IBM

Program Directory for

IBM IMS Enterprise Suite

for z/OS

V03.02.01

Program Number 5655-TDA

for Use with
z/OS

Document Date: February 2016

GI10-8964-03

> **Note**
>
> Before using this information and the product it supports, be sure to read the general information under 7.0, "Notices" on page 34.

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 Enterprise Suite for z/OS. This publication refers to IBM IMS Enterprise Suite for z/OS as IMS Enterprise Suite for z/OS.

The Program Directory contains the following sections:

- 2.0, "Program Materials" on page 5 identifies the basic program materials and documentation for IMS Enterprise Suite for z/OS.

- 3.0, "Program Support" on page 7 describes the IBM support available for IMS Enterprise Suite for z/OS.

- 4.0, "Program and Service Level Information" on page 9 lists the APARs (program level) and PTFs (service level) that have been incorporated into IMS Enterprise Suite for z/OS.

- 5.0, "Installation Requirements and Considerations" on page 10 identifies the resources and considerations that are required for installing and using IMS Enterprise Suite for z/OS.

- 6.0, "Installation Instructions" on page 19 provides detailed installation instructions for IMS Enterprise Suite for z/OS. It also describes the procedures for activating the functions of IMS Enterprise Suite for z/OS, or refers to appropriate publications.

Before installing IMS Enterprise Suite for z/OS, 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; then keep them for future reference. Section 3.2, "Preventive Service Planning" on page 7 tells you how to find any updates to the information and procedures in this program directory.

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

Do not use this program directory if you install IMS Enterprise Suite for z/OS 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 Enterprise Suite for z/OS Description

IBM IMS Enterprise Suite for z/OS, V3.2.1 (5655-TDA) components are designed to enhance your use of IBM Information Management System (IMS) applications and data.

IBM IMS Enterprise Suite for z/OS V3.2.1 contains:

- IMS SOAP Gateway

- IMS Connect API for Java

- Java Message Services API

- IMS Mobile Feature Pack

- IMS Mobile Feature Pack for z/OS Connect EE

Sample installation jobs are provided in Base Services to assist with installation. IBM Installation Manager for z/OS and the Java Development Kit are no longer included with IMS Enterprise Suite Version 3.2 Base Services but remain prerequisites.

The following IBM IMS Enterprise Suite components are downloadable from www.ibm.com/ims:

- IMS Explorer for Development

- IMS Connect API for Java

- IMS Data Provider for Microsoft .NET

- JMS API

IMS SOAP Gateway is installable only in z/OS environments in IMS Enterprise Suite V3.2.1; downloadable versions of SOAP Gateway for other platforms will remain available until end of support for Version 3.1 and 3.1.1.

IMS Mobile Feature Pack (IMS Mobile) and IMS Mobile Feature Pack for z/OS Connect Enterprise Edition (IMS Mobile for z/OS Connect EE) allow you to model, assemble, publish, and test IMS transactions as REST/JSON services. These services can then be consumed by mobile and cloud applications, which can access IMS assets on z/OS in a secure, managed, governed, and optimized way.

IMS Mobile leverages the IBM WebSphere Application Server Liberty Profile and its z/OS Connect feature. WebSphere Application Server Liberty Profile offers an integrated Representational State Transfer Technology (REST) endpoint, which supports the lightweight data-interchange format JavaScript Object Notation (JSON). z/OS Connect is a fast, secure, scalable, and reliable connector that can reach any z/OS asset, including IMS, and delivers common services and management for consistent operations.

IMS Mobile runs on z/OS only. Configuration and administration functions are provided through IMS Explorer for Development, described below.

IMS Mobile for z/OS Connect EE, helps you to create and deploy RESTful APIs that leverage mobile services that access IMS assets. This component works with z/OS Connect EE to extend the value of applications that run on z/OS by allowing you to create efficient and scalable APIs for contemporary mobile and cloud applications. The solution incorporates common tooling based on the Swagger 2.0 specification.

Connect API for Java provides a simple interface for developing custom IMS Connect TCP/IP client applications that are written in Java. The Connect API for Java manages the communication between the Java application and IMS Connect. You can use the Connect API for Java to drive IMS transactions, OTMA-supported IMS commands, CSL OM-supported IMS type-2 commands, and IMS Connect-supported

commands (such as PING and RACF Password Change) from your Java client application. SOAP Gateway runs on z/OS only.

IMS Explorer for Development enables IMS application developers and database architects and developers to easily perform common and essential tasks in an end-to-end application development lifecycle, through an Eclipse-based user interface that seamlessly integrates with other Eclipse-based solutions. Graphical editors simplify the development and visualization of Database Description (DBD) and Program Specification Block (PSB) resource definitions. IMS Explorer for Development also enables you to graphically edit PSBs and DBDs. It generates new PSB and DBD source and enables you to export that source to the host where normal PSBGEN, DBDGEN, and ACBGEN processing can be done. It also leverages the IBM IMS Universal JDBC Driver to provide a relational view of IMS data, and offers the ability to graphically build and run ad hoc queries against live IMS data. IMS Explorer for Development runs on Windows and also provides the administration and configuration functions for the IMS Mobile Feature Pack.

IMS Data Provider for Microsoft .NET simplifies development of Microsoft .NET applications that are written in C#, Visual Basic, and other ADO.NET-compliant languages to access IMS data. This access eliminates the need for intermediate steps or tools (such as DB2 stored procedures or third-party products) for access to IMS databases.

Java Message Services API (JMS API) expands Java application development in Java-dependent regions to offer synchronous callout support with the ICAL DL/I call.

