IBM

Program Directory for

IBM IMS Queue Control Facility for z/OS

4.1.0

Program Number 5698-N50

FMID H0GN410

for Use with
z/OS

Document Date: August 2024

> **Note**
>
> Before using this information and the product it supports, be sure to read the general information under 7.0, "Notices" on page 20.

Contents

Figures

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 IMS Queue Control Facility for z/OS. This publication refers to IBM IMS Queue Control Facility for z/OS as IBM IMS QCF.

The Program Directory contains the following sections:

- 2.0, "Program Materials" on page 3 identifies the basic program materials and documentation for IBM IMS QCF.

- 3.0, "Program Support" on page 5 describes the IBM support available for IBM IMS QCF.

- 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 IMS QCF.

- 5.0, "Installation Requirements and Considerations" on page 8 identifies the resources and considerations that are required for installing and using IBM IMS QCF.

- 6.0, "Installation Instructions" on page 14 provides detailed installation instructions for IBM IMS QCF. It also describes the procedures for activating the functions of IBM IMS QCF, or refers to appropriate publications.

Before installing IBM IMS QCF, 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 5 tells you how to find any updates to the information and procedures in this program directory.

IBM IMS QCF 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 IMS QCF are included on the CBPDO.

Do not use this program directory if you install IBM IMS QCF 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 IMS QCF Description

IBM IMS QCF is a transaction management tool that can help improve IMS message queue monitoring and management. With features to help prevent IMS message queue overflows, IBM IMS QCF can be used to monitor IMS message queues and to query, browse, load, and unload messages from IMS message queues.

In addition to continued support for IMS non-shared queues environments, IBM IMS QCF for z/OS 4.1 improves message queue management for IMS shared queues environments, including:

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- Shared queues monitoring and overflow protection
- Recovery of the full function message queue (MSGQ) structure in the Coupling Facility without the need for Common Queue Server logging

To get more information for IBM IMS QCF, go to URL:

https://www.ibm.com/products/ims/tools

1.2 IBM IMS QCF FMID

IBM IMS QCF consists of the following FMID:

H0GN410

2.0 Program Materials

An IBM program is identified by a program number. The program number for IBM IMS QCF is 5698-N50.

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 IMS QCF. 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 14 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 IMS QCF in the *CBPDO Memo To Users Extension*.

Figure 1. Program File Content				
Name	**O R G**	**R E C F M**	**L R E C L**	**BLK SIZE**
SMPMCS	SEQ	FB	80	8800
IBM.H0GN410.F1	SEQ	FB	80	8800
IBM.H0GN410.F2	SEQ	FB	80	8800
IBM.H0GN410.F3	SEQ	FB	80	8800
IBM.H0GN410.F4	SEQ	U	0	6144
IBM.H0GN410.F5	SEQ	FB	80	8800
IBM.H0GN410.F6	SEQ	FB	80	8800
IBM.H0GN410.F7	SEQ	FB	80	8800
IBM.H0GN410.F8	SEQ	FB	80	8800
IBM.H0GN410.F9	SEQ	FB	80	8800

2.2 Optional Machine-Readable Material

No optional machine-readable materials are provided for IBM IMS QCF.

2.3 Program Publications

The following sections identify the basic publications for IBM IMS QCF.

Figure 2 on page 4 identifies the basic unlicensed publications for IBM IMS QCF.

Figure 2. Basic Material: Unlicensed		
Publication Title	**Form Number**	**Media Format**
IBM IMS Queue Control Facility for z/OS License information CD	LC28-3299	CD and electronic
IBM IMS Queue Control Facility for z/OS User's Guide	GI13-5317	web
Note: Documentation can be found at URL: https://www.ibm.com/docs/en/ims-qcf/		

2.4 Program Source Materials

No program source materials or viewable program listings are provided for IBM IMS QCF.

2.5 Publications Useful During Installation

You might want to use the publications listed in Figure 3 during the installation of IBM IMS QCF.

Figure 3. 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

3.0 Program Support

This section describes the IBM support available for IBM IMS QCF.

3.1 Program Services

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

3.2 Preventive Service Planning

Before you install IBM IMS QCF, 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 6.1.8, "Perform SMP/E APPLY" on page 16 for a sample APPLY command

If you obtained IBM IMS QCF as part of a CBPDO, HOLDDATA is included.

If the CBPDO for IBM IMS QCF 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/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 IMS QCF are included in Figure 4.

Figure 4. PSP Upgrade and Subset ID		
UPGRADE	**SUBSET**	**Description**
5698N50	H0GN410	IBM IMS Q Control Facility

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 IMS QCF.

