Program Directory for

IBM Tivoli System Automation for z/OS

V3.2.0

Program Number 5698-SA3

FMIDs HWRE320, JWRE32C, JWRE32I, JWRE321, JWRE322, HKAH320

for Use with
z/OS Version 1 Release 7 or later

Document Date: December 2007

GI11-2691-02

Note!

Before using this information and the product it supports, be sure to read the general information under Appendix A, “Notices” on page 33.

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1.0 Introduction

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

The Program Directory contains the following sections:

- 2.0, “Program Materials” on page 5 identifies the basic and optional program materials and documentation for SA z/OS.
- 3.0, “Program Support” on page 9 describes the IBM support available for SA z/OS.
- 4.0, “Program and Service Level Information” on page 11 lists the APARs (program level) and PTFs (service level) incorporated into SA z/OS.
- 5.0, “Installation Requirements and Considerations” on page 15 identifies the resources and considerations required for installing and using SA z/OS.
- 6.0, “Installation Instructions” on page 23 provides detailed installation instructions for SA z/OS. It also describes the procedures for activating the functions of SA z/OS, or refers to appropriate publications.

Before installing SA z/OS, read the *CBPDO Memo To Users* and the *CBPDO Memo To Users Extension* that were supplied with this program in softcopy form as well as this Program Directory and then keep them for future reference. Section 3.2, “Preventive Service Planning” on page 9 tells you how to find any updates to the information and procedures in this Program Directory.

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

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

1.1 SA z/OS Description

IBM Tivoli System Automation for z/OS (SA z/OS) is a NetView-based application that provides you with a single point of control for a full range of systems management functions. SA z/OS functions include the monitoring, control, and automation of a large range of system elements spanning both the hardware and software resources of your enterprise in a sysplex wide scope.

In detail it provides:

- Powerful and flexible cluster-wide policy that reduces complexity, implementation time, coding and support effort
- Comprehensive Parallel Sysplex management and automation functions including single system image, single point of control, and unique Parallel Sysplex application automation
- Policy-based e-business automation that can start, stop, monitor, and recover z/OS traditional as well as UNIX applications and resources
- Integration with Tivoli enterprise solutions including network management
- Easy to use graphical user interface
- Comprehensive "canned" automation for IMS, CICS, TWS, DB2, SAP and WebSphere

Following is a summary of the enhancements made in SA z/OS V3.2

- When moving an application, with Resource Aware Application Management the current workload on the possible target systems is considered rather than moving the application to a random target.
- An interface for Tivoli Workload Scheduler (TWS) for z/OS is provided that does not require ACF definitions to initiate automation actions. This allows the TWS user to easily modify the automation scenario in-flight or in advance by making changes to the TWS CP or AD database.
- The TEP Integration provides an interface to the Tivoli Enterprise Portal (TEP) - Tivoli's strategic user interface for enterprise-wide monitoring and systems operation - which allows monitoring System Automation resources status and health via the TEP.
- The Extended Status Command Support allows to manage components - not being defined as System Automation resource - depending on the availablity of a subsystem
- The availablity of Move and Server groups is improved when moving a member. Additionally there is a definition capability for serial / parallel processing.
- A default desired status can now be defined for each application, application group and monitor.
- Alert/Escalation via SA IOM V2.1 introduces a notification function to inform e.g. stand-by operators via e-mail, pager or phone.
- Dialog enhancements
  - With Nested Class support the specification of a class hierarchy is enabled.
  - The integration of GDPS is enhanced further by providing special GDPS definitions.
  - The import function is enhanced to import all links that belong to a system or a group.
  - The file update function is enhanced to support additional policies and entry types.
  - For each resource individually it can be defined if it is registered to SDF, NMC, TWS status observer and/or SMF.
  - The usability especially concerning copying and reporting is improved.
- Job related information is written to SMF records at specific events within the lifetime of an application, an application group or a monitor to support availability and recovery time reporting.
- Additional sample policies are provided for OMVS, CIM, IO-OPS, TBSM and CICS Transaction Gateway.
- Function ING$QRY allows to query the status of a resource from within the Automation Table.
- The new INGQRY command is introduced to query resource attributes such as status.

- The INGAMS command has been enhanced to suspend sending orders to the automation agent.
- The INGREQ command panel has been restructured.
- The INGGROUP command has been enhanced to display modified attributes.
- The INGSTOBS command has been enhanced by a WAIT parameter.
- The INGINFO command has been enhanced to display a timestamps of the last status change.
- The SETTIMER command has been enhanced to allow additonal time definitions.
- The DISPINFO command has been enhanced to display additional data.
- The DISPMTR command has been enhanced to display timestamps of last start / stop.
- The commands SHUTSYS, DISPASST, SETASST, DISPWTOR can no longer be used.
- The new INGPSMON montoring routine is introduced to determine the status of an MVS subsystem
- Shared WLM resource name support allows to use a single WLM resource for multiple System Automation resources.
- The IMS panels have been modernized.
- The CICS Link/Health monitoring has been improved to monitor any CICS resource.
- Besides performance improvements, NMC is enhanced to support Informlist.
- ProcOps provides full z9 exploitation.

1.2 SA z/OS FMIDs

SA z/OS consists of the following FMIDs:

HWRE320
JWRE32C
JWRE32I
JWRE321
JWRE322
HKAH320

Note: JWRE321 is the Japanese NLS FMID. HKAH320 is the TEP Support FMID.

2.0 Program Materials

An IBM program is identified by a program number and feature numbers. The program number for SA z/OS is 5698-SA3 and the feature numbers are 5802 and 5812.

