



**Program Directory for
IBM IMS Fast Path Solution Pack for z/OS**

V02.01.00

Program Number 5698-FPP

FMIDs HAHQ210 and H22K310

for Use with
z/OS

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GI13-5905-01

Note

Before using this information and the product it supports, be sure to read the general information under 7.0, "Notices" on page 29.

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1.0 Introduction

This program directory is intended for system programmers who are responsible for program installation and maintenance. It contains information about the material and procedures associated with the installation of IBM IMS Fast Path Solution Pack for z/OS. This publication refers to IBM IMS Fast Path Solution Pack for z/OS as IMS FP Solution Pack.

The Program Directory contains the following sections:

- 2.0, “Program Materials” on page 4 identifies the basic program materials and documentation for IMS FP Solution Pack.
- 3.0, “Program Support” on page 8 describes the IBM support available for IMS FP Solution Pack.
- 4.0, “Program and Service Level Information” on page 10 lists the APARs (program level) and PTFs (service level) that have been incorporated into IMS FP Solution Pack.
- 5.0, “Installation Requirements and Considerations” on page 14 identifies the resources and considerations that are required for installing and using IMS FP Solution Pack.
- 6.0, “Installation Instructions” on page 21 provides detailed installation instructions for IMS FP Solution Pack. It also describes the procedures for activating the functions of IMS FP Solution Pack, or refers to appropriate publications.

Before installing IMS FP Solution Pack, 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 8 tells you how to find any updates to the information and procedures in this program directory.

IMS FP Solution Pack 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 IMS FP Solution Pack are included on the CBPDO.

Do not use this program directory if you install IMS FP Solution Pack 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 IMS FP Solution Pack Description

IBM IMS Fast Path Solution Pack for z/OS , V2.1 (5698-FPP) provides extensive and easy-to-use utilities that include all the functions database administrators (DBAs) need to analyze and maintain IMS Fast Path databases (DEDBs), as well as the Fast Path Second Index (FPSI) databases, including features that help boost system availability by enabling the operation of a variety of key functions without taking DEDBs offline.

IMS Fast Path Solution Pack for z/OS:

- Leverages a complete set of high-performance utilities to initialize, load, unload, reorganize, verify, tune, and report on DEDBs
- Provides utilities to build the FPSI databases, synchronize FPSI databases with their primary DEDBs, and reclaim the control intervals (CIs) in FPSI database data sets
- Integrates with active autonomies features of Autonomics Director (a component of the separately licensed IBM Tools Base for z/OS, V1.6 (5655-V93)) to establish the active autonomies environment to establish the active autonomies environment to automate recurring monitoring and maintenance tasks for DEDBs
- Extends the capabilities of IBM Management Console for IMS and Db2 for z/OS (5655-TAC, an IBM product separately licensed) by providing detailed insight into the health and availability of DEDBs through its more easily accessible web interface
- Provides high-performance image copy using advanced technology
- Provides utilities to manage IMS libraries to help provide database integrity and to correct pointer problems

IMS Fast Path Solution Pack for z/OS, V2.1 provides the following new utility, further extending the product's capabilities and usability: IMS Fast Path Solution Pack for z/OS offers:

- **Online Structure Change utility** The Online Structure Change utility (OSC) facilitates restructure tasks for online IMS DEDBs. The utility provides advanced functions that help DBAs change the DBD definition, randomizing module or segment edit/compression routine of DEDB while providing users with full access to the database. OSC helps to improve the overall database availability and helps to prevent or significantly reduce planned downtime.

In addition, IMS Fast Path Solution Pack V2.1 adds support for IMS Managed ACBs for the following additional utilities:

- DEDB Reload Segment Data Set Create utility (FABCUR6)
- DEDB Unloaded Segment Data Set Retrieve utility (FABCUR7)
- DEDB randomizing modules (FABCRMIF and FABDRMIF)

IMS Fast Path Solution Pack Utilities

- IMS Fast Path Advanced Tool
 - Integrates tool functions, improving processing efficiency and greatly reducing the time and resources needed for operation
 - Provides concurrent initialization, unload, reload, reorganization, restructure, analysis, tuning, DMAC print, and extract of multiple DEDB areas without impacting all areas of a database, all in a single step
 - Provides concurrent build, synchronization, analysis and free space reclaim of the FPSI databases
- IMS Fast Path Online Tools
 - Integrates tool functions, improving processing efficiency and greatly reducing the time and resource needed for operation
 - Consists of an Online Pointer Checker, Online Data Extract, Online Area Extender, Online Expert Reorganization, and Online DMAC print utilities
 - Provides for all operations without having to take the DEDBs offline