Base Services can help to ease installation, and provides sample jobs for installation of z/OS-based components

Enhancements in IMS Enterprise Suite V3.2.1

This release of the suite:

- Adds IMS Mobile Feature Pack for z/OS Connect EE. This is a new feature for IMS Enterprise Suite that works with z/OS Connect EE to extend the value of applications that run on z/OS by allowing you to create efficient and scalable APIs for contemporary mobile and cloud applications.

- IMS Explorer for Development which is used as the front-end interface for IMS Mobile is updated to also support the IMS Mobile Feature Pack for z/OS Connect EE.

1.2 IMS Enterprise Suite for z/OS FMIDs

IMS Enterprise Suite for z/OS consists of the following FMIDs:

HAHF320   Base Services
JAHF321   SOAP Gateway
JAHF322   Java Message Services API
JAHF323   Connect API for Java
JAHF32A   IMS Mobile Feature Pack
HAHF324   IMS Mobile Feature Pack for z/OS Connect EE[*]

Note: *Refer to the IMS Mobile Feature Pack for z/OS Connect EE Program Directory (GI13-4617-00), which is supplied with Enterprise Suite, for information regarding this FMID (HAHF324).

The following table describes the IMS environments that each IMS Enterprise Suite for z/OS FMID supports.

Figure 1. FMIDs for IMS Enterprise Suite for z/OS		DB Batch	DBCTL	DB/DC	DCCTL
FMID and Description					
HAHF320	Base Services	R	R	R	R
JAHF321	SOAP Gateway	N	N	A	A
JAHF322	Java Message Services API	N	A	A	A
JAHF323	Connect API for Java	N	N	A	A
JAHF32A	IMS Mobile Feature Pack	N	N	A	A
HAHF324	IMS Mobile Feature Pack for z/OS Connect EE	N	N	A	A

Where:

R   The FMID is required in this IMS configuration.

A   The FMID is applicable to this IMS configuration.

N   The FMID is not applicable to IMS in this configuration.

2.0 Program Materials

An IBM program is identified by a program number. The program number for IMS Enterprise Suite for z/OS is 5655-TDA.

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 Enterprise Suite for z/OS. 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 19 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 Enterprise Suite for z/OS in the *CBPDO Memo To Users Extension*.

You can refer to the *CBPDO Memo To Users Extension* to see where the files reside on the tape.

2.2 Optional Machine-Readable Material

No optional machine-readable materials are provided for IMS Enterprise Suite for z/OS.

2.3 Program Publications

The following sections identify the basic publications for IMS Enterprise Suite for z/OS.

Figure 2 identifies the basic unlicensed publications for IMS Enterprise Suite for z/OS. Those that are in softcopy format publications can be obtained from the IBM Publications Center website at: http://www.ibm.com/shop/publications/order/

Figure 2. Basic Material: Unlicensed	
Publication Title	**Form Number**
IBM IMS Enterprise Suite for z/OS License Information	GC19-4111
IBM IMS Enterprise Suite for z/OS Program Directory	GI10-8964
IMS Mobile Feature Pack for z/OS Connect Enterprise Edition Program Directory	GI13-4617

To view the unlicensed publications of other components that constitute IMS Enterprise Suite for z/OS, refer to the following Program Directory that is supplied with the product.

- Publication number GI13-4617 for IMS Mobile Feature Pack for z/OS Connect EE

2.3.1 Optional Program Publications

No optional publications are provided for IMS Enterprise Suite for z/OS.

2.4 Program Source Materials

No program source materials or viewable program listings are provided for IMS Enterprise Suite for z/OS.

2.5 Publications Useful During Installation

You might want to use the publications listed in Figure 3 during the installation of IMS Enterprise Suite for z/OS.

Figure 3. Publications Useful During Installation		
Publication Title	**Form Number**	**Media Format**
IBM SMP/E for z/OS User's Guide	SA23-2277	http://www.ibm.com/shop/publications/order/
IBM SMP/E for z/OS Commands	SA23-2275	http://www.ibm.com/shop/publications/order/
IBM SMP/E for z/OS Reference	SA23-2276	http://www.ibm.com/shop/publications/order/
IBM SMP/E for z/OS Messages, Codes, and Diagnosis	GA32-0883	http://www.ibm.com/shop/publications/order/

3.0 Program Support

This section describes the IBM support available for IMS Enterprise Suite for z/OS.

3.1 Program Services

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

3.2 Preventive Service Planning

Before you install IMS Enterprise Suite for z/OS, 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 6.1.12, "Perform SMP/E APPLY" on page 28 for a sample APPLY command.

If you obtained IMS Enterprise Suite for z/OS as part of a CBPDO, HOLDDATA is included.

If the CBPDO for IMS Enterprise Suite for z/OS 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-01.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 Enterprise Suite for z/OS are included in Figure 4.

Figure 4 (Page 1 of 2). PSP Upgrade and Subset ID		
UPGRADE	**SUBSET**	**Description**
IMSES320	HAHF320/GA	IMS Enterprise Suite for z/OS Base Services
IMSES320	JAHF321/GA	IMS Enterprise Suite for z/OS SOAP Gateway
IMSES320	JAHF322/GA	IMS Enterprise Suite for z/OS JMS API
IMSES320	JAHF323/GA	IMS Enterprise Suite for z/OS Connect API for JAVA

Figure 4 (Page 2 of 2). PSP Upgrade and Subset ID		
UPGRADE	**SUBSET**	**Description**
IMSES320	JAHF32A/GA	IMS Enterprise Suite for z/OS IMS Mobile Feature Pack

To review the Preventive Service Planning (PSP) information of other components that constitute IMS Enterprise Suite for z/OS, refer to the following Program Directory that is supplied with the product.

- Publication number GI13-4617 for IMS Mobile Feature Pack for z/OS Connect EE

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 identifies the component IDs (COMPID) for IMS Enterprise Suite for z/OS.

