



**Program Directory for
IBM IMS High Performance Unload for z/OS**

V01.02.00

Program Number 5655-E06

FMID H1IN120

for Use with
z/OS

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Note!

Before using this information and the product it supports, be sure to read the general information under 7.0, "Notices" on page 22.

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1.0 Introduction

This Program Directory is intended for the system programmer responsible for program installation and maintenance. It contains information concerning the material and procedures associated with the installation of IBM IMS High Performance Unload for z/OS. This publication refers to IBM IMS High Performance Unload for z/OS as IMS High Performance Unload.

The Program Directory contains the following sections:

- 2.0, “Program Materials” on page 3 identifies the basic and optional program materials and documentation for IMS High Performance Unload.
- 3.0, “Program Support” on page 6 describes the IBM support available for IMS High Performance Unload.
- 4.0, “Program and Service Level Information” on page 8 lists the APARs (program level) and PTFs (service level) incorporated into IMS High Performance Unload.
- 5.0, “Installation Requirements and Considerations” on page 10 identifies the resources and considerations required for installing and using IMS High Performance Unload.
- 6.0, “Installation Instructions” on page 16 provides detailed installation instructions for IMS High Performance Unload. It also describes the procedures for activating the functions of IMS High Performance Unload, or refers to appropriate publications.

Before installing IMS High Performance Unload, read the *CBPDO Memo To Users* and the *CBPDO Memo To Users Extension* that were supplied with this program in softcopy form as well as this Program Directory and then keep them for future 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.

IMS High Performance Unload is supplied in a Custom-Built Product Delivery Offering (CBPDO, 5751-CS3). The Program Directory is provided in softcopy form on the CBPDO tape which is identical to the hardcopy form provided with your order. All service and HOLDDATA for IMS High Performance Unload are included on the CBPDO tape.

Do not use this Program Directory if you are installing IMS High Performance Unload with a SystemPac or ServerPac. When using these offerings, use the jobs and documentation supplied with the offering. This documentation may point you to specific sections of the Program Directory as required.

1.1 IMS High Performance Unload Description

IMS High Performance Unload for z/OS, V1.2 (5655-E06) provides IMS database unload utilities and an API to read an IMS database sequentially. The functions are serviced by a high-performance database retrieval engine called the High Speed Sequential Retrieval (HSSR) Engine.

The product offers the following features and benefits:

- Fast segment retrieval from databases
- A user exit facility to allow additional processing for retrieved segments
- The ability to continue processing after sequence errors

IMS High Performance (HP) Unload for z/OS, V1.2 is keeping pace with and supporting the latest technologies and provides all maintenance supplied for the previous release.

The new release offers:

- IMS V9 and IMS V10 support
- Enhancements to the FABHURG1 unload utility:
 - JCL compatibility with the IMS HD Reorganization Unload utility (DFSURGU0).
 - A check record that can be added to an unload file. IMS High Performance Load for z/OS, V2 (5655-M26) uses the record to check against DBRC whether an update of the database has been done between unload and reload processes.
 - IBM-provided exit routine FABHKEYX is added to distribute the unload records to multiple unload files according to the root key values. The unload files can be used to migrate a non-HALDB to a HALDB.
- Enhancements to the API:
 - Qualified Segment Search Argument (SSA) is supported in a GN call to retrieve the root segment or the second level dependent segment.
 - Improved documentation.
- Performance improvement:
 - HSSR Engine uses Media Manager to read VSAM ESDS database data sets if the STEPLIB libraries are APF-authorized.
 - Buffer number for unload data set is optimized.

1.2 IMS High Performance Unload FMIDs

IMS High Performance Unload consists of the following FMID:

H11N120

2.0 Program Materials

An IBM program is identified by a program number and a feature number. The program number for IMS High Performance Unload is 5655-E06 and its feature number is 5802.

Basic Machine-Readable Materials are materials that are supplied under the base license and feature numbers, and are required for the use of the product. Optional Machine-Readable Materials are orderable under separate feature numbers, and are not required for the product to function.

