



Program Directory for IBM OMEGAMON for z/OS

5.5.1

Program Number 5698-T01

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 37.

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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 OMEGAMON for z/OS. This publication refers to IBM OMEGAMON for z/OS as OMEGAMON for z/OS.

The Program Directory contains the following sections:

- 2.0, “Program Materials” on page 4 identifies the basic program materials and documentation for OMEGAMON for z/OS.
- 3.0, “Program Support” on page 7 describes the IBM support available for OMEGAMON for z/OS.
- 4.0, “Program and Service Level Information” on page 9 lists the APARs (program level) and PTFs (service level) that have been incorporated into OMEGAMON for z/OS.
- 5.0, “Installation Requirements and Considerations” on page 11 identifies the resources and considerations that are required for installing and using OMEGAMON for z/OS.
- 6.0, “Installation Instructions” on page 27 provides detailed installation instructions for OMEGAMON for z/OS. It also describes the procedures for activating the functions of OMEGAMON for z/OS, or refers to appropriate publications.

Before installing OMEGAMON for z/OS, read the *CBPDO Memo To Users* and the *CBPDO Memo To Users Extension* that are supplied with this program in softcopy format and this program directory; after which, keep the documents for your reference. Section 3.2, “Preventive Service Planning” on page 7 tells you how to find any updates to the information and procedures in this program directory.

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

Do not use this program directory if you install OMEGAMON for z/OS with a 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 IBM OMEGAMON for z/OS Description

IBM introduced significant updates to IBM OMEGAMON Performance Monitors for key System z environments designed to run on IBM Tivoli Monitoring 6.3.0 Fix Pack 6 or higher and deliver enhanced capabilities designed to:

- Improve problem resolution efficiency by requiring fewer steps to isolate root cause performance impact in real time, therefore providing higher availability.
- Improve visibility, control, and automation with the more comprehensive 3270-based user interface (3270UI) capable of viewing the entire enterprise-wide environment from a single 3270 screen.
- Reduce the time required for installation, configuration, and maintenance by utilizing the IBM Z Monitoring Configuration Manager for configuration (besides the still supported PARMGEN configuration tool).
- Enhancements to further increase the usability and functionality of the enhanced 3270 user interface (3270UI).
 - Supports near term history for the enhanced 3270UI workspaces
 - Support for embedded data
 - Transaction file and database details
- Service Level Analysis and Bottleneck Analysis components now exploit IBM System z Integrated Information Processors, lowering the cost of compute time.
- Leverages Tivoli Monitoring and the self-describing agent autonomic capability to remove the necessity for using application CDs to manually synchronize management servers and agents.

OMEGAMON for z/OS 5.5 introduced real-time and near-term history monitoring for PCIe cards & Storage Class Memory.

- Enhancements include:
 - Monitoring Coupling Facilities, and enhancements to near-term history monitoring for z/OS Real Storage
 - Additional Near Term History tables and workspaces for data collected from Resource Measurement Facility (RMF) Monitor III
 - Allow selecting an RMF Distributed Data Server (DDS)
 - Addition of Memory List and Memory Zap (MLST/MZAP) functions in the OMEGAMON Enhanced 3270 User Interface
- Simplified deployment process reducing configuration parameters coupled with automatic discovery of system properties during the PARMGEN configuration process.

Note: For more information, refer to the usage of the PARMGEN KCIJPDLA job topic in this URL: <https://www.ibm.com/docs/en/om-shared?>

New in OMEGAMON for z/OS 5.5.1

IBM Discovery Library Adapter for z/OS 3.2.0 discovers z/OS resources and generates output XML files. The files, often referred to as Books, conform to the Discovery Library IdML XML schema and Common Data Model (CDM).

Features and functions:

- Support Z Resource Discovery Data Service - a modern API to retrieve zDLA data

The Discovery Library Adapter for z/OS is implemented as a combination of z/OS load modules and REXX routines that can be executed as a batch job or started task on the z/OS system to perform the discovery. The modules will typically use system service macros, various memory control blocks, APIs including DB/2 IFI, DSNREXX SQL, and product utilities including netstat and MQ command interface (API) to identify those resources and relationships that are active at the time discovery is executed.

Discovery coverage includes:

- z/OS information e.g. PARMLIB active member contents, LNKST, IODF data set etc.
- zSeries machine information e.g. Serial Number, Processing Capacity and LPAR
- SYSPLEX group information
- IMS information e.g. transactions, programs and data bases
- CICS information e.g. transactions, programs, files and System Initialization on Table (SIT) details
- DB/2 for z/OS information e.g. database, tables spaces
- MQSeries for z/OS information e.g. ports and connections
- WebSphere Application Server for z/OS information e.g. Cell, Node, configuration files
- Address Space information e.g. Allocations
- DASD volumes information

HKSB750 Shared Probes, this product package delivers a newer level of this shared component, please reference the **Special Considerations** section of this document for updated instructions pertaining to the installation of this updated component.