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

The program announcement material describes the features supported by SA 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 magnetic tape or downloadable files. It is installed using SMP/E, and is in SMP/E RELFILE format. See 6.0, “Installation Instructions” on page 23 for more information about how to install the program.

Figure 1. Basic Material: Program Tape

Medium	Feature Number	Physical Volume	External Label	VOLSER
3480 cart	5802	2	SA z/OS V3.2	WRE320 WRE321
3480 cart	5812	2	SA z/OS V3.2 JPN	WRE320 WRE321

Figure 2 describes the program file content for SA z/OS.

Notes:

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

Figure 2. Program File Content (WRE320)

Name	ORG	RECFM	LRECL	BLK SIZE
SMPMCS	PS	FB	80	6400
Base Automation:				
IBM.HWRE320.F1	PDS	FB	80	8800
IBM.HWRE320.F2	PDS	FB	80	8800
IBM.HWRE320.F3	PDS	FB	80	8800
IBM.HWRE320.F4	PDS	U	0	6144
IBM.HWRE320.F5	PDS	VB	1024	27998

Figure 3 (Page 1 of 2). Program File Content (WRE321)

Name	ORG	RECFM	LRECL	BLK SIZE
SMPMCS	PS	FB	80	6400
CICS AUTO:				
IBM.JWRE32C.F1	PDS	FB	80	8800
IBM.JWRE32C.F2	PDS	U	0	6144
IBM.JWRE32C.F3	PDS	FB	80	8800
IMS AUTO:				
IBM.JWRE32I.F1	PDS	FB	80	8800
IBM.JWRE32I.F2	PDS	U	0	6144
IBM.JWRE32I.F3	PDS	FB	80	8800
Base Automation JPN:				
IBM.JWRE321.F1	PDS	FB	80	8800
UCE:				
IBM.JWRE322.F1	PDS	FB	80	8800
IBM.JWRE322.F2	PDS	U	0	6144
IBM.JWRE322.F3	PDS	FB	80	8800
TEP Support:				
IBM.HKAH320.F1	PDS	FB	80	8800

Figure 3 (Page 2 of 2). Program File Content (WRE321)				
Name	**ORG**	**RECFM**	**LRECL**	**BLK SIZE**
IBM.HKAH320.F2	PDS	U	0	6144
IBM.HKAH320.F3	PDS	VB	6160	27998

2.2 Optional Machine-Readable Material

No optional machine-readable materials are provided for SA z/OS.

2.3 Program Publications

The following sections identify the basic and optional publications for SA z/OS.

2.3.1 Basic Program Publications

Figure 4 identifies the basic unlicensed program publications for SA z/OS. One copy of each of these publications is included when you order the basic materials for SA z/OS. For additional copies, contact your IBM representative.

Note: Softcopies of all of the manuals can be found on the homepage of IBM Tivoli System Automation for z/OS: http://www.ibm.com/servers/eserver/zseries/software/sa/bkserv/

Figure 4 (Page 1 of 2). Basic Material: Unlicensed Publications	
Publication Title	**Form Number**
IBM Tivoli System Automation for z/OS Customizing and Programming	SC33-8260
IBM Tivoli System Automation for z/OS Planning and Installation	SC33-8261
IBM Tivoli System Automation for z/OS Defining Automation Policy	SC33-8262
IBM Tivoli System Automation for z/OS User's Guide	SC33-8263
IBM Tivoli System Automation for z/OS Messages and Codes	SC33-8264
IBM Tivoli System Automation for z/OS Operator's Commands	SC33-8265
IBM Tivoli System Automation for z/OS Programmer's Reference	SC33-8266
IBM Tivoli System Automation for z/OS Program Directory	GI11-2691
System Automation for z/OS CICS Automation Programmer's Reference and Operator's Guide	SC33-8267

Figure 4 (Page 2 of 2). Basic Material: Unlicensed Publications	
Publication Title	**Form Number**
System Automation for z/OS IMS Automation Programmer's Reference and Operator's Guide	SC33-8268
System Automation for z/OS TWS Automation Programmer's Reference and Operator's Guide	SC33-8269
End-to-End Automation Adapter	SC33-8271
Monitoring Agent Configuration and User's Guide	SC33-8337

2.3.2 Optional Program Publications

No optional publications are provided for SA z/OS.

2.4 Program Source Materials

Customers with access to View Program Listings (VPL), such as through S/390 SoftwareXcel, can use the VPL facility for online viewing of available program listings. Those customers without access to VPL can contact their IBM representative.

2.5 Publications Useful During Installation

The publications listed in Figure 5 may be useful during the installation of SA z/OS. To order copies, contact your IBM representative or visit the IBM Publications Center on the World Wide Web at: http://www.ibm.com/shop/publications/order

Figure 5. Publications Useful During Installation	
Publication Title	**Form Number**
IBM SMP/E for z/OS User's Guide	SA22-7773
IBM SMP/E for z/OS Commands	SA22-7771
IBM SMP/E for z/OS Reference	SA22-7772
IBM SMP/E for z/OS Messages, Codes, and Diagnosis	GA22-7770

3.0 Program Support

This section describes the IBM support available for SA z/OS.

3.1 Program Services

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

3.2 Preventive Service Planning

Before installing SA z/OS, it is VERY IMPORTANT that you review the current Preventive Service Planning (PSP) information. The PSP buckets maintain current lists (which have been identified since the package was created) of any recommended or required service for this package's installation. This includes software PSP information (HWRE320) that contains HIPER, and/or required PTFs against the base release.

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

If you obtained SA z/OS as part of a CBPDO, there is HOLDDATA included on the PDO.