Figure 5. Component IDs			
FMID	**COMPID**	**Component Name**	**RETAIN Release**
HAHF320	5655TDA00	Base Services	320
JAHF321	5655TDA00	SOAP Gateway	321
JAHF322	5655TDA00	Java Message Services API	322
JAHF323	5655TDA00	Connect API for Java	323
JAHF32A	5655TDA00	IMS Mobile Feature Pack	32A

To identify the component IDs (COMPID) of other components that constitute IMS Enterprise Suite for z/OS, refer to the following Program Directory that is supplied with the product.

- Publication number GI13-4617 for IMS Mobile Feature Pack for z/OS Connect EE

4.0 Program and Service Level Information

This section identifies the program and relevant service levels of IMS Enterprise Suite for z/OS. 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

Refer to the PSP Facility for IMS Enterprise Suite for z/OS, V03.02.01 APAR information.

To review the APAR information information of other components that constitute IMS Enterprise Suite for z/OS, refer to the following Program Directory that is supplied with the product.

- Publication number GI13-4617 for IMS Mobile Feature Pack for z/OS Connect EE

4.2 Service Level Information

No PTFs against this release of IMS Enterprise Suite for z/OS have been incorporated into the product package.

Frequently check the IMS Enterprise Suite for z/OS 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.

To review the list PTFs that may have been incorporated in other components that constitute IMS Enterprise Suite for z/OS, refer to the following Program Directory that is supplied with the product.

- Publication number GI13-4617 for IMS Mobile Feature Pack for z/OS Connect EE

5.0 Installation Requirements and Considerations

The following sections identify the system requirements for installing and activating IMS Enterprise Suite for z/OS. 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.

IBM Installation Manager is required to install the SOAP Gateway or the IMS Mobile Feature Pack.

The SMP/E process puts the product installation code on the driving system. Additional steps are required to install the SOAP Gateway or IMS Mobile Feature Pack components using IBM Installation Manager. Instructions and sample JCL jobs are provided to guide you through the installation.

For the SOAP Gateway installation, start with the installation roadmap for the z/OS platform in the IMS Enterprise Suite welcome page at:
http://www-01.ibm.com/support/knowledgecenter/SS9NWR/welcome
to help you understand the overall installation process and determine your setup and installation scenario. The installation roadmap is available under:

> **IMS Enterprise Suite Version 3.2 >**
> **SOAP Gateway >**
> **Installing and configuring SOAP Gateway >**
> **Installing SOAP Gateway**

The web address for the SOAP Gateway installation roadmap is

http://www.ibm.com/support/knowledgecenter/SS9NWR_3.2.0/com.ibm.ims.soap32.doc/sgw_install_z32.htm.

For the IMS Mobile Feature Pack installation, start with the installation roadmap for the z/OS platform in the IMS Enterprise Suite welcome page at:
http://www-01.ibm.com/support/knowledgecenter/SS9NWR/welcome
to help you understand the overall installation process and determine your setup and installation scenario. The installation roadmap is available under:

> **IMS Enterprise Suite Version 3.2 >**
> **IMS Mobile Feature Pack (z/OS Connect) >**
> **Installing and configuring IMS Mobile Feature Pack >**

The web address for the IMS Mobile Feature Pack installation roadmap is

http://www.ibm.com/support/knowledgecenter/SS9NWR_3.2.0/com.ibm.ims.mobile32.doc/mobile_installroadmap.htm

For the SOAP Gateway and IMS Mobile Feature Pack installation, this Program Directory is used in conjunction with the installation information in the knowledge center, and covers only the SMP/E processing part of the installation. Additional installation and configuration steps are required and they are described in the Knowledge Center.

5.1 Driving System Requirements

This section describes the environment of the driving system required to install IMS Enterprise Suite for z/OS.

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 (Page 1 of 2). Driving System Software Requirements				
Program Number	Product Name	Minimum VRM	Minimum Service Level will satisfy these APARs	Included in the shipped product?
Any **one** of the following:				
5694-A01	z/OS	V01.13.00	N/A	No

Program Number	Product Name	Minimum VRM	Minimum Service Level will satisfy these APARs	Included in the shipped product?
5650-ZOS	z/OS	V02.01.00 or higher	N/A	No

Figure 6 (Page 2 of 2). Driving System Software Requirements

Note: SMP/E is a requirement for Installation and is an element of z/OS but can also be ordered as a separate product, 5655-G44, minimally V03.06.00.

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.

IMS Enterprise Suite for z/OS is installed into a file system, either HFS or zFS. Before installing IMS Enterprise Suite for z/OS, you must ensure that the target system file system data sets are available for processing on the driving system. OMVS must be active on the driving system and the target system file data sets must be mounted on the driving system.

If you plan to install IMS Enterprise Suite for z/OS in a zFS file system, this requires that zFS be active on the driving system. Information on activating and using zFS can be found in z/OS Distributed File Service zSeries File System Administration, SC24-5989.

To review the driving system requirements of other components that constitute IMS Enterprise Suite for z/OS, refer to the following Program Directory that is supplied with the product.

- Publication number GI13-4617 for IMS Mobile Feature Pack for z/OS Connect EE

5.2 Target System Requirements

This section describes the environment of the target system required to install and use IMS Enterprise Suite for z/OS.

IMS Enterprise Suite for z/OS 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.

Figure 7. Target System Mandatory Installation Requisites				
Program Number	Product Name	Minimum VRM	Minimum Service Level will satisfy these APARs	Included in the shipped product?
5655-IMZ	IBM Installation Manager	V01.04.03 with PTF UI28795	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.

IMS Enterprise Suite for z/OS has no conditional installation requisites.