- Online Space Management utility
 - Works with active autonomies features of Autonomics Director to automate database reorganization, IOVF extension, and SDEP extension task based on an understanding of the current state of your DEDB
- Online Structure Change utility
 - With Version 2.1:

Facilitates restructure tasks to change the DBD definition, randomizing module or segment edit/compression routine while providing users with full access to the DEDBs

IMS Library Integrity Utilities

- Provides utilities to validate, compare, map, and report on IMS libraries
- Complements and exploits the visualization of a decoded DBD from a DBD library in the IBM Management Console for IMS and Db2 for z/OS

IMS High Performance Image Copy

- Provides fast backup and recovery of database data sets using advance copy technology

IMS Database Repair Facility

- Provides the capability to locate and fix problem pointers

For more information on the features available in IMS Fast Path Solution Pack for z/OS, see the website: <https://www.ibm.com/no-en/marketplace/ims-fast-path-solution-pack>

1.2 IMS FP Solution Pack FMIDs

IMS FP Solution Pack consists of the following FMIDs:

HAHQ210 IMS FP Solution Pack
H27P220 IMS Library Integrity Utilities
H1J0420 IMS HP Image Copy
H22K310 DB Repair

2.0 Program Materials

An IBM program is identified by a program number. The program number for IMS FP Solution Pack is 5698-FPP.

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 IMS FP Solution Pack. 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 21 for more information about how to install the program.

You can find information about the physical media for the basic machine-readable materials for IMS FP Solution Pack in the *CBPDO Memo To Users Extension*.

Figure 1 describes the program file content for IMS FP Solution Pack. 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 must be used in the JCL of jobs that read the data sets. However, because the data sets are in IEBCOPY unloaded format, their actual attributes might 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	ORG	RECFM	RECL	BLK SIZE
SMPMCS	SEQ	FB	80	8800
IBM.HAHQ210.F1	PDS	FB	80	8800
IBM.HAHQ210.F2	PDS	FB	80	8800
IBM.HAHQ210.F3	PDS	FB	80	8800
IBM.HAHQ210.F4	PDS	U	0	6144
IBM.HAHQ210.F5	PDS	FB	80	8800

Figure 2. Program File Content for DB Repair

Name	O R G	R E C F M	L R E C L	BLK SIZE
SMPMCS	SEQ	FB	80	8800
IBM.H22K310.F1	PDS	FB	80	8800
IBM.H22K310.F2	PDS	U	0	6144
IBM.H22K310.F3	PDS	FB	80	8800
IBM.H22K310.F4	PDS	FB	80	8800
IBM.H22K310.F5	PDS	FB	80	8800

To view the Program File Content of the products that constitute IBM IMS Fast Path Solution Pack for z/OS, refer to the following Program Directories that are supplied with the product.

- Publication number GI10-8798 for IMS Library Integrity Utilities
- Publication number GI10-8671 for IMS High Performance Image Copy

2.2 Optional Machine-Readable Material

No optional machine-readable materials are provided for IMS FP Solution Pack.

2.3 Program Publications

The following sections identify the basic publications for IMS FP Solution Pack.

Figure 3 identifies the basic unlicensed publications for IMS FP Solution Pack. Publications can be accessed at the IBM Publications Center website at:

<http://www.ibm.com/e-business/linkweb/publications/servlet/pbi.wss>

Figure 3 (Page 1 of 2). Basic Material: Unlicensed

Publication Title	Form Number	Media Format
IBM IMS Fast Path Solution Pack for z/OS License Information	LC28-3202	http://www.ibm.com/software/sla/sladb.nsf
IBM IMS Library Integrity Utilities for z/OS Program Directory	GI10-8798	http://www.ibm.com/support/docview.wss?uid=swg27020942
IBM IMS High Performance Image Copy for z/OS Program Directory	GI10-8671	http://www.ibm.com/support/docview.wss?uid=swg27020942

