



**Program Directory for  
IBM MQ Advanced for z/OS**

**Long Term Support**

9.4.0

Program Number 5655-AV9

for use with  
z/OS

Document Date: July 2024

GI13-4490-00

**Note**

Before using this information and the product it supports, be sure to read the general information under 7.0, "Notices" on page 19.

---

# Contents

<b>1.0 Introduction</b>	1
1.1 IBM MQ Advanced Description	2
1.2 IBM MQ Advanced FMID(s)	3
<b>2.0 Program Materials</b>	4
2.1 Basic Machine-Readable Material	4
2.2 Program Publications	4
2.2.1 Optional Program Publications	4
2.3 Program Source Materials	4
2.4 Publications Useful During Installation	5
<b>3.0 Program Support</b>	6
3.1 Program Services	6
3.2 Preventive Service Planning	6
3.3 Statement of Support Procedures	6
<b>4.0 Program and Service Level Information</b>	7
4.1 Program Level Information	7
4.2 Service Level Information	7
<b>5.0 Installation Requirements and Considerations</b>	8
5.1 Driving System Requirements	8
5.1.1 Machine Requirements	8
5.1.2 Programming Requirements	9
5.2 Target System Requirements	9
5.2.1 Machine Requirements	9
5.2.2 Programming Requirements	9
5.2.2.1 Installation Requisites	9
5.2.2.2 Operational Requisites	10
5.2.2.3 Toleration/Coexistence Requisites	11
5.2.2.4 Incompatibility (Negative) Requisites	11
5.2.3 DASD Storage Requirements	11
5.3 FMIDs Deleted	11
5.4 Special Considerations	12
5.4.1 SMP/E Considerations	12
<b>6.0 Installation Instructions</b>	13
6.1 Installing IBM MQ Advanced	13
6.1.1 SMP/E Considerations for Installing IBM MQ Advanced	13
6.1.2 Sample Jobs	13
6.1.3 Perform SMP/E RECEIVE	14
6.1.4 Allocate SMP/E Target and Distribution Libraries	15

6.1.5 Create DDDEF Entries	15
6.1.6 Perform SMP/E APPLY	15
6.1.7 Perform SMP/E ACCEPT	16
6.1.8 Cleaning Up Obsolete Data Sets, Paths, and DDDEFs	17
6.2 Activating IBM MQ Advanced	18
<b>7.0 Notices</b>	19
7.1 Trademarks	19
<b>Reader's Comments</b>	20

---

## Figures

1. Publications Useful During Installation	5
2. Component IDs	6
3. Target System Conditional Operational Requisites	10
4. Sample Installation Jobs	14

---

## 1.0 Introduction

IBM MQ Advanced for z/OS 9.4 has two types of release; a Long Term Support (LTS) release and a Continuous Delivery (CD) release. The differences between these two are documented in detail at [https://www.ibm.com/docs/SSFKSJ\\_9.4.0/plan/q004715\\_.html](https://www.ibm.com/docs/SSFKSJ_9.4.0/plan/q004715_.html). This program directory describes installation of the FMIDs associated with the Long Term Support release.

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 MQ Advanced for z/OS. This publication refers to IBM MQ Advanced for z/OS as IBM MQ Advanced.

The Program Directory contains the following sections:

- 2.0, “Program Materials” on page 4 identifies the basic program materials and documentation for IBM MQ Advanced.
- 3.0, “Program Support” on page 6 describes the IBM support available for IBM MQ Advanced.
- 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 MQ Advanced.
- 5.0, “Installation Requirements and Considerations” on page 8 identifies the resources and considerations that are required for installing and using IBM MQ Advanced.
- 6.0, “Installation Instructions” on page 13 provides detailed installation instructions for IBM MQ Advanced. It also describes the procedures for activating the functions of IBM MQ Advanced, or refers to appropriate publications.

Before installing IBM MQ Advanced, 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; after which, keep the documents for your reference. Section 3.2, “Preventive Service Planning” on page 6 tells you how to find any updates to the information and procedures in this program directory.