To review the installation requisites of other components that constitute IMS Enterprise Suite for z/OS, refer to the following Program Directory that is supplied with the product.

- Publication number GI13-4617 for IMS Mobile Feature Pack for z/OS Connect EE

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 8 (Page 1 of 2). Target System Mandatory Operational Requisites	
Program Number	Product Name and Minimum VRM/Service Level
Any **one** of the following:	
5694-A01	z/OS V1.13.00
5650-ZOS	z/OS V2.01.00 or higher
Any **one** of the following:	

Figure 8 (Page 2 of 2). Target System Mandatory Operational Requisites	
Program Number	**Product Name and Minimum VRM/Service Level**
5635-A03	IMS V12.01.00
5655-DSQ	IMS Database Value Unit Edition V12.01.00 with PTF UK93908
5655-TM1	IMS Transaction Manager Value Unit Edition V12.01.00
5635-A04	IMS V13.01.00
5655-DSM	IMS Database Value Unit Edition V13.01.00
5655-TM2	IMS Transaction Manager Value Unit Edition V13.01.00
5635-A05	IMS V14.01.00
5655-DSE	IMS Database Value Unit Edition V14.01.00
5655-TM3	IMS Transaction Manager Value Unit Edition V14.01.00
Any **one** of the following:	
5655-W43	IBM 31-bit SDK for z/OS Java Technology Edition V7.0.1 or higher
5655-W44	IBM 64-bit SDK for z/OS Java Technology Edition V7.0.1 or higher

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.

IMS Enterprise Suite for z/OS has no conditional operational requisites.

To review the operational requisites of other components that constitute IMS Enterprise Suite for z/OS, refer to the following Program Directory that is supplied with the product.

- Publication number GI13-4617 for IMS Mobile Feature Pack for z/OS Connect EE

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 Enterprise Suite for z/OS 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 Enterprise Suite for z/OS has no negative requisites.

5.2.3 DASD Storage Requirements

IMS Enterprise Suite for z/OS libraries can reside on all supported DASD types.

Figure 9 on page 15 lists the total space that is required for each type of library.

Figure 9. Total DASD Space Required by IMS Enterprise Suite for z/OS	
Library Type	Total Space Required in 3390 Trks
Target	31 tracks
Distribution	7563 tracks
File System(s)	
usr/lpp/ims/imses/V3R2	1500 tracks
usr/lpp/InstallationManagerRepository/JAHF321	2250 tracks
usr/lpp/InstallationManagerRepository/JAHF32A	12750 tracks

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.

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.

The following figures describe the target and distribution libraries and file system paths required to install IMS Enterprise Suite for z/OS. The storage requirements of IMS Enterprise Suite for z/OS 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 10. Storage Requirements for IMS Enterprise Suite for z/OS 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
SAEWBASE	Sample	Any	U	PDS	FB	80	17	5
SAEWSAMP	Sample	Any	U	PDS	FB	80	14	5

Figure 11 (Page 1 of 2). IMS Enterprise Suite for z/OS File System Paths		
DDNAME	T Y P E	Path Name
SIOGSHFS	N	/usr/lpp/InstallationManagerRepository/JAHF321/IBM/
SIOGSINS	N	/usr/lpp/ims/imses/V3R2/soap_gateway_sample_jcl/IBM/
SDFSJJMS	N	/usr/lpp/ims/imses/V3R2/jms/IBM/
SHWSJHFS	N	/usr/lpp/ims/imses/V3R2/connect_api/Java/IBM/

Figure 11 (Page 2 of 2). IMS Enterprise Suite for z/OS File System Paths		
DDNAME	**T Y P E**	**Path Name**
SGMOSHFS	N	/usr/lpp/InstallationManagerRepository/JAHF32A/IBM/

Notes:

- The file system paths for JAHF321 are /usr/lpp/InstallationManagerRepository/JAHF321/IBM/ and /usr/lpp/ims/imses/V3R2/soap_gateway_sample_jcl/IBM/

- The file system path for JAHF322 is /usr/lpp/ims/imses/V3R2/jms/IBM/

- The file system path for JAHF323 is /usr/lpp/ims/imses/V3R2/connect_api/Java/IBM/

- The file system path for JAHF32A is /usr/lpp/InstallationManagerRepository/JAHF32A/IBM/

Figure 12. Storage Requirements for IMS Enterprise Suite for z/OS 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**
AAEWBASE	U	PDS	FB	80	17	5
AAEWSAMP	U	PDS	FB	80	14	5
ADFSJJMS	U	PDS	VB	255	3	3
AGMOMHFS	U	PDS	VB	255	6000	3
AHWSJHFS	U	PDS	VB	255	11	3
AIOGSHFS	U	PDS	VB	255	1518	3

To review the individual DASD storage requirements of other components that constitute IMS Enterprise Suite for z/OS, refer to the following Program Directory that is supplied with the product.

- Publication number GI13-4617 for IMS Mobile Feature Pack for z/OS Connect EE

5.3 FMIDs Deleted

Installing IMS Enterprise Suite for z/OS 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 Enterprise Suite for z/OS 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 Installation Manager is a z/OS Unix System Services application. Before using IBM Installation Manager to perform product installation and maintenance, you should customize your z/OS system as described in the z/OS Unix System Services Planning manual (GA22-7800) for your version of z/OS, paying particular attention to Chapter 3, "Customizing z/OS Unix", and Chapter 4, "Establishing Unix Security.

To review the individual special considerations of other components that constitute IMS Enterprise Suite for z/OS, refer to the following Program Directory that is supplied with the product.

- Publication number GI13-4617 for IMS Mobile Feature Pack for z/OS Connect EE

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 Enterprise Suite for z/OS.