The program announcement material describes the features supported by IMS High Performance Unload. 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 magnetic tape or downloadable files. It is installed using SMP/E, and is in SMP/E RELFILE format. See 6.0, "Installation Instructions" on page 16 for more information about how to install the program.

Information about the physical tape for the Basic Machine-Readable Materials for IMS High Performance Unload can be found in the *CBPDO Memo To Users Extension*.

Figure 1 describes the program file content for IMS High Performance Unload. You can refer to the *CBPDO Memo To Users Extension* to see where the files reside on the tape.

Notes:

1. The data set attributes in this table should be used in the JCL of jobs reading the data sets, but since the data sets are in IEBCOPY unloaded format, their actual attributes may be different.
2. If any RELFILEs are identified as PDSEs, ensure that SMPTLIB data sets are allocated as PDSEs.

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	6400
IBM.H1IN120.F1	PDS	FB	80	8800
IBM.H1IN120.F2	PDS	U	0	6144
IBM.H1IN120.F3	PDS	FB	80	8800
IBM.H1IN120.F4	PDS	FB	80	8800

2.2 Optional Machine-Readable Material

No optional machine-readable materials are provided for IMS High Performance Unload.

2.3 Program Publications

The following sections identify the basic and optional publications for IMS High Performance Unload.

2.3.1 Basic Program Publications

Figure 2 identifies the basic unlicensed program publications for IMS High Performance Unload. One copy of each of these publications is included when you order the basic materials for IMS High Performance Unload. For additional copies, contact your IBM representative.

<i>Figure 2. Basic Material: Unlicensed Publications</i>	
Publication Title	Form Number
IMS High Performance Unload for z/OS License Information	GC27-0937

Figure 3 identifies the basic unlicensed or licensed publications that are not available in hardcopy form, but are available through the internet or other media for IMS High Performance Unload.

<i>Figure 3. Basic Material: Other Unlicensed or Licensed Publications</i>		
Publication Title	Form Number	How Available
IMS High Performance Unload for z/OS User's Guide	SC27-0936	http://www.ibm.com/software/data/db2imstools/library.html

2.3.2 Optional Program Publications

No optional publications are provided for IMS High Performance Unload.

2.4 Program Source Materials

No program source materials or viewable program listings are provided for IMS High Performance Unload.

2.5 Publications Useful During Installation

The publications listed in Figure 4 on page 5 may be useful during the installation of IMS High Performance Unload. To order copies, contact your IBM representative or visit the IBM Publications Center on the World Wide Web at:

<http://www.ibm.com/shop/publications/order>

<i>Figure 4. Publications Useful During Installation</i>	
Publication Title	Form Number
<i>IBM SMP/E for z/OS User's Guide</i>	SA22-7773
<i>IBM SMP/E for z/OS Commands</i>	SA22-7771
<i>IBM SMP/E for z/OS Reference</i>	SA22-7772
<i>IBM SMP/E for z/OS Messages, Codes, and Diagnosis</i>	GA22-7770

3.0 Program Support

This section describes the IBM support available for IMS High Performance Unload.

3.1 Program Services

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

3.2 Preventive Service Planning

Before installing IMS High Performance Unload, it is VERY IMPORTANT that you review the current Preventive Service Planning (PSP) information. The PSP buckets maintain current lists of any recommended or required service for this package's installation. This includes software PSP information that contains HIPER, and/or required PTFs against the base release.

While there can be overlap between SW, HW and functional PSP buckets, reviewing all that apply to this package will ensure that you identify any known service required for your installation of this package.

If you obtained IMS High Performance Unload as part of a CBPDO, there is HOLDDATA included on the PDO.