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

Do not use this program directory if you install IBM MQ Advanced with a 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.

---

## 1.1 IBM MQ Advanced Description

IBM MQ Advanced provides the Managed File Transfer feature, the Advanced Message Security feature and the Connector Pack component. Each of these are independent of the other and can be used as required. For example you may decide to make use of the Advanced Message Security feature and the Connector Pack component, but not the Managed File Transfer feature.

IBM MQ for z/OS enables z/OS applications to use message queuing to participate in message-driven processing. With message-driven processing, applications can communicate across different platforms by using the appropriate MQ products. All MQ products implement a common application programming interface whatever platform the applications run on. The calls made by the applications and the messages they exchange are common.

The Managed File Transfer feature of IBM MQ Advanced for z/OS extends IBM MQ for z/OS to allow the transfer of files between systems in a managed and auditable way, regardless of file size or the operating systems used. Installation of the Managed File Transfer feature is performed by following the instructions in the IBM MQ for z/OS Program Directory (GI13-4488) and ensuring that the JMS9407 FMID is selected in the **CSQ8ASYJ** job.

The Advanced Message Security feature extends IBM MQ for z/OS by enabling messages flowing over IBM MQ to be encrypted so that the message contents remain secure between sending and receiving applications. These applications can be running on z/OS or other supported platforms and the applications do not require changing to make use of the capabilities of the Advanced Message Security feature. There is no installation necessary for the Advanced Message Security feature. Customization of the Advanced Message Security feature is described in the Configuring Advanced Message Security for z/OS section of the IBM MQ product documentation in IBM Documentation. Details can be found at: [https://www.ibm.com/docs/SSFKSJ\\_9.4.0/configure/q019097\\_.html](https://www.ibm.com/docs/SSFKSJ_9.4.0/configure/q019097_.html).

The Connector Pack component contains:

- The IBM Aspera faspio Gateway, which can be used to improve the throughput of message channels over high latency, lossy networks.
- IBM supported, Kafka Connect source and sink connectors for IBM MQ, which can be used to transfer data between IBM MQ and Apache Kafka.

### Important

IBM MQ Advanced only gives entitlement to the Managed File Transfer feature, the Advanced Message Security feature and the Connector Pack component. Separate entitlement to IBM MQ for z/OS, IBM MQ for z/OS VUE or IBM MQ Advanced for z/OS VUE is required to install and run the queue managers that are needed by these features and components.

---

## 1.2 IBM MQ Advanced FMID(s)

IBM MQ Advanced consists of the following FMID(s):

HMS9400  
JMS9401  
JMS9402  
JMS9403  
JMS9404  
JMS9405  
JMS9406  
JMS9407  
JMS9408  
HAV9400

### **Important**

HMS9400, JMS9401, JMS9402, JMS9403, JMS9404, JMS9405, JMS9406 and JMS9408 provide the queue manager and associated capabilities. These FMIDs should only be installed, and must only be used, if you have entitlement to one or more of: IBM MQ for z/OS, IBM MQ for z/OS VUE or IBM MQ Advanced for z/OS VUE.

---

## 2.0 Program Materials

An IBM program is identified by a program number. The program number for IBM MQ Advanced is 5655-AV9.

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

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

---

### 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 13 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 MQ Advanced in the *CBPDO Memo To Users Extension*.

---

### 2.2 Program Publications

The following sections identify the basic publications for IBM MQ Advanced.

IBM Documentation for IBM MQ Advanced: [https://www.ibm.com/docs/SSFKSJ\\_9.4.0](https://www.ibm.com/docs/SSFKSJ_9.4.0).

IBM MQ Advanced for z/OS 9.4 PDF files for product documentation and Program Directories: [https://www.ibm.com/docs/SSFKSJ\\_9.4.0/overview/q001040\\_.html](https://www.ibm.com/docs/SSFKSJ_9.4.0/overview/q001040_.html).

IBM MQ Advanced for z/OS 9.4 License Information document is available from IBM Terms. To access the license use a web browser with internet access to navigate to: <https://www.ibm.com/support/customer/csol/terms/?cat=software-licence> and search for GC34-7490.

