



**Program Directory for  
IBM WebSphere MQ  
Managed File Transfer  
for z/OS**

V8.0.0

Program Number 5655-MFT

FMID HMF8800

for use with  
z/OS

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GI13-3330-00

**Note**

Before using this information and the product it supports, be sure to read the general information under Appendix D, "Notices" on page 31.

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## 1.0 Introduction

This Program Directory is intended for system programmers who are responsible for program installation and maintenance. It contains information about the material and procedures associated with the installation of IBM WebSphere MQ Managed File Transfer for z/OS. This publication refers to IBM WebSphere MQ Managed File Transfer for z/OS as IBM WebSphere MQ Managed File Transfer.

The Program Directory contains the following sections:

- 2.0, “Program Materials” on page 3 identifies the basic program materials and documentation for IBM WebSphere MQ Managed File Transfer.
- 3.0, “Program Support” on page 5 describes the IBM support available for IBM WebSphere MQ Managed File Transfer.
- 4.0, “Program and Service Level Information” on page 7 lists the APARs (program level) and PTFs (service level) that have been incorporated into IBM WebSphere MQ Managed File Transfer.
- 5.0, “Installation Requirements and Considerations” on page 9 identifies the resources and considerations that are required for installing and using IBM WebSphere MQ Managed File Transfer.
- 6.0, “Installation Instructions” on page 17 provides detailed installation instructions for IBM WebSphere MQ Managed File Transfer. It also describes the procedures for activating the functions of IBM WebSphere MQ Managed File Transfer, or refers to appropriate publications.

Before installing IBM WebSphere MQ Managed File Transfer, read the *CBPDO Memo To Users* and the *CBPDO Memo To Users Extension* that are supplied with this program in softcopy format and this Program Directory; then keep them for future reference. Section 3.2, “Preventive Service Planning” on page 5 tells you how to find any updates to the information and procedures in this Program Directory.

IBM WebSphere MQ Managed File Transfer is supplied in a Custom-Built Product Delivery Offering (CBPDO, 5751-CS3). The Program Directory that is provided in softcopy format on the CBPDO tape is identical to the hardcopy format if one was included with your order. All service and HOLDDATA for IBM WebSphere MQ Managed File Transfer are included on the CBPDO tape.

Do not use this Program Directory if you install IBM WebSphere MQ Managed File Transfer with a SystemPac or ServerPac. When you use one of those offerings, use the jobs and documentation supplied with the offering. The offering will point you to specific sections of this Program Directory as needed.

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### 1.1 IBM WebSphere MQ Managed File Transfer Description

IBM WebSphere MQ Managed File Transfer for z/OS provides a managed file transfer solution, based on the WebSphere MQ transport, for moving files between IT systems without the need for programming. This product moves files in a reliable, secure, and auditable manner and enables file transfers to be fully-automated including scheduled and triggered transfers.

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## 1.2 IBM WebSphere MQ Managed File Transfer FMIDs

IBM WebSphere MQ Managed File Transfer consists of the following FMID:

HMF8800



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## 2.0 Program Materials

An IBM program is identified by a program number. The program number for IBM WebSphere MQ Managed File Transfer is 5655-MFT.

Basic Machine-Readable Materials are materials that are supplied under the base license and feature numbers, and are required for the use of the product.

The program announcement material describes the features supported by IBM WebSphere MQ Managed File Transfer. Ask your IBM representative for this information if you have not already received a copy.

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### 2.1 Basic Machine-Readable Material

The distribution medium for this program is physical media or downloadable files. This program is in SMP/E RELFILE format and is installed by using SMP/E. See 6.0, "Installation Instructions" on page 17 for more information about how to install the program.

You can find information about the physical media for the basic machine-readable materials for IBM WebSphere MQ Managed File Transfer in the *CBPDO Memo To Users Extension*.

Figure 1 describes the program file content for IBM WebSphere MQ Managed File Transfer.

*Figure 1. Program File Content*

<b>Name</b>	<b>O R G</b>	<b>R E C M</b>	<b>L R E C L</b>	<b>BLK SIZE</b>
SMPMCS	SEQ	FB	80	3120
IBM.HMF8800.F1	PDSE	FB	80	27920
IBM.HMF8800.F2	PDSE	VB	32000	32004
IBM.HMF8800.F3	PDSE	FB	80	27920

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### 2.2 Optional Machine-Readable Material

No optional machine-readable materials are provided for IBM WebSphere MQ Managed File Transfer.

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## 2.3 Program Publications

The following sections identify the basic publications for IBM WebSphere MQ Managed File Transfer.

Figure 2 on page 4 identifies the basic unlicensed publications for IBM WebSphere MQ Managed File Transfer. Publications can be accessed at the IBM Publications Center website at <http://www.ibm.com/shop/publications/order/>

<i>Figure 2. Basic Material: Unlicensed</i>		
<b>Publication Title</b>	<b>Form Number</b>	<b>Media Format</b>
Program Directory for IBM WebSphere MQ Managed File Transfer for z/OS V8.0.0.	GI13-3330-00	IBM Publications Center
IBM WebSphere MQ Managed File Transfer for z/OS V8.0.0 License Information CD	GC34-2958-00	CD-ROM

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## 2.4 Program Source Materials

No program source materials or viewable program listings are provided for IBM WebSphere MQ Managed File Transfer.

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## 2.5 Publications Useful During Installation

You might want to use the publications listed in Figure 3 during the installation of IBM WebSphere MQ Managed File Transfer.