If the CBPDO for IMS High Performance Unload is more than two weeks old when you install it, you should contact the IBM Support Center, use S/390 SoftwareXcel to obtain the current "PSP Bucket" or obtain the current PSP from the Web at <https://techsupport.services.ibm.com/server/390.psp390>

For program support, access the Software Support Web site at <http://www-3.ibm.com/software/support/>

PSP Buckets are identified by UPGRADEs, which specify product levels, and SUBSETs, which specify the FMIDs for a product level. The UPGRADE and SUBSET values for IMS High Performance Unload are:

Figure 5. PSP Upgrade and Subset ID

UPGRADE	SUBSET	Description
5655E06	H11N120	IMS High Performance Unload for z/OS

3.3 Statement of Support Procedures

Report any difficulties you have using this program to your IBM Support Center. If an APAR is required, the Support Center will advise how you should submit any needed information or documentation.

Figure 6 on page 7 identifies the component IDs (COMPID) for IMS High Performance Unload.

<i>Figure 6. Component IDs</i>			
FMID	COMPID	Component Name	RETAIN Release
H1IN120	5655E0600	IMS High Performance Unload	120

4.0 Program and Service Level Information

This section identifies the program and any relevant service levels of IMS High Performance Unload. The program level refers to the APAR fixes incorporated into the program. The service level refers to the PTFs incorporated into the program.

4.1 Program Level Information

The following APAR fixes against previous releases of IMS High Performance Unload have been incorporated into this release. They are listed by FMID.

- FMID H1IN120

PQ48541	PQ71688	PK07882
PQ49085	PQ72433	PK08779
PQ49420	PQ76387	PK08900
PQ50674	PQ77099	PK11209
PQ51595	PQ79143	PK11534
PQ52195	PQ79469	PK12918
PQ55504	PQ80191	PK13001
PQ55674	PQ81449	PK13441
PQ57581	PQ81675	PK13444
PQ57804	PQ81884	PK13800
PQ57815	PQ83387	PK14392
PQ59838	PQ84900	PK16234
PQ60530	PQ85305	PK17804
PQ60945	PQ85786	PK19058
PQ61589	PQ89724	PK19705
PQ62843	PQ89995	PK20862
PQ63210	PQ90043	PK21498
PQ63286	PQ93668	PK22535
PQ63445	PQ97692	PK22614
PQ65900	PQ97906	PK24577
PQ65972	PQ99842	PK24974
PQ66181	PK01994	PK27570
PQ67004	PK02399	PK28097
PQ67296	PK04153	PK30539
PQ67388	PK04546	PK32595
PQ68481	PK04792	PK33118
PQ69199	PK04911	PK33847
PQ69413	PK05759	PK34469
PQ70569	PK06057	PK35959
PQ70680	PK07157	PK38688
PQ70768	PK07881	PK47931

PK48499
PK49836

4.2 Service Level Information

No PTFs against this release of IMS High Performance Unload have been incorporated into the product tape.

Over time it is HIGHLY recommended that you frequently check the IMS High Performance Unload PSP bucket for HIPER and SPECIAL Attention PTFs against all FMID(s) which should be installed.

5.0 Installation Requirements and Considerations

The following sections identify the system requirements for installing and activating IMS High Performance Unload. The following terminology is used:

- *Driving system*: the system used to install the program.

The program may have specific operating system or product level requirements for utilizing processes such as binder or assembly utilities during the install.

- *Target system*: the system on which the program is intended to run.

The program may have specific product level requirements such as needing access to another product's library for link-edits that may directly affect the elements during the install or for its basic or enhanced operation. These requirements may be mandatory or optional.

In many cases, the same system can be used as both a driving system and a target system. However, you may want to set up a clone of your system to use as a target system by making a separate IPL-able copy of the running system. The clone should 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.

Some cases where two systems should be used include the following:

- When installing a new level of a product that is already installed, the new product will delete the old one. By installing onto a separate target system, you can test the new product while still keeping the old one in production.
- When installing a product that shares libraries or load modules with other products, the installation can disrupt the other products. Installing onto a test system or clone will allow you to 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 IMS High Performance Unload.

