IBM

Program Directory for

IBM MQ Advanced for z/OS

Continuous Delivery

9.2.4

Program Number 5655-AV9

for use with
z/OS

Continuous Delivery release refreshed with PTFs for 9.2.4 function

Document Date: December 2021

GI13-4455-04

> **Note**
>
> Before using this information and the product it supports, be sure to read the general information under 7.0, "Notices" on page 14.

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1.0 Introduction

IBM MQ Advanced for z/OS 9.2 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_9.2.0/com.ibm.mq.pla.doc/q004715_.html. This program directory describes installation of the FMIDs associated with the Continuous Delivery 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 12 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 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.

1.1 IBM MQ Advanced Description

IBM MQ Advanced provides the Managed File Transfer feature and the Advanced Message Security feature.

IBM MQ for z/OS enables z/OS applications to use message queuing to participate in message-driven processing with other IBM MQ enabled applications either on the z/OS platform or other platforms running IBM MQ.

The Managed File Transfer feature extends the use of IBM MQ for z/OS to enable files to be packaged as messages and sent over the IBM MQ network, again originating on z/OS, or on other platforms or across a combination of both. Installation of the Managed File Transfer feature is performed by following the instructions in the IBM MQ for z/OS Program Directory (GI13-4453) and ensuring that the JMS9CD7 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 Advanced Message Security feature capabilities. 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_9.2.0/com.ibm.mq.con.doc/q019097_.html.

Important

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

1.2 IBM MQ Advanced FMID(s)

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

> HMS9CD0
> JMS9CD1
> JMS9CD2
> JMS9CD3
> JMS9CD4
> JMS9CD5
> JMS9CD6
> JMS9CD7
> JMS9CD8

> **Important**
>
> HMS9CD0, JMS9CD1, JMS9CD2, JMS9CD3, JMS9CD4, JMS9CD5, JMS9CD6 and JMS9CD8 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 or IBM MQ 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 12 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.

Figure 1 identifies the basic unlicensed publications for IBM MQ Advanced. Those that are in softcopy format publications can be obtained from the IBM Publications Center website at https://www.ibm.com/resources/publications.

Figure 1. Basic Material: Unlicensed Publications		
Publication Title	**Form Number**	**Media Format**
IBM MQ Advanced for z/OS 9.2 License Information DVD	GC34-7387	DVD-ROM
IBM MQ Advanced for z/OS 9.2.4 Program Directory	GI13-4455	IBM Publications Center

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 2 on page 5 during the installation of IBM MQ Advanced.

Additionally, IBM MQ Advanced 9.2.4 documentation is published in IBM Documentation, which can be viewed from a web browser with Internet access at https://www.ibm.com/docs/SSFKSJ_9.2.0.

Figure 2. Publications Useful During Installation	
Publication Title	**Form Number**
IBM SMP/E for z/OS User's Guide	SA23-2277
IBM SMP/E for z/OS Commands	SA23-2275
IBM SMP/E for z/OS Reference	SA23-2276
IBM SMP/E for z/OS Messages, Codes, and Diagnosis	GA32-0883

Note: IBM Documentation https://www.ibm.com/docs/zos/2.4.0?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

Before you install IBM MQ Advanced, 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.

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://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 https://www.ibm.com/support/.

PSP Buckets are identified by UPGRADEs, which specify product levels; and SUBSETs, which specify the FMIDs for a product level. IBM MQ Advanced has no UPGRADEs or SUBSETs. UPGRADE and SUBSET values for the Managed File Transfer feature are described in the Program Directory for IBM MQ for z/OS (GI13-4453).

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. The Program Directory for IBM MQ for z/OS (GI13-4453) identifies the component IDs (COMPID) for the Managed File Transfer feature.

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

No APARs have been incorporated into IBM MQ Advanced. APARs for the Managed File Transfer feature are described in the Program Directory for IBM MQ for z/OS (GI13-4453).

