



**Program Directory for
IBM Tivoli System Automation for z/OS**

V3.3.0

Program Number 5698-SA3

FMIDs HWRE330, JWRE33C, JWRE33I, JWRE331, HKAH33T

for Use with
z/OS Version 1 Release 9 or later

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Note

Before using this information and the product it supports, be sure to read the general information under 7.0, "Notices" on page 33.

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1.0 Introduction

This program directory is intended for system programmers who are responsible for program installation and maintenance. It contains information about the material and procedures associated with the installation of IBM 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 6 identifies the basic and optional program materials and documentation for SA z/OS.
- 3.0, “Program Support” on page 10 describes the IBM support available for SA z/OS.
- 4.0, “Program and Service Level Information” on page 12 lists the APARs (program level) and PTFs (service level) that have been incorporated into SA z/OS.
- 5.0, “Installation Requirements and Considerations” on page 15 identifies the resources and considerations that are required for installing and using SA z/OS.
- 6.0, “Installation Instructions” on page 24 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 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 10 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 that is provided in softcopy format on the CBPDO tape is identical to the hardcopy format that is 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 install SA z/OS with a SystemPac or ServerPac. When you use these offerings, use the jobs and documentation supplied with the offering. This program directory can point you to specific sections of it as required.

1.1 SA z/OS Description

IBM Tivoli System Automation for z/OS (SA z/OS) is a NetView-based application designed to provide a single point of control for a full range of systems management functions. SA z/OS plays a key role in supplying high-end automation solutions. SA z/OS functions include monitoring, controlling and automating a large range of system elements spanning both the hardware and software resources of your enterprise. It is designed to automate I/O, processor, and system operations.

SA z/OS software enables high availability for critical business applications through policy-based self-healing capabilities. It helps customers with single z/OS systems and Parallel Sysplex clusters to:

- Reduce the frequency and duration of incidents that impact IT availability
- Improve productivity with reduced scripting requirements
- Address high availability shortcomings with policy modules based on best practices
- Ease management of complex infrastructures with a single point of control for multi-site enterprises
- Move the IT organization from reactive error correction to preemptive service protection
- Free operators from low-level tasks so they can focus on higher value activities

1.1.1 System Operations

System operations monitors and controls system operations applications and subsystems such as NetView, SDSF, JES, RMF, TSO, RODM, ACF/VTAM, DB2, CICS, IMS, OMEGAMON, TBSM, and TWS. With system operations, you can automate Parallel Sysplex applications. SA z/OS can automate applications distributed over a sysplex by virtually removing system boundaries for automation through its automation manager/automation agent design. SA z/OS reduces the complexity of managing a Parallel Sysplex through its goal driven automation and its concepts, such as grouping and powerful dependency support, which enable you to model your configuration. Single systems are also fully supported; the automation scope is then just one system. Enterprise monitoring is used by SA z/OS to update the NetView Management Console (NMC) resource status information that is stored in the Resource Object Data Manager (RODM), and update the health status information that is displayed on the Tivoli Enterprise Portal (TEP) via the IBM Tivoli Monitoring infrastructure.

1.1.2 Processor Operations

Processor operations monitors and controls processor hardware operations. It provides a connection from a focal point processor to a target processor. With NetView on the focal point system, processor operations automates operator and system consoles for monitoring and recovering target processors. Processor operations allows you to power on and off multiple target processors and reset them, perform IPLs, set the time of day clocks, respond to messages, monitor status, and detect and resolve wait states.

1.1.3 I/O-Operations

I/O operations provides a single point of control for managing connectivity in your active I/O configurations. It takes an active role in detecting unusual I/O conditions and lets you view and change paths between a processor and an input/output device, which can involve using dynamic switching: the enterprise systems connection (ESCON) or fiber channel connection (FICON) switch. I/O operations changes paths by letting you control channels, ports, switches, control units, and input/output devices. You can do this through an operator console or API.

1.2 What is New in SA z/OS V3.3

Discovery Library Adapter

The SA z/OS Discovery Library Adapter (DLA) will discover System Automation resources and relationships and create a Discovery Library Book file. The Book will follow the Discovery Library IdML schema and will be used to populate the CMDDB (Configuration Management Database). The SA z/OS DLA is intended to be a light-weight and high level discovery that can be deployed with minimum effort and with as few dependencies as possible.

Generation of Message Revision Table

SA z/OS now uses the NetView message revision table that enables you to intercept MVS messages before they are displayed, logged, automated, or routed through the sysplex. The customization dialog automatically generates the message revision table based on data stored in the policy database. This eliminates the need for an administrator to know the syntax, semantics and structure of the revision table.

