



**Program Directory for
IBM Tivoli Management Services on z/OS**

V6.3.0

Program Number 5698-A79

for Use with
z/OS

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Note

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

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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 Management Services on z/OS. This publication refers to IBM Tivoli Management Services on z/OS as Tivoli Management Services on z/OS.

The Program Directory contains the following sections:

- 2.0, “Program Materials” on page 3 identifies the basic program materials and documentation for Tivoli Management Services on z/OS.
- 3.0, “Program Support” on page 6 describes the IBM support available for Tivoli Management Services on z/OS.
- 4.0, “Program and Service Level Information” on page 8 lists the APARs (program level) and PTFs (service level) that have been incorporated into Tivoli Management Services on z/OS.
- 5.0, “Installation Requirements and Considerations” on page 9 identifies the resources and considerations that are required for installing and using Tivoli Management Services on z/OS.
- 6.0, “Installation Instructions” on page 20 provides detailed installation instructions for Tivoli Management Services on z/OS. It also describes the procedures for activating the functions of Tivoli Management Services on z/OS, or refers to appropriate publications.

Before installing Tivoli Management Services on 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 6 tells you how to find any updates to the information and procedures in this Program Directory.

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

Do not use this program directory if you install Tivoli Management Services on z/OS with a SystemPac or ServerPac. When you use one of those offerings, use the jobs and documentation supplied with the offering. The offering will point you to specific sections of this program directory as needed.

1.1 Tivoli Management Services on z/OS Description

Tivoli Management Services on z/OS is offered for those customers who want to run the Tivoli Enterprise Monitoring Server component on a z/OS platform. For example, you would order Tivoli Management Services on z/OS if you have purchased IBM Tivoli Monitoring or an OMEGAMON XE distributed product and you want to place a hub or remote Tivoli Enterprise Monitoring Server on z/OS. If you have purchased monitoring agent products that run on z/OS, Tivoli Management Services on z/OS is necessary for the installation, configuration, and operation of the monitoring agents.

Tivoli Management Services on z/OS includes shared components that run on distributed systems and shared components that run on z/OS. The following distributed components are provided on the IBM Tivoli Monitoring Base DVD:

- Tivoli Enterprise Portal
- Tivoli Enterprise Portal Server
- Tivoli Enterprise Monitoring Server

Before installing the distributed components, read *IBM Tivoli Monitoring Installation and Setup Guide*. This program directory gives installation instructions for the z/OS components. For configuration instructions, see the *Configuring Tivoli Enterprise Monitoring Server on z/OS* and the *OMEGAMON XE and Tivoli Management Services on z/OS: Common Planning and Configuration Guide* publications.

1.2 Tivoli Management Services on z/OS FMIDs

Tivoli Management Services on z/OS consists of the following FMIDs:

HKDS630
HKCI310
HKLV630

2.0 Program Materials

An IBM program is identified by a program number. The program number for Tivoli Management Services on z/OS is 5698-A79.

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.

The program announcement material describes the features supported by Tivoli Management Services on z/OS. Ask your IBM representative for this information if you have not already received a copy.

2.1 Basic Machine-Readable Material

The distribution medium for this program is physical media or downloadable files. This program is in SMP/E RELFILE format and is installed by using SMP/E. See 6.0, "Installation Instructions" on page 20 for more information about how to install the program.

You can find information about the physical media for the basic machine-readable materials for Tivoli Management Services on z/OS in the *CBPDO Memo To Users Extension*.

2.2 Optional Machine-Readable Material

No optional machine-readable materials are provided for Tivoli Management Services on z/OS.

2.3 Program Publications

The following sections identify the basic publications for Tivoli Management Services on z/OS.

Figure 1 identifies the basic unlicensed publications for Tivoli Management Services on z/OS. Publications can be accessed at the IBM Publications Center website at <http://www.ibm.com/shop/publications/order>.

Publication Title	Form Number
<i>IBM Tivoli Monitoring Quick Start Guide</i>	GI11-8058
<i>IBM Tivoli Monitoring Installation and Setup Guide</i>	GC32-9407
<i>IBM Tivoli Monitoring Administrator's Guide</i>	SC32-9408
<i>Tivoli Enterprise Portal User's Guide</i>	SC32-9409

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

Publication Title	Form Number
<i>IBM Tivoli Monitoring Troubleshooting Guide</i>	GC32-9458
<i>Configuring the Tivoli Enterprise Monitoring Server on z/OS</i>	SC27-2313
<i>IBM Tivoli Monitoring Command Reference</i>	SC23-6045
<i>IBM Tivoli Monitoring Messages</i>	SC23-7969
<i>IBM Tivoli Monitoring High-Availability Guide for Distributed Systems</i>	SC23-9768
<i>IBM Tivoli OMEGAMON XE and Tivoli Management Services on z/OS: Common Planning and Configuration Guide</i>	SC23-9734
<i>IBM Tivoli OMEGAMON XE and Tivoli Management Services on z/OS: Common Parameter Reference</i>	SC14-7280
<i>IBM Tivoli OMEGAMON XE and Tivoli Management Services on z/OS: PARMGEN Reference</i>	SC22-5435
<i>IBM Tivoli OMEGAMON XE and Tivoli Management Services on z/OS: Reports for Tivoli Common Reporting</i>	SC27-2304
<i>IBM Tivoli OMEGAMON XE and Tivoli Management Services on z/OS: Upgrade Guide</i>	SC27-2500

Prior to installing Tivoli Management Services on z/OS, IBM recommends you review the Quick Start guide as well as the Planning and Configuration guides listed in Figure 1 on page 3.

The Tivoli Management Services on z/OS product manuals and other Tivoli product manuals can be found at the Tivoli Information Center url listed below:

<http://publib.boulder.ibm.com/infocenter/tivihelp/v15r1/index.jsp>

2.4 Program Source Materials

No program source materials or viewable program listings are provided for Tivoli Management Services on z/OS.

2.5 Publications Useful During Installation

You might want to use the publications listed in Figure 2 on page 5 during the installation of Tivoli Management Services on z/OS.

Figure 2. Publications Useful During Installation

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 Tivoli Management Services on 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 Tivoli Management Services on z/OS, make sure that you have reviewed the current Preventive Service Planning (PSP) information. Review the PSP Bucket for General Information, Installation Documentation, and the Cross Product Dependencies sections. For the Recommended Service section, instead of reviewing the PSP Bucket, it is recommended you use the IBM.ProductInstall-RequiredService fix category in SMP/E to ensure you have all the recommended service installed. Use the **FIXCAT(IBM.ProductInstall-RequiredService)** operand on the **APPLY CHECK command**. See 6.1.11, "Perform SMP/E APPLY" on page 25 for a sample APPLY command.

If you obtained Tivoli Management Services on z/OS as part of a CBPDO, HOLDDATA is included.

If the CBPDO for Tivoli Management Services on z/OS is older than two weeks by the time you install the product materials, you can obtain the latest PSP Bucket information by going to the following website:

<http://www14.software.ibm.com/webapp/set2/psearch/search?domain=psp>

You can also use S/390 SoftwareXcel or contact the IBM Support Center to obtain the latest PSP Bucket information.