Please note the following points:

- Read the PSP information at 3.2, "Preventive Service Planning" on page 7 before attempting to install IMS Enterprise Suite for z/OS.

- If you want to install IMS Enterprise Suite for z/OS 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. The installation and activation of IMS Enterprise Suite for z/OS consists of the following steps:

  1. The installation is accomplished by running the sample jobs that are shown in Figure 14 on page 20.

  2. 6.2, "Activating IMS Enterprise Suite for z/OS" on page 32 refers to the instructions necessary to activate IMS Enterprise Suite for z/OS.

6.1 Installing IMS Enterprise Suite for z/OS

6.1.1 SMP/E Considerations for Installing IMS Enterprise Suite for z/OS

Use the SMP/E RECEIVE, APPLY, and ACCEPT commands to install this release of IMS Enterprise Suite for z/OS.

The IBM Installation Manager must be installed on the target system where IMS Enterprise Suite for z/OS SOAP Gateway or IMS Enterprise Suite for z/OS IMS Mobile Feature Pack are to be installed **before** attempting to install IMS Enterprise Suite for z/OS SOAP Gateway or IMS Enterprise Suite for z/OS IMS Mobile Feature Pack.

The installation of the SOAP Gateway or IMS Mobile Feature Pack consists of two parts:

1. The first part is to obtain the sample installation jobs, and the installation repository files through the SMP/E process.

2. The second part involves using IBM Installation Manager to install the SOAP Gateway or IMS Mobile Feature Pack.

For an installation roadmap, see either

- "Installing SOAP Gateway" topic in the IMS Knowledge Center at http://www.ibm.com/support/knowledgecenter/SS9NWR_3.2.0/com.ibm.ims.soap32.doc/sgw_install_z32.htm.

- "Installing and configuring IMS Mobile Feature Pack" topic in the IMS Knowledge Center at http://www.ibm.com/support/knowledgecenter/SS9NWR_3.2.0/com.ibm.ims.mobile32.doc/mobile_install roadmap.htm.

The SMP/E dialogs can be used to accomplish the SMP/E installation steps.

To review the individual SMP/E installation instructions of other components that constitute IMS Enterprise Suite for z/OS, refer to the following Program Directory that is supplied with the product.

- Publication number GI13-4617 for IMS Mobile Feature Pack for z/OS Connect EE

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.

Figure 13. SMP/E Options Subentry Values		
Subentry	**Value**	**Comment**
DSSPACE	(2400,240,790)	3390 DASD tracks
PEMAX	SMP/E Default	IBM recommends using the SMP/E default for PEMAX.

6.1.3 Sample Jobs

The following sample jobs are provided with IMS Enterprise Suite for z/OS.

6.1.3.1 Sample Installation Jobs: The following sample installation jobs are provided as part of the product to help you install IMS Enterprise Suite for z/OS:

Figure 14 (Page 1 of 2). Sample Installation Jobs			
Job Name	**Job Type**	**Description**	**RELFILE**
AEWALA	SMP/E	Sample job to allocate and initialize a new SMP/E CSI data set **(Optional)**	IBM.HAHF320.F1
AEWALB	SMP/E	Sample job to allocate SMP/E data sets **(Optional)**	IBM.HAHF320.F1
AEWRECV0	RECEIVE	Sample job to receive Base Services **(Optional)**	IBM.HAHF320.F1

Job Name	Job Type	Description	RELFILE
		Figure 14 (Page 2 of 2). Sample Installation Jobs	
AEWRECV1	RECEIVE	Sample job to receive SOAP Gateway **(Optional)**	IBM.HAHF320.F1
AEWRECV2	RECEIVE	Sample job to receive Java Message Services API **(Optional)**	IBM.HAHF320.F1
AEWRECV3	RECEIVE	Sample job to receive Connect API for Java **(Optional)**	IBM.HAHF320.F1
AEWRECV4	RECEIVE	Sample job to receive IMS Mobile Feature Pack **(Optional)**	IBM.HAHF320.F1
AEWALLOC	ALLOCATE	Sample job to allocate target and distribution libraries	IBM.HAHF320.F1
AEWZFS	ALLOMZFS	Sample job to allocate, create mountpoint, & mount zFS data sets **(Optional)**	IBM.HAHF320.F1
AEWJSMKD	MKDIR	Sample job to invoke the supplied AEWMKDIR EXEC to allocate file system paths	IBM.HAHF320.F1
AEWDDEF0	DDDEF	Sample job to define SMP/E DDDEFs for Base Services	IBM.HAHF320.F1
AEWDDEF1	DDDEF	Sample job to define SMP/E DDDEFs for SOAP Gateway **(Optional)**	IBM.HAHF320.F1
AEWDDEF2	DDDEF	Sample job to define SMP/E DDDEFs for Java Message Services API **(Optional)**	IBM.HAHF320.F1
AEWDDEF3	DDDEF	Sample job to define SMP/E DDDEFs for Connect API for Java **(Optional)**	IBM.HAHF320.F1
AEWDDEF4	DDDEF	Sample job to define SMP/E DDDEFs for IMS Mobile Feature Pack **(Optional)**	IBM.HAHF320.F1
AEWAPPLY	APPLY	Sample APPLY job	IBM.HAHF320.F1
AEWACCEP	ACCEPT	Sample ACCEPT job	IBM.HAHF320.F1
AEWTSCFS	ALLOCIM	Sample IM ALLOCATE job **(Optional)**	IBM.HAHF320.F1
AEWTSINS	INSTALL	Sample IM Installation job for SOAP Gateway **(Optional)**	IBM.HAHF320.F1
AEWTSUNI	UNINSTALL	Sample IM Removal job for SOAP Gateway **(Optional)**	IBM.HAHF320.F1
AEWIMCFS	ALLOCIM	Sample IM ALLOCATE job for IMS Mobile Feature Pack **(Optional)**	IBM.HAHF320.F1
AEWIMINS	INSTALL	Sample IM Installation job for IMS Mobile Feature Pack **(Optional)**	IBM.HAHF320.F1
AEWIMUNI	UNINSTALL	Sample IM Removal job for IMS Mobile Feature Pack **(Optional)**	IBM.HAHF320.F1

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 on page 20 to find the appropriate relfile data set.