#### 2.2.1 Optional Program Publications

No optional publications are provided for IBM MQ Advanced.

---

### 2.3 Program Source Materials

No program source materials or viewable program listings are provided for IBM MQ Advanced.

---

## 2.4 Publications Useful During Installation

You might want to use the publications listed in Figure 1 on page 5 during the installation of IBM MQ Advanced.

Additionally, IBM MQ Advanced 9.4.0 documentation is published in IBM Documentation, which can be viewed from a web browser with Internet access at [https://www.ibm.com/docs/SSFKSJ\\_9.4.0](https://www.ibm.com/docs/SSFKSJ_9.4.0).

<i>Figure 1. Publications Useful During Installation</i>	
<b>Publication Title</b>	<b>Form Number</b>
<i>IBM SMP/E for z/OS User's Guide</i>	SA23-2277
<i>IBM SMP/E for z/OS Commands</i>	SA23-2275
<i>IBM SMP/E for z/OS Reference</i>	SA23-2276
<i>IBM SMP/E for z/OS Messages, Codes, and Diagnosis</i>	GA32-0883

**Note:** These publications can be found in IBM Documentation. Use a web browser with internet access to refer to: <https://www.ibm.com/docs/en/zos/2.5.0?topic=zos-smpe>

---

## 3.0 Program Support

This section describes the IBM support available for IBM MQ Advanced.

---

### 3.1 Program Services

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

---

### 3.2 Preventive Service Planning

IBM MQ Advanced does not provide PSP buckets. Refer to PSP bucket information for IBM Z products for equivalent information in lieu of PSP buckets: <https://www.ibm.com/support/pages/node/7127792>.

If you obtained IBM MQ Advanced as part of a CBPDO, HOLDDATA is included.

If the CBPDO for IBM MQ Advanced 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: <https://www.ibm.com/support/pages/node/7127792>.

When using the PSP bucket information for IBM Z products site please ensure you complete the install of both the "Service Recommendations" and "Cross Product Dependencies" as described on the site.

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

---

### 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 2 identifies the component IDs (COMPID) for IBM MQ Advanced.

<i>Figure 2. Component IDs</i>			
<b>FMID</b>	<b>COMPID</b>	<b>Component Name</b>	<b>RETAIN Release</b>
JMS9407	5655MQ900	IBM MQ for z/OS Managed File Transfer	407
HAV9400	5655AV100	IBM MQ for z/OS Connector Pack	400

---

## 4.0 Program and Service Level Information

This section identifies the program and relevant service levels of IBM MQ Advanced. 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.

---

### 4.1 Program Level Information

APARs for the Managed File Transfer feature are described in the Program Directory for IBM MQ for z/OS (GI13-4488).

The following APAR fixes against previous releases of the Connector Pack component have been incorporated into this release. They are listed by FMID.

- FMID HAV9400

PH49564

---

### 4.2 Service Level Information

No PTFs against this release of IBM MQ Advanced have been incorporated into the product package.

Frequently check the IBM MQ Advanced 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.

---

## 5.0 Installation Requirements and Considerations

The following sections identify the system requirements for installing and activating IBM MQ Advanced. 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.

---

### 5.1 Driving System Requirements

This section describes the environment of the driving system required to install IBM MQ Advanced.

#### 5.1.1 Machine Requirements

See the Program Directory for IBM MQ for z/OS (GI13-4488) for details of the driving system requirements.

## 5.1.2 Programming Requirements

See the Program Directory for IBM MQ for z/OS (GI13-4488) for details of the product's programming requirements.

Additionally, the Connector Pack component is installed into a file system. Before installing the Connector Pack component, you must ensure that the target system file system data sets are available for processing on the driving system. OMVS must be active on the driving system and the target system file system data sets must be mounted on the driving system.

zFS must be active on the driving system. Information on activating and using zFS can be found in IBM Documentation at <https://www.ibm.com/docs/zos/2.5.0?topic=administration-zfs-guide>

---

## 5.2 Target System Requirements

This section describes the environment of the target system required to install and use IBM MQ Advanced.