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

For program support, access the Software Support Web site at http://www.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 SA z/OS are:

Figure 6. PSP Upgrade and Subset ID

UPGRADE	SUBSET	Description
HWRE320	HWRE320	SA z/OS
HWRE320	JWRE32C	SA z/OS CICS Automation
HWRE320	JWRE32I	SA z/OS IMS Automation
HWRE320	JWRE321	Japanese SA z/OS
HWRE320	JWRE322	Upper-case English SA z/OS
HKAH320	HKAH320	SA z/OS TEP Support

3.3 Statement of Support Procedures

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

Figure 7 on page 10 identifies the component IDs (COMPID) for SA z/OS.

Figure 7. Component IDs

FMID	COMPID	Component Name	RETAIN Release
HWRE320	5698SA300	SA z/OS Base Automation	320
JWRE32C	5698SA300	SA z/OS CICS AUTO	32C
JWRE32I	5698SA300	SA z/OS IMS AUTO	32I
JWRE321	5698SA300	SA z/OS Base Automation JPN	321
JWRE322	5698SA300	SA z/OS UCE	322
HKAH320	5698SA301	SA z/OS TEP Support	320

4.0 Program and Service Level Information

This section identifies the program and any relevant service levels of SA z/OS. The program level refers to the APAR fixes incorporated into the program. The service level refers to the PTFs incorporated into the program.

4.1 Program Level Information

The following APAR fixes against previous releases of SA z/OS have been incorporated into this release. They are listed by FMID.

- FIN APARs against previous releases

OA14393	OA17330	OA18634
OA14608	OA17506	OA18795
OA16269	OA17747	OA19071
OA17003	OA18040	OA19172
OA17059	OA18272	OA20303
OA17240	OA18613	OA21141

- FMID HWRE320

OA13533	OA14705	OA15354
OA13642	OA14725	OA15370
OA13661	OA14767	OA15398
OA13728	OA14816	OA15399
OA13835	OA14817	OA15408
OA13955	OA14912	OA15435
OA14026	OA14913	OA15486
OA14066	OA14949	OA15531
OA14128	OA14997	OA15614
OA14217	OA15052	OA15619
OA14290	OA15055	OA15706
OA14312	OA15057	OA15741
OA14392	OA15101	OA15761
OA14401	OA15162	OA15776
OA14458	OA15214	OA15789
OA14492	OA15218	OA15831
OA14520	OA15221	OA15832
OA14586	OA15285	OA15851
OA14604	OA15338	OA15854
OA14704	OA15346	OA15876

OA15915
OA15950
OA15983
OA16118
OA16121
OA16163
OA16201
OA16203
OA16240
OA16287
OA16291
OA16311
OA16314
OA16327
OA16345
OA16373
OA16396
OA16426
OA16459
OA16474
OA16485
OA16625
OA16659
OA16696
OA16702
OA16783
OA16792
OA16824
OA16914
OA16963
OA16965
OA17028
OA17046
OA17047
OA17049
OA17056
OA17078
OA17133
OA17217
OA17225
OA17228
OA17236
OA17253
OA17254
OA17267
OA17375
OA17382
OA17449
OA17498
OA17507
OA17527
OA17529
OA17603
OA17623
OA17639
OA17656
OA17687
OA17693
OA17742
OA17743
OA17767
OA17784
OA17802
OA17865
OA17883
OA17946
OA17951
OA17962
OA17989
OA18002
OA18019
OA18032
OA18050
OA18099
OA18133
OA18148
OA18150
OA18253
OA18254
OA18276
OA18287
OA18314
OA18354
OA18376
OA18392
OA18415
OA18479
OA18564
OA18573
OA18621
OA18729
OA18737
OA18749
OA18804
OA18826
OA18841
OA18866
OA18999
OA19005
OA19016
OA19019
OA19057
OA19059
OA19069
OA19081
OA19086
OA19121
OA19169
OA19170
OA19260
OA19277
OA19279
OA19332
OA19412
OA19476
OA19479
OA19527
OA19532
OA19590
OA19615
OA19668
OA19686
OA19696
OA19717
OA19782
OA19806
OA19818
OA19832
OA19838
OA19871
OA19926
OA19936
OA20023
OA20029
OA20032
OA20034

OA20081
OA20122
OA20209
OA20315
OA20327
OA20329
OA20332
OA20344
OA20390
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OA20425
OA20450
OA20544
OA20630
OA20668
OA20691
OA20704
OA20771
OA20773
OA20790
OA20829
OA20926
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OA21084
OA21147
OA21191
OA21250
OA21283
OA21342
OA21444
OA21491
OA21559
OA21564
OA21601
OA21622
OA21670
OA21676
OA21700
OA21769
OA21791
OA21798
OA21919
OA21939
OA21999
OA22014
OA22036
OA22037
OA22084
OA22201
OA22280
OA22299
OA22300
OA22345
OA22360
OA22406
OA22482
OA22499
OA22572
OA22598
OA22616
OA22655
OA22667
OA22692
OA22823

- FMID JWRE32C

OA18032
OA18934
OA21468

- FMID JWRE32I

OA13642
OA15057
OA16538
OA18032
OA18412
OA18934

- FMID JWRE321

OA13955
OA14066
OA14312
OA15285
OA15741
OA15851
OA15950
OA17047
OA17225
OA17267
OA17603
OA17693
OA17989
OA18253
OA18354

OA18564	OA20029	OA20668
OA18737	OA20032	OA20926
OA19019	OA20209	OA21564
OA19057	OA20332	

- FMID JWRE322

  OA19871

- FMID HKAH320

  No APARs incorporated, because this is a new FMID.

4.2 Service Level Information

No PTFs against this release of SA z/OS have been incorporated into the product tape.