5.1.1 Machine Requirements

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

5.1.2 Programming Requirements

<i>Figure 7. Driving System Software Requirements</i>	
Program Number	Product Name and Minimum VRM/Service Level
Any one of the following:	
5694-A01	z/OS V1.07.0 or later
5655-G44	IBM SMP/E for z/OS V3.04.0 or later

5.2 Target System Requirements

This section describes the environment of the target system required to install and use IMS High Performance Unload.

IMS High Performance Unload 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: An installation requisite is defined as a product that is required and **must** be present or one that is not required but **should** be present on the system for the successful installation of this product.

A mandatory installation requisite identifies products that are required, without exception, or this product **will not install** on your system. This includes products specified as PREs or REQs.

<i>Figure 8. Mandatory Installation Requisites</i>	
Program Number	Product Name and Minimum VRM/Service Level
Any one of the following:	
5655-C56	IMS V08.01.00
5655-J38	IMS V09.01.00
5635-A01	IMS V10.01.00

A conditional installation requisite identifies products that are **not** required for successful install but may resolve such things as certain warning messages at installation time. They include products that are specified as IF REQs.

IMS High Performance Unload has no conditional installation requisites.

5.2.2.2 Operational Requisites: An operational requisite is defined as a product that is required and **must** be present or a product that is not required but **should** be present on the system in order for this product to operate all or some of its functions.

A mandatory operational requisite identifies products that are required, without exception, or this product **will not operate** its basic function unless the requisite is met. This includes products specified as PREs or REQs.

IMS High Performance Unload has no mandatory operational requisites.

A conditional operational requisite identifies products that are **not required** for the basic function but are needed at run time for this product to utilize specific functions. They may include products specified as IF REQs.

IMS High Performance Unload has no conditional operational requisites.

5.2.2.3 Toleration/Coexistence Requisites: A toleration/coexistence requisite is defined as a product that must be present on a sharing system. 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 at different time intervals.

IMS High Performance Unload has no toleration/coexistence requisites.

5.2.2.4 Incompatibility (Negative) Requisites: A negative requisite identifies products that must *not* be installed on the same system as this product.

IMS High Performance Unload has no negative requisites.

5.2.3 DASD Storage Requirements

IMS High Performance Unload libraries can reside on all supported DASD types.

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

Library Type	Total Space Required in 3390 Trks
Target	440 tracks
Distribution	440 tracks

Notes:

1. IBM recommends use of system determined block sizes for efficient DASD utilization for all non-RECFM U data sets. For RECFM U data sets, IBM recommends a block size of 32760, which is the most efficient from a performance and DASD utilization perspective.

2. Abbreviations used for the data set type are:

- U** Unique data set, allocated by this product and used only by this product. To determine the correct storage needed for this data set, this table provides all required information; no other tables (or Program Directories) need to be referenced for the data set size.
- S** Shared data set, allocated by this product and used by this product and others. To determine the correct storage needed for this data set, the storage size given in this table needs to be added to 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 others. This data set is NOT allocated by this product. To determine the correct storage needed for this data set, the storage size given in this table needs to be added to other tables (perhaps in other program directories). This existing data set 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 one and reclaim the space used by the old release and any service that had been installed. You can determine whether or not 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 on the names and sizes of the required data sets, please refer to 6.1.7, "Allocate SMP/E Target and Distribution Libraries" on page 18.

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

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

4. All target libraries listed have the following attributes:

- The data set may be SMS-managed.
- It is not required for the data set to be SMS-managed.
- It is not required for the data set to reside on the IPL volume.
- The values in the "Member Type" column are not necessarily the actual SMP/E element types identified in the SMPMCS.

5. All target libraries listed which contain load modules have the following attributes:

- The data set may be in the LPA.
- It is not required for the data set to be in the LPA.
- The data set may be in the LNKLST.
- It is not required for the data set to be APF-authorized.

The following figures describe the target and distribution libraries required to install IMS High Performance Unload. The storage requirements of IMS High Performance Unload must be added to the storage required by other programs having data in the same library or path.