IBM MQ Advanced installs in the z/OS (Z038) SREL.

See the Program Directory for IBM MQ for z/OS (GI13-4488) for details of the individual product's target system requirements.

### 5.2.1 Machine Requirements

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

See the Program Directory for IBM MQ for z/OS (GI13-4488) for details of the product's machine requirements.

### 5.2.2 Programming Requirements

#### 5.2.2.1 Installation Requisites

Installation requisites identify products that are required and *must* be present on the system or products that are not required 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.

IBM MQ Advanced has no installation requisites. See the Program Directory for IBM MQ for z/OS (GI13-4488) for details of the product's installation requisites.

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.

IBM MQ Advanced has no conditional installation requisites. See the Program Directory for IBM MQ for z/OS (GI13-4488) for details of the product's conditional installation requisites.

### 5.2.2.2 Operational Requisites

Operational requisites are products that are required and *must* be present on the system or products that are not required 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.

IBM MQ Advanced has no mandatory operational installation requisites. See the Program Directory for IBM MQ for z/OS (GI13-4488) for details of the product's mandatory operational requisites.

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.

Conditional operational requisites for the Managed File Transfer feature are in the Program Directory for IBM MQ for z/OS (GI13-4488).

Conditional operational requisites for the Advanced Message Security feature are shown in Figure 3.

<i>Figure 3. Target System Conditional Operational Requisites</i>		
<b>Program Number</b>	<b>Product Name and Minimum VRM/Service Level</b>	<b>Function</b>
5655-MQ9	IBM MQ for z/OS 9.4.0	Advanced Message Security feature
Any <b>one</b> of the following:		
5655-ZOS	z/OS with RACF and Cryptographic Services System SSL (FMID HCPT510) 3.1.0 or higher	Advanced Message Security feature
5650-ZOS	z/OS with RACF and Cryptographic Services System SSL (FMID HCPT420) 2.5.0 or higher	Advanced Message Security feature

The Connector Pack component 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 MQ Advanced has no toleration/coexistence requisites. See the Program Directory for IBM MQ for z/OS (GI13-4488) for details of the product's 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 MQ Advanced has no incompatibility (negative) requisites. See the Program Directory for IBM MQ for z/OS (GI13-4488) for details of the product's incompatibility (negative) requisites.

## 5.2.3 DASD Storage Requirements

IBM MQ Advanced libraries can reside on all supported DASD types.

IBM MQ Advanced installs into the global, target and distribution zones previous created through the installation of IBM MQ for z/OS. There are no additional space requirements for IBM MQ Advanced

See the Program Directory for IBM MQ for z/OS (GI13-4488) for details of the product's DASD storage requirements.

---

## 5.3 FMIDs Deleted

Installing IBM MQ Advanced 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 MQ Advanced 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.

See the Program Directory for IBM MQ for z/OS (GI13-4488) for details of the FMIDs deleted by the individual products.

---

## 5.4 Special Considerations

IBM MQ Advanced has no special considerations for the target system. See the Program Directory for IBM MQ for z/OS (GI13-4488) for details of the product's special considerations for the target system.

### 5.4.1 SMP/E Considerations

IBM MQ Advanced must be installed into the same SMP/E zones, including SMPCSI, target, distribution, and zFS data sets as IBM MQ for z/OS. This Program Directory provides sample jobs and instructions to do this.

See the Program Directory for IBM MQ for z/OS (GI13-4488) for details of the individual product's SMP/E considerations.

---

## 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 MQ Advanced.

Please note the following points:

- 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 MQ Advanced

The installation of IBM MQ Advanced is effected by installing the Managed File Transfer feature FMID included in IBM MQ for z/OS. Follow the installation instructions in the IBM MQ for z/OS Program Directory (GI13-4488) to install JMS9407. Once the installation is complete you should also refer to 6.1.8, “Cleaning Up Obsolete Data Sets, Paths, and DDDEFs” on page 17 and 6.2, “Activating IBM MQ Advanced” on page 18 of this document.