Over time it is HIGHLY recommended that you frequently check the SA z/OS PSP bucket for HIPER and SPECIAL Attention PTFs against all FMID(s) which should be installed.

5.0 Installation Requirements and Considerations

The following sections identify the system requirements for installing and activating SA z/OS. The following terminology is used:

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

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

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

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

In many cases, the same system can be used as both a driving system and a target system. However, you may want to set up a clone of your system to use as a target system by making a separate IPL-able copy of the running system. The clone should include copies of all system libraries that SMP/E updates, copies of the SMP/E CSI data sets that describe the system libraries, and your PARMLIB and PROCLIB.

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

- When installing a new level of a product that is already installed, the new product will delete the old one. By installing onto a separate target system, you can test the new product while still keeping the old one in production.
- When installing a product that shares libraries or load modules with other products, the installation can disrupt the other products. Installing onto a test system or clone will allow you to assess these impacts without disrupting your production system.

5.1 Driving System Requirements

This section describes the environment of the driving system required to install SA 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 8 (Page 1 of 2). Driving System Software Requirements

Program Number	Product Name and Minimum VRM/Service Level
Any **one** of the following:	

Figure 8 (Page 2 of 2). Driving System Software Requirements	
Program Number	**Product Name and Minimum VRM/Service Level**
5694-A01	z/OS V1.7 or later
5655-G44	IBM SMP/E for z/OS V3.3 or later

5.2 Target System Requirements

This section describes the environment of the target system required to install and use SA z/OS.

SA z/OS installs in the z/OS (Z038) SREL.

5.2.1 Machine Requirements

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

5.2.2 Programming Requirements

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

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

SA z/OS has no mandatory installation requisites.

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

Figure 9. Conditional Installation Requisites		
Program Number	**Product Name and Minimum VRM/Service Level**	**Function**
5655-C56	IBM IMS V8.1 or later	For IMS automation
5697-E93	IBM CICS Transaction Server V2.3 or later	For CICS automation

5.2.2.2 Operational Requisites:

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

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

Figure 10. Mandatory Operational Requisites

Program Number	Product Name and Minimum VRM/Service Level
5697-ENV	Tivoli NetView for z/OS V5.1 or later
5694-A01	z/OS V1.7 or later

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

Figure 11. Conditional Operational Requisites

Program Number	Product Name and Minimum VRM/Service Level	Function
5655-F10	WebSphere MQ for z/OS V5.3.1 or later	For automation functions
5697-ENV	Tivoli NetView for z/OS V5.1 or later	• NetView Management Console Server and Client for Topology Manager functions • NetView Management Console 3270 for NMC workstation
5739-A03	z/VM V4.3 or later	ProcOps VM Second Level Systems Support
5694-A01	z/OS V1.7 or later with z/OS XML System Services parser PTF UA31443	OMEGAMON XE Support
5698-A79	IBM Tivoli Monitoring Services V6.1	This is an operational prerequisite for Tivoli Enterprise Portal Support only, i.e. when you want to operate HKAH320. Other SA z/OS functionality is not affected. HKAH320 can be installed in a CSI different from where the other SA z/OS V3.2 FMIDs are installed.

5.2.2.3 Toleration/Coexistence Requisites:

A toleration/coexistence requisite is defined as a product that must be present on a sharing system. These systems can be other systems in a multisystem environment (not necessarily sysplex), a shared DASD environment (such as test and production), or systems that reuse the same DASD at different time intervals.

SA z/OS has no toleration/coexistence requisites.

5.2.2.4 Incompatibility (Negative) Requisites:

A negative requisite identifies products that must *not* be installed on the same system as this product.

SA z/OS has no negative requisites.

5.2.3 DASD Storage Requirements

SA z/OS libraries can reside on all supported DASD types.

Figure 12 lists the total space required for each type of library.

Figure 12. Total DASD Space Required by SA z/OS

Library Type	Total Space Required in 3390 Trks
Target	5086 (3390 tracks)
Distribution	4948 (3390 tracks)
HFS or zFS	20 MB

Notes:

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

   U Unique data set, allocated by this product and used only by this product. To determine the correct storage needed for this data set, this table provides all required information; no other tables (or Program Directories) need to be referenced for the data set size.

   S Shared data set, allocated by this product and used by this product and others. To determine the correct storage needed for this data set, the storage size given in this table needs to be added to other tables (perhaps in other Program Directories). If the data set already exists, it must have enough free space to accommodate the storage size given in this table.

   E Existing shared data set, used by this product and others. This data set is NOT allocated by this product. To determine the correct storage needed for this data set, the storage size given in this table needs to be added to other tables (perhaps in other program directories). This

existing data set must have enough free space to accommodate the storage size given in this table.

If you currently have a previous release of this product installed in these libraries, the installation of this release will delete the old one and reclaim the space used by the old release and any service that had been installed. You can determine whether or not these libraries have enough space by deleting the old release with a dummy function, compressing the libraries, and comparing the space requirements with the free space in the libraries.

For more information on the names and sizes of the required data sets, please refer to 6.1.6, “Allocate SMP/E Target and Distribution Libraries” on page 27.

3. Abbreviations used for the HFS or zFS Path type are:

   N New path, created by this product.
   X Path created by this product, but may 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 may be changed.
   - The default block size of the data set may be changed.
   - The data set may be merged with another data set that has equivalent characteristics.
   - The data set may be either a PDS or a PDSE.
5. All target libraries listed have the following attributes:
   - The data set may be SMS-managed.
   - It is not required for the data set to be SMS-managed.
   - It is not required for the data set to reside on the IPL volume.
   - The values in the "Member Type" column are not necessarily the actual SMP/E element types identified in the SMPMCS.
6. All target libraries listed which contain load modules have the following attributes:
   - The data set may be in the LPA.
   - It is not required for the data set to be in the LPA.
   - The data set may be in the LNKLST.
   - It is not required for the data set to be APF-authorized.