Figure 3 (Page 2 of 2). Basic Material: Unlicensed

Publication Title	Form Number	Media Format
IBM IMS Fast Path Solution Pack for z/OS: Overview and Customization	GC27-9596	http://www.ibm.com/support/docview.wss?uid=swg27020942
IBM IMS Fast Path Solution Pack for z/OS: IMS High Performance Fast Path Utilities User's Guide	SC27-9536	http://www.ibm.com/support/docview.wss?uid=swg27020942
IBM IMS Fast Path Solution Pack for z/OS: Fast Path Basic Tools User's Guide	SC27-9597	http://www.ibm.com/support/docview.wss?uid=swg27020942
IBM IMS Fast Path Solution Pack for z/OS: Supplementary Utilities User's Guide	SC27-9598	http://www.ibm.com/support/docview.wss?uid=swg27020942
IBM IMS Library Integrity Utilities for z/OS User's Guide	SC19-3979	http://www.ibm.com/support/docview.wss?uid=swg27020942
IBM IMS High Performance Image Copy for z/OS User's Guide	SC19-2756	http://www.ibm.com/support/docview.wss?uid=swg27020942
IBM IMS Database Repair Facility for IMS Solution Packs User's Guide	SC19-2916	http://www.ibm.com/support/docview.wss?uid=swg27020942
IBM IMS Solution Packs Database Sensor User's Guide	SC19-3283	http://www.ibm.com/support/docview.wss?uid=swg27020942
IBM IMS Solution Packs IMS Database Space Tuning Guide	SC19-3395	http://www.ibm.com/support/docview.wss?uid=swg27020942

To view the unlicensed publications of the products that constitute IBM IMS Fast Path Solution Pack for z/OS, refer to the following Program Directories that are supplied with the product.

- Publication number GI10-8798 for IMS Library Integrity Utilities
- Publication number GI10-8671 for IMS High Performance Image Copy

2.4 Program Source Materials

No program source materials or viewable program listings are provided for IMS FP Solution Pack.

2.5 Publications Useful During Installation

You might want to use the publications listed in Figure 4 during the installation of IMS FP Solution Pack.

Figure 4. Publications Useful During Installation

Publication Title	Form Number	Media Format
<i>IBM SMP/E for z/OS User's Guide</i>	SA23-2277	http://www.ibm.com/e-business/linkweb/publications/servlet/pbi.wss
<i>IBM SMP/E for z/OS Commands</i>	SA23-2275	http://www.ibm.com/e-business/linkweb/publications/servlet/pbi.wss
<i>IBM SMP/E for z/OS Reference</i>	SA23-2276	http://www.ibm.com/e-business/linkweb/publications/servlet/pbi.wss
<i>IBM SMP/E for z/OS Messages, Codes, and Diagnosis</i>	GA32-0883	http://www.ibm.com/e-business/linkweb/publications/servlet/pbi.wss
<i>IBM Tools Base for z/OS Program Directory</i>	G110-8819	http://www.ibm.com/support/docview.wss?uid=swg27020942

3.0 Program Support

This section describes the IBM support available for IMS FP Solution Pack.

3.1 Program Services

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

3.2 Preventive Service Planning

Before you install IMS FP Solution Pack, 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-REQUIRESERVICE fix category in SMP/E to ensure you have all the recommended service installed. Use the **FIXCAT(IBM.PRODUCTINSTALL-REQUIRESERVICE)** operand on the **APPLY CHECK** command. See 6.1.10, "Perform SMP/E APPLY" on page 24 for a sample APPLY command

If you obtained IMS FP Solution Pack as part of a CBPDO, HOLDDATA is included.

If the CBPDO for IMS FP Solution Pack 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 IMS FP Solution Pack are included in Figure 5.

UPGRADE	SUBSET	Description
5655W14	HAHQ210	IMS FP Solution Pack
5655U08	H27P220	IMS Library Integrity Utilities
5655N45	H1J0420	IMS HP Image Copy

Figure 5 (Page 2 of 2). PSP Upgrade and Subset ID

UPGRADE	SUBSET	Description
5655U09	H22K310	IMS HP Pointer Checker - DB Repair

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 6 identifies the component IDs (COMPID) for IMS FP Solution Pack.

Figure 6. Component IDs

FMID	COMPID	Component Name	RETAIN Release
HAHQ210	5655W1400	IMS FP Solution Pack	210
H27P220	5655I4200	IMS Library Integrity Utilities	220
H1J0420	5655K9600	IMS HP Image Copy	420
H22K310	5655E0300	DB Repair	310

4.0 Program and Service Level Information

This section identifies the program and relevant service levels of IMS FP Solution Pack. 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

The following APAR fixes against previous releases of IMS FP Solution Pack have been incorporated into this release. They are listed by FMID.

