Program Directory for

IBM Tivoli OMEGAMON DE on z/OS

V4.2.0

Program Number 5698-B40

for Use with
z/OS

Document Date: September 2009

GI11-8946-01

Note

Before using this information and the product it supports, be sure to read the general information under 7.0, “Notices” on page 29.

Contents

Figures

1.0 Introduction

This program directory is intended for system programmers who are responsible for program installation and maintenance. It contains information about the material and procedures associated with the installation of IBM Tivoli OMEGAMON DE on z/OS. This publication refers to IBM Tivoli OMEGAMON DE on z/OS as OMEGAMON DE on z/OS.

The Program Directory contains the following sections:

- 2.0, “Program Materials” on page 4 identifies the basic and optional program materials and documentation for OMEGAMON DE on z/OS.
- 3.0, “Program Support” on page 6 describes the IBM support available for OMEGAMON DE 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 OMEGAMON DE on z/OS.
- 5.0, “Installation Requirements and Considerations” on page 9 identifies the resources and considerations that are required for installing and using OMEGAMON DE on z/OS.
- 6.0, “Installation Instructions” on page 20 provides detailed installation instructions for OMEGAMON DE on z/OS. It also describes the procedures for activating the functions of OMEGAMON DE on z/OS, or refers to appropriate publications.

Before installing OMEGAMON DE 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.

OMEGAMON DE 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 that is provided with your order. All service and HOLDDATA for OMEGAMON DE on z/OS are included on the CBPDO tape.

Do not use this program directory if you install OMEGAMON DE on z/OS with a SystemPac or ServerPac. When you use these offerings, use the jobs and documentation supplied with the offering. This documentation provides references to specific sections of the Program Directory as required.

1.1 OMEGAMON DE on z/OS Description

OMEGAMON DE on z/OS is a package of component products that provide an integrated view of your mainframe enterprise and the power to take corrective action when problems threaten system and application availability. The components in the package include OMEGAVIEW and OMEGAVIEW II for the Enterprise.

Tivoli OMEGAMON DE is a Tivoli Enterprise Portal feature that gives you a process-driven view of your enterprise. It enables you to pull together information from disparate sources, including a range of operating systems, servers, databases, mainframes, and network and Web components, in a single workspace and provides a single point of control from which you can manage all the resources in your enterprise.

Tivoli OMEGAMON DE extends the capabilities of Tivoli OMEGAMON XE to include:

Enterprise-specific Navigator views

- The Navigator physical view shows the hierarchy of managed resources by operating platform and type of Tivoli OMEGAMON XE agent. The Navigator business view offered by Tivoli OMEGAMON DE shows the hierarchy of any managed objects. You can define Navigator views for any logical grouping, such as a business process or a departmental hierarchy.

Views of data from different types of monitoring agents in one workspace

- In a single workspace, you can build a table or chart with data from one type of monitoring agent, and another table or chart with data from a different agent. Within that workspace, you can show views from as many different agent types as are included on that branch of the Navigator.

Linking application workspaces

- You can define a link from a workspace associated with one type of monitoring agent to a workspace associated with another type of agent.

Automation policies

- The Workflow editor enables you to design sets of automated system processes, called policies, to resolve system problems. A policy performs actions, schedules work to be performed by users, or automates manual tasks.

OMEGAVIEW and OMEGAVIEW II for the Enterprise

OMEGAVIEW aggregates, into a single Common User Access (CUA) view, the status information from the OMEGAMON II components of these IBM Tivoli OMEGAMON XE products:

- Tivoli OMEGAMON XE for CICS on z/OS
- Tivoli OMEGAMON XE for DB2 on z/OS
- Tivoli OMEGAMON XE for IMS on z/OS

  - Tivoli OMEGAMON XE for Mainframe Networks
  - Tivoli OMEGAMON XE for Storage on z/OS
  - Tivoli OMEGAMON XE on z/OS

  You can use the OMEGAVIEW reports, displayed on a 3270 terminal, to monitor and manage your mainframe computing enterprise.