<i>Figure 3. Publications Useful During Installation</i>		
<b>Publication Title</b>	<b>Form Number</b>	<b>Media Format</b>
<i>IBM SMP/E for z/OS User's Guide</i>	SA22-7773	<a href="http://www.ibm.com/shop/publications/order/">http://www.ibm.com/shop/publications/order/</a>
<i>IBM SMP/E for z/OS Commands</i>	SA22-7771	<a href="http://www.ibm.com/shop/publications/order/">http://www.ibm.com/shop/publications/order/</a>
<i>IBM SMP/E for z/OS Reference</i>	SA22-7772	<a href="http://www.ibm.com/shop/publications/order/">http://www.ibm.com/shop/publications/order/</a>
<i>IBM SMP/E for z/OS Messages, Codes, and Diagnosis</i>	GA22-7770	<a href="http://www.ibm.com/shop/publications/order/">http://www.ibm.com/shop/publications/order/</a>

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## 3.0 Program Support

This section describes the IBM support available for IBM WebSphere MQ Managed File Transfer.

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### 3.1 Program Services

Contact your IBM representative for specific information about available program services.

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### 3.2 Preventive Service Planning

Before you install IBM WebSphere MQ Managed File Transfer, make sure that you have reviewed the current Preventive Service Planning (PSP) information. Review the PSP Bucket for General Information, Installation Documentation, and the Cross Product Dependencies sections. For the Recommended Service section, instead of reviewing the PSP Bucket, it is recommended you use the IBM.ProductInstall-RequiredService fix category in SMP/E to ensure you have all the recommended service installed. Use the **FIXCAT(IBM.ProductInstall-RequiredService)** operand on the **APPLY CHECK command**. See 6.1.10, “Perform SMP/E APPLY” on page 22 for a sample APPLY command.

If you obtained IBM WebSphere MQ Managed File Transfer as part of a CBPDO, HOLDDATA is included.

If the CBPDO for IBM WebSphere MQ Managed File Transfer is older than two weeks by the time you install the product materials, you can obtain the latest PSP Bucket information by going to the following website:

<http://www14.software.ibm.com/webapp/set2/psearch/search?domain=psp>

You can also use S/390 SoftwareXcel or contact the IBM Support Center to obtain the latest PSP Bucket information.

For program support, access the Software Support Website at <http://www.ibm.com/software/support/>.

PSP Buckets are identified by UPGRADEs, which specify product levels; and SUBSETs, which specify the FMIDs for a product level. The UPGRADE and SUBSET values for IBM WebSphere MQ Managed File Transfer are included in Figure 4.

*Figure 4. PSP Upgrade and Subset ID*

UPGRADE	SUBSET	Description
WFTE800	HMF8800	IBM WebSphere MQ Managed File Transfer

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### 3.3 Statement of Support Procedures

Report any problems which you feel might be an error in the product materials to your IBM Support Center. You may be asked to gather and submit additional diagnostics to assist the IBM Support Center in their analysis.

Figure 5 on page 6 identifies the component IDs (COMPID) for IBM WebSphere MQ Managed File Transfer.

<i>Figure 5. Component IDs</i>			
<b>FMID</b>	<b>COMPID</b>	<b>Component Name</b>	<b>RETAIN Release</b>
HMF8800	5655MFT00	IBM WebSphere MQ Managed File Transfer	800

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## 4.0 Program and Service Level Information

This section identifies the program and relevant service levels of IBM WebSphere MQ Managed File Transfer. The program level refers to the APAR fixes that have been incorporated into the program. The service level refers to the PTFs that have been incorporated into the program.

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### 4.1 Program Level Information

The following APAR fixes against Websphere Message Queue File Transfer Edition (the predecessor of IBM WebSphere MQ Managed File Transfer) have been incorporated into this release. They are listed by FMID.

- FMID HMF8800

PM39200  
PM52446

PM52449  
PM69638

PM78830  
PI14471

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### 4.2 Service Level Information

No PTFs against this release of IBM WebSphere MQ Managed File Transfer have been incorporated into the product package.

It is highly recommended that you frequently check the IBM WebSphere MQ Managed File Transfer PSP Bucket for HIPER and SPECIAL attention PTFs against all FMIDs that you must install. You can also receive the latest HOLDDATA, then add the **FIXCAT(IBM.PRODUCTINSTALL-REQUIRESERVICE)** operand on your APPLY CHECK command. This will allow you to review the recommended and critical service that should be installed with your FMIDs.



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## 5.0 Installation Requirements and Considerations

The following sections identify the system requirements for installing and activating IBM WebSphere MQ Managed File Transfer. The following terminology is used:

- *Driving system*: the system on which SMP/E is executed to install the program.  
The program might have specific operating system or product level requirements for using processes, such as binder or assembly utilities during the installation.
- *Target system*: the system on which the program is configured and run.  
The program might have specific product level requirements, such as needing access to the library of another product for link-edits. These requirements, either mandatory or optional, might directly affect the element during the installation or in its basic or enhanced operation.

In many cases, you can use a system as both a driving system and a target system. However, you can make a separate IPL-able clone of the running system to use as a target system. The clone must include copies of all system libraries that SMP/E updates, copies of the SMP/E CSI data sets that describe the system libraries, and your PARMLIB and PROCLIB.