Rolling Recycle

SA z/OS enhances the INGGROUP command to allow you to request that automation performs a rolling recycle of a server application group. This consists of sequentially stopping and then restarting each member of the group, such that at the end of the operation all members that were active when the operation was requested have been stopped and recycled or stopped and left down. All members in the group will have been started after the rolling recycle was requested. Thus, during the recycle the impact on application availability is minimized.

TSRM Integration

The SA z/OS event alerting infrastructure is extensively enhanced in this release to become the foundation for opening trouble tickets in case a severe error is detected by SA z/OS that requires human intervention or attention. The same set of alert points that already exists for alarming and event notification are used when opening a ticket.

Event Notification for Netcool/OMNIBus and TEC

SA z/OS use the message adapter of the NetView Event/Automation Service (E/AS) to send BAROC events to Tivoli Netcool/OMNIBus. Tivoli Netcool/OMNIBus receives BAROC events via a probe for Tivoli EIF. Because BAROC events can also be received by the TEC Server, SA z/OS can send generated events to both the Tivoli Netcool/OMNIBus and the TEC Server.

Event notification for Tivoli Netcool/OMNIBus and TEC uses the same alert points as the alert notification for SA IOM. Additional alert points for event notification to Tivoli Netcool/OMNIBus and TEC have been incorporated into the common list of alert points for both services. At each alert point, INGALERT is called to pass the alert or event, depending on the Inform list of the resource.

More data into the Tivoli Enterprise Portal

Additional SA z/OS-related data is fed into the TEP to provide the corresponding workplaces:

- Outstanding WTORs
- Gateway Status
- Critical messages that currently go to SDF and NMC only

Enhanced DB2 Automation

This release of SA z/OS integrates the startup, shutdown, recovery, and monitoring of DB2 applications into its base functionality. The new structure makes use of existing base functionality and monitor resources (MTRs). This results in the following:

- Less DB2 feature code.
- The use of base SA z/OS functions to start and stop resources.

CICS Automation

SA z/OS integrates the startup, shutdown, recovery, and monitoring of CICS applications into its base functionality. This results in the following:

- Less CICS feature code.
- The use of base SA z/OS functions to start and stop resources.
- The use of monitor resources to have relationships to CICS applications.

IMS Automation

SA z/OS IMS automation has been enhanced to support an IMSPLEX by exploiting the IMS command center provided API.

Elimination Of Proc-Ops Control File

SA z/OS integrates processor operations more closely with system operations by using the same control file format (ACF) for processor-related data. There is only one configuration file (ACF) that holds both system operations and processor operations related data.

Command Enhancements

- AOCTRACE command
A new parameter, level, has been introduced that allows you to limit the amount of debug information that is written to the Netlog.
- DISPAPG command
The DISPAPG command shows the message history for captured messages that are associated with an application group.
- INGALERT
INGALERT now allows you to send alerts to various event notification targets.
- INGAMS command
The INGAMS command shows the APAR level of the automation manager and whether the automation agent has been placed in suspended mode.
- INGCF and INGCFL commands
The INGCF and INGCFL commands have been enhanced to allow you to control the maintenance mode of a coupling facility.
- INGEXEC
INGEXEC enables you to have a command processed on the system where a particular resource resides.
- INGGROUP command
You can now use the INGGROUP command to initiate or cancel the rolling recycle of a server or move group.
- INGMMSG command

The INGMSGS command displays all important (that is, exceptional) messages that currently exist for a given system.

- INGREQ command

The INGREQ command has been enhanced to support the prompt function for the STOP type.

- INGVARs

INGVARs has a SWAP parameter that replaces the current setting of a user variable only if the °old° value matches the current setting,

- SETTIMER command

You can now use SETTIMER to suspend and reactivate timers.

1.3 SA z/OS FMIDs

SA z/OS consists of the following FMIDs:

HWRE330

JWRE33C

JWRE33I

JWRE331

HKAH33T

Note: HKAH33T can be installed in a CSI different from where the other SA z/OS V3.3 FMIDs are installed.

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 respectively 5803 and 5813.

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. This program is in SMP/E RELFILE format and is installed by using SMP/E. See 6.0, "Installation Instructions" on page 24 for more information about how to install the program.

You can find information about the physical tape for the basic machine-readable materials for SA z/OS in the *CBPDO Memo To Users Extension*.