- OMEGAVIEW II for the Enterprise integrates status information into the Tivoli OMEGAMON XE architecture, allowing situations and policies to be created against a number of managed systems.
  - OMEGAMON sessions
  - User-defined IBM Tivoli AF/OPERATOR automation scripts
  - User-defined IBM Tivoli OMEGACENTER Gateway probes
  - Status items defined in the OMEGAVIEW Status Item Manager

  The OMEGAVIEW status data manager sends status information to the Tivoli Enterprise Monitoring Server, which in turn sends the information to Tivoli Enterprise Portal Server for display in its Java-based client interface. For detailed information about the Tivoli OMEGAMON XE products, Tivoli Enterprise Monitoring Server, Tivoli Enterprise Portal, see the books on the OMEGAMON Platform Documentation CD.

1.2 OMEGAMON DE on z/OS FMIDs

OMEGAMON DE on z/OS consists of the following FMIDs:

HKWO310
HKMV310
JKWO420

2.0 Program Materials

An IBM program is identified by a program number. The program number for OMEGAMON DE on z/OS is 5698-B40.

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

The program announcement material describes the features supported by OMEGAMON DE 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 magnetic tape or downloadable files. This program is in SMP/E RELFILE format and is installed by using SMP/E. See 6.0, “Installation Instructions” on page 20 for more information about how to install the program.

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

2.2 Optional Machine-Readable Material

No optional machine-readable materials are provided for OMEGAMON DE on z/OS.

2.3 Program Publications

The following sections identify the basic and optional publications for OMEGAMON DE on z/OS.

2.3.1 Basic Program Publications

Figure 1 identifies the basic unlicensed program publications for OMEGAMON DE on z/OS. One copy of each of these publications is included when you order the basic materials for OMEGAMON DE on z/OS. You can print additional copies when electronic publications are available using the softcopy url provided in the Product Announcement letter or from:

http://www.ibm.com/shop/publications/order

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

Figure 1. Basic Material: Unlicensed Publications	
Publication Title	**Form Number**
OMEGAVIEW and OMEGAVIEW II for the Enterprise Release Notes	GI11-4085
Configuring OMEGAVIEW and OMEGAVIEW II for the Enterprise	SC32-9426
Using OMEGAVIEW and OMEGAVIEW II for the Enterprise	SC32-9427

The OMEGAMON DE 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

2.3.2 Optional Program Publications

No optional publications are provided for OMEGAMON DE on z/OS.

2.4 Program Source Materials

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

2.5 Publications Useful During Installation

You might want to use the publications listed in Figure 2 during the installation of OMEGAMON DE on z/OS. To order copies, contact your IBM representative or visit the IBM Publications Center at http://www.ibm.com/shop/publications/order.

Figure 2. Publications Useful During Installation	
Publication Title	**Form Number**
IBM SMP/E for z/OS User's Guide	SA22-7773
IBM SMP/E for z/OS Commands	SA22-7771
IBM SMP/E for z/OS Reference	SA22-7772
IBM SMP/E for z/OS Messages, Codes, and Diagnosis	GA22-7770

3.0 Program Support

This section describes the IBM support available for OMEGAMON DE 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 OMEGAMON DE on z/OS, make sure that you have reviewed the current Preventive Service Planning (PSP) information. The PSP Buckets maintain current lists (which have been identified since the package was created) of any recommended or required service for the installation of this package. This service includes software PSP information that contains HIPER and required PTFs against the base release.

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

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

https://techsupport.services.ibm.com/server/390.psp390

For program support, access the Software Support Web site at http://www.ibm.com/software/support/.

PSP Buckets are identified by UPGRADEs, which specify product levels; and SUBSETs, which specify the FMIDs for a product level. The UPGRADE and SUBSET values for OMEGAMON DE on z/OS are included in Figure 3.