Note: The data in these tables should be used when determining 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 10. Storage Requirements for IMS High Performance Unload Target Libraries

Library DDNAME	Member Type	Target Volume	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
SHPSBASE	SAMPLE	Any	S	PDS	FB	80	30	35
SHPSJCL0	SAMPLE	Any	S	PDS	FB	80	40	20
SHPSMAC0	MACRO	Any	S	PDS	FB	80	70	60
SHPSLMD0	LMD0	Any	S	PDS	U	0	230	200
SHPSSAMP	SAMPLE	Any	S	PDS	FB	80	70	60

Figure 11. Storage Requirements for IMS High Performance Unload Distribution Libraries

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
AHPSJCL0	S	PDS	FB	80	70	60
AHPSMAC0	S	PDS	FB	80	70	60
AHPSMOD0	S	PDS	U	0	230	200
AHPSSAMP	S	PDS	FB	80	70	60

The following figures list data sets that are not used by SMP/E, but are required for IMS High Performance Unload to execute.

5.3 FMIDs Deleted

Installing IMS High Performance Unload may result in the deletion of other FMIDs. To see what FMIDs will be deleted, examine the ++VER statement in the product's SMPMCS.

If you do not wish to delete these FMIDs at this time, you must install IMS High Performance Unload into separate SMP/E target and distribution zones.

Note: These FMIDs will not automatically be deleted from the Global Zone. Consult the SMP/E manuals for instructions on how to do this.

5.4 Special Considerations

IMS High Performance Unload 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 IMS High Performance Unload.

Please note the following:

- If you want to install IMS High Performance Unload 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.
- Sample jobs have been provided to help perform some or all of the installation tasks. The SMP/E jobs assume that all DDDEF entries required for SMP/E execution have been defined in the appropriate zones.
- The SMP/E dialogs may be used instead of the sample jobs to accomplish the SMP/E installation steps.

6.1 Installing IMS High Performance Unload

6.1.1 SMP/E Considerations for Installing IMS High Performance Unload

This release of IMS High Performance Unload is installed using the SMP/E RECEIVE, APPLY, and ACCEPT commands. The SMP/E dialogs may be used to accomplish the SMP/E installation steps.

6.1.2 SMP/E Options Subentry Values

The recommended values for some SMP/E CSI subentries are shown in Figure 12. Use of values lower than these may result in failures in the installation process. DSSPACE is a subentry in the GLOBAL options entry. PEMAX is a subentry of the GENERAL entry in the GLOBAL options entry. Refer to the SMP/E manuals for instructions on updating the global zone.

Figure 12. SMP/E Options Subentry Values

SUB-ENTRY	Value	Comment
DSSPACE	(200,200,500)	3390 DASD tracks
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 IMS High Performance Unload:

Figure 13. Sample Installation Jobs

Job Name	Job Type	Description	RELFILE
FABHCSI	SMP/E	Sample job to allocate and initialize a new SMP/E CSI data set (Optional)	IBM.H1IN120.F1
FABHCSID	SMP/E	Sample job to allocate SMP/E data sets data set (Optional)	IBM.H1IN120.F1
FABHRECV	RECEIVE	Sample RECEIVE job	IBM.H1IN120.F1
FABHALLC	ALLOCATE	Sample job to allocate target and distribution libraries	IBM.H1IN120.F1
FABHDDEF	DDDEF	Sample job to define SMP/E DDDEFs	IBM.H1IN120.F1
FABHAPPL	APPLY	Sample APPLY job	IBM.H1IN120.F1
FABHACCP	ACCEPT	Sample ACCEPT job	IBM.H1IN120.F1

You can access the sample installation jobs by performing an SMP/E RECEIVE and then copying the jobs from the relfiles to a work data set for editing and submission. See Figure 13 on page 16 to find the appropriate relfile data set.