For program support, access the Software Support Website at <http://www.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 Tivoli Management Services on z/OS are included in Figure 3.

Figure 3. PSP Upgrade and Subset ID

UPGRADE	SUBSET	Description
5698A79	HKDS630	Tivoli Enterprise Monitoring Server on z/OS
	HKCI310	Configuration Assistance Tool
	HKLV630	TMS:Engine

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 4 on page 7 identifies the component IDs (COMPID) for Tivoli Management Services on z/OS.

<i>Figure 4. Component IDs</i>			
FMID	COMPID	Component Name	RETAIN Release
HKDS630	5608A2800	Tivoli Enterprise Monitoring Server on z/OS	630
HKCI310	5608A41CC	Configuration Assistance Tool	310
HKLV630	5608A41CE	TMS:Engine	630

4.0 Program and Service Level Information

This section identifies the program and relevant service levels of Tivoli Management Services on 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 components included with Tivoli Management Services on z/OS have been incorporated into this release. They are listed by FMID.

- FMID HKDS630

OA37631 OA38366 OA38500 OA38773 OA38895 OA38896 OA38913 OA38919
OA38922 OA38926 OA38938 OA38946 OA38947 OA38953 OA38962 OA38963
OA38972 OA38974 OA38988 OA38989 OA38990 OA38991 OA38992 OA38993
OA38995 OA38996 OA38997 OA39001 OA39002 OA39011 OA39012 OA39013
OA39017 OA39020 OA39447 OA39630 OA39969 OA40162 OA40409 OA40411
OA40412 OA40422 OA40424 OA40426 OA40427 OA40431 OA40432 OA40435
OA40436 OA40437 OA40438 OA40439 OA40440 OA40443 OA40445 OA40446
OA40450 OA40452 OA40453 OA40459

- FMID HKCI310

OA09405 OA09526 OA09527 OA09528 OA09529 OA09530 OA09531 OA09532

- FMID HKLV630

OA37475 OA38066 OA38898 OA38899 OA38909 OA38950 OA38973 OA38994
OA39016 OA39019 OA39557 OA40434 OA40441 OA40442 OA40444

4.2 Service Level Information

No PTFs against this release of Tivoli Management Services on z/OS have been incorporated into the product package.

5.0 Installation Requirements and Considerations

The following sections identify the system requirements for installing and activating Tivoli Management Services on z/OS. The following terminology is used:

- *Driving system*: the system on which SMP/E is executed to install the program.
- *Target system*: the system on which the program is configured and run.

In many cases, you can use a system as both a driving system and a target system. However, you can make a separate IPL-able clone of the running system to use as a target system. The clone must include copies of all system libraries that SMP/E updates, copies of the SMP/E CSI data sets that describe the system libraries, and your PARMLIB and PROCLIB.

Use separate driving and target systems in the following situations:

- When you install a new level of a product that is already installed, the new level of the product will replace the old one. By installing the new level onto a separate target system, you can test the new level and keep the old one in production at the same time.
- When you install a product that shares libraries or load modules with other products, the installation can disrupt the other products. By installing the product onto a separate target system, you can assess these impacts without disrupting your production system.

5.1 Driving System Requirements

This section describes the environment of the driving system required to install Tivoli Management Services on 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 5. Driving System Software Requirements

Program Number	Product Name	Minimum VRM	Minimum Service Level will satisfy these APARs	Included in the shipped product?
5694-A01	z/OS	V01.12.00	N/A	No

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

5.2 Target System Requirements

This section describes the environment of the target system required to install and use Tivoli Management Services on z/OS.

Tivoli Management Services on 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 and *must* be present on the system or products that are not required but *should* be present on the system for the successful installation of this product.

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

Figure 6. Target System Mandatory Installation Requisites

Program Number	Product Name	Minimum VRM	Minimum Service Level will satisfy these APARs	Included in the shipped product?
5694-A01	z/OS	V01.12.00	N/A	No

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

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

Tivoli Management Services on z/OS has no conditional installation requisites.

5.2.2.2 Operational Requisites

Operational requisites are products that are required and *must* be present on the system or products that are not required but *should* be present on the system for this product to operate all or part of its functions.

Mandatory operational requisites identify products that are required for this product to operate its basic functions. These products are specified as PREs or REQs.

<i>Figure 7. Target System Mandatory Operational Requisites</i>	
Program Number	Product Name and Minimum VRM/Service Level
5694-A01	z/OS V01.12.00 or higher

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

The self-describing agent (SDA) support provided in this release requires JRE for this optional capability.

<i>Figure 8. Target System Conditional Operational Requisites</i>	
Program Number	Product Name and Minimum VRM/Service Level
Any one of the following:	
5655-N98	IBM 31-bit SDK for z/OS, Java 2 Technology Edition V5
5655-N99	IBM 64-bit SDK for z/OS, Java 2 Technology Edition V5
5655-R31	IBM 31-bit SDK for z/OS, Java 2 Technology Edition V6 or higher
5655-R32	IBM 64-bit SDK for z/OS, Java 2 Technology Edition V6 or higher

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.

Tivoli Management Services on 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.

Tivoli Management Services on z/OS has no negative requisites.

5.2.3 DASD Storage Requirements

Tivoli Management Services on z/OS libraries can reside on all supported DASD types.

Figure 9 on page 12 lists the total space that is required for each type of library.

Library Type	Total Space Required in 3390 Trks
Target	3811
Distribution	3813

Notes:

1. If you are installing into an existing environment that has the data sets in Figure 12 on page 14 and Figure 13 on page 15 already allocated, ensure sufficient disk space and directory blocks are available to support the requirement listed. This might require you to reallocate some data sets to avoid x37 abends.
2. Use system determined block sizes for efficient DASD utilization for all non-RECFM U data sets. For RECFM U data sets, a block size of 32760 is recommended, which is the most efficient from a performance and DASD utilization perspective.
3. Abbreviations used for data set types are shown as follows.

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

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

For more information about the names and sizes of the required data sets, see 6.1.8, "Allocate SMP/E Target and Distribution Libraries" on page 24.

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

- The default name of the data set can not be changed.
- The default block size of the data set can be changed.
- The data set can not be merged with another data set that has equivalent characteristics.

5. All target libraries listed have the following attributes:

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

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

- These data sets can not be in the LPA.
- These data sets can be in the LNKLST except for TKANMODS.

If you are installing into an existing environment, ensure the values used for the SMP/E work datasets reflect the minimum values shown in Figure 10. Check the corresponding DDDEF entries in all zones because use of values lower than these can result in failures in the installation process. Refer to the SMP/E manuals for instructions on updating DDDEF entries.