Use separate driving and target systems in the following situations:

- When you install a new level of a product that is already installed, the new level of the product will replace the old one. By installing the new level onto a separate target system, you can test the new level and keep the old one in production at the same time.
- When you install a product that shares libraries or load modules with other products, the installation can disrupt the other products. By installing the product onto a separate target system, you can assess these impacts without disrupting your production system.

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### 5.1 Driving System Requirements

This section describes the environment of the driving system required to install IBM WebSphere MQ Managed File Transfer.

#### 5.1.1 Machine Requirements

The driving system can run in any hardware environment that supports the required software.

#### 5.1.2 Programming Requirements

Figure 6. Driving System Software Requirements

Program Number	Product Name	Minimum VRM	Minimum Service Level will satisfy these APARs	Included in the shipped product?
Any <b>one</b> of the following:				
5694-A01	z/OS	V1.13.0 or higher	N/A	No
5650-ZOS	z/OS	V2.1 or higher	N/A	No
5655-G44	IBM SMP/E for z/OS	V3.5.0	N/A	No

**Note:** Installation might require migration to new z/OS releases to be service supported.

See [http://www.ibm.com/systems/z/os/zos/support/zos\\_eos\\_dates.html](http://www.ibm.com/systems/z/os/zos/support/zos_eos_dates.html).

## 5.2 Target System Requirements

This section describes the environment of the target system that is required to install and use IBM WebSphere MQ Managed File Transfer.

### 5.2.1 Machine Requirements

The target system can run in any hardware environment that supports the required software.

### 5.2.2 Programming Requirements

**5.2.2.1 Installation Requisites:** Installation requisites identify products that are required by and *must* be present on the system or products that are not required by but *should* be present on the system for the successful installation of this product.

Mandatory installation requisites identify products that are required on the system for the successful installation of this product. These products are specified as PREs or REQs.



<i>Figure 7. Target System Mandatory Installation Requisites</i>				
Program Number	Product Name	Minimum VRM	Minimum Service Level will satisfy these APARs	Included in the shipped product?
Any <b>one</b> of the following:				
5694-A01	z/OS	V1.13.0 or higher	N/A	No
5650-ZOS	z/OS	V2.1 or higher	N/A	No

**Note:** Installation might require migration to new z/OS releases to be service supported. See [http://www.ibm.com/systems/z/os/zos/support/zos\\_eos\\_dates.html](http://www.ibm.com/systems/z/os/zos/support/zos_eos_dates.html).

Conditional installation requisites identify products that are *not* required for successful installation of this product but can resolve such things as certain warning messages at installation time. These products are specified as IF REQs.

**5.2.2.2 Operational Requisites:** Operational requisites are products that are required by and *must* be present on the system or products that are not required by but *should* be present on the system for this product to operate all or part of its functions.

Mandatory operational requisites identify products that are required for this product to operate its basic functions. These products are specified as PREs or REQs.

<i>Figure 8. Target System Mandatory Operational Requisites</i>	
Program Number	Product Name and Minimum VRM/Service Level
Any <b>one</b> of the following:	
5655-R36	IBM WebSphere MQ for z/OS V7.1
5655-W97	IBM WebSphere MQ for z/OS V8.0
Any <b>one</b> of the following:	
5655-W44	IBM 64-bit SDK for z/OS, Java Technology Edition Version 7
5655-W43	IBM 31-bit SDK for z/OS, Java Technology Edition Version 7

Conditional operational requisites identify products that are *not* required for this product to operate its basic functions but are required at run time for this product to operate specific functions. These products are specified as IF REQs.

IBM WebSphere MQ Managed File Transfer has no conditional operational requisites.

**5.2.2.3 Toleration/Coexistence Requisites:** Toleration/coexistence requisites identify products that must be present on sharing systems. These systems can be other systems in a multisystem environment (not necessarily sysplex), a shared DASD environment (such as test and production), or systems that reuse the same DASD environment at different time intervals.

IBM WebSphere MQ Managed File Transfer has no toleration/coexistence requisites.

**5.2.2.4 Incompatibility (Negative) Requisites:** Negative requisites identify products that must *not* be installed on the same system as this product.

IBM WebSphere MQ Managed File Transfer has no negative requisites.

### 5.2.3 DASD Storage Requirements

IBM WebSphere MQ Managed File Transfer libraries can reside on all supported DASD types.

Figure 9 lists the total space that is required for each type of library.

<i>Figure 9. Total DASD Space Required by IBM WebSphere MQ Managed File Transfer</i>		
<b>Library Type</b>	<b>Total Space Required in 3390 Trks</b>	<b>File System Description</b>
Target	20	
Distribution	4132	
File System	161 MB	

**Notes:**

1. For non-RECFM U data sets, IBM recommends using system-determined block sizes for efficient DASD utilization. For RECFM U data sets, IBM recommends using a block size of 32760, which is most efficient from the performance and DASD utilization perspective.
2. Abbreviations used for data set types are shown as follows.
  - U** Unique data set, allocated by this product and used by only this product. This table provides all the required information to determine the correct storage for this data set. You do not need to refer to other tables or program directories for the data set size.
  - S** Shared data set, allocated by this product and used by this product and other products. To determine the correct storage needed for this data set, add the storage size given in this table to those given in other tables (perhaps in other program directories). If the data set already exists, it must have enough free space to accommodate the storage size given in this table.
  - E** Existing shared data set, used by this product and other products. This data set is *not* allocated by this product. To determine the correct storage for this data set, add the storage size given in this table to those given in other tables (perhaps in other program directories). If

the data set already exists, it must have enough free space to accommodate the storage size given in this table.