- FMID HAHQ130 (IMS FP Solution Pack)

PH01862	PI32244	PI35883
PH05366	PI33076	PI37479
PH07673	PI34189	PI38421
PH08293	PI49408	PI38789
PH08805	PI49799	PI44783
PH18423	PI50655	PI46443
PH14611	PI52662	PI47029
PI05155	PI53131	PI60506
PI06424	PI53281	PI62214
PI06716	PI56179	PI62290
PI06718	PI58330	PI66194
PI12789	PI62216	PI67146
PI14356	PI69811	PI67240
PI16431	PI70018	PI68304
PI16740	PI71981	PI70507
PI17236	PI72876	PI73094
PI17555	PI74389	PI78246
PI17756	PI75264	PI79885
PI18225	PI79450	PI80839
PI18788	PI81871	PI83948
PI20026	PI82362	PI85470
PI22426	PI85933	PI87065
PI22667	PI92437	PI89911
PI24263	PI94659	PI94622
PI30544	PI23988	

The following APAR fixes against previous releases of IMS Library Integrity Utilities have been incorporated into this release. They are listed by FMID.

- FMID H27P210 (IMS Library Integrity Utilities)

PK72952	PM22634	PM61228
PK74275	PM28084	PM64743
PK78067	PM30256	PM64916
PK78962	PM30910	PM67105
PK82286	PM35070	PM67816
PK84633	PM35071	PM68396
PK85040	PM37113	PM69050
PK86986	PM37150	PM69550
PK87420	PM41075	PM70576
PK89606	PM46494	PM71083
PK91313	PM46539	PM71502
PK92830	PM46613	PM72387
PK93253	PM47964	PM75259
PK94160	PM50776	PM76894
PK95252	PM52711	PM79750
PK99258	PM53105	PM80933
PM00241	PM53369	PM83105
PM02369	PM53932	PM83106
PM03227	PM55052	PM86805
PM10930	PM55827	PM88667
PM14955	PM56804	PM89597
PM17661	PM57519	PM89697
PM21355	PM60149	PM96421
PM21961		

The following APAR fixes against previous releases of IMS HP Image Copy have been incorporated into this release. They are listed by FMID.

- FMID H1J0410 (IMS HP Image Copy)

PK09541	PK15594	PK18978
PK09722	PK15598	PK19977
PK11605	PK15843	PK21070
PK12997	PK16009	PK21502
PK14099	PK16156	PK21666
PK14105	PK16454	PK22704
PK14295	PK16726	PK23109
PK14331	PK16728	PK23423
PK14382	PK16733	PK23701
PK14562	PK17130	PK23714
PK15050	PK18068	PK23784
PK15169	PK18715	PK23876

PK24693	PK41920	PK66575
PK25028	PK41921	PK66880
PK25484	PK41922	PK67873
PK26299	PK42644	PK68121
PK26896	PK43361	PK68158
PK27225	PK43716	PK68272
PK27395	PK45121	PK69500
PK28092	PK45371	PK70349
PK28108	PK45462	PK72893
PK29015	PK46921	PK73511
PK30631	PK46960	PK74296
PK31006	PK47222	PK75559
PK31299	PK48191	PK75674
PK32026	PK48318	PK76238
PK32028	PK49160	PK78236
PK33115	PK49914	PK78239
PK33608	PK50542	PK79032
PK34133	PK51003	PK80381
PK34198	PK53839	PK80766
PK35048	PK53858	PK82370
PK35110	PK55442	PK82467
PK35129	PK55693	PK83503
PK35954	PK57985	PK84204
PK36006	PK58094	PK85898
PK36213	PK58921	PK87250
PK36670	PK60299	PK87563
PK37644	PK61021	PK87615
PK37981	PK61486	PK91050
PK38377	PK61849	PK91965
PK39458	PK62163	PK94931
PK39461	PK62351	PK95360
PK39795	PK63113	PK96674
PK39968	PK63321	PK97330
PK41107	PK63957	PK97537
PK41535	PK66570	PK99132
		PK99259

The following APAR fixes against previous releases of DB Repair have been incorporated into this release. They are listed by FMID.