<i>Figure 1. Basic Material: Program Tape</i>					
Medium	Feature Number	Physical Volume	External Label	VOLSER	
3480 cart	5802	1	SA z/OS V3.3	WRE330	
3480 cart	5812	1	SA z/OS V3.3 JPN	WRE330	
3590 cart	5803	1	SA z/OS V3.3	WRE330	
3590 cart	5813	1	SA z/OS V3.3 JPN	WRE330	

Figure 2 on page 7 describes the program file content for SA z/OS.

Notes:

1. The data set attributes in this table must be used in the JCL of jobs that read the data sets. However, because the data sets are in IEBCOPY unloaded format, their actual attributes might be different.
2. If any RELFILEs are identified as PDSEs, ensure that SMPTLIB data sets are allocated as PDSEs.

Figure 2. Program File Content

Name	O R G	R E C F M	L R E C L	BLK SIZE
SMPMCS	SEQ	FB	80	6400
Base Automation:				
IBM.HWRE330.F1	PDS	FB	80	8800
IBM.HWRE330.F2	PDS	FB	80	8800
IBM.HWRE330.F3	PDS	FB	80	8800
IBM.HWRE330.F4	PDS	U	0	6144
IBM.HWRE330.F5	PDS	VB	1024	27998
CICS Automation:				
IBM.JWRE33C.F1	PDS	FB	80	8800
IBM.JWRE33C.F2	PDS	U	0	6144
IBM.JWRE33C.F3	PDS	FB	80	8800
IMS Automation:				
IBM.JWRE33I.F1	PDS	FB	80	8800
IBM.JWRE33I.F2	PDS	U	0	6144
IBM.JWRE33I.F3	PDS	FB	80	8800
Base Automation JPN:				
IBM.JWRE331.F1	PDS	FB	80	8800
TEP Support:				
IBM.HKAH33T.F1	PDS	FB	80	8800
IBM.HKAH33T.F2	PDS	U	0	6144
IBM.HKAH33T.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 3 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/>

Publication Title	Form Number
IBM Tivoli System Automation for z/OS Product Automation	SC34-2569
IBM Tivoli System Automation for z/OS Customizing and Programming	SC34-2570
IBM Tivoli System Automation for z/OS Planning and Installation	SC34-2571
IBM Tivoli System Automation for z/OS Defining Automation Policy	SC34-2572
IBM Tivoli System Automation for z/OS User's Guide	SC34-2573
IBM Tivoli System Automation for z/OS Messages and Codes	SC34-2574
IBM Tivoli System Automation for z/OS Operator's Commands	SC34-2575
IBM Tivoli System Automation for z/OS Programmer's Reference	SC34-2576
IBM Tivoli System Automation for z/OS End-to-End Automation Adapter	SC34-2580
IBM Tivoli System Automation for z/OS Monitoring Agent Configuration & User's Guide	SC34-2581
IBM Tivoli System Automation for z/OS Program Directory	GI11-2711

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. Customers without access to VPL can contact their IBM representative for available program listings.

2.5 Publications Useful During Installation

You might want to use the publications listed in Figure 4 on page 9 during the installation of SA z/OS. To order copies, contact your IBM representative or visit the IBM Publications Center at <http://www.ibm.com/shop/publications/order>.

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

3.0 Program Support

This section describes the IBM support available for SA 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 SA z/OS, make sure that you have reviewed 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 the installation of this package. This service includes software PSP information (HWRE330) that contains HIPER and required PTFs against the base release.

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

If the CBPDO for SA z/OS is older than two weeks old by the time you install the product materials, you should contact the IBM Support Center or use S/390 SoftwareXcel to obtain the latest PSP Bucket information. You can also obtain the latest PSP Bucket information by going to the following Web site: <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 shown as follows:

Figure 5. PSP Upgrade and Subset ID

UPGRADE	SUBSET	Description
HWRE330	HWRE330	SA z/OS
HWRE330	JWRE331	Japanese SA z/OS
HWRE330	JWRE33C	SA z/OS CICS Automation
HWRE330	JWRE33I	SA z/OS IMS Automation
HKAH33T	HKAH33T	SA z/OS TEP Support

3.3 Statement of Support Procedures

Report any problems which you feel might be an error in the product materials to your IBM Support Center. You may be asked to gather and submit additional diagnostics to assist the IBM Support Center in their analysis.

Figure 6 on page 11 identifies the component IDs (COMPID) for SA z/OS.