1.2 OMEGAMON for z/OS FMIDs

OMEGAMON for z/OS consists of the following FMIDs:

HKM5550
HKOB750
HKSB750
HIZD320

2.0 Program Materials

An IBM program is identified by a program number. The program number for OMEGAMON for z/OS is 5698-T01.

Basic Machine-Readable Materials are materials that are supplied under the base license and are required for the use of the product.

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

2.1 Basic Machine-Readable Material

The distribution medium for this program is physical media or downloadable files. This program is in SMP/E RELFILE format and is installed by using SMP/E. See 6.0, "Installation Instructions" on page 27 for more information about how to install the program.

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

2.2 Program Publications

The following sections identify the basic publications for OMEGAMON for z/OS.

Figure 1 on page 5 identifies the basic unlicensed publications for OMEGAMON for z/OS.

The unlicensed documentation for OMEGAMON for z/OS can be found on the IBM Documentation website at <https://www.ibm.com/docs/en/omegamon-for-zos>.

<i>Figure 1. Basic Material: Unlicensed Publications</i>
Publication Title
<i>Planning and Configuration Guide</i>
<i>User's Guide</i>
<i>Troubleshooting Guide</i>
<i>OMEGAMON Realtime Collector User's Guide</i>
<i>OMEGAMON Realtime Collector Command and Keywords Reference</i>
<i>IBM Discovery Library Adapter for z/OS User's Guide & Reference</i>
OMEGAMON and Tivoli Management Services on z/OS shared documentation
<i>New in this Release</i>
<i>Overview</i>
<i>Getting started</i>
<i>Planning</i>
<i>Installing</i>
<i>Upgrading</i>
<i>Configuring</i>
<i>Scenarios and how-tos</i>
<i>Reference</i>

Prior to installing OMEGAMON for z/OS, IBM recommends you review the OMEGAMON shared documentation 6.3.0 Fix Pack 2 and above, **First time deployment guide (FTU installation and tasks)**, the Planning, Configuring, and Configuration Manager topics for general planning and configuration flow. This documentation focuses on the things you will need to know for a successful installation and configuration of the product components included in this package.

The OMEGAMON shared documentation, and other IBM product documentation can be found at the IBM Documentation URL listed below:

<https://www.ibm.com/docs/en/om-shared>

Refer to the *Program Directory for IBM Tivoli Management Services on z/OS* (GI11-4105) for a complete documentation list and installation instructions for its product components.

2.3 Program Source Materials

No program source materials or viewable program listings are provided for OMEGAMON for z/OS.

2.4 Publications Useful During Installation

You might want to use the publications listed in Figure 2 during the installation of OMEGAMON for z/OS.

<i>Figure 2. Publications Useful During Installation</i>	
Publication Title	Form Number
<i>IBM SMP/E for z/OS User's Guide</i>	SA23-2277
<i>IBM SMP/E for z/OS Commands</i>	SA23-2275
<i>IBM SMP/E for z/OS Reference</i>	SA23-2276
<i>IBM SMP/E for z/OS Messages, Codes, and Diagnosis</i>	GA32-0883

Note: These publications can be found in IBM Documentation. Use a web browser with internet access to refer to: <https://www.ibm.com/docs/en/zos/2.5.0?topic=zos-smpe>

3.0 Program Support

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

3.1 Program Services

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

3.2 Preventive Service Planning

Before you install OMEGAMON for z/OS, make sure that you have reviewed the current Preventive Service Planning (PSP) information. Review the PSP Bucket for General Information, Installation Documentation, and the Cross Product Dependencies sections. For the Recommended Service section, instead of reviewing the PSP Bucket, it is recommended you use the IBM.PRODUCTINSTALL-REQUIRESERVICE fix category in SMP/E to ensure you have all the recommended service installed. Use the **FIXCAT(IBM.PRODUCTINSTALL-REQUIRESERVICE)** operand on the **APPLY CHECK** command. See 6.1.9, “Perform SMP/E APPLY” on page 32 for a sample APPLY command.

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

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

<https://www.ibm.com/support/pages/ibmsearch>

You can also contact the IBM Support Center to obtain the latest PSP Bucket information.

For program support, access the Software Support Website at **<https://www.ibm.com/mysupport/>**.

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 OMEGAMON for z/OS are included in Figure 3 on page 8.

This product has an installation requirement for IBM Tivoli Management Services on z/OS 6.3.2 Fix Pack 7 or higher (5698-A79), so you should review the PSP buckets for it as well. Refer to the *Program Directory for IBM Tivoli Management Services on z/OS (GI11-4105)* for those UPGRADE and SUBSET values.