- FMID H22K120 (DB Repair)

PQ97004	PQ99060	PK04199
PQ98661	PK02623	PK04557

PK05474	PK24689	PK39339
PK06865	PK26080	PK45314
PK13818	PK26092	PK48456
PK18051	PK32682	PK48804
PK19302	PK34745	PK48805
PK21206	PK36408	PK50357
PK23370	PK37283	PK53127

4.2 Service Level Information

No PTFs against this release of IMS FP Solution Pack have been incorporated into the product package.

Frequently check the IMS FP Solution Pack 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 IMS FP Solution Pack. 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 IMS FP Solution Pack.

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 7. 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	V02.02.00	N/A	No
5655-G44	IBM SMP/E for z/OS	V03.06.00	N/A	No

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 IMS FP Solution Pack.

IMS FP Solution Pack 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.

Figure 8 (Page 1 of 2). Target System Mandatory Installation Requisites

Program Number	Product Name	Minimum VRM	Minimum Service Level will satisfy these APARs	Included in the shipped product?
5655-V93	IBM Tools Base for z/OS	01.06.00 or higher	At latest maintenance level	No
Any one of the following:				

Figure 8 (Page 2 of 2). Target System Mandatory Installation Requisites

Program Number	Product Name	Minimum VRM	Minimum Service Level will satisfy these APARs	Included in the shipped product?
5635-A05	IMS	V14.01.00	N/A	No
5655-DSE	IMS Database Value Unit Edition	V14.01.00	N/A	No
5635-A06	IMS	V15.01.00	N/A	No
5655-DS5	IMS Database Value Unit Edition	V15.01.00	N/A	No

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.

IMS FP Solution Pack has no conditional installation requisites.

To view the Installation Requisites of the products that constitute IBM IMS Fast Path Solution Pack for z/OS, refer to the following Program Directories that are supplied with the product.

- Publication number GI10-8798 for IMS Library Integrity Utilities
- Publication number GI10-8671 for IMS High Performance Image Copy

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.

IMS FP Solution Pack has no 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.

Figure 9. Target System Conditional Operational Requisites

Program Number	Product Name and Minimum VRM/Service Level	Function
5655-FPP	IBM IMS Fast Path Solution Pack, V02.01.00, - IMS HP Image Copy, FMID H1J0420	For various IMS FP Solution Pack, FMID HAHQ210, functions.
5655-V93	IBM Tools Base for z/OS V01.06.00	For Database Sensor, Report Repository, IMS Tools Online System Interface, and for graphical and simplified web access to DBDs.
5635-A06	IMS Version 15 with APARs PH00728, PH09142, PH16612, and PI83433	For function Online Structure Change utility
5655-V93	IMS Tools Base for z/OS V01.06.00 with APAR PH21599	For function Online Structure Change utility
5650-ZOS	z/OS V02.02.00 - DFSORT or a functionally equivalent sort program	For Pointer Checker and Restructure/Reorganization and FP Secondary Index building, for function Integrity Checker, and for the ACBLIB Analyzer Utility.
5650-ZOS	z/OS V02.02.00 - ISPF	For DB Repair on TSO terminals and batch

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.

IMS FP Solution Pack 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.

IMS FP Solution Pack has no negative requisites.

5.2.3 DASD Storage Requirements

IMS FP Solution Pack libraries can reside on all supported DASD types.

Figure 10 lists the total space that is required for each type of library.

Figure 10. Total DASD Space Required by IMS FP Solution Pack

Library Type	Total Space Required
Target	710
Distribution	695

To review the individual DASD Storage Requirements of each of the products that constitute IBM IMS Fast Path Solution Pack for z/OS, refer to the Program Directories supplied with the product.

- Publication number GI10-8798 for IMS Library Integrity Utilities
- Publication number GI10-8671 for IMS High Performance Image Copy

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 6.1.8, “Allocate SMP/E Target and Distribution Libraries” on page 24.