There is no installation necessary for the Advanced Message Security feature. Customization of the Advanced Message Security feature is described in the Configuring Advanced Message Security for z/OS section of the IBM MQ product documentation in IBM Documentation. Details can be found at: [https://www.ibm.com/docs/SSFKSJ\\_9.4.0/configure/q019097\\_.html](https://www.ibm.com/docs/SSFKSJ_9.4.0/configure/q019097_.html).

If Connector Pack component functionality is required then FMID HAV9400 must be installed into the SMP/E zones containing the HMS9400 and JMS9408 FMIDs. The zones are created when you follow the installation instructions for IBM MQ for z/OS. You must complete the installation of IBM MQ for z/OS before proceeding with the installation of the Connector Pack component by following the instructions below.

#### 6.1.1 SMP/E Considerations for Installing IBM MQ Advanced

Use the SMP/E RECEIVE, APPLY, and ACCEPT commands to install this release of IBM MQ Advanced.

#### 6.1.2 Sample Jobs

The following sample installation jobs are provided as part of the product to help you install the Connector Pack component.

The sample installation jobs are sorted by name into an order in which to run them in sequence (after editing) to install the Connector Pack component. 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.

<i>Figure 4. Sample Installation Jobs</i>			
<b>Job Name</b>	<b>Job Type</b>	<b>Description</b>	<b>SMPTLIB Data Set</b>
CSQ8A1RC	RECEIVE	Sample RECEIVE job	IBM.HAV9400.F2
CSQ8A2AP	APPLY	Sample APPLY job	IBM.HAV9400.F2
CSQ8A3AC	ACCEPT	Sample ACCEPT job	IBM.HAV9400.F2

You can access the sample installation jobs by performing an SMP/E RECEIVE (refer to 6.1.3, “Perform SMP/E RECEIVE” on page 14) then copy the jobs from the SMPTLIB data sets to a work data set for editing and submission. See Figure 4 to find the appropriate data set.

You can also copy the sample installation jobs from the product files by submitting the following job. 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=*
//IN DD DSN=IBM.HAV9400.F2,UNIT=SYSALLDA,DISP=SHR,
// VOL=SER=filevol
//OUT DD DSNAME=jcl-library-name,
// DISP=(NEW,CATLG,DELETE),
// VOL=SER=dasdvol,UNIT=SYSALLDA,
// SPACE=(TRK,(11,41,5))
//SYSUT3 DD UNIT=SYSALLDA,SPACE=(CYL,(1,1))
//SYSIN DD *
COPY INDD=IN,OUTDD=OUT
/*
```

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

IN:

**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.

### 6.1.3 Perform SMP/E RECEIVE

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

You can also choose to edit and submit sample job CSQ8A1RC to perform the SMP/E RECEIVE for the Connector Pack component. 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.

## 6.1.4 Allocate SMP/E Target and Distribution Libraries

All data sets used by IBM MQ Advanced are allocated by other products, so no new allocations are required.

## 6.1.5 Create DDDEF Entries

All DDDEFs used by IBM MQ Advanced are created by other products, so no new DDDEFs are required.

## 6.1.6 Perform SMP/E APPLY

1. Ensure that you have the latest HOLDDATA; then edit and submit sample job CSQ8A2AP to perform an SMP/E APPLY CHECK for the Connector Pack component. Consult the instructions in the sample job for more information.

The latest HOLDDATA is available through several different portals, including <https://public.dhe.ibm.com/s390/assigns/> or <https://www.ibm.com/support/pages/enhanced-holddata-zos> for usage instructions. The latest HOLDDATA may identify HIPER and FIXCAT APARs for the FMIDs you will be installing. An APPLY CHECK will help you determine if any HIPER or FIXCAT APARs are applicable to the FMIDs you are installing. If there are any applicable HIPER or FIXCAT APARs, the APPLY CHECK will also identify fixing PTFs that will resolve the APARs, if a fixing PTF is available.

You should install the FMIDs regardless of the status of unresolved HIPER or FIXCAT APARs. However, do not deploy the software until the unresolved HIPER and FIXCAT APARs have been analyzed to determine their applicability. That is, before deploying the software either ensure fixing PTFs are applied to resolve all HIPER or FIXCAT APARs, or ensure the problems reported by all HIPER or FIXCAT APARs are not applicable to your environment.

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 are sample APPLY commands:

- a. To ensure that all recommended and critical service is installed with the FMIDs, receive the latest HOLDDATA and use the APPLY CHECK command as follows

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

Some HIPER APARs might not have fixing PTFs available yet. You should analyze the symptom flags for the unresolved HIPER APARs to determine if the reported problem is applicable to your

environment and if you should bypass the specific ERROR HOLDs in order to continue the installation of the FMIDs.

This method requires more initial research, but can provide resolution for all HIPERs that have fixing PTFs 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 unresolved HIPER APARs, you can add the BYPASS(HOLDCLASS(HIPER)) operand to the APPLY CHECK command. This will allow you to install FMIDs even though one or more unresolved HIPER APARs exist. After the FMIDs are installed, use the SMP/E REPORT ERRSYSMODS command to identify unresolved HIPER APARs and any fixing PTFs.