Figure 3. PSP Upgrade and Subset ID

UPGRADE	SUBSET	Description
OMEGM5550	HKM5550	OMEGAMON for z/OS
	HKOB750	OMNIMON Base
	HKSB750	Shared Probes
ZOSDLA	HIZD320	IBM Discovery Library Adapter for z/OS

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 identifies the component IDs (COMPID) for OMEGAMON for z/OS.

Figure 4. Component IDs

FMID	COMPID	Component Name	RETAIN Release
HKM5550	5698A5900	OMEGAMON for z/OS	550
HKOB750	5608A41OB	OMNIMON Base	750
HKSB750	5608A41SP	Shared Probes	750
HIZD320	5698A4700	IBM Discovery Library Adapter for z/OS	320

4.0 Program and Service Level Information

This section identifies the program and relevant service levels of OMEGAMON for z/OS. The program level refers to the APAR fixes that have been incorporated into the program. The service level refers to the PTFs that have been incorporated into the program.

4.1 Program Level Information

The following APAR fixes against the previous release of components included with OMEGAMON for z/OS have been incorporated into this release. They are listed by FMID.

- FMID HKM5550

OA45222 OA45465 OA45838 OA45936 OA45958 OA46160 OA46432 OA46858
OA47128 OA47271 OA47300 OA47572 OA47610 OA47620 OA47765 OA47889
OA48172 OA48261 OA48354 OA48400 OA48551 OA48819 OA48829 OA48937
OA49047 OA49167 OA49226 OA49369 OA49399 OA49482 OA49530 OA49614
OA49689 OA49872 OA49898 OA49908 OA49919 OA50020 OA50132 OA50133
OA50261 OA50272 OA50363 OA50548 OA51082 OA51142 OA51340 OA51356
OA51828 OA51877 OA52004 OA52301 OA52316 OA52346

- FMID HKOB750

OA45606 OA45816 OA45821 OA45846 OA46014 OA46177 OA46354 OA46704
OA46857 OA46860 OA46861 OA46867 OA46911 OA47142 OA47263 OA47617
OA48029 OA48198 OA48295 OA48532 OA48662 OA48739 OA48917 OA49057
OA49106 OA49278 OA49686 OA49902 OA49927 OA49966 OA50243 OA50263
OA50563 OA50894 OA51033 OA51043 OA51357 OA51417 OA51556 OA51564
OA51646 OA51815 OA51908 OA52016 OA52082 OA52314 OA52323 OA52442

- FMID HKSB750

OA51458 OA51463 OA51955 OA52489 OA52553 OA53084 OA53329 OA53347
OA53431 OA53714 OA54479 OA54551 OA55263

- FMID HIZD320

OA36070 OA34388 OA40005 OA40585 OA40760 OA41322 OA41662 OA41604
OA43245 OA42836 OA45275 OA46337 OA46190 OA50377 OA48608 OA48092
OA46882 OA48660 OA46912 OA47137 OA47264 OA47357 OA47810 OA47844
OA48106 OA49943 OA48978 OA49050 OA49290 OA50051 OA50811 OA51462
OA52819 OA53263 OA52105 OA55003 OA56499 OA58571 OA60640 OA60786
OA61082 OA61550 OA61913 OA62043 OA61655 OA63544

4.2 Service Level Information

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

Frequently check the OMEGAMON for z/OS PSP Bucket for HIPER and SPECIAL attention PTFs against all FMIDs that you must install. You can also receive the latest HOLDDATA, then add the **FIXCAT(IBM.PRODUCTINSTALL-REQUIRESERVICE)** operand on your **APPLY CHECK** command. This will allow you to review the recommended and critical service that should be installed with your FMIDs.

5.0 Installation Requirements and Considerations

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

- *Driving system*: the system on which SMP/E is executed to install the program.
The program might have specific operating system or product level requirements for using processes, such as binder or assembly utilities during the installation.
- *Target system*: the system on which the program is configured and run.
The program might have specific product level requirements, such as needing access to the library of another product for link-edits. These requirements, either mandatory or optional, might directly affect the element during the installation or in its basic or enhanced operation.

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

Use separate driving and target systems in the following situations:

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

5.1 Driving System Requirements

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

5.1.1 Machine Requirements

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

5.1.2 Programming Requirements

Figure 5. Driving System Software Requirements

Program Number	Product Name	Minimum VRM	Minimum Service Level will satisfy these APARs	Included in the shipped product?
5650-ZOS	z/OS	2.4 or higher	N/A	No

Notes:

1. SMP/E is a requirement for installation and is an element of z/OS.
2. Installation might require migration to new z/OS releases to be service supported. See <https://www.ibm.com/support/lifecycle/>.

5.2 Target System Requirements

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

OMEGAMON for 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.