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 LNKLIST.
- 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 IMS FP Solution Pack. The storage requirements of IMS FP Solution Pack 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 11. Storage Requirements for IMS FP Solution Pack Target Libraries

Library DDNAME	Member Type	Target Volume	T Y P E	O R G	R E C O R D M	L R E C O R D L	No. of 3390 Trks	No. of DIR Blks
SFABCLIB	CLIST	Any	S	PDS	FB	80	80	50
SFABLMD0	LMOD	Any	S	PDS	U	0	30	50
SFABMLIB	Message	Any	S	PDS	FB	80	15	30
SFABPLIB	Panel	Any	S	PDS	FB	80	30	50
SHFPBASE	Sample	Any	U	PDS	FB	80	15	3
SHFPJCL0	Sample	Any	U	PDS	FB	80	15	3
SHFPLMD0	APF	Any	U	PDS	U	0	450	350
SHFPMAC0	Macro	Any	U	PDS	FB	80	60	6
SHFPSAMP	Sample	Any	U	PDS	FB	80	15	3

Figure 12. Storage Requirements for IMS FP Solution Pack 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
AFABCLIB	S	PDS	FB	80	80	50
AFABMLIB	S	PDS	FB	80	15	30
AFABMOD0	S	PDS	U	0	30	50
AFABPLIB	S	PDS	FB	80	30	50
AHFPJCL0	U	PDS	FB	80	15	3
AHFPMAC0	U	PDS	FB	80	60	6
AHFPMOD0	U	PDS	U	0	450	350
AHFPSAMP	U	PDS	FB	80	15	3

5.3 FMIDs Deleted

Installing IMS FP Solution Pack 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 IMS FP Solution Pack 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

If you already have standalone installations of any of the products that are contained in IMS FP Solution Pack, you do not have to install or customize those products again.

To view the individual Special Considerations of the products that constitute IMS FP Solution Pack, refer to the following Program Directories that are supplied with the product.

- Publication number GI10-8798 for IMS Library Integrity Utilities
- Publication number GI10-8671 for IMS High Performance Image Copy

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 FP Solution Pack.

Please note the following points:

- If you want to install IMS FP Solution Pack 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 IMS FP Solution Pack

6.1.1 SMP/E Considerations for Installing IMS FP Solution Pack

Use the SMP/E RECEIVE, APPLY, and ACCEPT commands to install this release of IMS FP Solution Pack.

To view the individual SMP/E installation instructions of each of the products that constitute IBM IMS Fast Path Solution Pack for z/OS, refer to the following Program Directories that are supplied with the product, and follow the instructions in the corresponding section(s):

- Publication number GI10-8798 for IMS Library Integrity Utilities
- Publication number GI10-8671 for IMS High Performance Image Copy

6.1.2 SMP/E Options Subentry Values

The recommended values for certain SMP/E CSI subentries are shown in Figure 13. 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.

Subentry	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 SMP/E CALLLIBS Processing

IMS FP Solution Pack, FMID HAHQ210, uses the CALLLIBS function that is provided in SMP/E to resolve external references during installation. When IMS FP Solution Pack is installed, ensure that DDDEF exists for the following library:

- SDFSRESL

DB Repair, FMID H22K310, uses the CALLLIBS function that is provided in SMP/E to resolve external references during installation. When DB Repair is installed, ensure that DDDEFs exist for the following libraries:

- SISpload
- SISPLPA

Note: CALLLIBS uses the previous DDDEFs only to resolve the link-edit for IMS FP Solution Pack. These data sets are not updated during the installation of IMS FP Solution Pack.

6.1.4 Sample Jobs

The following sample installation jobs are provided as part of the product to help you install IMS FP Solution Pack:

Figure 14. Sample Installation Jobs

Job Name	Job Type	Description	RELFILE
HFPALA	SMP/E	Sample job to allocate new SMP/E data sets (Optional)	IBM.HAHQ210.F2
HFPALB	SMP/E	Sample job to define SMP/E zones and DDDEFs (Optional)	IBM.HAHQ210.F2
HFPRECEV	RECEIVE	Sample RECEIVE job for IMS FP Solution Pack (FMID: HAHQ210)	IBM.HAHQ210.F2
HFPRECV2	RECEIVE	Sample RECEIVE job for DB Repair (FMID: H22K310)	IBM.HAHQ210.F2
HFPALLOC	ALLOCATE	Sample job to allocate target and distribution libraries for IMS FP Solution Pack	IBM.HAHQ210.F2
HFPDDDEF	DDDEF	Sample job to define SMP/E DDDEFs	IBM.HAHQ210.F2
HFPAPPLY	APPLY	Sample APPLY job	IBM.HAHQ210.F2
HFPACCEP	ACCEPT	Sample ACCEPT job	IBM.HAHQ210.F2

You can access the sample installation jobs by performing an SMP/E RECEIVE (refer to 6.1.7, “Perform SMP/E RECEIVE” on page 24) then copy the jobs from the RELFILES to a work data set for editing and submission. See Figure 14 to find the appropriate relfile data set.