This product has an installation requirement for IBM Tivoli Management Services on z/OS V6.2.1 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
OMXEWO420	HKWO310	OMEGAVIEW II for the Enterprise
	HKMV310	OMEGAVIEW
	JKWO420	OMEGAMON DE on z/OS, install

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 OMEGAMON DE on z/OS.

Figure 4. Component IDs

FMID	COMPID	Component Name	RETAIN Release
HKWO310	5608A4200	OMEGAVIEW II for the Enterprise	310
HKMV310	5608A1200	OMEGAVIEW	310
JKWO420	5608A4200	OMEGAMON DE on z/OS, install	420

4.0 Program and Service Level Information

This section identifies the program and relevant service levels of OMEGAMON DE 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 OMEGAMON DE on z/OS have been incorporated into this release. They are listed by FMID.

- FMID HKWO310

  OA09436

- FMID HKMV310

  OA09452

4.2 Service Level Information

PTFs containing APAR fixes against this release of OMEGAMON DE on z/OS have been incorporated into this release. They are listed by FMID.

- FMID HKWO310

  UA29712 UA31590

- FMID HKMV310

  UA22644 UA23308 UA24285 UA25506 UA29206 UA29548 UA31539 UA32251
  UA33025 UA34566 UA37312

5.0 Installation Requirements and Considerations

The following sections identify the system requirements for installing and activating OMEGAMON DE 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 OMEGAMON DE 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 this product's shipment?
Any **one** of the following:				
5694-A01	z/OS	V01.08.00 or higher	N/A	No
5655-G44	SMP/E for z/OS	V03.04.00 or higher	N/A	No

5.2 Target System Requirements

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

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

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

Figure 6. Target System Mandatory Installation Requisites

Program Number	Product Name	Minimum VRM	Minimum Service Level will satisfy these APARs	Included in this product's shipment?
5694-A01	z/OS	V01.08.00 or higher	N/A	No
5698-A79	IBM Tivoli Management Services on z/OS	V06.02.01 or higher	N/A	No

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 DE on z/OS has no conditional installation requisites.

5.2.2.2 Operational Requisites

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

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

Figure 7. Target System Mandatory Operational Requisites

Program Number	Product Name and Minimum VRM/Service Level
5694-A01	z/OS V01.08.00 or higher
5698-A79	IBM Tivoli Management Services on z/OS V06.02.01 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.

Figure 8. Target System Conditional Operational Requisites	
Program Number	**Product Name and Minimum VRM/Service Level**
One or more of the following:	
5698-A32	IBM Tivoli OMEGAMON XE for CICS on z/OS V04.01.00 or higher
5698-A34	IBM Tivoli OMEGAMON XE for IMS on z/OS V04.01.00 or higher
5698-A33	IBM Tivoli OMEGAMON XE on z/OS V04.01.00 or higher
5698-A35	IBM Tivoli OMEGAMON XE for Mainframe Networks V04.01.00 or higher
5698-A37	IBM Tivoli OMEGAMON XE for Storage on z/OS V04.01.00 or higher
5698-B23	IBM Tivoli OMEGAMON XE for Messaging on z/OS V07.00.00 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.

OMEGAMON DE 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.

OMEGAMON DE on z/OS has no negative requisites.

5.2.3 DASD Storage Requirements

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

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

Figure 9. Total DASD Space Required by OMEGAMON DE on z/OS	
Library Type	**Total Space Required in 3390 Trks**
Target	477
Distribution	478

Notes:

1. If you are installing into an existing environment that has the data sets in Figure 12 on page 15 and Figure 13 on page 16 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 6.1.6, “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 may not be changed.
   - The default block size of the data set may be changed.
   - The data set may 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:
   - The data set may not be in the LPA.
   - The data set may 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	TYPE	ORG	RECFM	LRECL	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 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	TYPE	ORG	RECFM	LRECL	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 12 and Figure 13 on page 16 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 OMEGAMON DE on z/OS must be added to the storage required by other programs having data in the same library or path.