<i>Figure 6. Component IDs</i>			
FMID	COMPID	Component Name	RETAIN Release
HWRE330	5698SA300	SA z/OS Base Automation	330
JWRE33C	5698SA300	SA z/OS CICS AUTO	33C
JWRE33I	5698SA300	SA z/OS IMS AUTO	33I
JWRE331	5698SA300	SA z/OS Base Automation JPN	331
HKAH33T	5698SA301	SA z/OS TEP Support	330

4.0 Program and Service Level Information

This section identifies the program and relevant service levels of SA 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

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

OA20303
OA28785

- FMID HWRE330

OA23321	OA24139	OA24821	OA25851	OA26524
OA23361	OA24198	OA24851	OA25854	OA26602
OA23392	OA24199	OA24866	OA25871	OA26605
OA23506	OA24213	OA24869	OA25917	OA26635
OA23508	OA24323	OA24921	OA26007	OA26640
OA23517	OA24338	OA24928	OA26042	OA26684
OA23579	OA24408	OA24933	OA26043	OA26708
OA23599	OA24413	OA24957	OA26047	OA26726
OA23674	OA24440	OA24995	OA26078	OA26774
OA23693	OA24451	OA24996	OA26154	OA26776
OA23703	OA24468	OA25015	OA26168	OA26849
OA23739	OA24484	OA25016	OA26171	OA26864
OA23765	OA24499	OA25080	OA26179	OA26895
OA23822	OA24507	OA25113	OA26195	OA26896
OA23863	OA24523	OA25126	OA26212	OA26950
OA23935	OA24529	OA25248	OA26241	OA26975
OA23972	OA24579	OA25275	OA26253	OA27001
OA23973	OA24585	OA25451	OA26275	OA27017
OA24020	OA24586	OA25545	OA26367	OA27029
OA24032	OA24677	OA25711	OA26390	OA27030
OA24036	OA24743	OA25721	OA26445	OA27078
OA24078	OA24755	OA25744	OA26455	OA27085
OA24090	OA24777	OA25769	OA26459	OA27094
OA24111	OA24805	OA25817	OA26491	OA27128

OA27211	OA28249	OA29183	OA30056	OA30821
OA27229	OA28286	OA29217	OA30069	OA30904
OA27232	OA28381	OA29297	OA30105	OA30929
OA27373	OA28382	OA29437	OA30107	OA31010
OA27374	OA28394	OA29484	OA30220	OA31019
OA27485	OA28397	OA29519	OA30245	OA31054
OA27494	OA28492	OA29520	OA30282	OA31122
OA27523	OA28501	OA29545	OA30312	OA31149
OA27558	OA28549	OA29552	OA30322	OA31151
OA27575	OA28566	OA29553	OA30329	OA31204
OA27660	OA28617	OA29556	OA30408	OA31239
OA27661	OA28719	OA29562	OA30447	OA31271
OA27665	OA28739	OA29610	OA30467	OA31274
OA27701	OA28757	OA29665	OA30469	OA31321
OA27723	OA28773	OA29668	OA30524	OA31385
OA27750	OA28786	OA29671	OA30578	OA31469
OA27754	OA28831	OA29682	OA30608	OA31472
OA27769	OA28836	OA29685	OA30609	OA31482
OA27772	OA28865	OA29729	OA30611	OA31497
OA27833	OA28875	OA29741	OA30676	OA31590
OA27887	OA28933	OA29763	OA30680	OA31738
OA27921	OA28957	OA29823	OA30692	OA31780
OA27988	OA29063	OA29874	OA30705	OA31922
OA28074	OA29090	OA29920	OA30716	OA31951
OA28094	OA29112	OA29923	OA30717	OA31997
OA28217	OA29131	OA29952	OA30756	OA32047
OA28248	OA29139	OA29961	OA30782	

- FMID JWRE33C

OA24822
OA29729
OA30692

- FMID JWRE33I

OA23321
OA24822

- FMID JWRE331

OA23361	OA24323	OA25917	OA27078	OA29553
OA23392	OA24484	OA26047	OA28248	OA29685
OA23506	OA24821	OA26078	OA28397	OA29874
OA23508	OA24869	OA26154	OA28566	OA30220
OA23517	OA24928	OA26179	OA28836	OA30245
OA23674	OA24995	OA26708	OA28875	OA30821
OA23693	OA25113	OA26895	OA29063	OA31274
OA23972	OA25126	OA26896	OA29112	
OA24032	OA25744	OA26950	OA29131	

- FMID HKAH33T

OA23976	OA26985
OA25848	OA28567

4.2 Service Level Information

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

It is highly recommended that you frequently check the SA z/OS PSP Bucket for HIPER and SPECIAL Attention PTFs against all FMIDs that you must install.

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; where SMP/E executes.
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 access these impacts without disrupting your production system.