You can also copy the sample installation jobs from the product files by submitting the following job. Your distribution medium will be for 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=*
//*****
//* Make the //FILEIN DD statement below active for *
//* downloaded DASD files. *
//*****
//FILEIN DD DSN=IBM.HAHQ210.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,(30,15,15))
//SYSUT3 DD UNIT=SYSALLDA,SPACE=(CYL,(1,1))
//SYSIN DD *
COPY INDD=xxxxIN,OUTDD=OUT
/*
```

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

FILEIN:

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

OUT:

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

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

SYSIN:

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

6.1.5 Allocate SMP/E data sets (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 HFPALA to allocate the SMP/E data set for IMS FP Solution Pack.

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

6.1.6 Initialize SMP/E data sets (Optional)

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

Edit and submit sample job HFPALB to initialize SMP/E zones for IMS FP Solution Pack. 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 Perform SMP/E RECEIVE

If you have obtained IMS FP Solution Pack as part of a CBPDO, use the RCVPDO job in the CBPDO RIMLIB data set to receive the IMS FP Solution Pack 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 HFPRECEV to perform the SMP/E RECEIVE for IMS FP Solution Pack (HAHQ210). Consult the instructions in the sample job for more information.

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

- You can also choose to edit and submit sample job HFPRECV2 to perform the SMP/E RECEIVE for DB Repair (H22K310). Consult the instructions in the sample job for more information.

Expected Return Codes and Messages for HFPRECV2: You will receive a return code of 0 if this job runs correctly.

6.1.8 Allocate SMP/E Target and Distribution Libraries

Edit and submit sample job HFPALLOC to allocate the SMP/E target and distribution libraries for IMS FP Solution Pack. 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 Create DDDEF Entries

Edit and submit sample job HFPDDDEF to create DDDEF entries for the SMP/E target and distribution libraries for IMS FP Solution Pack. Consult the instructions in the sample job for more information.

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

6.1.10 Perform SMP/E APPLY

1. Ensure that you have the latest HOLDDATA; then edit and submit sample job HFPAPPLY to perform an SMP/E APPLY CHECK for IMS FP Solution Pack. 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/holddata/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:

- 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
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.

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

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

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

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

6.1.11 Execute Installation Verification Program for IMS FP Solution Pack

Edit and submit sample job **HFPCIVP** in the **SHFPJCL0** library to run the Installation Verification test for IMS FP Solution Pack.

Note

SHFPLMD0 is required to be APF-authorized to run the IVP job HFPCIVP.

Consult the instructions in the job for more information.

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

6.1.12 Perform SMP/E ACCEPT

Edit and submit sample job HFACCEP to perform an SMP/E ACCEPT CHECK for IMS FP Solution Pack. Consult the instructions in the sample job for more information.

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

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

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

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

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

If PTFs that contain replacement modules are accepted, SMP/E ACCEPT processing will link-edit or bind the modules into the distribution libraries. During this processing, the Linkage Editor or Binder might issue messages that indicate unresolved external references, which will result in a return code of 4 during the ACCEPT phase. You can ignore these messages, because the distribution libraries are not executable and the unresolved external references do not affect the executable system libraries.

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

6.1.13 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 IMS FP Solution Pack, 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 IMS FP Solution Pack

For customization of IMS FP Solution Pack use the IMS Tools SETUP utility, which is distributed with IBM Tools Base for z/OS. The SETUP utility is a Rexx utility that provides an ISPF interface to guide you through the customization of all required tools, including the components of both IBM Tools Base and IMS FP Solution Pack. SETUP will generate JCL/Tasks in the order in which they must be executed by you and consolidates like tasks to avoid repetitive requests for each product within your organization. Help is provided at the panel and field level, so no customization guides are needed.

IBM strongly recommends you use the IMS Tools SETUP utility to consolidate the customization of each of the components of IMS FP Solution Pack versus going through the steps in each Overview and Customization Guide. It also provides an easy and quick way to verify the installation and customization.

To begin the customization process, execute the following Rexx EXEC in ISPF:

```
EXEC 'yourSMPEhlq.SHKTCEXE(HKTQSETU)' 'yourSMPEhlq'
```

For more information about customization and use of the various components of IMS FP Solution Pack refer to the following publication: IBM IMS Fast Path Solution Pack for z/OS: Overview and Customization, GC27-9596

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