<i>Figure 6. Target System Mandatory Installation Requisites</i>				
Program Number	Product Name	Minimum VRM	Minimum Service Level will satisfy these APARs	Included in the shipped product?
5650-ZOS	z/OS	2.4 or higher	N/A	No
5698-A79	IBM Tivoli Management Services on z/OS	6.3.2	N/A	No

Note: Installation might require migration to new releases to obtain support. See <https://www.ibm.com/support/lifecycle/>

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.

OMEGAMON for 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.

<i>Figure 7. Target System Mandatory Operational Requisites</i>	
Program Number	Product Name and Minimum VRM/Service Level
5650-ZOS	z/OS 2.4 or higher
5698-A79	IBM Tivoli Management Services on z/OS 6.3.2 Fix Pack 7 or higher

Note: Installation might require migration to new releases to obtain support. See <https://www.ibm.com/support/lifecycle/>

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.

OMEGAMON for z/OS has no conditional operational requisites.

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.

OMEGAMON for z/OS has no toleration/coexistence requisites.

5.2.2.4 Incompatibility (Negative) Requisites

Negative requisites identify products that must *not* be installed on the same system as this product.

OMEGAMON for z/OS has no negative requisites.

5.2.3 DASD Storage Requirements

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

Figure 8 lists the total space that is required for each type of library.

<i>Figure 8. Total DASD Space Required by OMEGAMON for z/OS</i>	
Library Type	Total Space Required in 3390 Trks
Target	2250
Distribution	1607

Notes:

1. If you are installing into an existing environment that has the data sets in Figure 11 on page 16 and Figure 12 on page 18 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. 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.
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 6.1.6, "Allocate SMP/E Target and Distribution Libraries" on page 31.

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.
- The data set can be either a PDS or a PDSE, with some exceptions. If the value in the "ORG" column specifies "PDS", the data set must be a PDS. If the value in "DIR Blks" column specifies "N/A", the data set must be a PDSE.

5. All target libraries listed have the following attributes:

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

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

- These data sets can not be in the LPA, with some exceptions. If the data set should be placed in the LPA, see the Special Considerations section below.
- These data sets can be in the LNKST except for TKANMODR and TKANMODS.
- These data sets are not required to be APF-authorized, with some exceptions. If the data set must be APF-authorized, see the Special Considerations section below.

If you are installing into an existing environment, ensure the values used for the SMP/E work data sets reflect the minimum values shown in Figure 9 on page 16. 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 9. 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	E	PDS	FB	80	150	150	220
SMPWRK2	E	PDS	FB	80	150	150	220
SMPWRK3	E	PDS	FB	80	300	600	1320
SMPWRK4	E	PDS	FB	80	150	150	220
SMPWRK6	E	PDS	FB	80	300	1500	660
SYSUT1	E	SEQ	--	--	75	75	0
SYSUT2	E	SEQ	--	--	75	75	0
SYSUT3	E	SEQ	--	--	75	75	0
SYSUT4	E	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 10. Check the space and directory block allocation and reallocate the data sets, if necessary.

Figure 10. Storage Requirements for SMP/E 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
SMPLTS	E	PDSE	U	0	15	150	N/A
SMPMTS	E	PDS	FB	80	15	150	220
SMPPTS	E	PDSE	FB	80	300	1500	N/A
SMPSCDS	E	PDS	FB	80	15	150	220
SMPSTS	E	PDS	FB	80	15	150	220

Figure 11 and Figure 12 on page 18 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 19 for more information.

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

Figure 11. Storage Requirements for OMEGAMON for z/OS Target Libraries

Library DDNAME	Member Type	Target Volume	T Y P E	O R G	R E C F M	L R E C L	No. of 3390 Trks	No. of DIR Blks
SIZDEXEC	CLIST	Any	U	PDS	FB	80	20	3
SIZDINST	JCL	Any	U	PDS	FB	80	3	3
SIZDLOAD	Samples	Any	U	PDS	U	0	65	12
SIZDMESG	CLIST	Any	U	PDS	FB	80	3	3
SIZDSAMP	Samples	Any	U	PDS	FB	80	25	3
TKANCLI	CLIST	Any	S	PDS	FB	80	2	44
TKANCMD	Parm	Any	E	PDS	FB	80	17	33
TKANCUS	CLIST	Any	E	PDS	FB	80	36	40
TKANDATV	Data	Any	E	PDS	VB	6160	7	4
TKANEXEC	EXEC	Any	S	PDS	VB	255	24	44
TKANHENU	Help	Any	E	PDS	FB	80	56	34
TKANISP	CLIST	Any	S	PDS	FB	80	2	44
TKANMAC	Macro	Any	E	PDS	FB	80	12	5
TKANMOD	LMOD	Any	E	PDS	U	0	256	36
TKANMODL	LMOD	Any	E	PDS	U	0	381	47
TKANMODP	LMOD	Any	S	PDSE	U	0	409	N/A
TKANMODS	LMOD	Any	E	PDS	U	0	74	56
TKANOSRC	Data	Any	S	PDS	VB	255	2	44
TKANPAR	Parm	Any	E	PDS	FB	80	7	5
TKANPKGI	Data	Any	E	PDS	FB	80	47	6
TKANSAM	Sample	Any	E	PDS	FB	80	10	8
TKANWENU	Panel	Any	S	PDS	FB	80	611	176
TKOBDATF	Data	Any	S	PDS	FB	80	2	44
TKOBHELP	Help	Any	S	PDS	FB	80	19	132
TKOMHELP	Help	Any	U	PDS	FB	80	64	396
TKOMPROC	Panel	Any	U	PDS	FB	80	88	484