If you currently have a previous release of this product installed in these libraries, the installation of this release will delete the old release and reclaim the space that was used by the old release and any service that had been installed. You can determine whether these libraries have enough space by deleting the old release with a dummy function, compressing the libraries, and comparing the space requirements with the free space in the libraries.

For more information about the names and sizes of the required data sets, see 6.1.5, "Allocate SMP/E Target and Distribution Libraries" on page 20.

3. Abbreviations used for the file system path type are as follows.

- N** New path, created by this product.
- X** Path created by this product, but might already exist from a previous release.
- P** Previously existing path, created by another product.

4. All target and distribution libraries listed have the following attributes:

- The default name of the data set can be changed.
- The default block size of the data set can be changed.
- The data set can be merged with another data set that has equivalent characteristics.
- The data set can be either a PDS or a PDSE.

5. All target libraries listed have the following attributes:

- These data sets can be SMS-managed, but they are not required to be SMS-managed.
- These data sets are not required to reside on the IPL volume.
- The values in the "Member Type" column are not necessarily the actual SMP/E element types that are identified in the SMPMCS.

6. All target libraries that are listed and contain load modules have the following attributes:

- These data sets can be in the LPA, but they are not required to be in the LPA.
- These data sets can be in the LNKLIST.
- These data sets are not required to be APF-authorized.

<i>Figure 10 (Page 1 of 2). Storage Requirements for SMP/E Work Data Sets</i>						
<b>Library DDNAME</b>	<b>T Y P E</b>	<b>O R G A N I Z A T I O N</b>	<b>R E C O R D S</b>	<b>L E N G T H</b>	<b>No. of 3390 Trks</b>	<b>No. of DIR Blks</b>
SMPWRK1	E	PDS	FB	80	200	20
SMPWRK2	E	PDS	FB	80	100	20
SMPWRK3	E	PDS	FB	80	9000	150

Figure 10 (Page 2 of 2). Storage Requirements for SMP/E Work Data Sets

Library DDNAME	T Y P E	O R G	R E C F M	L R E C L	No. of 3390 Trks	No. of DIR Blks
SMPWRK4	E	PDS	FB	80	100	20
SMPWRK6	E	PDS	FB	80	5000	700
SYSUT1	E	SEQ	-	-	9000	-
SYSUT2	E	SEQ	-	-	100	-
SYSUT3	E	SEQ	-	-	100	-
SYSUT4	E	SEQ	-	-	100	-

The following table provides an estimate of the storage needed in the SMP/E data sets for IBM WebSphere MQ Managed File Transfer. You must add the estimates to those of any other programs and service that you install to determine the total additional storage requirements.

If the table indicates that the SMPLTS data set must be a PDSE and your existing SMPLTS is a PDS, you must allocate a new PDSE and copy your SMPLTS into it; then change the SMPLTS DDDEF entry to indicate the new PDSE data set.

Figure 11. Storage Requirements for SMP/E Data Sets

Library DDNAME	T Y P E	O R G	R E C F M	L R E C L	No. of 3390 Trks	No. of DIR Blks
SMPPTS	E	PDS	FB	80	8000	80
SMPSCDS	E	PDS	FB	80	8000	80
SMPMTS	E	PDS	FB	80	8000	80
SMPSTS	E	PDS	FB	80	8000	80

The following figures describe the target and distribution libraries and file system paths required to install IBM WebSphere MQ Managed File Transfer. The storage requirements of IBM WebSphere MQ Managed File Transfer must be added to the storage required by other programs that have data in the same library or path.

**Note:** Use the data in these tables to determine which libraries can be merged into common data sets. In addition, since some ALIAS names may not be unique, ensure that no naming conflicts will be introduced before merging libraries.

*Figure 12. Storage Requirements for IBM WebSphere MQ Managed File Transfer Target Libraries*

Library DDNAME	Member Type	Target Volume	T Y P E	O R G	R E C O M M	L R E C L	No. of 3390 Trks	No. of DIR Blks
SBFGJCL	PROC	ANY	U	PDSE	FB	80	10	N/A
SBFGCMDS	PROC	ANY	U	PDSE	FB	80	10	N/A

*Figure 13. IBM WebSphere MQ Managed File Transfer File System Paths*

DDNAME	T Y P E	Path Name
SBFGANT	N	/usr/lpp/mqmfte/V8R0M0/IBM/

*Figure 14. Storage Requirements for IBM WebSphere MQ Managed File Transfer Distribution Libraries*

Library DDNAME	T Y P E	O R G	R E C O M M	L R E C L	No. of 3390 Trks	No. of DIR Blks
ABFGJCL	U	PDSE	FB	80	10	N/A
ABFGANT	U	PDSE	VB	32000	4112	N/A
ABFGCMDS	U	PDSE	FB	80	10	N/A

---

## 5.3 FMIDs Deleted

Installing IBM WebSphere MQ Managed File Transfer might result in the deletion of other FMIDs. To see which FMIDs will be deleted, examine the ++VER statement in the SMPMCS of the product.

If you do not want to delete these FMIDs at this time, install IBM WebSphere MQ Managed File Transfer into separate SMP/E target and distribution zones.

**Note:** These FMIDs are not automatically deleted from the Global Zone. If you want to delete these FMIDs from the Global Zone, use the SMP/E REJECT NOFMID DELETEFMID command. See the SMP/E manuals for instructions.