5.1 Driving System Requirements

This section describes the environment of the driving system that is 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 7. Driving System Software Requirements

Program Number	Product Name	Minimum VRM	Minimum Service Level will satisfy these APARs	Included in this product's shipment?
Any one of the following:				
5694-A01	z/OS	V01.09.00	N/A	No
5655-G44	IBM SMP/E for z/OS	V03.04.00	N/A	No

Note: Installation may 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.

SA z/OS is partially installed into a file system, either HFS or zFS. Before installing SA 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 system data sets must be mounted on the driving system.

If you plan to install SA 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.

5.2 Target System Requirements

This section describes the environment of the target system that is 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

Installation requisites identify products that are required by and *must* be present on the system or products that are not required by but *should* be present on the system for the successful installation of this product.

Mandatory installation requisites identify products that are required on the system for the successful installation of this product. These products are specified as PREs or REQs.

Figure 8. Target System Mandatory Installation Requisites

Program Number	Product Name	Minimum VRM	Minimum Service Level will satisfy these APARs	Included in this product's shipment?
5694-A01	z/OS	V01.09.00 or higher	N/A	No
5697-ENV	Tivoli NetView for z/OS	V5.2 or higher	N/A	No

Note: Installation may require migration to new z/OS releases to be service supported. See http://www-03.ibm.com/systems/z/os/zos/support/zos_eos_dates.html.

Conditional installation requisites identify products that are *not* required for successful installation of this product but can resolve such things as certain warning messages at installation time. These products are specified as IF REQs.

Figure 9. Target System Conditional Installation Requisites

Program Number	Product Name	Minimum VRM	Minimum Svc Lvl to satisfy these APARs	Function for which this is a Req't	Included in this product's shipment?
5655-J38	IBM IMS	V9.1 or higher	N/A	IMS Automation	No
5697-E93	IBM CICS Transaction Server	V2.3 or higher	N/A	CICS Automation	No

5.2.2.2 Operational Requisites

Operational requisites are products that are required by and *must* be present on the system or products that are not required by 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. These products are specified as PREs or REQs.

Figure 10 (Page 1 of 2). Target System Mandatory Operational Requisites

Program Number	Product Name and Minimum VRM/Service Level
5694-A01	z/OS V01.09.00 or later

Figure 10 (Page 2 of 2). Target System Mandatory Operational Requisites

Program Number	Product Name and Minimum VRM/Service Level
5697-ENV	Tivoli NetView for z/OS V5.2 or later

Conditional operational requisites identify products that are *not* required for this product to operate its basic functions but are required at run time for this product to operate specific functions. These products are specified as IF REQs.

Figure 11. Target System Conditional Operational Requisites

Program Number	Product Name and Minimum VRM/Service Level	Function
5739-A03	zVM V4.3v or later	ProcOps VM Second Level Systems Support
5698-A79	IBM Tivoli Monitoring Services V6.1	Tivoli Enterprise Portal Support

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.

SA 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.

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 that is required for each type of library.

Figure 12 (Page 1 of 2). Total DASD Space Required by SA z/OS

Library Type	Total Space Required in 3390 Trks
Target	2530 (3390 tracks)

Figure 12 (Page 2 of 2). Total DASD Space Required by SA z/OS

Library Type	Total Space Required in 3390 Trks
Distribution	2430 (3390 tracks)
File System	10 MB

Notes:

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

- U** Unique data set, allocated by this product and used by only this product. This table provides all the required information to determine the correct storage for this data set. You do not need to refer to other tables or program directories for the data set size.
- S** Shared data set, allocated by this product and used by this product and other products. To determine the correct storage needed for this data set, add the storage size given in this table to those given in other tables (perhaps in other program directories). If the data set already exists, it must have enough free space to accommodate the storage size given in this table.
- E** Existing shared data set, used by this product and other products. This data set is *not* allocated by this product. To determine the correct storage for this data set, add the storage size given in this table to those given in other tables (perhaps in other program directories). If the data set already exists, it must have enough free space to accommodate the storage size given in this table.

If you currently have a previous release of this product installed in these libraries, the installation of this release will delete the old release and reclaim the space that was used by the old release and any service that had been installed. You can determine whether these libraries have enough space by deleting the old release with a dummy function, compressing the libraries, and comparing the space requirements with the free space in the libraries.

For more information about the names and sizes of the required data sets, see 6.1.6, "Allocate SMP/E Target and Distribution Libraries" on page 28.

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 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:

- These data sets can be SMS-managed, but they are not required to be SMS-managed.
- These data sets are not required to reside on the IPL volume.
- The values in the "Member Type" column are not necessarily the actual SMP/E element types that are identified in the SMPMCS.