Figure 5. Component IDs			
FMID	**COMPID**	**Component Name**	**RETAIN Release**
H0GN410	5697E9900	IMS QCF	410

4.0 Program and Service Level Information

This section identifies the program and relevant service levels of IBM IMS QCF. 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 IMS QCF.

4.2 Service Level Information

No PTFs against this release of IBM IMS QCF have been incorporated into the product package.

Frequently check the IBM IMS QCF 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 IMS QCF. 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 IMS QCF.

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?
5650-ZOS	z/OS	V02.05.00	N/A	No

Note: SMP/E is a requirement for Installation and is an element of z/OS.

Note: Installation might require migration to new z/OS releases to be service supported. See https://www-01.ibm.com/software/support/lifecycle/index_z.html.

5.2 Target System Requirements

This section describes the environment of the target system required to install and use IBM IMS QCF.

IBM IMS QCF installs in the DBS (P115) SREL.

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 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 IMS QCF has no mandatory installation requisites.

Note: Installation might require migration to new z/OS releases to be service supported. See http://www-03.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.

IBM IMS QCF has no 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.

Figure 7. Target System Mandatory Operational Requisites		
Program Number	**Minimum VRM/Service Level**	**Product Name**
And any **one** of the following		
5635-A06	v15.02.00 or higher	IBM IMS
5655-TM4	v15.02.00 or higher	IBM IMS Transaction Value Unit Edition

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 IMS QCF 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 IMS QCF 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 IMS QCF has no negative requisites.

5.2.3 DASD Storage Requirements

IBM IMS QCF libraries can reside on all supported DASD types.

Figure 8 lists the total space that is required for each type of library.

Figure 8. Total DASD Space Required by IBM IMS QCF		
Library Type	Total Space Required in 3390 Trks	Description
Target	170	Target System Data Sets
Distribution	170	Distribution Library Data Sets

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 6.1.6, "Allocate SMP/E Target and Distribution Libraries" on page 16.

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, with some exceptions. If the value in the "ORG" column specifies "PDS", the data set must be a PDS. If the value in "DIR Blks" column specifies "N/A", the data set must be 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 not be in the LPA, with some exceptions. If the value in the "Member Type" column specifies "LPA", it is advised to place the data set in the LPA.
   - These data sets can be in the LNKLST.
   - These data sets are not required to be APF-authorized, with some exceptions. If the value in the "Member Type" column specifies "APF", the data set must be APF-authorized.

The following figures describe the target and distribution libraries and file system paths required to install IBM IMS QCF. The storage requirements of IBM IMS QCF 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 9. Storage Requirements for IBM IMS QCF Target Libraries								
Library DDNAME	Member Type	Target Volume	TYPE	ORG	RECFM	LRECL	No. of 3390 Trks	No. of DIR Blks
SIQCBASE	Samples	ANY	S	PDS	FB	80	5	5
SIQCEXEC	EXEC	ANY	S	PDS	FB	80	10	5
SIQCLINK	Modules	ANY	S	PDS	U	0	200	50
SIQCMACS	Macro	ANY	S	PDS	FB	80	10	5
SIQCMENU	Messages	ANY	S	PDS	FB	80	15	15
SIQCPENU	Panels	ANY	S	PDS	FB	80	75	35
SIQCSAMP	Samples	ANY	S	PDS	FB	80	20	15
SIQCTENU	Tables	ANY	S	PDS	FB	80	5	5

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
Figure 10. Storage Requirements for IBM IMS QCF Distribution Libraries						
AIQCBASE	S	PDS	FB	80	5	5
AIQCEXEC	S	PDS	FB	80	10	5
AIQCLINK	S	PDS	U	0	200	75
AIQCMACS	S	PDS	FB	80	10	5
AIQCMENU	S	PDS	FB	80	15	15
AIQCPENU	S	PDS	FB	80	65	40
AIQCSAMP	S	PDS	FB	80	20	15
AIQCTENU	S	PDS	FB	80	5	5

5.3 FMIDs Deleted

Installing IBM IMS QCF 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 IMS QCF 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 Commands book for details.

5.4 Special Considerations

IBM IMS QCF has no 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 IMS QCF.

Please note the following points:

- If you want to install IBM IMS QCF 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 IMS QCF

6.1.1 SMP/E Considerations for Installing IBM IMS QCF

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

When installing IBM IMS QCF keep in mind that this product installs using SMP/E and not by downloading XMIT files, such as RMFPACK.LOAD.XMIT, RMFPACK.SMF2ZRF.XMIT, and RMFPACK.JCL.XMIT and performing a TSO RECEIVE on them. Once the SMP/E installation is finished (as described in the Program Directory) the product documentation can be followed as is.