Figure 10. Storage Requirements for SMP/E Work Data Sets

Library DDNAME	T Y P E	O R G A N I Z A T I O N	R E C O R D S	L E N G T H	Prim No. of 3390 Trks	Sec No. of 3390 Trks	No. of DIR Blks
SMPWRK1	S	PDS	FB	80	150	150	220
SMPWRK2	S	PDS	FB	80	150	150	220
SMPWRK3	S	PDS	FB	80	300	600	1320
SMPWRK4	S	PDS	FB	80	150	150	220
SMPWRK6	S	PDS	FB	80	300	1500	660
SYSUT1	S	SEQ	--	--	75	75	0
SYSUT2	S	SEQ	--	--	75	75	0
SYSUT3	S	SEQ	--	--	75	75	0
SYSUT4	S	SEQ	--	--	75	75	0

If you are installing into an existing environment, ensure the current SMP/E support dataset allocations reflect the minimum values shown in Figure 11. Check the space and directory block allocation and reallocate the data sets, if necessary.

Figure 11. Storage Requirements for SMP/E Data Sets

Library DDNAME	T Y P E	O R G M	R E C F M	L R E C L	Prim No. of 3390 Trks	Sec No. of 3390 Trks	No. of DIR Blks
SMPLTS	S	PDSE	U	0	15	150	N/A
SMPMTS	S	PDS	FB	80	15	150	220
SMPPTS	S	PDSE	FB	80	300	1500	N/A
SMPSCDS	S	PDS	FB	80	15	150	220
SMPSTS	S	PDS	FB	80	15	150	220

Figure 12 and Figure 13 on page 15 describe the target and distribution libraries that will be allocated by this product's install jobs or that will be required for installation. The space requirements reflect what is specified in the allocation job or the space that this product will require in existing libraries. Additional tables are provided to show the specific space required for libraries that are used by each FMID. See 5.2.4, "DASD Storage Requirements by FMID" on page 16 for more information.

The storage requirements of Tivoli Management Services on z/OS must be added to the storage required by other programs having data in the same library or path.

Figure 12 (Page 1 of 2). Storage Requirements for Tivoli Management Services on z/OS Target Libraries

Library DDNAME	Member Type	Target Volume	T Y P E	O R G M	R E C F M	L R E C L	No. of 3390 Trks	No. of DIR Blks
TKANCMD	Parm	Any	S	PDS	FB	80	8	88
TKANCUS	CLIST	Any	S	PDS	FB	80	1086	1320
TKANDATV	Data	Any	S	PDS	VB	6160	75	132
TKANHENU	Help	Any	S	PDS	FB	80	25	880
TKANMAC	Macro	Any	S	PDS	FB	80	4	44
TKANMOD	LMOD	Any	S	PDS	U	0	217	880
TKANMODL	LMOD	Any	S	PDS	U	0	2022	660
TKANMODS	LMOD	Any	S	PDS	U	0	6	220
TKANPAR	Parm	Any	S	PDS	FB	80	3	88
TKANPENU	Panel	Any	S	PDS	FB	80	96	3080
TKANPKGI	Data	Any	S	PDS	FB	80	51	88
TKANSAM	Sample	Any	S	PDS	FB	80	32	176

Figure 12 (Page 2 of 2). Storage Requirements for Tivoli Management Services on 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
TKANSQL	SQL	Any	S	PDS	FB	80	3	88
TKCIINST	CLIST	Any	S	PDS	FB	80	112	132
TKNSLOCL	Data	Any	S	PDS	VB	6160	71	88

Figure 13. Storage Requirements for Tivoli Management Services on 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
DKANCMD	S	PDS	FB	80	8	88
DKANCUS	S	PDS	FB	80	1086	1320
DKANDATV	S	PDS	VB	6160	75	132
DKANHENU	S	PDS	FB	80	25	880
DKANMAC	S	PDS	FB	80	4	44
DKANMOD	S	PDS	U	0	217	880
DKANMODL	S	PDS	U	0	2024	660
DKANMODS	S	PDS	U	0	6	220
DKANPAR	S	PDS	FB	80	3	88
DKANPENU	S	PDS	FB	80	96	3080
DKANPKGI	S	PDS	FB	80	51	88
DKANSAM	S	PDS	FB	80	32	176
DKANSQL	S	PDS	FB	80	3	88
DKCIINST	S	PDS	FB	80	112	132
DKNSLOCL	S	PDS	VB	6160	71	88

5.2.4 DASD Storage Requirements by FMID

The tables in this section can help determine the specific space required for components not already installed in an existing environment. There is a table for each FMID included with the product.

Figure 14. Storage Requirements for HKDS630 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
TKANCUS	CLIST	Any	S	PDS	FB	80	132	88
TKANDATV	Data	Any	S	PDS	VB	6160	66	17
TKANMAC	Macro	Any	S	PDS	FB	80	1	2
TKANMOD	LMOD	Any	S	PDS	U	0	189	2
TKANMODL	LMOD	Any	S	PDS	U	0	1572	14
TKANMODS	LMOD	Any	S	PDS	U	0	3	5
TKANPAR	Parm	Any	S	PDS	FB	80	1	2
TKANPKGI	Data	Any	S	PDS	FB	80	9	2
TKANSAM	Sample	Any	S	PDS	FB	80	7	4
TKANSQL	SQL	Any	S	PDS	FB	80	2	2
TKNSLOCL	Data	Any	S	PDS	VB	6160	62	38
DKANCUS			S	PDS	FB	80	132	88
DKANDATV			S	PDS	VB	6160	66	17
DKANMAC			S	PDS	FB	80	1	2
DKANMOD			S	PDS	U	0	189	2
DKANMODL			S	PDS	U	0	1573	14
DKANMODS			S	PDS	U	0	3	5
DKANPAR			S	PDS	FB	80	1	2
DKANPKGI			S	PDS	FB	80	9	2
DKANSAM			S	PDS	FB	80	7	4
DKANSQL			S	PDS	FB	80	2	2
DKNSLOCL			S	PDS	VB	6160	62	38

Figure 15. Storage Requirements for HKCI310 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
TKANCMD	Parm	Any	S	PDS	FB	80	6	2
TKANCUS	CLIST	Any	S	PDS	FB	80	813	625
TKANPAR	Parm	Any	S	PDS	FB	80	1	5
TKANPKGI	Data	Any	S	PDS	FB	80	23	2
TKANSAM	Sample	Any	S	PDS	FB	80	4	4
TKCIINST	Sample	Any	S	PDS	FB	80	98	90
DKANCMD			S	PDS	FB	80	6	2
DKANCUS			S	PDS	FB	80	813	625
DKANPAR			S	PDS	FB	80	1	5
DKANPKGI			S	PDS	FB	80	23	2
DKANSAM			S	PDS	FB	80	4	4
DKCIINST			S	PDS	FB	80	98	90

Figure 16 (Page 1 of 2). Storage Requirements for HKLV630 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
TKANCMD	Parm	Any	S	PDS	FB	80	1	2
TKANHENU	Help	Any	S	PDS	FB	80	22	28
TKANMAC	Macro	Any	S	PDS	FB	80	3	2
TKANMODL	LMOD	Any	S	PDS	U	0	187	152
TKANMODS	LMOD	Any	S	PDS	U	0	3	4
TKANPAR	Parm	Any	S	PDS	FB	80	1	3
TKANPENU	Panel	Any	S	PDS	FB	80	84	53
TKANPKGI	Data	Any	S	PDS	FB	80	15	2
TKANSAM	Sample	Any	S	PDS	FB	80	17	6
DKANCMD			S	PDS	FB	80	1	2
DKANHENU			S	PDS	FB	80	22	28
DKANMAC			S	PDS	FB	80	3	2

Figure 16 (Page 2 of 2). Storage Requirements for HKLV630 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
DKANMODL			S	PDS	U	0	187	152
DKANMODS			S	PDS	U	0	3	4
DKANPAR			S	PDS	FB	80	1	3
DKANPENU			S	PDS	FB	80	84	53
DKANPKGI			S	PDS	FB	80	15	2
DKANSAM			S	PDS	FB	80	17	6

5.3 FMIDs Deleted

Installing Tivoli Management Services on 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 Tivoli Management Services on z/OS into separate SMP/E target and distribution zones.