Figure 12. Storage Requirements for OMEGAMON for z/OS Distribution Libraries

Library DDNAME	T Y P E	O R G	R E C F M	L R E C L	No. of 3390 Trks	No. of DIR Blks
AIZDEXEC	U	PDS	FB	80	20	3
AIZDINST	U	PDS	FB	80	3	3
AIZDLOAD	U	PDS	U	0	65	12
AIZDMESG	U	PDS	FB	80	3	5
AIZDSAMP	U	PDS	FB	80	25	3
DKANCLI	S	PDS	FB	80	2	44
DKANCMD	E	PDS	FB	80	17	33
DKANCUS	E	PDS	FB	80	13	15
DKANDATV	E	PDS	VB	6160	245	8
DKANEXEC	S	PDS	VB	255	24	44
DKANHENU	E	PDS	FB	80	56	44
DKANISP	S	PDS	FB	80	2	44
DKANMAC	E	PDS	FB	80	12	5
DKANMOD	E	PDS	U	0	145	102
DKANMODL	E	PDS	U	0	406	57
DKANMODP	S	PDSE	U	0	98	N/A
DKANMODS	E	PDS	U	0	61	3
DKANOSRC	S	PDS	VB	255	4	44
DKANPAR	E	PDS	FB	80	7	5
DKANPKGI	E	PDS	FB	80	47	6
DKANSAM	E	PDS	FB	80	10	8
DKANWENU	S	PDS	FB	80	161	176
DKOBDATF	S	PDS	FB	80	2	44
DKOBHELP	S	PDS	FB	80	19	132
DKOMHELP	U	PDS	FB	80	64	396
DKOMPROC	U	PDS	FB	80	88	484

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 13 (Page 1 of 2). Storage Requirements for HKM5550 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
TKANCLI	CLIST	Any	S	PDS	FB	80	1	2
TKANCMD	Parm	Any	E	PDS	FB	80	17	33
TKANCUS	CLIST	Any	E	PDS	FB	80	23	25
TKANDATV	Data	Any	E	PDS	VB	6160	238	4
TKANEXEC	EXEC	Any	S	PDS	VB	255	3	8
TKANHENU	Help	Any	E	PDS	FB	80	44	21
TKANISP	CLIST	Any	S	PDS	FB	80	1	3
TKANMAC	Macro	Any	E	PDS	FB	80	4	2
TKANMOD	LMOD	Any	E	PDS	U	0	24	12
TKANMODL	LMOD	Any	E	PDS	U	0	336	34
TKANMODP	LMOD	Any	E	PDS	U	0	26	N/A
TKANPAR	Parm	Any	E	PDS	FB	80	6	3
TKANPKGI	Data	Any	E	PDS	FB	80	29	2
TKANSAM	Sample	Any	E	PDS	FB	80	7	5
TKANWENU	Panel	Any	S	PDS	FB	80	73	45
TKOMHELP	Help	Any	U	PDS	FB	80	56	261
TKOMPROC	Panel	Any	U	PDS	FB	80	77	340
DKANCLI			S	PDS	FB	80	1	2
DKANCMD			E	PDS	FB	80	17	33
DKANCUS			E	PDS	FB	80	23	25
DKANDATV			E	PDS	VB	6160	238	4
DKANEXEC			S	PDS	VB	255	3	8
DKANHENU			E	PDS	FB	80	44	21
DKANISP			S	PDS	FB	80	1	3
DKANMAC			E	PDS	FB	80	4	2

Figure 13 (Page 2 of 2). Storage Requirements for HKM5550 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
DKANMOD			E	PDS	U	0	1	2
DKANMODL			E	PDS	U	0	361	45
DKANMODP			E	PDS	U	0	5	N/A
DKANPAR			E	PDS	FB	80	6	3
DKANPKGI			E	PDS	FB	80	29	2
DKANSAM			E	PDS	FB	80	7	5
DKANWENU			S	PDS	FB	80	73	45
DKOMHELP			U	PDS	FB	80	56	261
DKOMPROC			U	PDS	FB	80	77	340