You may also choose to copy the jobs from the tape or product files by submitting the job below. Use either the //TAPEIN or the //FILEIN DD statement, depending on your distribution medium, and comment out or delete the other statement. Add a job card and change the lowercase parameters to uppercase values to meet your site's requirements before submitting.

```
//STEP1 EXEC PGM=IEBCOPY
//SYSPRINT DD SYSOUT=*
//TAPEIN DD DSN=IBM.fmid.Fy,UNIT=tunit,
// VOL=SER=volser,LABEL=(x,SL),
// DISP=(OLD,KEEP)
//FILEIN DD DSN=IBM.H1IN120.F1,UNIT=SYSALLDA,DISP=SHR,
// VOL=SER=filevol
//OUT DD DSNAME=jc1-library-name,
// DISP=(NEW,CATLG,DELETE),
// VOL=SER=dasdvol,UNIT=SYSALLDA,
// SPACE=(TRK,(20,5,20))
//SYSUT3 DD UNIT=SYSALLDA,SPACE=(CYL,(1,1))
//SYSIN DD *
COPY INDD=xxxxIN,OUTDD=OUT
/*
```

In the sample above, update the statements as noted below:

If using TAPEIN:

tunit is the unit value matching the product tape.

volser is the volume serial matching the product tape.

x is the tape file number where the data set name is on the tape.

Refer to the documentation provided by CBPDO to see where IBM.H1IN120.F1 is on the tape.

If using FILEIN

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

OUT

jcl-library-name is the name of the output data set where the sample jobs will be stored.

dasdvol is the volume serial of the DASD device where the output data set will reside.

SYSIN

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

6.1.4 Allocate SMP/E CSI (Optional)

If you are using an existing CSI, do not execute this job.

If you are allocating a new SMP/E data set for this install, edit, and submit sample job FABHCSI to allocate the SMP/E data set for IMS High Performance Unload.

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

6.1.5 Initialize CSI zones (Optional)

Edit and submit sample job FABHCSID to initialize SMP/E zones for IMS High Performance Unload. 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. the SMP/E data set for IMS High Performance Unload.

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

6.1.6 Perform SMP/E RECEIVE

Having obtained IMS High Performance Unload as part of a CBPDO, use the RCVPDO job found in the CBPDO RIMLIB data set to RECEIVE the IMS High Performance Unload FMIDs as well as any service, HOLDDATA, included on the CBPDO tape. For more information, refer to the documentation included with the CBPDO.

You can also choose to edit and submit sample job FABHRECV to perform the SMP/E RECEIVE for IMS High Performance Unload. 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 Allocate SMP/E Target and Distribution Libraries

Edit and submit sample job FABHALLC to allocate the SMP/E target and distribution libraries for IMS High Performance Unload. 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 Create DDDEF Entries

Edit and submit sample job FABHDDEF to create DDDEF entries for the SMP/E target and distribution libraries for IMS High Performance Unload. 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.

6.1.9 Perform SMP/E APPLY

1. Ensure you have the latest Enhanced HOLDDATA, then edit and submit sample job FABHAPPL to perform an SMP/E APPLY CHECK for IMS High Performance Unload. Consult the instructions in the sample job for more information.

Perform an SMP/E APPLY CHECK for IMS High Performance Unload.

Enhanced HOLDDATA introduces ERROR HOLDS against FMIDs for HIPER APARs. Prior to installing, you should ensure you have the latest Enhanced HOLDDATA (available at url <http://service.software.ibm.com/holdata/390holddata.html>). The FMID(s) should be installed regardless of the status of unresolved HIPERs, however, the software should not be deployed until the unresolved HIPERs have been analyzed to determine applicability.

To receive the full benefit of the SMP/E Causer SYSMOD Summary Report, do *not* bypass the following on the APPLY CHECK: PRE, ID, REQ, and IFREQ. This is because the SMP/E root cause analysis identifies the cause only of **ERRORS** and not of **WARNINGS** (SYSMODs that are bypassed are treated as warnings, not errors, by SMP/E).