---

## 5.4 Special Considerations

IBM WebSphere MQ Managed File Transfer has no special considerations for the target system.

### 5.4.1 SMP/E Considerations

IBM recommends that you install IBM WebSphere MQ Managed File Transfer into a new set of SMP/E zones, including SMPCSI, target, distribution, and zFS data sets, to allow independent maintenance of IBM WebSphere MQ Managed File Transfer, z/OS, and other subsystems. This Program Directory provides sample jobs and instructions to create such an SMP/E environment.

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## 6.0 Installation Instructions

This chapter describes the installation method and the step-by-step procedures to install and to activate the functions of IBM WebSphere MQ Managed File Transfer.

Please note the following points:

- If you want to install IBM WebSphere MQ Managed File Transfer into its own SMP/E environment, consult the SMP/E manuals for instructions on creating and initializing the SMPCSI and the SMP/E control data sets.
- You can use the sample jobs that are provided to perform part or all of the installation tasks. The SMP/E jobs assume that all DDDEF entries that are required for SMP/E execution have been defined in appropriate zones.
- You can use the SMP/E dialogs instead of the sample jobs to accomplish the SMP/E installation steps.

---

### 6.1 Installing IBM WebSphere MQ Managed File Transfer

#### 6.1.1 SMP/E Considerations for Installing IBM WebSphere MQ Managed File Transfer

Use the SMP/E RECEIVE, APPLY, and ACCEPT commands to install this release of IBM WebSphere MQ Managed File Transfer.

All installation steps must be run from a user ID that is defined to UNIX Systems Services, and has the following attributes:

- UID(0) or READ access or higher to the BPX.SUPERUSER facility class.
- READ access or higher to the BPX.FILEATTR.PROGCTL and BPX.FILEATTR.APF and BPX.FILEATTR.SHARELIB facility classes.

#### 6.1.2 SMP/E Options Subentry Values

The recommended values for certain SMP/E CSI subentries are shown in Figure 15. Using values lower than the recommended values can result in failures in the installation. DSSPACE is a subentry in the GLOBAL options entry. PEMAX is a subentry of the GENERAL entry in the GLOBAL options entry. See the SMP/E manuals for instructions on updating the global zone.

<i>Figure 15 (Page 1 of 2). SMP/E Options Subentry Values</i>		
<b>Subentry</b>	<b>Value</b>	<b>Comment</b>
DSSPACE	100,100,800	

Figure 15 (Page 2 of 2). SMP/E Options Subentry Values

Subentry	Value	Comment
PEMAX	SMP/E Default	IBM recommends using the SMP/E default for PEMAX.

### 6.1.3 Sample Jobs

The following sample installation jobs are provided as part of the product to help you install IBM WebSphere MQ Managed File Transfer:

The sample installation jobs are sorted by name into an order in which to run them in sequence (after editing) to install IBM WebSphere MQ Managed File Transfer. The exact order in which to run the jobs is not absolutely critical. Running the jobs in either the sequence they are listed in the list below or in the text of this chapter is acceptable.

Figure 16. Sample Installation Jobs

Job Name	Job Type	Description	RELFILE
BFGASYSJ	SMP/E	(Optional) Customize the sample installation JCL.	IBM.HMF8800.F1
BFGBGBLZ	GZONE	(Optional) Create a new SMP/E Consolidated Software Inventory (CSI) GLOBAL zone.	IBM.HMF8800.F1
BFGCTGTZ	TZONE	Define SMP/E TARGET zones to CSI created by BFGBGBLZ job.	IBM.HMF8800.F1
BFGDDISZ	DZONE	Define SMP/E DISTRIBUTION zones to CSI created by BFGBGBLZ job.	IBM.HMF8800.F1
BFGAALOC	ALLOCATE	Allocate the TARGET and DISTRIBUTION libraries.	IBM.HMF8800.F1
BFGFAZFS	ALLOMZFS	Allocate and mount zFS data set.	IBM.HMF8800.F1
BFGGMKEX	MKDIR	Run the BFGZMKDR EXEC job to create file system paths for IBM WebSphere MQ Managed File Transfer.	IBM.HMF8800.F1
BFGHDDEF	DDDEF	Define SMP/E DDDEFs for IBM WebSphere MQ Managed File Transfer.	IBM.HMF8800.F1
BFGIRECV	RECEIVE	Perform SMP/E RECEIVE for installation.	IBM.HMF8800.F1
BFGJAPLY	APPLY	Apply base and maintenance.	IBM.HMF8800.F1
BFGKACPT	ACCEPT	Accept base and maintenance.	IBM.HMF8800.F1

You can access the sample installation jobs by performing an SMP/E RECEIVE (refer to 6.1.9, “Perform SMP/E RECEIVE” on page 21) then copy the jobs from the RELFILES to a work data set for editing and submission. See Figure 16 to find the appropriate relfile data set.