Note: These FMIDs are not automatically deleted from the Global Zone. If you want to delete these FMIDs from the Global Zone, use the SMP/E REJECT NOFMID DELETEFMID command. See the SMP/E Commands book for details.

5.4 Special Considerations

To effectively manage a suite of products with common components, you can install products into shared zones of a consolidated software inventory (CSI). Space requirements are reduced by installing products into shared CSI zones avoiding the duplication when different target zones, distribution zones, and data sets are used. Sharing a common set of zones also allows SMP/E to automatically manage IFREQ situations that exist across product components.

If you intend to share a Tivoli Enterprise Monitoring Server on z/OS with other products, use shared CSI zones so product configuration sets up the runtime environment correctly.

Tivoli Management Services on z/OS requires maintenance for one of the components included in this product package.

If you are installing into an existing CSI zone that contains the listed FMID, ensure the maintenance has been installed previously or it must be installed with this product package.

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Consider the following items when using shared CSI zones.

- You must specify the same high-level qualifier for the target and distribution libraries as the other products in the same zones for the configuration tool to work correctly.
- If you install a product into an existing CSI that contains a previous version of the same product, SMP/E deletes the previous version during the installation process. To maintain multiple product versions concurrently, they must be installed into separate CSI zones.
- If you install into an existing environment, you might need to remove data set references from the installation jobs to avoid errors because the data sets already exist.
- If you are installing into an existing environment that has the data sets already allocated, ensure sufficient space and directory blocks are available to support the requirement listed in the DASD tables. This might require you to reallocate some data sets to avoid x37 abends.

6.0 Installation Instructions

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

Please note the following points:

- If you want to install Tivoli Management Services on 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. Additionally, to assist you in doing this, IBM has provided samples at the following Website to help you create an SMP/E environment. Copies of these have been included with the other sample jobs.

<http://www.ibm.com/support/docview.wss?rs=660&context=SSZJDU&uid=swg21066230>

- 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.

6.1 Installing Tivoli Management Services on z/OS

6.1.1 SMP/E Considerations for Installing Tivoli Management Services on z/OS

Use the SMP/E RECEIVE, APPLY, and ACCEPT commands to install this release of Tivoli Management Services on z/OS.

6.1.2 SMP/E Options Subentry Values

The recommended values for certain SMP/E CSI subentries are shown in Figure 17. Using values lower than the recommended values can result in failures in the installation. DSSPACE is a subentry in the GLOBAL options entry. PEMAX is a subentry of the GENERAL entry in the GLOBAL options entry. See the SMP/E manuals for instructions on updating the global zone.

Figure 17. SMP/E Options Subentry Values

Subentry	Value	Comment
DSSPACE	300,1200,1200	Use 1200 directory blocks
PEMAX	SMP/E Default	IBM recommends using the SMP/E default for PEMAX.

6.1.3 SMP/E CALLLIBS Processing

Tivoli Management Services on z/OS does not use the CALLLIBS function.

6.1.4 Installation Job Generator Utility

A utility is available to generate the necessary installation jobs for this product and others that might be included in the product package deliverable. Be aware that not all products are supported at this time and maintenance might have to be installed to get the latest updates for the product table. It is recommended you use this job generation utility to create a set of jobs to install the product package when installing into an existing environment rather than using the sample jobs provided for each product.

The job generation utility is delivered in the Configuration Assistance Tool component of the Tivoli Management Services on z/OS product. This utility is enhanced thru the maintenance stream so there could be an issue if it is invoked from an environment without the latest maintenance. Ensure the latest maintenance is installed for the components of this product to get the latest updates for the product table.

If you are installing for the first time into a new environment and don't have an existing environment available to invoke this utility, you must use the sample jobs for the Tivoli Management Services on z/OS product and install it first. This will install the FMID containing the job generation utility and the latest maintenance. Then you can invoke the utility from the target library TKCIINST to install other products in the package.

You can access the job generation utility in two different ways. For an existing environment, find the SMP/E target library with the low-level qualifier of TKCIINST. After you locate the TKCIINST file, invoke the utility by using ISPF option 6 and entering the following command.

```
ex 'hi lev.TKCIINST(KCIRJG00)'
```

You can also access the utility from the installation and configuration tool by selecting option 2 (Install products) from the main menu. Then select option 0 (Generate install JCL) from the "Install Products" panel.

You can use the online help available as a tutorial to become familiar with the utility and its processes.

6.1.4.1 Introduction to the Job Generator

The job generation utility creates a set of jobs to define a SMP/E environment (CSI and supporting data sets), allocate product libraries (target and distribution zone data sets and DDDEFS), and install the products (RECEIVE APPLY ACCEPT). You can use these jobs to create a totally new environment or to install the products into an existing CSI.

Processing Steps

- The jobs are generated from a series of ISPF interactive panels and ISPF file tailoring.
- The initial step is selection of the product mix. The set of products will determine any additions to the basic set of values needed to create the JCL.

Process Log

- One of the members of the generated job library is KCIJGLOG, which is the process log.

- This member shows the generating parameters and internal lists that were used to create the batch jobs.
- It also indicates which jobs were actually produced and need to be run. Note that the RECEIVE, APPLY, and ACCEPT jobs are always generated even if the selected products are already in the target CSI. In that case, the jobs install additional maintenance when available.

6.1.4.2 Product Selection

You can select one or more products from a table that will determine the set of FMIDs to install. You must select at least one product and you should always select the appropriate version of the IBM Tivoli Management Services on z/OS product (5698-A79). This will install the necessary FMIDs and maintenance for a new environment but also ensure any requisite maintenance will be processed when installing into an existing environment.

The selection table contains information about all of the supported products and might contain entries for products that you do not have or do not wish to install. Select only those products that are available in the package delivered and that you want to install.

6.1.4.3 Installing into an existing CSI

When the high-level qualifiers point to an existing environment, the job generation utility eliminates the jobs that allocate and initialize the CSI.

The job generation utility suppresses the creation of libraries that already exist in the target environment. Instead, the generator creates a job to determine whether sufficient space is available for any additional data to be installed into the libraries.

The member KCIJGANL is generated to report on the available space for each of the existing libraries that will have new data. However, KCIJGANL cannot check for the maintenance stream requirements.