Figure 14 (Page 1 of 2). Storage Requirements for HKOB750 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	E	PDS	FB	80	13	15
TKANDATV	Data	Any	E	PDS	VB	6160	1	2
TKANEXEC	EXEC	Any	S	PDS	VB	255	21	15
TKANHENU	Help	Any	E	PDS	FB	80	12	13
TKANISP	CLIST	Any	S	PDS	FB	80	1	2
TKANMAC	Macro	Any	E	PDS	FB	80	8	3
TKANMOD	LMOD	Any	E	PDS	U	0	121	19
TKANMODL	LMOD	Any	E	PDS	U	0	12	2
TKANMODP	LMOD	Any	E	PDSE	U	0	330	N/A
TKANMODS	LMOD	Any	E	PDS	U	0	74	56
TKANOSRC	Data	Any	S	PDS	VB	255	5	5
TKANPAR	Parm	Any	E	PDS	FB	80	1	2
TKANPKGI	Data	Any	E	PDS	FB	80	15	2
TKANSAM	Sample	Any	E	PDS	FB	80	3	3

Figure 14 (Page 2 of 2). Storage Requirements for HKOB750 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
TKANWENU	Panel	Any	S	PDS	FB	80	74	67
TKOBDATF	Data	Any	S	PDS	FB	80	2	2
TKOBHELP	Help	Any	S	PDS	FB	80	17	66
DKANCUS			E	PDS	FB	80	13	15
DKANDATV			E	PDS	VB	6160	1	2
DKANEXEC			S	PDS	VB	255	21	15
DKANHENU			E	PDS	FB	80	12	13
DKANISP			S	PDS	FB	80	1	2
DKANMAC			E	PDS	FB	80	8	3
DKANMOD			E	PDS	U	0	125	90
DKANMODL			E	PDS	U	0	12	2
DKANMODP			E	PDSE	U	0	81	N/A
DKANMODS			E	PDS	U	0	61	3
DKANOSRC			S	PDS	VB	255	5	5
DKANPAR			E	PDS	FB	80	1	2
DKANPKGI			E	PDS	FB	80	15	2
DKANSAM			E	PDS	FB	80	3	3
DKANWENU			S	PDS	FB	80	74	67
DKOBDATF			S	PDS	FB	80	2	2
DKOBHELP			S	PDS	FB	80	17	66

Figure 15 (Page 1 of 2). Storage Requirements for HKSB750 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
TKANDATV	Data	Any	E	PDS	VB	6160	6	2
TKANMOD	LMOD	Any	E	PDS	U	0	122	5
TKANMODL	LMOD	Any	E	PDS	U	0	33	11
TKANPKGI	Data	Any	E	PDS	FB	80	3	2

Figure 15 (Page 2 of 2). Storage Requirements for HKSB750 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
DKANDATV			E	PDS	VB	6160	6	2
DKANMOD			E	PDS	U	0	22	11
DKANMODL			E	PDS	U	0	33	10
DKANPKG1			E	PDS	FB	80	3	2

Figure 16. Storage Requirements for HIZD320 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
SIZDEXEC	CLIST	Any	U	PDS	FB	80	6	1
SIZDINST	JCL	Any	U	PDS	FB	80	2	1
SIZDLOAD	Samples	Any	U	PDS	U	0	80	10
SIZDMESG	CLIST	Any	U	PDS	FB	80	2	1
SIZDSAMP	Samples	Any	U	PDS	FB	80	4	3
AIZDEXEC			U	PDS	FB	80	6	1
AIZDINST			U	PDS	FB	80	2	1
AIZDLOAD			U	PDS	U	0	80	10
AIZDMESG			U	PDS	FB	80	2	1
AIZDSAMP			U	PDS	FB	80	4	3

5.3 FMIDs Deleted

Installing OMEGAMON for z/OS might result in the deletion of other FMIDs. To see which FMIDs will be deleted, examine the ++VER statement in the SMPMCS of the product.

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

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

5.4 Special Considerations

IBM OMEGAMON for z/OS 5.5.1 delivers a newer release of the HKSB750 Shared Probes FMID, however the KM5J6APP and KM5J7ACC sample jobs provided reference HKSB740 in the SELECT and FORFMID operands, please update these jobs to reflect the new HKSB750 FMID before running these jobs.

```
APPLY GROUPEXTEND
  SELECT (
    HKM5550
    HKOB750
    HKSB740 /* change to HKSB750 */
  )
FORFMID (
  HKM5550
  HKOB750
  HKSB740 /* change to HKSB750 */
)
CHECK
.
```

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.