6. All target libraries that are listed and contain load modules have the following attributes:

- These data sets can be in the LPA, but they are not required to be in the LPA.
- These data sets can be in the LNKLIST.
- These data sets are not required to be APF-authorized.

The following figures describe the target and distribution libraries and file system 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 (Page 1 of 2). Storage Requirements for SA 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
SINGIMSG	MSG	ANY	U	PDS	FB	80	15	6
SINGINST	SAMP	ANY	U	PDS	FB	80	7	2
SINGIPDB	Data	ANY	U	PDS	FB	80	215	2
SINGIPNL	PNL	ANY	U	PDS	FB	80	230	70
SINGIREX	EXEC	ANY	U	PDS	FB	80	260	25
SINGISKL	SKEL	ANY	U	PDS	FB	80	10	12
SINGITBL	Table	ANY	U	PDS	FB	80	23	4
SINGJMSG	MSG	ANY	U	PDS	FB	80	8	20
SINGJPNL	PNL	ANY	U	PDS	FB	80	232	48
SINGJPWS	Data	ANY	U	PDS	FB	80	20	2
SINGMOD1	LMOD	ANY	U	PDS	U	0	1573	70
SINGMOD2	LMOD	ANY	U	PDS	U	0	42	10
SINGMOD3	LMOD	ANY	U	PDS	U	0	12	5
SINGMSGV	MSG	ANY	U	PDS	FB	80	2	2
SINGNMSG	MSG	ANY	U	PDS	FB	80	23	25

Figure 13 (Page 2 of 2). Storage Requirements for SA z/OS Target Libraries

Library DDNAME	Member Type	Target Volume	T Y P E	O R G	R E C O R D M	L R E C L	No. of 3390 Trks	No. of DIR Blks
SINGNPNL	PNL	ANY	U	PDS	FB	80	273	50
SINGNPRF	Data	ANY	U	PDS	FB	80	2	2
SINGNPRM	Data	ANY	U	PDS	FB	80	27	6
SINGNREX	EXEC	ANY	U	PDS	FB	80	1072	70
SINGOBJV	OBJ	ANY	U	PDS	FB	80	2	2
SINGPWS1	Data	ANY	U	PDS	FB	80	20	2
SINGREXV	EXEC	ANY	U	PDS	FB	80	10	2
SINGSAMP	SAMP	ANY	U	PDS	FB	80	60	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	20

Figure 14 (Page 1 of 2). SA z/OS File System Paths

DDNAME	T Y P E	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/
SINGDCFG	N	/usr/lpp/ing/dist/TEC/IBM/
SINGDPOL	X	/usr/lpp/ing/doc/policies/IBM/
SINGDSCR	X	/usr/lpp/ing/doc/IBM/
SINGICFG	N	/usr/lpp/ing/dist/TDI/IBM/
SINGOSCR	N	/usr/lpp/ing/dist/OMNibus/IBM/
SINGSCFG	X	/usr/lpp/ing/SAP/IBM/

Figure 14 (Page 2 of 2). SA z/OS File System Paths

DDNAME	T Y P E	Path Name
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	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
AINGHFSV	U	PDS	VB	1024	303	10
AINGIMSG	U	PDS	FB	80	15	6
AINGINST	U	PDS	FB	80	7	2
AINGIPDB	U	PDS	FB	80	215	2
AINGIPNL	U	PDS	FB	80	230	70
AINGIREX	U	PDS	FB	80	260	25
AINGISKL	U	PDS	FB	80	10	12
AINGITBL	U	PDS	FB	80	23	4
AINGJMSG	U	PDS	FB	80	8	20
AINGJPNL	U	PDS	FB	80	232	48
AINGJPWS	U	PDS	FB	80	20	2
AINGMOD1	U	PDS	U	0	1155	210
AINGMSGV	U	PDS	FB	80	2	2
AINGNMSG	U	PDS	FB	80	23	25
AINGNPNL	U	PDS	FB	80	273	50
AINGNPRF	U	PDS	FB	80	2	2
AINGNPRM	U	PDS	FB	80	27	6
AINGNREX	U	PDS	FB	80	1072	68
AINGOBJV	U	PDS	FB	80	2	2
AINGPWS1	U	PDS	FB	80	20	2
AINGREXV	U	PDS	FB	80	10	2
AINGSAMP	U	PDS	FB	80	60	12

Figure 15 (Page 2 of 2). Storage Requirements for SA 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
DKANCUS	S	PDS	FB	80	2000	10
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 JWRE331 is not installed.