```
APPLY S(fmid,fmid,...) CHECK
FORMID(fmid,fmid,...)
SOURCEID(RSU*)
FIXCAT(IBM.ProductInstall-RequiredService)
GROUPEXTEND
BYPASS(HOLDCLASS(HIPER)) .
..any other parameters documented in the program directory
```

This method is quicker, but requires subsequent review of the Exception SYSMOD report produced by the REPORT ERRSYSMODS command to investigate any unresolved HIPERs. If you have received the latest HOLDDATA, you can also choose to use the REPORT MISSINGFIX command and specify Fix Category IBM.PRODUCTINSTALL-REQUIREDSERVICE to investigate missing recommended service.

If you bypass HOLDs during the installation of the FMIDs because fixing PTFs are not yet available, you can be notified when the fixing 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.

## 6.1.7 Perform SMP/E ACCEPT

Edit and submit sample job CSQ8A3AC to perform an SMP/E ACCEPT CHECK for the Connector Pack component. 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 *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.

## 6.1.8 Cleaning Up Obsolete Data Sets, Paths, and DDDEFs

The following data sets, which were allocated and used by IBM MQ Managed File Transfer, are no longer used. You can delete these obsolete data sets after you delete IBM MQ Managed File Transfer from your system.

- ABFGHFSB
- ABFGSAMP
- ABFGINST

The following file system paths, which were created and used by IBM MQ Managed File Transfer, are no longer used. You can delete these obsolete file system paths after you delete IBM MQ Managed File Transfer from your system.

- /usr/lpp/mqmft/V9R1MX/\*
- /usr/lpp/mqmft/V9R1M0/\*
- /usr/lpp/mqmft/V9R0Mx/\*
- /usr/lpp/mqmft/V9R0M0/\*
- /usr/lpp/mqmft/V8R0M0/\*

The following DDDEF entries, which were created and used by IBM MQ Managed File Transfer, are no longer used. You can delete these obsolete DDDEF entries after you delete IBM MQ Managed File Transfer from your system.

- ABFGHFSB
- SBFGHFSB
- ABFGSAMP
- ABFGINST
- SBFGINST

---

## 6.2 Activating IBM MQ Advanced

### Important

IBM MQ Advanced only gives entitlement to the Managed File Transfer feature, the Advanced Message Security feature and the Connector Pack component. Separate entitlement to IBM MQ for z/OS, IBM MQ for z/OS VUE, or IBM MQ Advanced for z/OS VUE is required to install and run the queue managers that are needed by these features and components.

In addition to FMIDs JMS9407 and HAV9400, IBM MQ Advanced contains HMS9400, JMS9401, JMS9402, JMS9403, JMS9404, JMS9405, JMS9406, JMS9408 which provide the queue manager and associated capabilities. These FMIDs should only be installed, and must only be used, if you have entitlement to one or more of: IBM MQ for z/OS, IBM MQ for z/OS VUE or IBM MQ Advanced for z/OS VUE.

If you mount the file system in which you have installed the Connector Pack component in read-only mode during execution, then you do not have to take further actions to activate IBM MQ Advanced.

You have now installed IBM MQ Advanced for z/OS. Before you can start to use IBM MQ Advanced for z/OS, it must be customized. This is described in the Configuring Managed File Transfer for z/OS and Configuring Advanced Message Security for z/OS sections of the IBM MQ product documentation in IBM Documentation. Details can be found at:

[https://www.ibm.com/docs/SSFKSJ\\_9.4.0/configure/q120190\\_.html](https://www.ibm.com/docs/SSFKSJ_9.4.0/configure/q120190_.html)  
and [https://www.ibm.com/docs/SSFKSJ\\_9.4.0/configure/q019097\\_.html](https://www.ibm.com/docs/SSFKSJ_9.4.0/configure/q019097_.html).