The installation of OMEGAMON for z/OS requires the Tivoli Enterprise Monitoring Server on z/OS be installed in the CSI. Refer to the *Program Directory for IBM Tivoli Management Services on z/OS (GI11-4105)* for installation instructions of its product components.

Prior to installing OMEGAMON for z/OS, IBM recommends you review the OMEGAMON shared documentation 6.3.0 Fix Pack 2 and above, **First time deployment guide (FTU installation and tasks)**, the Planning, Configuring, and Configuration Manager topics for general planning and configuration flow. This documentation focuses on the things you will need to know for a successful installation and configuration of this product.

The OMEGAMON shared documentation, and other IBM product documentation can be found at the IBM Documentation URL listed below:

<https://www.ibm.com/docs/en/om-shared>

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

HKCI310 - UA95719
HKDS630 - UA79950 UA79951
HKLV630 - UA79952 UA79953

New DDDEFs and allocations were introduced via the service process and must be present in the CSI before the APPLY job is executed.

- PTF UJ93059 (HIZD320 FMID), requires SMP/E SMPTLOAD DDDEF, ensure that SMPTLOAD is defined in the CSI.

The following sample job is provided to make these definitions, change all occurrences of the following lowercase variables to values suitable for your installation before submitting.

```
#globalcsi - The dsname of your global CSI.  
#tzone - The name of the SMP/E target zone.  
#dzone - The name of the SMP/E distribution zone.
```

```

//SMPTLOAD JOB 'ACCOUNT INFORMATION','SMPTLOAD',
//          CLASS=A,MSGCLASS=X,MSGLEVEL=(1,1),NOTIFY=&SYSUID
//*****
//*          D e f i n e   D D D E F   E n t r i e s   *
//*****
//SMPTLOAD EXEC PGM=GIMSMP,REGION=4096K
//SMPCSI  DD DISP=OLD,DSN=#globalcsi
//SMPCNTL DD *
    SET   BDY(GLOBAL) .
    UCLIN .
    ADD DDDEF(SMPTLOAD) CYL SPACE(2,1) DIR(10)
        UNIT(SYSALLDA) .
    ENDUCL .

    SET   BDY(#tzone) .
    UCLIN .
    ADD DDDEF(SMPTLOAD) CYL SPACE(2,1) DIR(10)
        UNIT(SYSALLDA) .
    ENDUCL .

    SET   BDY(#dzone) .
    UCLIN .
    ADD DDDEF(SMPTLOAD) CYL SPACE(2,1) DIR(10)
        UNIT(SYSALLDA) .
    ENDUCL .
/*

```

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.

When OMEGAMON for z/OS is used with the IBM OMEGAMON Dashboard Edition on z/OS product, they should both be installed in the same CSI target and distribution zones. This ensures the maintenance level of the Engine and Management Server components, which are used by both products, is at the same level. If they are installed in different CSI zones, you should check to ensure the maintenance levels of the Engine and Management Server components in both zones are the same or at a compatible level. This is also true for your runtime library environments (RTE).

The PSP bucket will have the most current information and must be reviewed before installation.

6.0 Installation Instructions

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

Please note the following points:

- If you want to install OMEGAMON for z/OS into its own SMP/E environment, consult the SMP/E manuals for instructions on creating and initializing the SMPCSI and the SMP/E control data sets.
- You can use the sample jobs that are provided to perform part or all of the installation tasks. The SMP/E jobs assume that all DDDEF entries that are required for SMP/E execution have been defined in appropriate zones.

6.1 Installing OMEGAMON for z/OS

6.1.1 SMP/E Considerations for Installing OMEGAMON for z/OS

Use the SMP/E RECEIVE, APPLY, and ACCEPT commands to install this release of OMEGAMON for 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.

<i>Figure 17. SMP/E Options Subentry Values</i>		
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

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

- CSSLIB
- SCEEBND2
- SCEELIB
- SCLBSID
- SEZACMTX

Note: CALLLIBS uses the previous DDDEFs only to resolve the link-edit for OMEGAMON for z/OS. These data sets are not updated during the installation of OMEGAMON for z/OS.

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 be required to get the latest updates for the Job Generator product selection 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 z/OS Installation and Configuration Tool component of the Tivoli Management Services on z/OS product, which is a requisite of this product. This utility is enhanced through 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 Job Generator product selection 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 TKANCUS to install other products in the package.

The job generation utility can be invoked from the SMP/E target library with the low-level qualifier of TKANCUS, launch the utility by using ISPF option 6 and entering the following command.

```
ex '&gbl_target_hilev.TKANCUS'
```

Select "SMP/E-install z/OS products with Install Job Generator (JOBGEN)" from the z/OS Installation and Configuration Tool main menu.

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) that is an installation requisite for this product offering. 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. 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 originally created for the products included in OMEGAMON for z/OS. This will require you to research and tailor each of the jobs accordingly. The Relfiles and member names for these sample jobs are provided in the following tables.