5.3 FMIDs Deleted

Installing SA 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 SA 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, see the SMP/E manuals for instructions.

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.
- You can use the sample jobs that are provided to perform part or all of the installation tasks. The SMP/E jobs assume that all DDDEF entries that are required for SMP/E execution have been defined in appropriate zones.
- You can use the SMP/E dialogs instead of the sample jobs to accomplish the SMP/E installation steps.

6.1 Installing SA z/OS

6.1.1 SMP/E Considerations for Installing SA z/OS

Use the SMP/E RECEIVE, APPLY, and ACCEPT commands to install this release of SA z/OS.

6.1.2 SMP/E Options Subentry Values

The recommended values for certain SMP/E CSI subentries are shown in Figure 16. Using values lower than the recommended values can result in failures in the installation. DSSPACE is a subentry in the GLOBAL options entry. PEMAX is a subentry of the GENERAL entry in the GLOBAL options entry. See the SMP/E manuals for instructions on updating the global zone.

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

- CSSLIB

For NetView

- CNMLINK
- NVULIB

For ISPF, shipped with z/OS

- SISpload

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

- SCEECPP
- SCEELKED
- SCEELKEX
- SCEEBND2
- SCEEOBJ
- SCEESPC
- SIBMCALL

For CICS V2.3 or later

- SDFHLOAD

For IMS V9.1 or later

- SDFSRESL

Note: CALLLIBs use the previous DDDEFs only to resolve the link-edit for SA z/OS. 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:

<i>Figure 17 (Page 1 of 2). Sample Installation Jobs</i>			
Job Name	Job Type	Description	RELFILE
INGALLOC	ALLOCATE	Sample job to allocate target and distribution libraries	IBM.HWRE330.F3
KAHALLOC	ALLOCATE	Sample job to allocate target and distribution libraries for TEP support	IBM.HKAH33T.F1
INGISMKD	MKDIR	Sample job to allocate HFS or zFS paths	IBM.HWRE330.F3
INGDDDEF	DDDEF	Sample job to define SMP/E DDDEFs	IBM.HWRE330.F3
KAHDDDEF	DDDEF	Sample job to define SMP/E DDDEFs for TEP support	IBM.HKAH33T.F1
INGDDDCL	DDDEF	Sample job to define prerequisite product DDDEFs	IBM.HWRE330.F3
INGAPPLY	APPLY	Sample APPLY job	IBM.HWRE330.F3
KAHAPPLY	APPLY	Sample APPLY job for TEP support	IBM.HKAH33T.F1

Figure 17 (Page 2 of 2). Sample Installation Jobs

Job Name	Job Type	Description	RELFILE
INGACCT	ACCEPT	Sample ACCEPT job	IBM.HWRE330.F3
KAHACCT	ACCEPT	Sample ACCEPT job for TEP support	IBM.HKAH33T.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 on page 25 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=*
//TAPEIN DD DSN=IBM.HWRE330.F3,
// UNIT=tunit,VOL=SER=WRE330,
// LABEL=(4,SL),DISP=(OLD,KEEP)
//FILEIN DD DSN=IBM.HWRE330.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=(INGDDCL,INGAPPLY,INGACCT)
/*
```

Respectively for the TEP Support:

```
//STEP2 EXEC PGM=IEBCOPY
//SYSPRINT DD SYSOUT=*
//TAPEIN DD DSN=IBM.HKAH33T.F1,
// UNIT=tunit,VOL=SER=WRE330,
// LABEL=(14,SL),DISP=(OLD,KEEP)
//FILEIN DD DSN=IBM.HKAH33T.F1,UNIT=SYSALLDA,DISP=SHR,
// VOL=SER=filevol
//OUT DD DSNAME=jcl-library-name-tep,
// 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)
/*

```

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

TAPEIN:

tunit is the unit value that matches the product 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.

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

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

SYSIN

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

6.1.5 Perform SMP/E RECEIVE

If you have obtained SA z/OS as part of a CBPDO, use the RCVPDO job in the CBPDO RIMLIB data set to receive the SA z/OS FMIDs, service, and HOLDDATA that are included on the CBPDO tape. For more information, see the documentation that is included in 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 ...
//RECEIVE   EXEC PGM=GIMSMP,REGION=4096K
//SMPCSI    DD DSN=smpe.global.csi,DISP=SHR
//SMPPTFIN  DD DSN=SMPMCS,DISP=(OLD,KEEP),
//          VOL=SER=WRE330,LABEL=(1,SL),
//          UNIT=(tunit,,DEFER)
//SMPHOLD   DD DUMMY
//SMPCNTL   DD *
            SET BOUNDARY(GLOBAL) .
            RECEIVE S(HWRE330,JWRE33C,JWRE33I,JWRE331) .
/*