You can also copy the sample installation jobs from the tape or product files by submitting the following job. Depending on your distribution medium, use either the //TAPEIN or the //FILEIN DD statement and comment out or delete the other 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 //TAPEIN DD statement below active if you install*
//* from a CBPDO tape by uncommenting the DD statement below. *
//*************************************************************
//*TAPEIN   DD DSN=IBM.HAHF320.F1,UNIT=tunit,
//*         VOL=SER=volser,LABEL=(x,SL),
//*         DISP=(OLD,KEEP)
//*************************************************************
//* Make the //TAPEIN DD statement below active if you install*
//* from a product tape received outside the CBPDO process    *
//* (using the optional SMP/E RECEIVE job) by uncommenting     *
//* the DD statement below.                                    *
//*************************************************************
//*TAPEIN   DD DSN=IBM.HAHF320.F1,UNIT=tunit,
//*         VOL=SER=AHF320,LABEL=(x,SL),
//*         DISP=(OLD,KEEP)
//*************************************************************
//* Make the //FILEIN DD statement below active for           *
//* downloaded DASD files.                                     *
//*************************************************************
//*FILEIN   DD DSN=IBM.HAHF320.F1,UNIT=SYSALLDA,DISP=SHR,
//*          VOL=SER=filevol
//OUT      DD DSNAME=jcl-library-name,
//         DISP=(NEW,CATLG,DELETE),
//         VOL=SER=dasdvol,UNIT=SYSALLDA,
//         SPACE=(TRK,(20,10,5))
//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:

TAPEIN:
   tunit is the unit value that matches the product package.
   volser is the volume serial that matches the product package.
   x is the tape file number that indicates the location of the data set name on the tape.
   See the documentation that is provided by CBPDO for the location of IBM.HAHF320.F1 on the tape.

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.

6.1.3.2 Other Sample Jobs: Sample jobs are also provided with IMS Enterprise Suite for z/OS to assist with the installation of SOAP Gateway and the IMS Mobile Feature Pack by using the IBM Installation Manager command line interface.

* Use the installation roadmap in the "Installing and configuring SOAP Gateway" and "Installing and configuring IMS Mobile Feature Pack" topics in the IMS Knowledge Center to guide your installation.

* Refer to the comments in each sample job for usage details.

6.1.4 Copy the SMP/E installation sample jobs from the tape or product files

Use the sample job provided in 6.1.3.1, "Sample Installation Jobs" on page 20 to copy (by using the IEBCOPY program) the SMP/E installation sample jobs to your SMP/E driving system.

6.1.5 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 AEWALA to allocate the SMP/E data set for IMS Enterprise Suite for z/OS. 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 Initialize CSI zones (Optional)

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

Note: If you do not run the optional jobs to set up your CSI, you must set the PEMAX value to its SMP/E default. If not, you might get error messages of GIM25901E during the Allocate SMP/E processing for FMID HAHF320.

Edit and submit sample job AEWALB to initialize SMP/E zones for IMS Enterprise Suite for z/OS. 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 Enterprise Suite for z/OS as part of a CBPDO, use the RCVPDO job in the CBPDO RIMLIB data set to receive the IMS Enterprise Suite for z/OS 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 AEWRECV0 to perform the SMP/E RECEIVE for IMS Enterprise Suite for z/OS, Base Services. 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.

Additionally, if you are installing:

- **JAHF321 (SOAP Gateway)**, edit and submit sample job AEWRECV1 to perform the SMP/E RECEIVE for SOAP Gateway. 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.

- **JAHF322 (Java Message Services API)**, edit and submit sample job AEWRECV2 to perform the SMP/E RECEIVE for Java Message Services API. 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.

- **JAHF323 (Connect API for Java)**, edit and submit sample job AEWRECV3 to perform the SMP/E RECEIVE for Connect API for Java. 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.

- **JAHF32A (IMS Mobile Feature Pack)**, edit and submit sample job AEWRECV4 to perform the SMP/E RECEIVE for IMS Mobile Feature 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.

6.1.8 Allocate SMP/E Target and Distribution Libraries

Edit and submit sample job AEWALLOC to allocate the SMP/E target and distribution libraries for IMS Enterprise Suite for z/OS. 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 Allocate, create and mount ZFS Files (Optional)

This job allocates, creates a mountpoint, and mounts zFS data sets.

If you plan to install IMS Enterprise Suite for z/OS into a new z/OS UNIX file system, you can edit and submit the optional AEWZFS job. This job will perform the following tasks:

- Create the z/OS UNIX file system
- Create a mount point
- Mount the z/OS UNIX file system on the mountpoint

Consult the instructions in the sample job for more information.

The recommended z/OS UNIX file system type is *zFS*. The recommended mount point for IMS Enterprise Suite for z/OS is */usr/lpp/ims/imses/V3R2*.

The recommended mount point for JAHF321 (SOAP Gateway) is */usr/lpp/InstallationManagerRepository/JAHF321*.

The recommended mount point for JAHF32A (IMS Mobile Feature Pack) is */usr/lpp/InstallationManagerRepository/JAHF32A*.