4.2 Service Level Information

PTFs containing APAR fixes against this release of IBM MQ Advanced have been incorporated into this product package. For a list of included PTFs, examine the ++VER statement in the product's SMPMCS.

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-REQUIREDSERVICE)** 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

The driving system can run in any hardware environment that supports the required software. See the Program Directory for IBM MQ for z/OS (GI13-4453) for details of the driving system requirements.

5.1.2 Programming Requirements

See the Program Directory for IBM MQ for z/OS (GI13-4453) for details of the product's programming requirements.

5.2 Target System Requirements

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

See the Program Directory for IBM MQ for z/OS (GI13-4453) for details of the 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 (GI13-4453) 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.

See the Program Directory for IBM MQ for z/OS (GI13-4453) for details of the product's installation Requisites.

Note: Installation might require migration to new releases to obtain support. See https://www.ibm.com/support/lifecycle/.

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 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. See the Program Directory for IBM MQ for z/OS (GI13-4453) 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 (GI13-4453). Conditional operational requisites for the Advanced Message Security feature are shown in Figure 3.

Figure 3. Target System Conditional Operational Requisites		
Program Number	**Product Name and Minimum VRM/Service Level**	**Function**
5655-MQ9	IBM MQ for z/OS 9.2.4	Advanced Message Security feature
5650-ZOS	z/OS with RACF and Cryptographic Services System SSL (FMID HCPT420) 2.3.0 or higher	Advanced Message Security feature

Note: Installation might require migration to new releases to obtain support. See https://www.ibm.com/support/lifecycle/.

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. See the Program Directory for IBM MQ for z/OS (GI13-4453) 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. See the Program Directory for IBM MQ for z/OS (GI13-4453) for details of the product's incompatibility (negative) requisites.

5.2.3 DASD Storage Requirements

See the Program Directory for IBM MQ for z/OS (GI13-4453) for details of the product's DASD storage requirements.

5.3 FMIDs Deleted

IBM MQ Advanced itself involves no installation. However the installation of component features might result in the deletion of other FMIDs. To see which FMIDs will be deleted, examine the ++VER statement in the SMPMCS of IBM MQ for z/OS.

If you do not want to delete these FMIDs at this time, install the IBM MQ Advanced components 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 MQ Advanced has no special considerations for the target system. See the Program Directory for IBM MQ for z/OS (GI13-4453) for details of the product's special considerations for the target system.

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:

- If you want to install IBM MQ Advanced 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 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 (GI13-4453) to install JMS9CD7. Once the installation is complete you should also refer to 6.1.1, "Cleaning Up Obsolete Data Sets, Paths, and DDDEFs" and 6.2, "Activating IBM MQ Advanced" on page 13 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_9.2.0/com.ibm.mq.con.doc/q019097_.html.

6.1.1 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/mqmfte/V9R1MX/*

- /usr/lpp/mqmfte/V9R1M0/*

- /usr/lpp/mqmfte/V9R0Mx/*

- /usr/lpp/mqmfte/V9R0M0/*

- /usr/lpp/mqmfte/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, provided in JMS9CD7, and the Advanced Message Security feature, which doesn't have an FMID. Separate entitlement to IBM MQ for z/OS or IBM MQ for z/OS VUE is required to install and run the queue managers that are needed by these features.

In addition to FMID JMS9CD7, IBM MQ Advanced contains HMS9CD0, JMS9CD1, JMS9CD2, JMS9CD3, JMS9CD4, JMS9CD5, JMS9CD6, JMS9CD8 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 or IBM MQ for z/OS VUE.

If you mount the file system in which you have installed IBM MQ Advanced 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_9.2.0/com.ibm.mq.con.doc/q120190_.html
and
https://www.ibm.com/docs/SSFKSJ_9.2.0/com.ibm.mq.con.doc/q019097_.html.

7.0 Notices

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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 or use S/390 SoftwareXcel to obtain the current "PSP Bucket".

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Reader's Comments

Program Directory for IBM MQ Advanced for z/OS, December 2021

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- 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

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