The sample jobs provided expect a CSI to exist already.

Figure 18. Sample Installation Jobs for IBM OMEGAMON for z/OS

Job Name	Job Type	Description	SMPTLIB Data Set
KM5J3ALO	ALLOCATE	Sample job to allocate target and distribution libraries	IBM.HKM5550.F18
KM5J4DDF	DDDEF	Sample job to define SMP/E DDDEFs	IBM.HKM5550.F18
KM5J5REC	RECEIVE	Sample RECEIVE job	IBM.HKM5550.F18
KM5J6APP	APPLY	Sample APPLY job	IBM.HKM5550.F18
KM5J7ACC	ACCEPT	Sample ACCEPT job	IBM.HKM5550.F18

Figure 19 (Page 1 of 2). Sample Installation Jobs for IBM Discovery Library Adapter for z/OS

Job Name	Job Type	Description	RELFILE
IZDJALLO	ALLOCATE	Sample job to allocate target and distribution libraries	IBM.HIZD320.F1
IZDJDDDF	DDDEF	Sample job to define SMP/E DDDEFs	IBM.HIZD320.F1
IZDJRECD	RECEIVE	Sample RECEIVE job	IBM.HIZD320.F1

Figure 19 (Page 2 of 2). Sample Installation Jobs for IBM Discovery Library Adapter for z/OS

Job Name	Job Type	Description	RELFILE
IZDJAPP	APPLY	Sample APPLY job	IBM.HIZD320.F1
IZDJACC	ACCEPT	Sample ACCEPT job	IBM.HIZD320.F1

The installation of OMEGAMON for z/OS requires the Tivoli Enterprise Monitoring Server on z/OS be installed in the CSI. Refer to the *Program Directory for IBM Tivoli Management Services on z/OS (GI11-4105)* for installation instructions of its product components.

You can access the sample installation jobs by performing an SMP/E RECEIVE (refer to 6.1.8, “Perform SMP/E RECEIVE” on page 32) then copy the jobs from the SMPTLIB data sets to a work data for editing and submission.

You can also copy the sample installation jobs from the product files by submitting the following job. 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,REGION=4M
//SYSPRINT DD SYSOUT=*
//IN DD DSN=IBM.fmid.relfile,UNIT=SYSALLDA,DISP=SHR,
// VOL=SER=filevol
//OUT DD DSNAME=jcl-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=IN,OUTDD=OUT
SELECT MEMBER=(member-names)
/*
```

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

IN:

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.

6.1.6 Allocate SMP/E Target and Distribution Libraries

Edit and submit the generated job KCIJGALO to allocate the SMP/E target and distribution libraries for OMEGAMON for z/OS.

If you are not using the generated allocation job, select the sample allocation job for each of the products included. 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

6.1.7 Create DDDEF Entries

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

If you are not using the generated job, select the sample DDDEF job for each of the products included. 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

6.1.8 Perform SMP/E RECEIVE

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

You can also choose to edit and submit the generated KCIJGREC job or select the sample job for each of the products included to perform the SMP/E RECEIVE for OMEGAMON for z/OS. Consult the instructions in the sample job for more information.

Expected Return Codes and Messages: 0

6.1.9 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 OMEGAMON for z/OS.

If you are not using the generated job, select the sample APPLY job for each of the products included. 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/holddata/390holddata.html>. The latest HOLDDATA may identify HIPER and

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

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

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

Here are sample APPLY commands:

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 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 HOLDDs 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 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.

```
GIM23913W LINK-EDIT PROCESSING FOR SYSMOD aaaaaaa
        WAS SUCCESSFUL FOR MODULE bbbbbbbb IN
        LMOD ccccccc IN THE dddddddd 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 20 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.

Figure 20. SMP/E Elements Not Selected

KDFHSMGR	KDFMACON	KDFMMGR	KDFSPINI
----------	----------	---------	----------

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.

6.1.10 Perform SMP/E ACCEPT

Edit and submit the generated job KCIJGACC to perform an SMP/E ACCEPT CHECK for OMEGAMON for z/OS.

If you are not using the generated job, select the sample ACCEPT job for each of the products included. 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 *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 documentation 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 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 20 on page 34 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 OMEGAMON for z/OS

Prior to activating OMEGAMON for z/OS, IBM recommends you review the Quick Start Guide, **First time deployment guide (FTU installation and configuration tasks)**, as well as the Planning and Configuring topics if you have not already done so. This documentation focuses on the things you will need to know for a successful installation and configuration of this product.

The *Planning and Configuration Guide* documentation contains the step-by-step procedures to activate the functions of OMEGAMON for z/OS.

This documentation can be found online at:

<https://www.ibm.com/docs/en/omegamon-for-zos>

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 to obtain the current "PSP Bucket".

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