The space analyzer function is very helpful in identifying data set space issues that might cause X37 abends during APPLY and ACCEPT processing.

6.1.4.4 Job Generator - Update Command

The job generation utility was enhanced to allow dynamic additions to the product table. The UPDATE routine is used to obtain additional data for products that are available but not yet included in the installation job generator table, KCIDJG00.

You must have the product RELFILES available on DASD in order to run this routine and all components of the product must be available. After a successful run, the output of this routine will replace the KCIDJG00 member of the work data set. If you make multiple changes to the data member be sure to save the original member as a backup.

Note: Not all products qualify for inclusion in the job generator process at this time. Refer to the online help for more information about this facility.

6.1.5 Sample Jobs

If you choose not to use the installation job generator utility documented in the previous section, you can use the sample jobs that were created for Tivoli Management Services on z/OS. This will require you to research and tailor each of the jobs accordingly.

The sample jobs provided expect a CSI to exist already. If one does not exist, see the information at the beginning of the installation section for creating one. The sample installation jobs in Figure 18 on page 23 are provided as part of the product to help you install Tivoli Management Services on z/OS.

<i>Figure 18. Sample Installation Jobs</i>			
Job Name	Job Type	Description	RELFILE
KDSJ1SMA	Optional	Sample job to create new SMP/E support files	IBM.HKDS630.F12
KDSJ2SMI	Optional	Sample job to create and prime a new SMP/E CSI	IBM.HKDS630.F12
KDSJ3ALO	ALLOCATE	Sample job to allocate target and distribution libraries	IBM.HKDS630.F12
KDSJ4DDF	DDDEF	Sample job to define SMP/E DDDEFs	IBM.HKDS630.F12
KDSJ5REC	RECEIVE	Sample RECEIVE job	IBM.HKDS630.F12
KDSJ6APP	APPLY	Sample APPLY job	IBM.HKDS630.F12
KDSJ7ACC	ACCEPT	Sample ACCEPT job	IBM.HKDS630.F12

You can access the sample installation jobs by performing a SMP/E RECEIVE (refer to 6.1.10, “Perform SMP/E RECEIVE” on page 25), then copy the jobs from the relfiles to a work data set for editing and submission. See Figure 18 to find the appropriate relfile data set.

You can also choose to copy the jobs from the tape or product files by creating and 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,REGION=4M
//SYSPRINT DD SYSOUT=*
//TAPEIN DD DSN=IBM.KDS630.F12,UNIT=tunit,
// VOL=SER=volser,LABEL=(x,SL),
// DISP=(OLD,KEEP)
//FILEIN DD DSN=IBM.HKDS630.F12,UNIT=SYSALLDA,DISP=SHR,
// VOL=SER=filevol
//OUT DD DSNAME=jc1-library-name,
// DISP=(NEW,CATLG,DELETE),
// VOL=SER=dasdvol,UNIT=SYSALLDA,
// SPACE=(TRK,(10,2,5))
//SYSUT3 DD UNIT=SYSALLDA,SPACE=(CYL,(1,1))
//SYSIN DD *
```

```
COPY INDD=xxxxIN,OUTDD=OUT
SELECT MEMBER=(KDSJ1SMA,KDSJ2SMI,KDSJ3ALO,KDSJ4DDF,KDSJ5REC)
SELECT MEMBER=(KDSJ6APP,KDSJ7ACC)
/*
```

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

If using TAPEIN:

tunit is the unit value that matches the product tape.

volser is the volume serial that matches the product tape.

x is the tape file number that indicates the location of the data set name on the tape.

Refer to the documentation provided by CBPDO to see where IBM.HKDS630.F12 is on the tape.

If using FILEIN:

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

OUT:

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

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

SYSIN:

Change **xxxxIN** to either TAPEIN or FILEIN depending on your input DD statement.

6.1.6 Create New SMP/E Support Files - Optional

If you do not want to install into an existing environment, you can create a new environment. To allocate new SMP/E support data sets for Tivoli Management Services on z/OS installation, edit and submit the generated allocation job KCIJGSMA or edit and submit sample job KDSJ1SMA. Consult the instructions in the job for more information.

Expected Return Codes and Messages: 0

6.1.7 Create New SMP/E CSI - Optional

If you do not want to install into an existing environment, you can create a new environment. To allocate a new SMP/E CSI and prime it for Tivoli Management Services on z/OS installation, edit and submit the generated allocation job KCIJGSMI or edit and submit sample job KDSJ2SMI. Consult the instructions in the sample job for more information.

Expected Return Codes and Messages: 0

6.1.8 Allocate SMP/E Target and Distribution Libraries

Edit and submit the generated job KCIJGALO to allocate the SMP/E target and distribution libraries for Tivoli Management Services on z/OS.

If you are not using the generated allocation job, select the sample job KDSJ3ALO. Edit and submit it after making appropriate changes for your environment. Consult the instructions in the sample job for more information. Consider the following issues before submitting the job.

- If you are installing into an existing environment, you might have to remove lines for data sets that already exist.
- If you are installing into an existing environment that has the data sets already allocated, ensure sufficient space and directory blocks are available to support the requirement listed in the DASD tables. This might require you to reallocate some data sets to avoid x37 abends.

Expected Return Codes and Messages: 0

6.1.9 Create DDDEF Entries

Edit and submit the generated job KCIJGDDF to create DDDEF entries for the SMP/E target and distribution libraries for Tivoli Management Services on z/OS.

If you are not using the generated job, select the sample job KDSJ4DDF. Edit and submit it after making appropriate changes for your environment. Consult the instructions in the sample job for more information. If you are installing into an existing environment, you might have to remove lines for data sets that already exist.

Expected Return Codes and Messages: 0

6.1.10 Perform SMP/E RECEIVE

If you have obtained Tivoli Management Services on z/OS as part of a CBPDO, use the RCVPDO job in the CBPDO RIMLIB data set to receive the Tivoli Management Services on z/OS FMIDs, service, and HOLDDATA that are included on the CBPDO package. For more information, see the documentation that is included in the CBPDO.

You can also choose to edit and submit the generated job KCIJGREC or the sample job KDSJ5REC to perform the SMP/E RECEIVE for Tivoli Management Services on z/OS. Consult the instructions in the sample job for more information.

Expected Return Codes and Messages: 0

6.1.11 Perform SMP/E APPLY

Ensure that you have the latest HOLDDATA, then edit and submit the generated job KCIJGAPP to perform an SMP/E APPLY CHECK for Tivoli Management Services on z/OS.

If you are not using the generated job, select the sample job KDSJ6APP to perform an SMP/E APPLY CHECK. Edit and submit it after making appropriate changes for your environment. Consult the instructions in the sample job for more information.

The latest HOLDDATA is available through several different portals, including <http://service.software.ibm.com/holdata/390holddata.html>. The latest HOLDDATA may identify HIPER and FIXCAT APARs for the FMIDs you will be installing. An APPLY CHECK will help you determine if any

HIPER or FIXCAT APARs are applicable to the FMIDs you are installing. If there are any applicable HIPER or FIXCAT APARs, the APPLY CHECK will also identify fixing PTFs that will resolve the APARs, if a fixing PTF is available.

You should install the FMIDs regardless of the status of unresolved HIPER or FIXCAT APARs. However, do not deploy the software until the unresolved HIPER and FIXCAT APARs have been analyzed to determine their applicability. That is, before deploying the software either ensure fixing PTFs are applied to resolve all HIPER or FIXCAT APARs, or ensure the problems reported by all HIPER or FIXCAT APARs are not applicable to your environment.

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

Here are sample APPLY commands:

1. To ensure that all recommended and critical service is installed with the FMIDs, receive the latest HOLDDATA and use the APPLY CHECK command as follows

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

Some HIPER APARs might not have fixing PTFs available yet. You should analyze the symptom flags for the unresolved HIPER APARs to determine if the reported problem is applicable to your environment and if you should bypass the specific ERROR HOLDS in order to continue the installation of the FMIDs.

This method requires more initial research, but can provide resolution for all HIPERs that have fixing PTFs available and are not in a PE chain. Unresolved PEs or HIPERs might still exist and require the use of BYPASS.

2. To install the FMIDs without regard for unresolved HIPER APARs, you can add the BYPASS(HOLDCLASS(HIPER)) operand to the APPLY CHECK command. This will allow you to install FMIDs even though one or more unresolved HIPER APARs exist. After the FMIDs are installed, use the SMP/E REPORT ERRSYSMODS command to identify unresolved HIPER APARs and any fixing PTFs.

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

This method is the quicker, but requires subsequent review of the Exception SYSMOD report produced by the REPORT ERRSYSMODS command to investigate any unresolved HIPERs. If you

have received the latest HOLDDATA, you can also choose to use the REPORT MISSINGFIX command and specify Fix Category IBM.ProductInstall-RequiredService to investigate missing recommended service.

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

Expected Return Codes and Messages from APPLY CHECK: 0

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.

If you process a PTF with a ++HOLD statement, you will receive a return code of 4 and the following message when the BYPASS operand is used.