You can also copy the sample installation jobs from the tape or product files by submitting the following job. Depending on your distribution medium, use either the //TAPEIN or the //FILEIN DD statement and comment out or delete the other statement. Before you submit the job, add a job card and change the lowercase parameters to uppercase values to meet the requirements of your site.

```
//STEP1 EXEC PGM=IEBCOPY
//SYSPRINT DD SYSOUT=*
//TAPEIN DD DSN=IBM.HMF8800.F1,UNIT=tunit,
// VOL=SER=volser,LABEL=(x,SL),
// DISP=(OLD,KEEP)
//FILEIN DD DSN=IBM.HMF8800.F1,UNIT=SYSALLDA,DISP=SHR,
// VOL=SER=filevol
//OUT DD DSNAME=jcl-library-name,
// DISP=(NEW,CATLG,DELETE),
// VOL=SER=dasdvol,UNIT=SYSALLDA,
// SPACE=(TRK,(30,20,5))
//SYSUT3 DD UNIT=SYSALLDA,SPACE=(CYL,(1,1))
//SYSIN DD *
COPY INDD=xxxxIN,OUTDD=OUT
/*
```

See the following information to update the statements in the previous sample:

**TAPEIN:**

**tunit** is the unit value that matches the product package.

**volser** is the volume serial that matches the product package.

**x** is the tape file number that indicates the location of the data set name on the tape.

See the documentation that is provided by CBPDO for the location of IBM.HMF8800.F1 on the tape.

**FILEIN:**

**filevol** is the volume serial of the DASD device where the downloaded files reside.

**OUT:**

**jcl-library-name** is the name of the output data set where the sample jobs are stored.

**dasdvol** is the volume serial of the DASD device where the output data set resides.

**SYSIN:**

**xxxxIN** is either TAPEIN or FILEIN depending on your input DD statement.

Customize each of the sample jobs listed in Figure 16 on page 18. Each sample job contains comments with specific instructions for customization.

## 6.1.4 Prepare the installation environment

**6.1.4.1 Global zone:** If you are installing into an existing global zone, check that:

- The PEMAX option entry is set to 9999, or left to default.
- The DSSPACE options entry specifies at least 800 directory blocks.

If you are installing into a new global zone, edit and submit sample job **BFGBGBLZ** to create a new SMP/E global zone for IBM WebSphere MQ Managed File Transfer. Ensure that the job card is valid for your system. Consult the instructions in the sample job for more information.

**Expected Return Codes and Messages:** **BFGBGBLZ** has a number of steps, all of which should complete with a return code of 0.

If any of the return codes is not 0, inspect the job output to determine what caused the problem and correct it, then rerun the job from the step that failed.

**6.1.4.2 Target and distribution zones:** If you need to create new target and distribution zones for IBM WebSphere MQ Managed File Transfer, edit and submit the following sample jobs:

- **BFGCTGTZ** to create a new target zone.
- **BFGDDISZ** to create a new distribution zone.

Ensure in each case that the job card is valid for your system. Consult the instructions in the sample job for more information.

**Expected Return Codes and Messages: 0**

Both jobs consist of a number of steps, all of which should complete with a return code of 0.

If any of the return codes is not 0, inspect the job output to determine what caused the problem, correct it, and then rerun the job from the step that failed.

## 6.1.5 Allocate SMP/E Target and Distribution Libraries

Customize and run sample job **BFGEALOC** to allocate the SMP/E target and distribution libraries for IBM WebSphere MQ Managed File Transfer. Refer to the instructions in the sample job for more information.

Make sure the data sets are allocated on the required volumes.

**Expected Return Codes and Messages:** You will receive a return code of 0 if this job runs correctly.

## 6.1.6 Create the UNIX System Services File System

Customize and run the **BFGFAZFS** sample job to define the file system.

**Expected Return Codes and Messages:** You will receive a return code of 0 if this job runs correctly.

## 6.1.7 Allocate zFS PATHS

Customize the sample job **BFGGMKEX** to allocate the file system which will contain the IBM WebSphere MQ Managed File Transfer product code and create the required subdirectories.

### Important!

The BFGGMKEX and BFGHDDEF jobs use -PathPrefix- to represent a service directory on your driving system. It is assumed that you are mounting IBM WebSphere MQ Managed File Transfer zFS data sets under a service directory that already contains the /usr and /usr/lpp directories. If you specify a -PathPrefix- directory that does not contain /usr and usr/lpp subdirectories, you must manually create these subdirectories before running the BFGGMKEX job.

Run the customized sample job **BFGGMKEX** under a user ID that has certain system privileges; refer to 6.1, “Installing IBM WebSphere MQ Managed File Transfer” on page 17 for a summary of the privileges that you need to run the BFGGMKEX job successfully.

Check the job output to verify that all directories have been created.

If you create a new file system for this product, consider updating the BPXPRMxx PARMLIB member to mount the new file system at IPL time. This action can be helpful if an IPL occurs before the installation is completed.

**Expected Return Codes and Messages:** You will receive a return code of 0 if this job runs correctly.

## 6.1.8 Define DDDEF Entries

Customize and run the sample job **BFGHDDEF** to create SMP/E DDDEFs for target and distribution data sets and directories. Make sure the call library DDDEFs point to the corresponding data sets for your z/OS target system.

Check the job output to verify that all directories have been created.

**Expected Return Codes and Messages:** You will receive a return code of 0 if this job runs correctly.

## 6.1.9 Perform SMP/E RECEIVE

If you have obtained IBM WebSphere MQ Managed File Transfer as part of a CBPDO, use the RCVPDO job in the CBPDO RIMLIB data set to receive the IBM WebSphere MQ Managed File Transfer FMIDs, service, and HOLDDATA that are included on the CBPDO package. For more information, see the documentation that is included in the CBPDO.

Otherwise edit and submit sample job **BFGIRECV** to perform the SMP/E RECEIVE for IBM WebSphere MQ Managed File Transfer. Consult the instructions in the sample job for more information.