Figure 12. Storage Requirements for OMEGAMON DE on z/OS Target Libraries

Library DDNAME	Member Type	Target Volume	TYPE	ORG	RECFM	LRECL	No. of 3390 Trks	No. of DIR Blks
TKANCUS	CLIST	Any	E	PDS	FB	80	26	16
TKANDATV	Data	Any	E	PDS	VB	6160	3	5
TKANHENU	Help	Any	E	PDS	FB	80	31	55
TKANMODL	LMOD	Any	E	PDS	U	0	121	16
TKANPAR	Data	Any	E	PDS	FB	80	2	5
TKANPENU	Panel	Any	E	PDS	FB	80	263	100
TKANPKGI	Data	Any	E	PDS	FB	80	12	6
TKANSAM	Sample	Any	E	PDS	FB	80	6	10
TKMVDATP	Data	Any	U	PDS	FB	80	11	44
TKMVDATT	Data	Any	U	PDS	FB	80	2	44

Figure 13. Storage Requirements for OMEGAMON DE on z/OS Distribution Libraries

Library DDNAME	TYPE	ORG	RECFM	LRECL	No. of 3390 Trks	No. of DIR Blks
DKANCUS	E	PDS	FB	80	26	16
DKANDATV	E	PDS	VB	6160	3	5
DKANHENU	E	PDS	FB	80	31	55
DKANMODL	E	PDS	U	0	122	14
DKANPAR	E	PDS	FB	80	2	5
DKANPENU	E	PDS	FB	80	263	100
DKANPKGI	E	PDS	FB	80	12	6
DKANSAM	E	PDS	FB	80	6	10
DKMVDATP	U	PDS	FB	80	11	44
DKMVDATT	U	PDS	FB	80	2	44

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 HKWO310 Libraries

Library DDNAME	Member Type	Target Volume	TYPE	ORG	RECFM	LRECL	No. of 3390 Trks	No. of DIR Blks
TKANCUS	CLIST	Any	E	PDS	FB	80	3	5
TKANDATV	Data	Any	E	PDS	VB	6160	2	3
TKANMODL	LMOD	Any	E	PDS	U	0	36	2
TKANPAR	Data	Any	E	PDS	FB	80	1	2
TKANPKGI	Data	Any	E	PDS	FB	80	3	2
DKANCUS			E	PDS	FB	80	3	5
DKANDATV			E	PDS	VB	6160	2	3
DKANMODL			E	PDS	U	0	36	2
DKANPAR			E	PDS	FB	80	1	2
DKANPKGI			E	PDS	FB	80	3	2

Figure 15. Storage Requirements for HKMV310 Libraries

Library DDNAME	Member Type	Target Volume	TYPE	ORG	RECFM	LRECL	No. of 3390 Trks	No. of DIR Blks
TKANCUS	CLIST	Any	E	PDS	FB	80	22	9
TKANDATV	Data	Any	E	PDS	VB	6160	1	2
TKANHENU	Help	Any	E	PDS	FB	80	31	55
TKANMODL	LMOD	Any	E	PDS	U	0	85	14
TKANPAR	Data	Any	E	PDS	FB	80	1	3
TKANPENU	Panel	Any	E	PDS	FB	80	263	100
TKANPKGI	Data	Any	E	PDS	FB	80	7	2
TKANSAM	Sample	Any	E	PDS	FB	80	6	10
TKMVDATP	Data	Any	U	PDS	FB	80	10	10
TKMVDATT	Data	Any	U	PDS	FB	80	2	3
DKANCUS			E	PDS	FB	80	22	9
DKANDATV			E	PDS	VB	6160	1	2
DKANHENU			E	PDS	FB	80	31	55
DKANMODL			E	PDS	U	0	86	12
DKANPAR			E	PDS	FB	80	1	3
DKANPENU			E	PDS	FB	80	263	100
DKANPKGI			E	PDS	FB	80	7	2
DKANSAM			E	PDS	FB	80	6	10
DKMVDATP			U	PDS	FB	80	10	10
DKMVDATT			U	PDS	FB	80	2	3