```
GIM42001W THE FOLLOWING CONDITIONS FOR SYSMOD sysmod
          WERE NOT SATISFIED, BUT WERE IGNORED BECAUSE THE
          BYPASS OPERAND WAS SPECIFIED. PROCESSING CONTINUES.
```

If the BYPASS operand is not included in the control statement when processing a PTF with a ++HOLD statement, the job will get a return code of 12 and the following message.

```
GIM30206E command PROCESSING FAILED FOR SYSMOD sysmod.
          HOLD REASON IDS WERE NOT RESOLVED.
```

Expected Return Codes and Messages from APPLY: 4

You can receive many of the following messages depending on your environment. These messages can be ignored, because they will not affect product execution.

```
GIM23903W LINK-EDIT PROCESSING FOR SYSMOD aaaaaaa
          WAS SUCCESSFUL FOR MODULE bbbbbbbb IN
          LMOD ccccccc IN THE ddddddd LIBRARY. THE
          RETURN CODE WAS ee. DATE yy.ddd - TIME
          hh:mm:ss - SEQUENCE NUMBER nnnnnn.
```

```
GIM23913W LINK-EDIT PROCESSING FOR SYSMOD aaaaaaa
          WAS SUCCESSFUL FOR MODULE bbbbbbbb IN
          LMOD ccccccc IN THE ddddddd LIBRARY. THE
          RETURN CODE WAS ee. DATE yy.ddd -- TIME
          hh:mm:ss -- SEQUENCE NUMBER nnnnnn --
          SYSPRINT FILE ffffffff.
```