```

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=WRE330,LABEL=(1,SL),
//          UNIT=(tunit,,DEFER)
//SMPHOLD   DD DUMMY
//SMPCTL    DD *
           SET BOUNDARY(GLOBAL) .
           RECEIVE S(HKAH33T) .
/*

```

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: This job should complete with a return code 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: This job should complete with a return code 0.

6.1.7 Allocate File system Paths

Mount the file system data set of the target system on the driving system when you run the sample INGISMKD job because the job will create paths in the file system.

Before you run the sample job to create the paths in the file system, ensure that OMVS is active on the driving system, and that the file system of the target system is mounted to the driving system. If you install SA z/OS into a zFS file system, zFS must be active on the driving system.

If you plan to install SA z/OS into a new file system, 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 file system for SA 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: This job should complete with a return code 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 that you have the latest 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 SA z/OS 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 JWRE331.

HOLDDATA introduces ERROR HOLDS against FMIDs for HIPER APARs. Before the installation, ensure that you have the latest HOLDDATA, which is available through several different portals, including <http://service.software.ibm.com/holddata/390holddata.html>. Install the FMIDs regardless of the status of unresolved HIPERs. However, don't deploy the software until the unresolved HIPERs are analyzed to determine applicability.

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. This is because 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 two methods to install FMIDs when ++HOLDS for HIPERs exist for the FMIDs that you install:

- a. To ensure that all recommended and critical service is installed with the FMIDs, if you are using SMP/E 3.5 or higher and have received the latest HOLDDATA, add the FIXCAT operand to the APPLY command as shown below. If you are using a prior release of SMP/E, add the SOURCEID(HIPER,RSU*) operand to the APPLY command.

If using SMP/E V3.5 or higher:

```
APPLY S(fmid,fmid,...)
FORFMID(fmid,fmid,...)
SOURCEID(RSU*)
FIXCAT(IBM.ProductInstall-RequiredService)
GROUPEXTEND .
```

If using SMP/E V3.4 or prior:

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

Some HIPER APARs might not have PTFs available yet. You have to analyze the symptom flags to determine if you want to bypass the specific ERROR HOLDS and continue the installation of the FMIDs.

This method requires more initial research, but can provide resolution for all HIPERs that have fixes 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 the HIPERs, you can add a BYPASS(HOLDCLASS(HIPER)) operand to the APPLY command. In this way, you can install FMIDs even though HIPER ERROR HOLDS against them still exist. Only the HIPER ERROR HOLDS are bypassed. After the FMIDs are installed, run the SMP/E REPORT ERRSYSMODS command to identify 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 are running SMP/E V3.5 or higher and have received the latest HOLDDATA, you can also choose to run REPORT MISSINGFIX for Fix Category IBM.ProductInstall-RequiredService to investigate missing recommended service.

If you bypass HOLDS during the installation of the FMIDs because PTFs are not yet available, you can make yourself notified when the PTFs are available by using the APAR Status Tracking (AST) function of ServiceLink or the APAR Tracking function of ResourceLink.

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

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

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

Expected Return Codes and Messages from APPLY (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.

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 SA z/OS 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 PRE, ID, REQ, and IFREQ on the ACCEPT CHECK. This is because the SMP/E root cause analysis identifies the cause of only *errors* but not *warnings* (SMP/E treats bypassed PRE, ID, REQ, and IFREQ conditions as warnings rather than errors).

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

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: 0.

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

Expected Return Codes and Messages from ACCEPT: 0.

6.1.11 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 SA 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.

6.2 Activating SA z/OS

SA z/OS must be customized after the SMP/E installation is completed. See publication *System Automation for z/OS Planning and Installation, SC34-2571* for a description on how to setup SA z/OS. Once the customization is complete you can start using the SA z/OS customization dialog to define the policy.

The publication *System Automation for z/OS Operator, SC34-2575* describe the various commands that you can use when activating the product.

The publication *Monitoring Agent Configuration and User's Guide, SC34-2581* contains the step-by-step procedures to activate the SA z/OS Tivoli Enterprise Portal Agent.

The publication *IBM Tivoli System Automation for z/OS End-to-End Automation Adapter, SC34-2575* contains the step-by-step instructions to setup the end-to-end adapter for communicating with the System Automation Application Manager.

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.

7.0 Notices

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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, March 2010

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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

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