Figure 16. Storage Requirements for JKWO420 Libraries

Library DDNAME	Member Type	Target Volume	TYPE	ORG	RECFM	LRECL	No. of 3390 Trks	No. of DIR Blks
TKANCUS	CLIST	Any	E	PDS	FB	80	1	2
TKANPKGI	Data	Any	E	PDS	FB	80	2	2
DKANCUS			E	PDS	FB	80	1	2
DKANPKGI			E	PDS	FB	80	2	2

5.3 FMIDs Deleted

Installing OMEGAMON DE 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 OMEGAMON DE 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, see the SMP/E manuals for instructions.

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.

The installation of OMEGAMON DE on 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.

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 - UA43882 UA44822 UA45653 UA47377 UA48096
HKDS621 - UA45107 UA45711 UA48032
```

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 DE on z/OS is used with an OMEGAMON XE 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).

When the RKANPENU DD statement consists of two or more concatenated libraries, care must be taken that the libraries within the concatenation have identical attributes. Specifically if a PDS and a PDSE are concatenated, all panel members from the first library will be accessible, but members from the second library will not be accessible.

The PSP bucket will have the most current information and must be reviewed before installation. The OMEGAVIEW or OMEGAMON DE configuration document must also be reviewed for other operational considerations.

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 DE on z/OS.

Note the following information:

- If you want to install OMEGAMON DE 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 Web site to help you create an SMP/E environment.

  http://www-1.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.
- You can use the SMP/E dialogs instead of the sample jobs to accomplish the SMP/E installation steps.

6.1 Installing OMEGAMON DE on z/OS

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

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

OMEGAMON DE 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 generator utility to create a set of jobs to install the product package rather than using the sample jobs provided for each product.

The job generation utility is delivered in the installation and configuration tool component (HKCI310) of the Tivoli Management Services on z/OS product, which is a requisite of this product. This utility has been enhanced thru the maintenance stream so there is a dilemma if it is invoked from the HKCI310 Relfile. You will not have the latest product table or the UPDATE feature which allows the table to be updated dynamically. Ensure the latest maintenance (UA48096) is installed for the HKCI310 FMID to get the latest updates for the product table.

If you plan to create a new environment, you can invoke the utility from an existing environment but you should ensure it has the latest maintenance installed for the HKCI310 FMID. You can also use the utility to select and install the Tivoli Management Services on z/OS product first, which will install the HKCI310 FMID along with other FMIDs and the latest maintenance. Then you can invoke the utility from the target library TKCIINST and you should have the latest product table.

You can access the 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 'hilev.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 generator 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, 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. You should always select the appropriate version of the IBM Tivoli Management Services 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 generator eliminates the jobs that allocate and initialize the CSI.

The generator 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. 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

A recent enhancement to the utility (PTF UA44822 for HKCI310) is intended 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. 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 OMEGAMON DE 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. The sample installation jobs in Figure 18 are provided as part of the product to help you install OMEGAMON DE on z/OS.

Figure 18. Sample Installation Jobs

Job Name	Job Type	Description	RELFILE
KWOJ0ALO	ALLOCATE	Sample job to allocate target and distribution libraries	IBM.JKWO420.F2
KWOJ0DDF	DDDEF	Sample job to define SMP/E DDDEFs	IBM.JKWO420.F2
KWOJ0REC	RECEIVE	Sample RECEIVE job	IBM.JKWO420.F2
KWOJ0APP	APPLY	Sample APPLY job	IBM.JKWO420.F2
KWOJ0ACC	ACCEPT	Sample ACCEPT job	IBM.JKWO420.F2

The installation of OMEGAMON DE on 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 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 may 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.JKWO420.F2,UNIT=tunit,
//         VOL=SER=volser,LABEL=(x,SL),
//         DISP=(OLD,KEEP)
//FILEIN   DD DSN=IBM.JKWO420.F2,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=xxxxIN,OUTDD=OUT
    SELECT MEMBER=(KWOJ0ACC,KWOJ0ALO,KWOJ0APP,KWOJ0DDF,KWOJ0REC)
/*
```