**Expected Return Codes and Messages:** You will receive a return code of 0 if this job runs correctly.

## 6.1.10 Perform SMP/E APPLY

1. Ensure that you have the latest HOLDDATA; then edit and submit sample job **BFGJAPLY** to perform an SMP/E APPLY CHECK for IBM WebSphere MQ Managed File Transfer. Consult the instructions in the sample job for more information.

HOLDDATA introduces ERROR HOLDS against FMIDs for HIPER APARs. Before the installation, ensure that you have the latest HOLDDATA, which is available through several different portals, including <http://service.software.ibm.com/holddata/390holddata.html>. Install the FMIDs regardless of the status of unresolved HIPERs. However, do not deploy the software until the unresolved HIPERs are analyzed to determine applicability.

To receive the full benefit of the SMP/E Causer SYSMOD Summary Report, do *not* bypass the PRE, ID, REQ, and IFREQ on the APPLY CHECK. The SMP/E root cause analysis identifies the cause only of *errors* and not of *warnings* (SMP/E treats bypassed PRE, ID, REQ, and IFREQ conditions as warnings, instead of errors).

Here is a sample to install FMIDs when ++HOLDS for HIPERs exist for the FMIDs that you install:

- a. To ensure that all recommended and critical service is installed with the FMIDs, if you have received the latest HOLDDATA, add the FIXCAT operand to the APPLY command as shown below.

```
APPLY S(fmid,fmid,...)
FORFMID(fmid,fmid,...)
SOURCEID(RSU*)
FIXCAT(IBM.ProductInstall-RequiredService)
GROUPEXTEND .
```

Some HIPER APARs might not have PTFs available yet. You have to analyze the symptom flags to determine if you want to bypass the specific ERROR HOLDS and continue the installation of the FMIDs.

This method requires more initial research, but can provide resolution for all HIPERs that have fixes available and are not in a PE chain. Unresolved PEs or HIPERs might still exist and require the use of BYPASS.

- b. To install the FMIDs without regard for the HIPERs, you can add a BYPASS(HOLDCLASS(HIPER)) operand to the APPLY command. In this way, you can install FMIDs even though HIPER ERROR HOLDS against them still exist. Only the HIPER ERROR HOLDS are bypassed. After the FMIDs are installed, run the SMP/E REPORT ERRSYSMODS command to identify missing HIPER maintenance.

```
APPLY S(fmid,fmid,...)
FORFMID(fmid,fmid,...)
SOURCEID(RSU*)
GROUPEXTEND
BYPASS(HOLDCLASS(HIPER)) .
..any other parameters documented in the Program Directory
```

This method is the quicker of the two, but requires subsequent review of the REPORT ERRSYSMODS to investigate any HIPERs. If you have received the latest HOLDDATA, you can also choose to run REPORT MISSINGFIX for Fix Category IBM.ProductInstall-RequiredService to investigate missing recommended service.

If you bypass HOLDDs during the installation of the FMIDs because PTFs are not yet available, you can be notified when the PTFs are available by using the APAR Status Tracking (AST) function of ServiceLink or the APAR Tracking function of ResourceLink.

2. After you take actions that are indicated by the APPLY CHECK, remove the CHECK operand and run the job again to perform the APPLY.

**Note:** The GROUPEXTEND operand indicates that SMP/E applies all requisite SYSMODs. The requisite SYSMODS might be applicable to other functions.

**Expected Return Codes and Messages from APPLY CHECK:** You will receive a return code of 0 if this job runs correctly.

**Expected Return Codes and Messages from APPLY:** You will receive a return code of 0 if this job runs correctly.

### 6.1.11 Perform SMP/E ACCEPT

Edit and submit sample job **BFGKACPT** to perform an SMP/E ACCEPT CHECK for IBM WebSphere MQ Managed File Transfer. Consult the instructions in the sample job for more information.

To receive the full benefit of the SMP/E Causer SYSMOD Summary Report, do *not* bypass the PRE, ID, REQ, and IFREQ on the ACCEPT CHECK. The SMP/E root cause analysis identifies the cause of only *errors* but not *warnings* (SMP/E treats bypassed PRE, ID, REQ, and IFREQ conditions as warnings rather than errors).

Before you use SMP/E to load new distribution libraries, it is recommended that you set the ACCJCLIN indicator in the distribution zone. In this way, you can save the entries that are produced from JCLIN in the distribution zone whenever a SYSMOD that contains inline JCLIN is accepted. For more information about the ACCJCLIN indicator, see the description of inline JCLIN in the *SMP/E Commands* book for details.

After you take actions that are indicated by the ACCEPT CHECK, remove the CHECK operand and run the job again to perform the ACCEPT.

**Note:** The GROUPEXTEND operand indicates that SMP/E accepts all requisite SYSMODs. The requisite SYSMODS might be applicable to other functions.

**Expected Return Codes and Messages from ACCEPT CHECK:** You will receive a return code of 0 if this job runs correctly.

If PTFs that contain replacement modules are accepted, SMP/E ACCEPT processing will link-edit or bind the modules into the distribution libraries. During this processing, the Linkage Editor or Binder might issue messages that indicate unresolved external references, which will result in a return code of 4 during the

ACCEPT phase. You can ignore these messages, because the distribution libraries are not executable and the unresolved external references do not affect the executable system libraries.