6.1.2 SMP/E Options Subentry Values

The recommended values for certain SMP/E CSI subentries are shown in Figure 11. 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.

Figure 11. SMP/E Options Subentry Values		
Subentry	**Value**	**Comment**
DSSPACE	(300,500,900)	Use 900 directory blocks
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 IMS QCF:

Job Name	Job Type	Description	RELFILE
IQCALA	CSI Create	Sample CSI create (OPTIONAL!)	IBM.H0GN410.F2
IQCALB	CSI Create	Sample CSI create (OPTIONAL!)	IBM.H0GN410.F2
IQCRECEV	RECEIVE	Sample RECEIVE job	IBM.H0GN410.F2
IQCALLOC	ALLOCATE	Sample job to allocate target and distribution libraries	IBM.H0GN410.F2
IQCDDDEF	DDDEF	Sample job to define SMP/E DDDEFs	IBM.H0GN410.F2
IQCAPPLY	APPLY	Sample APPLY job	IBM.H0GN410.F2
IQCACCEP	ACCEPT	Sample ACCEPT job	IBM.H0GN410.F2

Figure 12. Sample Installation Jobs

You can access the sample installation jobs by performing an SMP/E RECEIVE (refer to 6.1.5, "Perform SMP/E RECEIVE" on page 16) then copy the jobs from the SMPTLIB data sets to a work data set for editing and submission. See Figure 12 to find the appropriate data set.

You can also copy the sample installation jobs from the product files by submitting the following job. The distribution medium is noted by the //FILEIN DD 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=*
//FILEIN   DD DSN=ibm.h0gn410.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,(primary,secondary,dir))
//SYSUT3   DD UNIT=SYSALLDA,SPACE=(CYL,(1,1))
//SYSIN    DD *
  COPY INDD=FILEIN,OUTDD=OUT
/*
```

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

- FILEIN:

    DSN=**ibm.h0gn410.f1** is the RELFILE where installation samples are located.
    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.

6.1.4 Perform SMP/E Environment Allocation (OPTIONAL!)

If you choose to allocate a separate CSI and Zones, you will also need to allocate separate SMP/E data sets for use with the new zones. Samples IQCALA and IQCALB are provided for this purpose. It is important that the data set names match between the sample jobs.

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

6.1.5 Perform SMP/E RECEIVE

If you have obtained IBM IMS QCF as part of a CBPDO, use the RCVPDO job in the CBPDO RIMLIB data set to receive the IBM IMS QCF 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 IQCRECEV to perform the SMP/E RECEIVE for IBM IMS QCF. 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.

6.1.6 Allocate SMP/E Target and Distribution Libraries

Edit and submit sample job IQCALLOC to allocate the SMP/E target and distribution libraries for IBM IMS QCF. 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.

6.1.7 Create DDDEF Entries

Edit and submit sample job IQCDDDEF to create DDDEF entries for the SMP/E target and distribution libraries for IBM IMS QCF. 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.

6.1.8 Perform SMP/E APPLY

Ensure that you have the latest HOLDDATA; then edit and submit sample job IQCAPPLY to perform an SMP/E APPLY CHECK for IBM IMS QCF. Consult the instructions in the sample job for more information.

The latest HOLDDATA is available through several different portals, including http://service.software.ibm.com/holdata/390holddata.html. 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:

1. 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.

2. 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
FORFMID(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.

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.

After installing new function, you should perform two operations:

1. Create a backup of the updated data sets, including any SMP/E data sets affected, in case something happens to the data sets during the next phase.

2. Do some testing before putting the new function into production.

After you are satisfied that an applied SYSMOD has performed reliably in your target system, you can install it in your distribution libraries using the ACCEPT process.

Another good practice is to accept most SYSMODs, particularly FMIDs, before performing another APPLY process. This provides you the ability to use the RESTORE process of SMP/E and to support the scenario where SMP/E needs to create a new load module from the distribution libraries during the APPLY process.

6.1.9 Perform SMP/E ACCEPT

Edit and submit sample job IQCACCEP to perform an SMP/E ACCEPT CHECK for IBM IMS QCF. 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.

6.1.10 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 IMS QCF, 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 IMS QCF

The publication **IBM IMS Queue Control Facility for z/OS User's Guide, GI13-5317** contains necessary information to customize and use IBM IMS QCF.

7.0 Notices

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