```
IEW2454W SYMBOL symbo1 UNRESOLVED. NO AUTOCALL (NCAL) SPECIFIED.
```

Figure 19 on page 28 contains a list of elements that might be marked as not selected during the APPLY and ACCEPT processes. This might occur because a VERSION parameter was supplied in an FMID indicating that it contained a higher level version of the same element provided by another FMID being processed at the same time. The higher version element is selected for processing and the lower version is not selected for processing. It might also occur because maintenance is being installed at the same time as the FMIDs.

<i>Figure 19 (Page 1 of 4). SMP/E Elements Not Selected</i>					
KAHAHELP	KAHCMDLB	KAHJPU1C	KAHJPU1P	KAHJPU1S	KAHPRMLB
KCGBHELP	KCGDDICT	KCI\$JCRD	KCI\$SYSN	KCICBATO	KCICBAT1
KCICBDIC	KCICBRWS	KCICCPYE	KCICCUST	KCICEXIT	KCICJOB1
KCICMCUS	KCICMDLB	KCICPGHP	KCICRDME	KCICRDM2	KCICRECB
KCICREP1	KCICRPLC	KCICRTE	KCICRTEA	KCICRTED	KCICRTEU
KCICRTEX	KCICRUNA	KCICRUNC	KCICRUNL	KCICRUNS	KCICRUNV
KCICSCAN	KCICSTRT	KCICSVA1	KCICSVA2	KCICSVU2	KCICSV2
KCICSV5	KCICTALR	KCICUPG3	KCICUTIL	KCICVER	KCIDDICT
KCIDELIM	KCIDINFO	KCIDINFX	KCIDIVP1	KCIDJG00	KCIDPLBI
KCIDPLBT	KCIDPMAP	KCIDRBAT	KCIDRCOM	KCIDRDMC	KCIDRDMI
KCIDREQS	KCIDRIVP	KCIDRPLB	KCIDRRTE	KCIDRSEC	KCIDRSYS
KCIDRUSS	KCIH@PG0	KCIH@PG1	KCIH@PG5	KCIH@SUB	KCIH@SUC
KCIH@SUD	KCIH@SUE	KCIH@SUF	KCIH@SUG	KCIH@SUH	KCIH@SUI
KCIH@SUJ	KCIH@SUK	KCIH@SUL	KCIH@SUM	KCIH@SUN	KCIH@SUO
KCIH@SUP	KCIHCLOX	KCIHCLOY	KCIHCLO1	KCIHCLO2	KCIHCUT
KCIHDFIC	KCIHIN1	KCIHIN2	KCIHIN2A	KCIHIN2B	KCIHIN2C
KCIHIN2D	KCIHIN2E	KCIHIN2F	KCIHIR4	KCIHIR4A	KCIHIR4B
KCIHIVP1	KCIHIVP2	KCIHIVP3	KCIHIVP4	KCIHJG0	KCIHJG0A
KCIHJG0B	KCIHJG0C	KCIHJG0D	KCIHJG0E	KCIHJG0F	KCIHJG0G
KCIHJG0H	KCIHJG0I	KCIHJG0J	KCIHJG0K	KCIHJG0L	KCIHJG0M
KCIHPG3	KCIHPG3A	KCIHPG3B	KCIHPG3C	KCIHPG3D	KCIHPG3E
KCIHPG3F	KCIHPG3G	KCIHPG3H	KCIHPG3I	KCIHPG4	KCIHPG4A
KCIHPG4B	KCIHPG4C	KCIHPG6	KCIHPG6A	KCIHPG7	KCIHPG7A
KCIHPLBC	KCIHPLBD	KCIHPLBI	KCIHPLBJ	KCIHPLBK	KCIHPLBM
KCIHPLBR	KCIHPLBS	KCIHPLBT	KCIHPLBX	KCIHPLBY	KCIHPLB0
KCIHPLB1	KCIHPLB2	KCIHP0A	KCIHP0AA	KCIHP0AB	KCIHP0B
KCIHP0BA	KCIHP0C	KCIHP0CA	KCIHP0CB	KCIHP0CC	KCIHP0CD
KCIHP0CE	KCIHP0D	KCIHP0DA	KCIHP0DB	KCIHP0DC	KCIHP0DD

Figure 19 (Page 2 of 4). SMP/E Elements Not Selected

KCIHP0DE	KCIHP1A	KCIHP1AA	KCIHP1AB	KCIHP1AC	KCIHP1AD
KCIHP1AE	KCIHP1AF	KCIHP1AG	KCIHP1AH	KCIHP1AI	KCIHP1AJ
KCIHP1AK	KCIHP1B	KCIHP1BA	KCIHP1BB	KCIHP1C	KCIHP1CA
KCIHP1CB	KCIHP1CC	KCIHP1CD	KCIHP1D	KCIHP1DA	KCIHP1DB
KCIHP1E	KCIHP1EA	KCIHP1F	KCIHP1FA	KCIHP1G	KCIHP1GA
KCIHP1GB	KCIHP5A	KCIHP5AA	KCIHP5AB	KCIHP5AC	KCIHP5AD
KCIHP5B	KCIHP5BA	KCIHP5C	KCIHP5CA	KCIHP5CB	KCIHP5D
KCIHP5DA	KCIHP5DB	KCIHP5DC	KCIHP5DD	KCIHP5F	KCIHP5FA
KCIHP5FB	KCIHP8A	KCIHP8B	KCIHP8BA	KCIHP8D	KCIHP8DA
KCIHP80	KCIHP80A	KCIHP80B	KCIHP80C	KCIHP81	KCIHP85
KCIHP86	KCIHP87	KCIHP88	KCIHP89	KCIHRA	KCIHRAA
KCIHRAB	KCIHRAC	KCIHRAD	KCIHRAE	KCIHRAF	KCIHRAG
KCIHRAH	KCIHRA1	KCIHRA1A	KCIHRA1B	KCIHRA1C	KCIHRA1D
KCIHRA1E	KCIHRA1F	KCIHRA1G	KCIHRA1H	KCIHRA1I	KCIHRA1J
KCIHRA1K	KCIHRA1L	KCIHRA1M	KCIHRB	KCIHRBA	KCIHRBB
KCIHRBC	KCIHRBD	KCIHRBE	KCIHRBF	KCIHRBU	KCIHRBUA
KCIHRBUB	KCIHRBUC	KCIHRBUD	KCIHRBUE	KCIHRBUF	KCIHRBUG
KCIHRBUH	KCIHRTB	KCIHRTBA	KCIHRTX	KCIHRTY	KCIHRU
KCIHRUA	KCIHRUB	KCIHRUC	KCIHRUD	KCIHRUE	KCIHRUF
KCIHRUG	KCIHRUH	KCIHRUI	KCIHRUJ	KCIHRUK	KCIHRU1
KCIHRU1A	KCIHRU1B	KCIHRU1C	KCIHRU1D	KCIHRU1E	KCIHRU1F
KCIHRU1G	KCIHRU1H	KCIHRU1I	KCIHRU1J	KCIHRU1K	KCIHRV
KCIHRVA	KCIHRVB	KCIHRVC	KCIHRVD	KCIHRVE	KCIHRVF
KCIHRV1	KCIHRV1A	KCIHRV1B	KCIHRV1C	KCIHRV1D	KCIHRV1E
KCIHRV1F	KCIHRV1G	KCIHSTAU	KCIHSTAX	KCIHSTA1	KCIHSTA3
KCIHTN	KCIHTNA	KCIHTNB	KCIHTNC	KCIHTND	KCIHTNE
KCIHUT3	KCIJ\$NDX	KCIJALOC	KCIJPCCF	KCIJPCFG	KCIJPLOG
KCIJPUP1	KCIJPUP2	KCIJPU11	KCIJPVER	KCIMBATO	KCIMRTU
KCIMTPDS	KCIP@PGP	KCIP@PG0	KCIP@PG1	KCIP@PG2	KCIP@PG3
KCIP@PG4	KCIP@PG5	KCIP@PG6	KCIP@PG8	KCIP@PRS	KCIP@SUB
KCIPARED	KCIPAREP	KCIPARIO	KCIPARRX	KCIPCHP	KCIPCHPB
KCIPCH1	KCIPCH3	KCIPCH4	KCIPCH5	KCIPCH6	KCIPCH7
KCIPCLOP	KCIPCLOX	KCIPCLO1	KCIPCLO2	KCIPCMSS	KCIPCUTL

Figure 19 (Page 3 of 4). SMP/E Elements Not Selected

KCIPHCKP	KCIPHCK1	KCIPIN1	KCIPIN2	KCIPIR4	KCIPIR7
KCIPJGD0	KCIPJG00	KCIPJG01	KCIPJG02	KCIPJG03	KCIPJG04
KCIPJG05	KCIPLOGO	KCIPPLBP	KCIPPLB0	KCIPPLB1	KCIPPLB2
KCIPPLB3	KCIPPLB4	KCIPPRPT	KCIPPR4	KCIPRDME	KCIPRDM1
KCIPRIM	KCIPRMLB	KCIPRTAB	KCIPRTA1	KCIPRTA2	KCIPRTEA
KCIPRTEU	KCIPRTEV	KCIPRTEW	KCIPRTEY	KCIPRTUB	KCIPRTU1
KCIPRTU2	KCIPRTU3	KCIPRTU4	KCIPRTV1	KCIPRTV2	KCIPRTW1
KCIPSP01	KCIPSTAU	KCIPSTA1	KCIPSTA3	KCIR@PG1	KCIR@PG2
KCIRCLON	KCIRDFIC	KCIRIVPJ	KCIRIVP1	KCIRIVP2	KCIRJCRD
KCIRJGD0	KCIRJGD1	KCIRJGD2	KCIRJG00	KCIRJG01	KCIRJG02
KCIRJG04	KCIRJG05	KCIRJLOG	KCIRLIBS	KCIRMAP1	KCIRPLBC
KCIRPLBH	KCIRPLBI	KCIRPLBJ	KCIRPLBS	KCIRPLBT	KCIRPLBV
KCIRPLBX	KCIRPLBY	KCIRPLB1	KCIRPLB2	KCIRRDME	KCIRRMEM
KCIRRVER	KCIRSTAU	KCIRSTA4	KCIRSUB1	KCIRSV2	KCIRSV5
KCIRUEDT	KCISBATO	KCISBATX	KCISHCKP	KCISIVP1	KCISIVP2
KCISJG0W	KCISJG01	KCISJG02	KCISJG03	KCISJG1	KCISJG10
KCISJG11	KCISJG2	KCISJG3	KCISJG4	KCISJG5	KCISJG6
KCISJG7	KCISJG8	KCISJG9	KCISLSD	KCISPLBI	KCISREP1
KCISREP2	KCISRUNA	KCISRUNE	KCISRUNF	KCISRUNG	KCISRUNL
KCISSTA4	KCISSUB1	KCISSVA0	KCISSVOF	KCISSVON	KCISSVU1
KCISSVU2	KCISSYSP	KCISUPG2	KCIUSSJB	KCIZC02	KCI310SP
KC2AHELP	KC5AHELP	KC5CMDLB	KC5JPU1C	KC5JPU1P	KC5JPU1S
KC5PRMLB	KDFAHELP	KDOAHELP	KDOCMDLB	KDOJPU1C	KDOJPU1P
KDOJPU1S	KDOPRMLB	KDSAHELP	KDSCMDLB	KDSJPU1C	KDSJPU1P
KDSJPU1S	KDSPRMLB	KD2AHELP	KD2JPU11	KD2JPU12	KD2JPU13
KD2JPU14	KD2PRMLB	KD2PRMLF	KD2PRMLP	KD4CMDLB	KD4JPU1C
KD4JPU1P	KD4JPU1S	KD4PRMLB	KD5CMDLB	KD5JPU1C	KD5JPU1P
KD5JPU1S	KD5PRMLB	KETJPU1P	KETJPU1S	KETPRMLB	KGWAHELP
KGWCMDLB	KGWJPU1C	KGWJPU1P	KGWJPU1S	KGWPRMLB	KHLCMDLB
KHLJPU1C	KHLJPU1P	KHLJPU1S	KHLPRMLB	KINSTALL	KIPVLKD
KI2AHELP	KI5AHELP	KI5CMDLB	KI5JPU1C	KI5JPU1P	KI5JPU1S
KI5PRMLB	KMCAHELP	KMCCMDLB	KMCJPU1C	KMCJPU1P	KMCJPU1S
KMCPRMLB	KMQAHELP	KMQCMDLB	KMQJPU1C	KMQJPU1P	KMQJPU1S

Figure 19 (Page 4 of 4). SMP/E Elements Not Selected

KMQPRMLB	KMVAHELP	KM2AHELP	KM5AHELP	KM5CMDLB	KM5JPU1C
KM5JPU1P	KM5JPU1S	KM5PRMLB	KM5VLKD	KNAAHELP	KNACMDLB
KNAJPU1C	KNAJPU1P	KNAJPU1S	KNAPRMLB	KN3AHELP	KN3CMDLB
KN3JPU1C	KN3JPU1P	KN3JPU1S	KN3PRMLB	KOBAHELP	KOBCMDLB
KOBJPU1C	KOBJPU1P	KOBJPU1S	KOBPRMLB	KONAHELP	KQIAHELP
KQICMDLB	KQIJPU1C	KQIJPU1P	KQIJPU1S	KQIPRMLB	KRGAHELP
KRGCMDLB	KRGJPU1C	KRGJPU1P	KRGJPU1S	KRGPRMLB	KRHAHELP
KRHCMDB	KRHJPU1C	KRHJPU1P	KRHJPU1S	KRHPRMLB	KRJAHELP
KRJCMDLB	KRJPU1C	KRJPU1P	KRJPU1S	KRJPRMLB	KRKCMDLB
KRKJPU1C	KRKJPU1P	KRKJPU1S	KRKPRMLB	KRNAHELP	KRNCMDLB
KRNJPU1C	KRNJPU1P	KRNJPU1S	KRNPRMLB	KRTAHELP	KRTBHELP
KRTDDICT	KRTDDICX	KRVAHELP	KRVCMDLB	KRVJPU1C	KRVJPU1P
KRVJPU1S	KRVPRMLB	KRWCMDLB	KRWJPU1C	KRWJPU1P	KRWJPU1S
KRWPRMLB	KS3AHELP	KS3CMDLB	KS3JPU1C	KS3JPU1P	KS3JPU1S
KS3PRMLB	KWOCMDLB	KWOJPU1C	KWOJPU1P	KWOJPU1S	KWOPRMLB
KWWBHELP	KWWDDICT	KYNAHELP	KYNCMDLB	KYNJPU1C	KYNJPU1P
KYNJPU1S	KYNPRMLB				

After installing new function, you should perform two operations:

1. Create a backup of the updated data sets, including any SMP/E data sets affected, in case something happens to the data sets during the next phase.
2. Do some testing before putting the new function into production.

After you are satisfied that an applied SYSMOD has performed reliably in your target system, you can install it in your distribution libraries using the ACCEPT process.

Another good practice is to accept most SYSMODs, particularly FMIDs, before performing another APPLY process. This provides you the ability to use the RESTORE process of SMP/E and to support the scenario where SMP/E needs to create a new load module from the distribution libraries during the APPLY process.

6.1.12 Perform SMP/E ACCEPT

Edit and submit the generated job KCIJGACC to perform an SMP/E ACCEPT CHECK for Tivoli Management Services on z/OS.

If you are not using the generated job, select the sample job KDSJ7ACC to perform an SMP/E ACCEPT CHECK. Edit and submit it after making appropriate changes for your environment. Consult the instructions in the sample job for more information.

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

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

Expected Return Codes and Messages from ACCEPT CHECK: 0

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.

If you process a PTF with a ++HOLD statement, you will receive a return code of 4 and the following message when the BYPASS operand is used.