**Expected Return Codes and Messages from ACCEPT:** You will receive a return code of 0 if this job runs correctly.

## 6.1.12 Run REPORT CROSSZONE

The SMP/E REPORT CROSSZONE command identifies requisites for products that are installed in separate zones. This command also creates APPLY and ACCEPT commands in the SMPPUNCH data set. You can use the APPLY and ACCEPT commands to install those cross-zone requisites that the SMP/E REPORT CROSSZONE command identifies.

After you install IBM WebSphere MQ Managed File Transfer, it is recommended that you run REPORT CROSSZONE against the new or updated target and distribution zones. REPORT CROSSZONE requires a global zone with ZONEINDEX entries that describe all the target and distribution libraries to be reported on.

For more information about REPORT CROSSZONE, see the SMP/E manuals.

---

## 6.2 Activating IBM WebSphere MQ Managed File Transfer

### 6.2.1 File System Execution

If you choose to have the file system in which you have installed IBM WebSphere MQ Managed File Transfer mounted in read-only mode during execution, the following tasks are required to accomplish this:

If you have included a mount statement in BPXPRMxx PARMLIB member for this file system, ensure it includes the operand MODE(READ).

To change the file system to read only in UNIX System Services, execute the following commands:

1. `umount -o immediate pathname`
2. `mount -d destdsys -f fsname -r pathname`

For a detailed explanation of the above commands, refer to the z/OS UNIX System Services Command Reference, listed in Figure 3 on page 4.

IBM WebSphere MQ Managed File Transfer is fully operational after the SMP/E installation is completed. You do not have to do further customization to activate this function.

---

## Appendix A. Service Considerations

The following SMP/E data sets must have the minimum sizes shown to avoid possible problems when applying service.

<i>Figure 17. Global Zone: Minimum Data Set Sizes</i>			
<b>Name</b>	<b>Primary</b>	<b>Secondary</b>	<b>Directory</b>
SMPPTS	8000 tracks	800 tracks	80 directory blocks
SYSUT1	9000 tracks	900 tracks	n/a

<i>Figure 18. Target and Distribution Zones: Minimum Data Set Sizes</i>			
<b>Name</b>	<b>Primary</b>	<b>Secondary</b>	<b>Directory</b>
SMPWRK3	9000 tracks	900 tracks	150 directory blocks
SMPWRK6	5000 tracks	500 tracks	700 directory blocks





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## **Appendix B. Automated Customization of Installation JCL**

Automated customization of installation JCL makes tailoring each piece of JCL individually unnecessary, reducing the chances of making a mistake.

Edit BFGASYSJ and follow the instructions in the job to define the values you want to use to tailor the installation JCL. The figures in Appendix C, “High-Level Qualifiers and Symbolic Parameters” on page 29 show the values you must tailor and have space for you to record your choices.

Submit BFGASYSJ. Expected return code 0.

A return code of 4 means that the JCL has been automatically updated, but there may be some JCL jobs which could not be updated correctly. The job output from the automatic update job will indicate which members may require further manual updates to run correctly.



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## Appendix C. High-Level Qualifiers and Symbolic Parameters

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### C.1 High-Level Qualifiers

Use Figure 19 to plan the high-level qualifiers for the IBM WebSphere MQ Managed File Transfer data sets.

<i>Figure 19. High-Level Qualifiers For Data Set Names</i>			
<b>Parameter name in the sample JCL provided</b>	<b>Example value</b>	<b>Your value</b>	<b>Description</b>
-SHLQUAL-	HLQ.SMPE		IBM WebSphere MQ Managed File Transfer SMP/E HLQ
-THLQUAL-	HLQ.TLIB		IBM WebSphere MQ Managed File Transfer TARGET HLQ
-DHLQUAL-	HLQ.DLIB		IBM WebSphere MQ Managed File Transfer DISTBN HLQ

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### C.2 Symbolic Parameters

Use Figure 20 to plan the symbolic parameters for the IBM WebSphere MQ Managed File Transfer sample jobs.

<i>Figure 20 (Page 1 of 2). Symbolic Parameters</i>			
<b>Parameter name in the sample jobs</b>	<b>Example value</b>	<b>Your value</b>	<b>Description</b>
-MOUTPUT-	THQ.TBPZINST		PDS name of modified Installation scripts

Figure 20 (Page 2 of 2). Symbolic Parameters

Parameter name in the sample jobs	Example value	Your value	Description
-MINPUT-	DHQ.UBPZINST		PDS name of unmodified Installation scripts
-SMPVOL-	VOLSER		Disk volume used by SMP/E
-SMPUNIT-	UNITTYPE		Disk unit type used by SMP/E
-TARVOL-	VOLSER		Disk volume serial for target data sets
-DISVOL-	VOLSER		Disk volume serial for distribution data sets
SYSALLDA	3390		Disk unit type for other data sets
-GZONECSI-	GZONE		Global Zone CSI name
-TZNAME-	TZONE		Target Zone CSI name
-DZNAME-	DZONE		Distribution Zone CSI name
-PathPrefix-	/Service		File system target path prefix
-TAPEUNIT-	3590		Tape unit type for SMP/E receive job
-TAPEVOLB-	ZMQMFTE		Tape unit type for SMP/E receive job
-ZFSNAME-	ZFSNAME		zFS cluster data set name
-ZFSVOL-	ZFSVOL		zFS cluster data set disk volume

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## Reader's Comments

### Program Directory for IBM WebSphere MQ Managed File Transfer for z/OS, June 2014

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