Before running the sample job to create the z/OS UNIX file system, you must ensure that OMVS is active on the driving system. zFS must be active on the driving system if you are installing IMS Enterprise Suite for z/OS into a file system that is zFS.

If you create a new file system for this product, consider updating the BPXPRMxx PARMLIB member to mount the new file system at IPL time. This action can be helpful if an IPL occurs before the installation is completed.

```
MOUNT FILESYSTEM('#dsn1')
 MOUNTPOINT('/usr/lpp/ims/imses/V3R2')
 MODE(RDRW)                /* can be MODE(READ) */
 TYPE(ZFS) PARM('AGGRGROW') /* zFS, with extents */

MOUNT FILESYSTEM('#dsn2')
 MOUNTPOINT('/usr/lpp/InstallationManagerRepository/JAHF321')
 MODE(RDRW)                /* can be MODE(READ) */
 TYPE(ZFS) PARM('AGGRGROW') /* zFS, with extents */

MOUNT FILESYSTEM('#dsn3')
 MOUNTPOINT('/usr/lpp/InstallationManagerRepository/JAHF32A')
 MODE(RDRW)                /* can be MODE(READ) */
 TYPE(ZFS) PARM('AGGRGROW') /* zFS, with extents */
```

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

#dsn1 is the name of the data set holding the z/OS UNIX file system used to install IMS Enterprise Suite V3R2.

/usr/lpp/ims/imses/V3R2 is the name of the mount point where the z/OS UNIX file system will be mounted.

#dsn2 is the name of the data set holding the z/OS UNIX file system used to store the SOAP Gateway repository.
/usr/lpp/InstallationManagerRepository/JAHF321 is the name of the mount point where the z/OS UNIX file system will be mounted.

#dsn3 is the name of the data set holding the z/OS UNIX file system used to store the IMS Mobile Feature Pack repository.
/usr/lpp/InstallationManagerRepository/JAHF32A is the name of the mount point where the z/OS UNIX file system will be mounted.

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

6.1.10 Allocate File System Paths

Before you run the sample job to create the paths in the file system, ensure that:

- OMVS is active on the driving system

- The file system of the target system is mounted to the driving system

- HFS or zFS is active on the driving system

- You have the following authority:

    - UID(0) or access to BPX.SUPERUSER.FACILITY class
    - Access to BPX.FILEATTR.APF
    - Access to BPX.FILEATTR.PROGCTL
    - Access to BPX.FILEATTR.SHARELIB

        Note: Access to BPX.FILEATTR.* can be used instead.

The target system HFS or zFS data sets must be mounted on the driving system when running the sample job AEWJSMKD since the job will create paths in the HFS or zFS.

Before running the sample job to create the paths in the file system, you must ensure that OMVS is active on the driving system and that the target system's HFS or zFS file system is mounted to the driving system. zFS must be active on the driving system if you are installing IMS Enterprise Suite for z/OS into a file system that is zFS.

If you plan to install IMS Enterprise Suite for z/OS into a new HFS or zFS file system, you must create the mountpoints and mount the new file systems to the driving system for IMS Enterprise Suite for z/OS.

The recommended mountpoint for IMS Enterprise Suite for z/OS is

   /usr/lpp/ims/imses/V3R2

The recommended mountpoint for JAHF321 (SOAP Gateway) is

/usr/lpp/InstallationManagerRepository/JAHF321

The recommended mountpoint for JAHF32A (IMS Mobile Feature Pack) is

/usr/lpp/InstallationManagerRepository/JAHF32A

Edit and submit sample job AEWJSMKD to allocate the HFS or zFS paths for IMS Enterprise Suite for z/OS. Consult the instructions in the sample job for more information.

If you create a new file system for this product, consider updating the BPXPRMxx PARMLIB member to mount the new file system at IPL time. This action can be helpful if an IPL occurs before the installation is completed.

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

6.1.11 Create DDDEF Entries

Edit and submit sample job AEWDDEF0 to create DDDEF entries for the SMP/E target and distribution libraries for IMS Enterprise Suite for z/OS. 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.

If you are installing:

- **JAHF321 (SOAP Gateway)**, edit and submit sample job AEWDDEF1 to create DDDEF entries for the SMP/E target and distribution libraries. 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.

- **JAHF322 (Java Message Services API)**, edit and submit sample job AEWDDEF2 to create DDDEF entries for the SMP/E target and distribution libraries. 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.

- **JAHF323 (Connect API for Java)**, edit and submit sample job AEWDDEF3 to create DDDEF entries for the SMP/E target and distribution libraries. 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.

- **JAHF32A (IMS Mobile Feature Pack)**, edit and submit sample job AEWDDEF4 to create DDDEF entries for the SMP/E target and distribution libraries. 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.

6.1.12 Perform SMP/E APPLY

1. Ensure that you have the latest HOLDDATA; then edit and submit sample job AEWAPPLY to perform an SMP/E APPLY CHECK for IMS Enterprise Suite for z/OS. 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:

   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),HOLDFIXCAT) .
 ..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

Expected Return Codes and Messages from APPLY CHECK: You might receive a return code of 4 if these jobs runs correctly. The following messages can be ignored: GIM43401W, GIM44402W, and GIM61903W.

Note: All 'NOT SEL' messages in the ELEMENT SUMMARY REPORT are expected and can be ignored.

Expected Return Codes and Messages from APPLY: You will receive a return code of 4 if this job runs correctly. The following messages can be ignored: GIM43401W, GIM44402W, and GIM61903W. IEW2454W can be ignored if it is in the SMPLTS processing.

Note: All 'NOT SEL' messages in the ELEMENT SUMMARY REPORT are expected and can be ignored.