The following figures describe the target and distribution libraries and HFS or zFS paths required to install SA z/OS. The storage requirements of SA z/OS must be added to the storage required by other programs having data in the same library or path.

Note: The data in these tables should be used when determining which libraries can be merged into common data sets. In addition, since some ALIAS names may not be unique, ensure that no naming conflicts will be introduced before merging libraries.

Figure 13. Storage Requirements for SA z/OS Target Libraries

Library DDNAME	Member Type	Target Volume	TYPE	ORG	RECFM	LRECL	No. of 3390 Trks	No. of DIR Blks
SINGIMSG	MSG	ANY	U	PDS	FB	80	17	6
SINGINST	SAMP	ANY	U	PDS	FB	80	6	2
SINGIPDB	Data	ANY	U	PDS	FB	80	151	2
SINGIPNL	PNL	ANY	U	PDS	FB	80	240	70
SINGIREX	EXEC	ANY	U	PDS	FB	80	259	25
SINGISKL	SKEL	ANY	U	PDS	FB	80	17	12
SINGITBL	Table	ANY	U	PDS	FB	80	34	4
SINGJMSG	MSG	ANY	U	PDS	FB	80	24	21
SINGJPNL	PNL	ANY	U	PDS	FB	80	237	48
SINGJPWS	Data	ANY	U	PDS	FB	80	21	2
SINGMOD1	LMOD	ANY	U	PDS	U	0	1602	70
SINGMOD2	LMOD	ANY	U	PDS	U	0	36	10
SINGMOD3	LMOD	ANY	U	PDS	U	0	13	5
SINGMSGV	MSG	ANY	U	PDS	FB	80	2	2
SINGNMSG	MSG	ANY	U	PDS	FB	80	25	25
SINGNPNL	PNL	ANY	U	PDS	FB	80	289	50
SINGNPRF	Data	ANY	U	PDS	FB	80	2	2
SINGNPRM	Data	ANY	U	PDS	FB	80	141	6
SINGNREX	EXEC	ANY	U	PDS	FB	80	1075	70
SINGOBJV	OBJ	ANY	U	PDS	FB	80	2	2
SINGPWS1	Data	ANY	U	PDS	FB	80	21	2
SINGREXV	EXEC	ANY	U	PDS	FB	80	7	2
SINGSAMP	SAMP	ANY	U	PDS	FB	80	77	12
TKANCUS	Data	ANY	S	PDS	FB	80	2000	1000
TKANDATV	Data	ANY	S	PDS	VB	6160	300	50
TKANMODL	LMOD	ANY	S	PDS	U	0	3300	400
TKANPAR	Data	ANY	S	PDS	FB	80	30	50
TKANPKGI	Data	ANY	S	PDS	FB	80	200	200

Figure 14. SA z/OS HFS or zFS Paths

DDNAME	TYPE	Path Name
SINGACFG	X	/usr/lpp/ing/adapter/config/IBM/
SINGADAT	X	/usr/lpp/ing/adapter/data/IBM/
SINGALIB	X	/usr/lpp/ing/adapter/lib/IBM/
SINGASCR	X	/usr/lpp/ing/adapter/IBM/
SINGASSL	X	/usr/lpp/ing/adapter/ssl/IBM/
SINGDPOL	N	/usr/lpp/ing/doc/policies/IBM/
SINGDSCR	N	/usr/lpp/ing/doc/IBM/
SINGULIB	X	/usr/lpp/ing/ussauto/lib/IBM/
SINGUSCR	X	/usr/lpp/ing/ussauto/IBM/

Figure 15 (Page 1 of 2). Storage Requirements for SA z/OS Distribution Libraries

Library DDNAME	TYPE	ORG	RECFM	LRECL	No. of 3390 Trks	No. of DIR Blks
AINGHFSV	U	PDS	VB	1024	184	10
AINGIMSG	U	PDS	FB	80	16	6
AINGINST	U	PDS	FB	80	6	2
AINGIPDB	U	PDS	FB	80	151	2
AINGIPNL	U	PDS	FB	80	240	70
AINGIREX	U	PDS	FB	80	256	25
AINGISKL	U	PDS	FB	80	17	12
AINGITBL	U	PDS	FB	80	34	4
AINGJMSG	U	PDS	FB	80	24	21
AINGJPNL	U	PDS	FB	80	235	48
AINGJPWS	U	PDS	FB	80	21	2
AINGMOD1	U	PDS	U	0	1161	210
AINGMSGV	U	PDS	FB	80	2	2
AINGNMSG	U	PDS	FB	80	25	25
AINGNPNL	U	PDS	FB	80	289	50

Figure 15 (Page 2 of 2). Storage Requirements for SA z/OS Distribution Libraries

Library DDNAME	TYPE	ORG	RECFM	LRECL	No. of 3390 Trks	No. of DIR Blks
AINGNPRF	U	PDS	FB	80	2	2
AINGNPRM	U	PDS	FB	80	141	6
AINGNREX	U	PDS	FB	80	1075	68
AINGOBJV	U	PDS	FB	80	2	2
AINGPWS1	U	PDS	FB	80	21	2
AINGREXV	U	PDS	FB	80	7	2
AINGSAMP	U	PDS	FB	80	77	12
DKANCUS	S	PDS	FB	80	2000	1000
DKANDATV	S	PDS	VB	6160	300	50
DKANMODL	S	PDS	U	0	3300	400
DKANPAR	S	PDS	FB	80	30	50
DKANPKGI	S	PDS	FB	80	200	40

Note: Data sets AINGJMSG, AINGJPNL and AINGJPWS are for Japanese data only and remain empty if JWRE321 is not installed.

