Reference (SC19-3674-00)

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### Change #5: June 2014

#### Chapter 3. "Viewing and changing data sets"

At the end of the "Auxiliary edit" section (page 102), *add* this note:

**Note:** In Auxiliary edit, updates using the block DD line command and the CHANGE ALL primary command are retained in memory and the commands limited to the storage available. If, while processing these commands, a short on storage condition is encountered the 'Storage Shortage Warning' panel FMNPSW is displayed.

#### Chapter 16. "Functions"

*Add* these two return codes to the DSC function (page 879, Return code section is on page 882):

- 2 No Copy - duplicate records not copied.
- 2 No Copy - REXX procedure has dropped records which are not subsequently copied.

*Add* this return code to the DSP function (page 975, Return code section is on page 976):

- 2 No print - REXX procedure has dropped records which are not subsequently printed.

Under the function FCH, in Usage Notes, after the section "Multiple command processing" on page 1026, *add* this section:

##### **Data sets containing variable length records**

If a CHANGE command would result in an increase in the length of a variable length record, the change is not processed.

Under the function SET, *remove* this sentence (under the syntax diagram on page 1062):

Enter SET with no parameters to display the current settings.

---

### Change #4: December 2013

#### Chapter 7. "Using File Manager utilities"

Table 5. "Criteria for identifying message header types", on page 334, does not show correct spacing for MQDH, MQIH, and MQTM. There must be four characters (including spaces) between the quotes. At the moment these layouts only show three. *Replace* Table 5 with this table:

*Table 5. Criteria for identifying message header types*

Layout name	PL/I template: add this ID criteria	COBOL template: add this ID criteria
MQCIH	#2==' CIH '	#3==' CIH '
MQDH	#2==' DH '	#3==' DH '

Table 5. Criteria for identifying message header types (continued)

Layout name	PL/I template: add this ID criteria	COBOL template: add this ID criteria
MQDLH	#2=='DLH '	#3=='DLH '
MQIIH	#2=='IIH '	#3=='IIH '
MQMDE	#2=='MDE '	#3=='MDE '
MQMD1	#2=='MD ' & #3=1	#3=='MD ' & #4=1
MQMD2	#2=='MD ' & #3=2	#3=='MD ' & #4=2
MQRFH1	#2=='RFH ' & #3=1	#3=='RFH ' & #4=1
MQRFH2	#2=='RFH ' & #3=2	#3=='RFH ' & #4=2
MQRMH	#2=='RMH '	#3=='RMH '
MQTM	#2=='TM '	#3=='TM '
MQTMC2	#2=='TMC '	#3=='TMC '
MQWIH	#2=='WIH '	#3=='WIH '
MQXQH	#2=='XQH '	#3=='XQH '

---

## Change #3: May 2013

### Chapter 16. "Functions"

Add the following sentences to the NUMDIFF and RCDIFF parameter descriptions on page 963 (section "DSM (Data Set Compare)"):

#### NUMDIFF

Add the sentence "A *numdiff* value of zero results in all differences being reported."

#### RCDIFF

Add the sentence "A *numdiff* value of zero always trigger the return code."

---

## Change #2: March 2013

### Appendix "File Manager messages"

To the section "Messages" on page 1175, *add* this message:

---

#### FMNBA719 Change failed

**Explanation:** The File Manager Find/Change utility could not change one or more strings because:

- The change string is longer than the find string and there is insufficient space in the record to accommodate the change string.

- An attempt is being made to change a VSAM KSDS key field, The key field will be identified with a 'K' next to the record number in the report.

**User response:** Change the find or change string to avoid the problem.

---

## Change #1 October 2012

### Appendix "File Manager messages"

To the section "Messages" on page 1175, *add* this message:

---

#### FMNBE719 Change failed

**Explanation:** The Find/Change utility has terminated with a nonzero return code.



**User response:** The explanation of the associated return code can be found in “FCH (Find/Change)” on page 1025.



---

## User's Guide and Reference for DB2 Data (SC19-3675-00)

---

### Change #1 February 2013

In Chapter 4, "Viewing and changing DB2 data", Table 3 "Characteristics of editor modes" (on page 98), *add* this row:

---

	<b>"Normal mode"</b>	<b>"Large mode"</b>
Row size	No restriction	Row size must not exceed the maximum page size (32704) less 16 bytes. When this limit is exceeded, the editor session reports SQLCODE-670 stating: "The record length of the table exceeds the page size limit". This is because large mode uses a DB2 scrollable cursor, for which each row requires an additional 16 bytes. If you get SQLCODE-670 use "Normal mode" to view or update the DB2 table.

---



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## **User's Guide and Reference for IMS Data (SC19-3676-00)**

There are no general documentation changes.



---

## **User's Guide and Reference for CICS ((SC19-3677-00)**

There are no general documentation changes.





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UK91097		PM81426	41	UK96435	
PM70656	79	PM87878	41	PM87001	31
PM75158	81	UK95967		UK97431	
PM77575	79	PM84382	33	PM94819	27
UK91098		PM87939	35	UK97432	
PM70656	79	PM89192	36	PM94819	27
PM75158	81	PM90169	36	UK97433	
PM77575	79	PM92321	38	PM94819	27
UK91099		UK95980		UK97434	
PM70656	79	PM84382	33	PM94819	27
PM75158	81	PM87939	35	UK97435	
PM77575	79	PM89192	36	PM94819	27

UK97436  
    PM94819 27  
UK97437  
    PM94819 27  
UK98689  
    PM76965 25  
UK98690  
    PM76965 25  
UK98691  
    PM76965 25  
UK98692  
    PM76965 25  
UK98693  
    PM76965 25  
UK98694  
    PM76965 25

## **W**

WBLKSIZE processing option 80  
WLRECL processing option 80





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