There are two methods to complete an FMID installation where ++HOLDS for HIPERs exist for the FMID(s) being installed:

- a. To ensure that all recommended and critical service is installed with the FMID(s), add the SOURCEIDs of PRP, HIPER, and RSU* to the APPLY command. There may be PE or HIPER APARs that do not have resolving PTFs available yet. You need to analyze the symptom flags to determine if you want to BYPASS the specific ERROR HOLDS and continue the FMID installation.

```
APPLY S(fmid,fmid,...)
FORFMID(fmid,fmid,...)
SOURCEID(PRP,HIPER,RSU*,...)
GROUPEXTEND .
```

This method requires more initial research, but will provide resolution for all HIPERs that have fixes available and are not in a PE chain. There may still be unresolved PEs or HIPERs that will require the use of BYPASS.

- b. To install the FMID(s) as it would have been installed prior to Enhanced HOLDDATA, you can add a BYPASS(HOLDCLASS(HIPER)) operand to the APPLY command. This will allow the FMID to be installed even though there are HIPER ERROR HOLDS against it. Note that not all ERROR HOLDS were bypassed, only the HIPER ERROR HOLDS. After the FMID(s) are installed, the SMP/E REPORT ERRSYSMODS command should be run to identify any missing HIPER maintenance.

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

This method is the quicker of the two, but requires subsequent review of the REPORT ERRSYSMODS to investigate any HIPERs.

If you bypass any HOLDS during the installation of the FMID(s) because fixing PTFs were not yet available you can use the APAR Status Tracking (AST) function of ServiceLink or the APAR Tracking function of ResourceLink to be notified when the fixing PTF is available.

2. After you have taken any actions 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 apply 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.

6.1.10 Executing Installation Verification Test

Edit and submit IVP job FABHIVP in SHPSJCL0 library. Consult the instructions in the job for more information.

6.1.11 Perform SMP/E ACCEPT

Edit and submit sample job FABHACCP to perform an SMP/E ACCEPT CHECK for IMS High Performance Unload. Consult the instructions in the sample job for more information.

Perform an SMP/E ACCEPT CHECK for IMS High Performance Unload.

To receive the full benefit of the SMP/E Causer SYSMOD Summary Report, do *not* bypass the following on the ACCEPT CHECK: PRE, ID, REQ, and IFREQ. This is because the SMP/E root cause analysis identifies the cause only of **ERRORS** and not of **WARNINGS** (SYSMODs that are bypassed are treated as warnings, not errors, by SMP/E).

Before using SMP/E to load new distribution libraries, it is recommended that you set the ACCJCLIN indicator in the distribution zone. This will cause entries produced from JCLIN to be saved in the distribution zone whenever a SYSMOD containing inline JCLIN is ACCEPTed. For more information on the ACCJCLIN indicator, see the description of inline JCLIN in the SMP/E manuals.

Once you have taken any actions 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 accept 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 containing replacement modules are being ACCEPTed, SMP/E ACCEPT processing will link-edit/bind the modules into the distribution libraries. During this processing, the Linkage Editor or Binder may issue messages documenting unresolved external references, resulting in a return code of 4 from the ACCEPT step. These messages can be ignored, because the distribution libraries are not executable and the unresolved external references will not affect the executable system libraries.

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

6.1.12 Run REPORT CROSSZONE

The SMP/E REPORT CROSSZONE command will identify requisites defined for products that have been installed in separate zones. This command will also create APPLY and ACCEPT commands in the SMPPUNCH data set that you can use to install those cross-zone requisites it identifies.

After you have installed IMS High Performance Unload, 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 describing all the target and distribution libraries to be reported on.

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

6.2 Activating IMS High Performance Unload

IMS High Performance Unload is fully operational once the SMP/E installation is complete. No further customization is required to activate this function.

7.0 Notices

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Reader's Comments

Program Directory for IBM IMS High Performance Unload for z/OS, March 2008

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