5.3 FMIDs Deleted

Installing SA z/OS may result in the deletion of other FMIDs. To see what FMIDs will be deleted, examine the ++VER statement in the product's SMPMCS.

If you do not wish to delete these FMIDs at this time, you must install SA z/OS into separate SMP/E target and distribution zones.

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

5.4 Special Considerations

SA z/OS has no special considerations for the target system.

6.0 Installation Instructions

This chapter describes the installation method and the step-by-step procedures to install and to activate the functions of SA z/OS.

Please note the following:

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

6.1 Installing SA z/OS

The product tape contains SA z/OS Base Automation, SA z/OS CICS AUTO, SA z/OS IMS AUTO, SA z/OS Base Automation JPN and SA z/OS UCE.

The FMIDs are:

- HWRE320 - SA z/OS Base Automation (including TWS automation)
- JWRE32C - SA z/OS CICS AUTO
- JWRE32I - SA z/OS IMS AUTO
- JWRE321 - SA z/OS Base Automation JPN
- JWRE322 - SA z/OS UCE
- HKAH320 - SA z/OS TEP Support

JWRE321 needs only to be installed if you want Japanese NLS.
JWRE322 needs only to be installed if you want I/O Operations upper-case English messages.

Note: The dependency structure of the FMIDs is as follows:

1. JWRE32C is dependent on HWRE320.
2. JWRE32I is dependent on HWRE320.
3. JWRE321 is dependent on HWRE320.
4. JWRE322 is dependent on HWRE320.

6.1.1 SMP/E Considerations for Installing SA z/OS

This release of SA z/OS is installed using the SMP/E RECEIVE, APPLY, and ACCEPT commands. The SMP/E dialogs may be used to accomplish the SMP/E installation steps.

6.1.2 SMP/E Options Subentry Values

The recommended values for some SMP/E CSI subentries are shown in Figure 16 on page 24. Use of values lower than these may result in failures in the installation process. DSSPACE is a subentry in the GLOBAL options entry. PEMAX is a subentry of the GENERAL entry in the GLOBAL options entry. Refer to the SMP/E manuals for instructions on updating the global zone.

Figure 16. SMP/E Options Subentry Values

SUB-ENTRY	Value	Comment
DSSPACE	1200,1200,500	Size of largest file.
PEMAX	SMP/E Default	IBM recommends using the SMP/E default for PEMAX.

6.1.3 SMP/E CALLLIBS Processing

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

For Tivoli NetView for z/OS V5.1 or later

- CNMLINK
- NVULIB

For ISPF, shipped with z/OS

- SISPLOAD

For LE Libraries for PL/I, C and C++

- SCEECPP
- SCEELKED
- SCEELKEX
- SCEEOBJ
- SCEESPC
- SIBMCALL

For CICS V2.3 or later

- SDFHLOAD

For IMS V8.1 or later

- SDFSRESL

Note: The DDDEFs above are used only to resolve the link-edit for SA z/OS using CALLLIBS. These data sets are not updated during the installation of SA z/OS.

6.1.4 Sample Jobs

The following sample installation jobs are provided as part of the product to help you install SA z/OS:

Figure 17. Sample Installation Jobs

Job Name	Job Type	Description	RELFILE
INGALLOC	ALLOCATE	Sample job to allocate target and distribution libraries	IBM.HWRE320.F3
KAHALLOC	ALLOCATE	Sample job to allocate target and distribution libraries for TEP support	IBM.HKAH320.F1
INGISMKD	MKDIR	Sample job to allocate HFS or zFS paths	IBM.HWRE320.F3
INGDDDEF	DDDEF	Sample job to define SMP/E DDDEFs	IBM.HWRE320.F3
KAHDDDEF	DDDEF	Sample job to define SMP/E DDDEFs for TEP support	IBM.HKAH320.F1
INGDDDCL	DDDEF	Sample job to define prerequisite product DDDEFs	IBM.HWRE320.F3
INGAPPLY	APPLY	Sample APPLY job	IBM.HWRE320.F3
KAHAPPLY	APPLY	Sample APPLY job for TEP support	IBM.HKAH320.F1
INGACCPT	ACCEPT	Sample ACCEPT job	IBM.HWRE320.F3
KAHACCPT	ACCEPT	Sample ACCEPT job for TEP support	IBM.HKAH320.F1

You can access the sample installation jobs by performing an SMP/E RECEIVE and then copying the jobs from the relfiles to a work data set for editing and submission. See Figure 17 to find the appropriate relfile data set.

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

```
//STEP1    EXEC PGM=IEBCOPY
//SYSPRINT DD SYSOUT=*
//TAPEIN   DD DSN=IBM.HWRE320.F3,
//         UNIT=tunit,VOL=SER=WRE320,
//         LABEL=(4,SL),DISP=(OLD,KEEP)
//FILEIN   DD DSN=IBM.HWRE320.F3,UNIT=SYSALLDA,DISP=SHR,
//         VOL=SER=filevol
//OUT      DD DSNAME=jcl-library-name,
//         DISP=(NEW,CATLG,DELETE),
//         VOL=SER=dasdvol,UNIT=SYSALLDA,
//         SPACE=(TRK,(5,2,2))
//SYSUT3   DD UNIT=SYSALLDA,SPACE=(CYL,(1,1))
//SYSIN    DD *
    COPY INDD=xxxxIN,OUTDD=OUT
```

```
    SELECT MEMBER=(INGALLOC,INGISMKD,INGDDDEF)
    SELECT MEMBER=(INGDDDCL,INGAPPLY,INGACCPT)
/*
```