```
GIM42001W THE FOLLOWING CONDITIONS FOR SYSMOD sysmod
          WERE NOT SATISFIED, BUT WERE IGNORED BECAUSE THE
          BYPASS OPERAND WAS SPECIFIED. PROCESSING CONTINUES.
```

If the BYPASS operand is not included in the control statement when processing a PTF with a ++HOLD statement, the job will get a return code of 12 and the following message.

```
GIM30206E command PROCESSING FAILED FOR SYSMOD sysmod.
          HOLD REASON IDS WERE NOT RESOLVED.
```

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

Expected Return Codes and Messages from ACCEPT: 4

Figure 19 on page 28 contains a list of elements that might be marked as not selected during the APPLY and ACCEPT processes. This might occur because a VERSION parameter was supplied in an FMID indicating that it contained a higher level version of the same element provided by another FMID being processed at the same time. The higher version element is selected for processing and the lower version is not selected for processing. It might also occur because maintenance is being installed at the same time as the FMIDs.

6.2 Activating Tivoli Management Services on z/OS

Prior to activating Tivoli Management Services on z/OS, IBM recommends you review the Quick Start guide, the PARMGEN Reference manual, as well as the Planning and Configuration guides listed in Figure 1 on page 3, if you have not already done so. These books focus on the things you will need to know for a successful installation and configuration of this product.

The publication *Configuring the Tivoli Enterprise Monitoring Server on z/OS*, SC27-2313 contains the step-by-step procedures to activate the functions of Tivoli Management Services on z/OS.

These publications can be found online at:

<http://publib.boulder.ibm.com/infocenter/tivihelp/v15r1/index.jsp>

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