If PTFs containing SYSTEM HOLDDATA are being applied, SMP/E APPLY processing will indicate the subject HOLDDATA is bypassed, resulting in a return code of 4 from the APPLY step. These messages do not affect the success of the APPLY step and can be ignored, however, you must take any action described by the HOLDDATA.

Note: The process of applying IBM IMS Enterprise Suite for z/OS will automatically invoke UNIX shell scripts (SHELLSCRs) that will issue commands as required.

6.1.13 Perform SMP/E ACCEPT

Edit and submit sample job AEWACCEP to perform an SMP/E ACCEPT CHECK for IMS Enterprise Suite for z/OS. 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 PTFs are being accepted and if this job runs correctly, you might receive a **return code of 4**.

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.

The following message can be ignored: GIM61903W.

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

The following message can be ignored: GIM61903W.

6.1.14 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 Enterprise Suite for z/OS, 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.

6.1.15 Cleaning Up Obsolete Data Sets, Paths, and DDDEFs

The following file system paths, which were created and used by previous releases of this product, are no longer used in this release. You can delete these obsolete file system paths after you delete the previous release from your system.

- **For IMS Enterprise Suite V03.01.00:**
    - /usr/lpp/ims/enterprise/V3R1/connect_api
    - /usr/lpp/ims/enterprise/V3R1/java170
    - /usr/lpp/ims/enterprise/V3R1/jms
    - /usr/lpp/InstallationManagerRepository/JAHF311

- **For IMS Enterprise Suite V03.01.01:**
    - /usr/lpp/ims/enterprise/V3R1/connect_api
    - /usr/lpp/ims/enterprise/V3R1/java170
    - /usr/lpp/ims/enterprise/V3R1/jms
    - /usr/lpp/InstallationManagerRepository/JAHF311
    - /usr/lpp/InstallationManagerRepository/JAHF31A

The following DDDEF entries, which were created and used by previous releases of this product, are no longer used in this release. You can delete these obsolete DDDEF entries after you delete the previous release from your system.

- AAEWAIX
- AAEWJAVA
- AAEWJV31
- AAEWJV64
- AAEWLINX
- AAEWWINS
- AAEWZLNX
- ADFSJDMD
- AHWSJHFS
- AHWSCHFS
- SAEWAIX
- SAEWJAVA
- SAEWLINX
- SAEWWINS
- SDFSJDMD
- SHWSJHFS
- SHWSCHFS

6.2 Activating IMS Enterprise Suite for z/OS

If you mount the file system in which you have installed IMS Enterprise Suite for z/OS in read-only mode during execution, then you do not have to take further actions to activate IMS Enterprise Suite for z/OS.

To review how to activate other components that constitute IMS Enterprise Suite for z/OS, refer to the following Program Directory that is supplied with the product.

- Publication number GI13-4617 for IMS Mobile Feature Pack for z/OS Connect EE

6.3 Installing IMS Enterprise Suite for z/OS SOAP Gateway via Installation Manager

For post-SMP/E installation, follow the steps described in the SOAP Gateway installation information in the knowledge center at:
http://www-01.ibm.com/support/knowledgecenter/SS9NWR_3.2.0/com.ibm.ims.soap32.doc/sgw_install_z32.htm.
Sample jobs are provided create and mount the required file systems, specify the mount point for each SOAP Gateway installation component, and install SOAP Gateway.

6.3.1 Uninstalling IMS Enterprise Suite for z/OS SOAP Gateway

Edit and submit sample job AEWTSUNI to uninstall SOAP Gateway. Consult the instructions in the sample job for more information.

6.4 Installing IMS Enterprise Suite for z/OS IMS Mobile Feature Pack via Installation Manager

For post-SMP/E installation, follow the steps described in the IMS Mobile Feature Pack installation information in the knowledge center at:
http://www-01.ibm.com/support/knowledgecenter/SS9NWR_3.2.0/com.ibm.ims.mobile32.doc/mobile_installroadmap.htm.
Sample jobs are provided to create and mount the required file systems, specify the mount point for each IMS Mobile Feature Pack installation component, and install IMS Mobile Feature Pack.

6.4.1 Uninstalling IMS Enterprise Suite for z/OS IMS Mobile Feature Pack

Edit and submit sample job AEWIMUNI to uninstall the IMS Mobile Feature Pack. Consult the instructions in the sample job for more information.

6.5 Verifying IMS Enterprise Suite for z/OS Installation

The last step of the installation tasks is to verify the installation.

To view the IMS Enterprise Suite for z/OS V3.2 installation verification instructions go to the IMS Enterprise Suite welcome page at the following address:
http://www-01.ibm.com/support/knowledgecenter/SS9NWR/welcome

To view the IMS Enterprise Suite for z/OS Connect API for JAVA installation verification instructions:

Navigate as follows:

IMS Enterprise Suite Version 3.2 >
IMS Connect API for Java >
Installing the Connect API for Java >
Verifying the Connect API for Java installation

To view the IMS Enterprise Suite for z/OS SOAP Gateway installation verification instructions:

Navigate as follows:

IMS Enterprise Suite Version 3.2 >
IMS SOAP Gateway >
Installing and configuring SOAP Gateway >
Verifying the installation of SOAP Gateway

To view the IMS Enterprise Suite for z/OS IMS Mobile Feature Pack installation verification instructions:

Navigate as follows:

IMS Enterprise Suite Version 3.2 >
IMS mobile (REST/JSON) solution >
IMS Mobile Feature Pack (z/OS Connect) >
Installing and configuring IMS Mobile Feature Pack >
Verifying the installation of IMS Mobile Feature Pack

To review the installation verification requirements of other components that constitute IMS Enterprise Suite for z/OS, refer to the following Program Directory that is supplied with the product.

• Publication number GI13-4617 for IMS Mobile Feature Pack for z/OS Connect EE

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