Respectively for the TEP Support:

```
//STEP2    EXEC PGM=IEBCOPY
//SYSPRINT DD SYSOUT=*
//TAPEIN   DD DSN=IBM.HKAH320.F1,
//         UNIT=tunit,VOL=SER=WRE321,
//         LABEL=(12,SL),DISP=(OLD,KEEP)
//FILEIN   DD DSN=IBM.HKAH320.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,(5,2,2))
//SYSUT3   DD UNIT=SYSALLDA,SPACE=(CYL,(1,1))
//SYSIN    DD *
    COPY INDD=xxxxIN,OUTDD=OUT
    SELECT MEMBER=(KAHALLOC,KAHDDDEF,KAHAPPLY,KAHACCPT)
/*
```

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

If using TAPEIN:
: *tunit* is the unit value matching the product tape.

If using FILEIN
: *filevol* is the volume serial of the DASD device where the downloaded files reside.

OUT
: *jcl-library-name* is the name of the output data set where the sample jobs will be stored.
dasdvol is the volume serial of the DASD device where the output data set will reside.

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

6.1.5 Perform SMP/E RECEIVE

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

You can also choose to edit and submit the following sample job to perform the SMP/E RECEIVE for SA z/OS.

Replace *smpe.global.csi* and *tape* below with a value appropriate for your system. Add job card as necessary and update SMPCSI with the appropriate data set.

```
//JOB1      JOB ...
//RECEIV0   EXEC PGM=GIMSMP,REGION=4096K
//SMPCSI    DD  DSN=smpe.global.csi,DISP=SHR
//SMPPTFIN  DD DSN=SMPMCS,DISP=(OLD,KEEP),
//             VOL=SER=WRE320,LABEL=(1,SL),
//             UNIT=(tunit,,DEFER)
//SMPHOLD   DD DUMMY
//SMPCNTL   DD *
   SET BOUNDARY(GLOBAL).
   RECEIVE S(HWRE320) .
/*
//RECEIV1   EXEC PGM=GIMSMP,REGION=4096K
//SMPCSI    DD  DSN=smpe.global.csi,DISP=SHR
//SMPPTFIN  DD DSN=SMPMCS,DISP=(OLD,KEEP),
//             VOL=SER=WRE321,LABEL=(1,SL),
//             UNIT=(tunit,,DEFER)
//SMPHOLD   DD DUMMY
//SMPCNTL   DD *
   SET BOUNDARY(GLOBAL).
   RECEIVE S(JWRE32C,JWRE32I,JWRE321,JWRE322) .
/*
```

Respectively for the TEP Support:
It is recommended to install the TEP support into the same CSI as SA z/OS. Otherwise specify the CSI of the TEP installation.

```
//JOB2      JOB ...
//RECEIVE   EXEC PGM=GIMSMP,REGION=4096K
//SMPCSI    DD  DSN=smpe.itm.csi,DISP=SHR
//SMPPTFIN  DD DSN=SMPMCS,DISP=(OLD,KEEP),
//             VOL=SER=WRE321,LABEL=(1,SL),
//             UNIT=(tunit,,DEFER)
//SMPHOLD   DD DUMMY
//SMPCNTL   DD *
   SET BOUNDARY(GLOBAL).
   RECEIVE S(HKAH320).
/*
```

Expected Return Codes and Messages: 0.

6.1.6 Allocate SMP/E Target and Distribution Libraries

1. Edit and submit sample job INGALLOC to allocate the SMP/E target and distribution libraries for SA z/OS. Consult the instructions in the sample job for more information.

   Expected Return Codes and Messages: 0.

2. Edit and submit sample job KAHALLOC to allocate the SMP/E target and distribution libraries for SA z/OS TEP Support. Consult the instructions in the sample job for more information.

Expected Return Codes and Messages: 0.

6.1.7 Allocate HFS or zFS Paths

The target system HFS or zFS data set must be mounted on the driving system when running the sample INGISMKD job 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 SA z/OS into a file system that is zFS.

If you plan to install SA z/OS into a new HFS or zFS file system, you must create the mountpoint and mount the new file system to the driving system. For SA z/OS, the recommended mountpoint is: /usr/lpp/ing

Edit and submit sample job INGISMKD to allocate the HFS or zFS paths for SA z/OS. Consult the instructions in the sample job for more information.

If you create a new HFS or zFS for this product, you should consider updating the BPXPRMxx PARMLIB member to mount the new file system at IPL time. This may be helpful if an IPL occurs before the installation is complete.

Expected Return Codes and Messages: 0.

6.1.8 Create DDDEF Entries

1. Edit and submit sample job INGDDDEF to create DDDEF entries for the SMP/E target and distribution libraries for SA z/OS. Consult the instructions in the sample job for more information.

   Expected Return Codes and Messages: This job should complete with a return code 0. However, if some or all of these DDDEF entries already exist, then the job will complete with a return code 8. You will have to examine the output and determine whether or not the existing entries should be replaced. You can change the 'ADD' to 'REP' in this job to replace existing entries.

2. Job INGDDDCL defines the DDDEFs, for the SA z/OS prerequisite product libraries, to SMP/E. These DDDEFs are used by the SMP/E CALLLIB function during installation.

   Edit sample job INGDDDCL. Consult the instructions in the sample job for more information and submit sample job INGDDDCL.
   If the prerequisite products are installed in the same SMP/E CSI zones as SA z/OS, the DDDEFs may already be defined. Edit the job to comment out the libraries that are already defined.

   Expected Return Codes and Messages: INGDDDCL will complete with message GIM35601E and a return code of 8 if a DDDEF entry already exists. Otherwise, INGDDDCL should complete with a return code of 0.