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

If using TAPEIN:
- **tunit** is the unit value matching the product tape.
- **volser** is the volume serial matching the product tape.
- **x** is the tape file number where the data set name is on the tape.
- Refer to the documentation provided by CBPDO to see where IBM.JKWO420.F2 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 will be stored.
- **dasdvol** is the volume serial of the DASD device where the output data set will reside.

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

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 DE on z/OS.

If you are not using the generated allocation job, select the sample job KWOJ0ALO. 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 DE on z/OS.

If you are not using the generated job, select the sample job KWOJ0DDF. 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 DE on z/OS as part of a CBPDO, use the RCVPDO job in the CBPDO RIMLIB data set to receive the OMEGAMON DE on z/OS FMIDs, service, and HOLDDATA that are included on the CBPDO tape. For more information, see the documentation that is included in the CBPDO.

You can also choose to edit and submit the generated job KCIJGREC or the sample job KWOJ0REC to perform the SMP/E RECEIVE for OMEGAMON DE on 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

Edit and submit the generated job KCIJGAPP to perform an SMP/E APPLY CHECK for OMEGAMON DE on z/OS.

If you are not using the generated job, select the sample job KWOJ0APP 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.

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

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

Here are two methods to install FMIDs when ++HOLDs for HIPERs exist for the FMIDs that you install:

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

```
If using SMP/E V3.5 or higher:
APPLY S(fmid,fmid,...)
FORFMID(fmid,fmid,...)
SOURCEID(RSU*)
FIXCAT(IBM.ProductInstall-RequiredService)
GROUPEXTEND .

If using SMP/E V3.4 or prior:
APPLY S(fmid,fmid,...)
FORFMID(fmid,fmid,...)
SOURCEID(HIPER,RSU*)
GROUPEXTEND .
```

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

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

2. To install the FMIDs without regard for the HIPERs, you can add a BYPASS(HOLDCLASS(HIPER)) operand to the APPLY command. In this way, you can install FMIDs even though HIPER ERROR HOLDs against them still exist. Only the HIPER ERROR HOLDs are bypassed. After the FMIDs are installed, run the SMP/E REPORT ERRSYSMODS command to identify missing HIPER maintenance.

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

   This method is the quicker of the two, but requires subsequent review of the REPORT ERRSYSMODS to investigate any HIPERs. If you are running SMP/E V3.5 or higher and have received the latest HOLDDATA, you can also choose to run REPORT MISSINGFIX for Fix Category IBM.ProductInstall-RequiredService to investigate missing recommended service.

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

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

Figure 19 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 19. SMP/E Elements Not Selected

KMVEIIII	KMVSMINI	KMVVALID	KSDSLADR	KSDSLDAT	KSDSLFDR
KSDSLFND	KSDSLIDX	KSDSLINF	KSDSLRED	KWODINFO	KWOJ0ACC
KWOJ0ALO	KWOJ0APP	KWOJ0DDF	KWOJ0REC	KWOJ0SMA	KWOJ0SMI

6.1.10 Perform SMP/E ACCEPT

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

If you are not using the generated job, select the sample job KWOJ0ACC 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. This is because the SMP/E root cause analysis identifies the cause of only *errors* but not *warnings* (SMP/E treats bypassed PRE, ID, REQ, and IFREQ conditions as warnings rather than errors).

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

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 if no PTFs are being installed: 0

Figure 19 on page 27 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 DE on z/OS

The publication *Configuring OMEGAVIEW and OMEGAVIEW II for the Enterprise, SC32-9426* contains the step-by-step procedures to activate the functions of OMEGAMON DE on z/OS. This publication can be found online at:

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

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GI11-8946-01