Configuration and use of the faspio Gateway that is provided in the Connector Pack component is described in IBM Documentation at [https://www.ibm.com/docs/SSFKSJ\\_9.4.0/configure/aspera\\_def\\_unixlinux.html](https://www.ibm.com/docs/SSFKSJ_9.4.0/configure/aspera_def_unixlinux.html).

Configuration and use of the IBM MQ Kafka Connectors that are provided in the Connector Pack component is described in IBM Documentation at [https://www.ibm.com/docs/SSFKSJ\\_9.4.0/scenarios/mqkafkacon.html](https://www.ibm.com/docs/SSFKSJ_9.4.0/scenarios/mqkafkacon.html).

---

## 7.0 Notices

This information was developed for products and services offered in the U.S.A. IBM may not offer the products, services, or features discussed in this document in other countries. Consult your local IBM representative for information on the products and services currently available in your area. Any reference to an IBM product, program, or service is not intended to state or imply that only that IBM product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any IBM intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any non-IBM product, program, or service.

APAR numbers are provided in this document to assist in locating PTFs that may be required. Ongoing problem reporting may result in additional APARs being created. Therefore, the APAR lists in this document may not be complete. To obtain current service recommendations and to identify current product service requirements, always contact the IBM Customer Support Center to obtain the current "PSP Bucket".

IBM may have patents or pending patent applications covering subject matter in this document. The furnishing of this document does not give you any license to these patents. You can send license inquiries, in writing, to the

IBM Director of Licensing  
IBM Corporation  
North Castle Drive  
Armonk, New York 10504-1785  
USA

For license inquiries regarding double-byte (DBCS) information, contact the IBM Intellectual Property Department in your country or send inquiries, in writing, to:

Intellectual Property Licensing  
Legal and Intellectual Property Law  
IBM Japan, Ltd.  
19-21, Nihonbashi-Hakozakicho, Chuo-ku  
Tokyo 103-8510, Japan

---

## 7.1 Trademarks

IBM, the IBM logo, Aspera, ibm.com, RACF, and z/OS are trademarks or registered trademarks of International Business Machines Corporation, in the United States and/or other countries. Other product and service names might be trademarks of IBM or other companies. A current list of IBM trademarks is available on [ibm.com/trademark](http://ibm.com/trademark).

---

## Reader's Comments

### Program Directory for IBM MQ Advanced for z/OS, July 2024

We appreciate your input on this publication. Feel free to comment on the clarity, accuracy, and completeness of the information or give us any other feedback that you might have.

Send your comments by emailing us at [ibmdocs@us.ibm.com](mailto:ibmdocs@us.ibm.com), and include the following information:

- Your name and address
- Your email address
- Your telephone or fax number
- The publication title and order number
- The topic and page number related to your comment
- The text of your comment

When you send information to IBM, you grant IBM a nonexclusive right to use or distribute the information in any way it believes appropriate without incurring any obligation to you.

IBM or any other organizations will only use the personal information that you supply to contact you about the issues that you submit.

Thank you for your participation.





Printed in Ireland

GI13-4490-00