3. Edit and submit sample job KAHDDDEF to create DDDEF entries for the SMP/E target and distribution libraries for SA z/OS TEP Support. Consult the instructions in the sample job for more information.

Expected Return Codes and Messages: This job should complete with a return code 0.

6.1.9 Perform SMP/E APPLY

1. Ensure you have the latest Enhanced HOLDDATA, then edit and submit sample job INGAPPLY to perform an SMP/E APPLY CHECK for SA z/OS, respectively KAHAPPLY to perform an SMP/E APPLY CHECK for TEP support. Consult the instructions in the sample job for more information.

   At this point you must decide which format of SA z/OS I/O Operations operator console messages you want to use.

Mixed-case US English	is included in the base. No action is required for this selection.
Japanese	is supplied for installations which must to use Japanese NLS. It is installed by doing an APPLY of the dependent feature JWRE321.
Upper-case US English	is supplied for installations which must print the console log on an upper-case-only printer. It is installed by doing an APPLY of the dependent feature JWRE322.

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

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

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

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

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

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

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

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

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

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

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

2. After you have taken any actions indicated by the APPLY CHECK, remove the CHECK operand and run the job again to perform the APPLY.

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

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

Expected Return Codes and Messages from APPLY (INGAPPLY): 0 or 4.

INGAPPLY may complete with messages GIM23903W or GIM23913W (depending on system setup), IEW2646W, IEW2651W, IEW2454W, and a return code 4.
Be aware that SA z/OS utilizes the SMP/E CALLLIB function. Basically two Link Edits are done. The first Link Edit will have UNRESOLVED REFERENCES. These REFERENCES will be resolved during the second Link Edit.

Note: If both, the FMID HWRE320 and the dependent feature JWRE322 are applied together, 'NOT SEL' messages will be received for HWRE320 CSECTs that are also in the feature FMID and can be ignored.

Expected Return Codes and Messages from APPLY (KAHAPPLY): 0.

6.1.10 Perform SMP/E ACCEPT

Edit and submit sample job INGACCPT to perform an SMP/E ACCEPT CHECK for SA z/OS, respectively KAHACCPT to perform an SMP/E ACCEPT CHECK for TEP support. 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 following

on the ACCEPT CHECK: PRE, ID, REQ, and IFREQ. This is because the SMP/E root cause analysis identifies the cause only of **ERRORS** and not of **WARNINGS** (SYSMODs that are bypassed are treated as warnings, not errors, by SMP/E).

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

Once you have taken any actions indicated by the ACCEPT CHECK, remove the CHECK operand and run the job again to perform the ACCEPT.

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

Expected Return Codes and Messages from ACCEPT CHECK: 0.

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

Expected Return Codes and Messages from ACCEPT: 0.

Note: If both, the FMID HWRE320 and the dependent feature JWRE322 are accepted together, 'NOT SEL' messages will be received for HWRE320 CSECTs that are also in the feature FMID and can be ignored.

6.2 Activating SA z/OS

SA z/OS is fully operational once the SMP/E installation is complete. No further customization is required to activate this function.

The publication *IBM Tivoli System Automation for z/OS Planning and Installation, SC33-8261* contains the step-by-step procedures to activate the functions of SA z/OS.

The publication *Monitoring Agent Configuration and User's Guide, SC33-8337* contains the step-by-step procedures to activate the System Automation for z/OS Tivoli Enterprise Portal Agent.

6.2.1 HFS or zFS Execution

If you choose to have the HFS or zFS in which you have installed SA z/OS mounted in read-only mode during execution, then no further tasks are required to accomplish this.

Appendix A. Notices

References in this document to IBM products, programs, or services do not imply that IBM intends to make these available in all countries in which IBM operates. Any reference to an IBM product, program, or service is not intended to state or imply that only IBM's product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe on any of IBM's intellectual property rights may be used instead of the IBM product, program, or service. Evaluation and verification of operation in conjunction with other products, except those expressly designated by IBM, is the user's responsibility.

APAR numbers are provided in this document to assist in locating PTFs that may be required. Ongoing problem reporting may result in additional APARs being created. Therefore, the APAR lists in this document may not be complete. To obtain current service recommendations and to identify current product service requirements, always contact the IBM Customer Support Center or use S/390 SoftwareXcel to obtain the current "PSP Bucket".

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Reader's Comments

Program Directory for IBM Tivoli System Automation for z/OS, December 2007

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For each of the topics below please indicate your satisfaction level by circling your choice from the rating scale. If a statement does not apply, please circle N.

RATING SCALE

```
  very                                very          not
satisfied  <====================>  dissatisfied  applicable
   1        2        3        4         5            N
```

	Satisfaction					
Ease of product installation	1	2	3	4	5	N
Contents of Program Directory	1	2	3	4	5	N
Installation Verification Programs	1	2	3	4	5	N
Time to install the product	1	2	3	4	5	N
Readability and organization of Program Directory tasks	1	2	3	4	5	N
Necessity of all installation tasks	1	2	3	4	5	N
Accuracy of the definition of the installation tasks	1	2	3	4	5	N
Technical level of the installation tasks	1	2	3	4	5	N
Ease of getting the system into production after installation	1	2	3	4	5	N

How did you order this product?

___ CBPDO
___ CustomPac
___ ServerPac
___ Independent
___ Other

Is this the first time your organization has installed this product?

___ Yes
___ No

Were the people who did the installation experienced with the installation of z/OS products?

___ Yes
___ No

If yes, how many years? __

If you have any comments to make about your ratings above, or any other aspect of the product installation, please list them below:

_____
_____
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Please provide the following contact information:

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