



**Program Directory for
IBM Tivoli OMEGAMON XE for DB2
Performance Expert on z/OS**

V5.2.0

Program Number 5655-W37

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 38.

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1.0 Introduction

This program directory is intended for system programmers who are responsible for program installation and maintenance. It contains information about the material and procedures associated with the installation of IBM Tivoli OMEGAMON XE for DB2 Performance Expert on z/OS. This publication refers to IBM Tivoli OMEGAMON XE for DB2 Performance Expert on z/OS as OMEGAMON XE for DB2 PE on z/OS.

The Program Directory contains the following sections:

- 2.0, “Program Materials” on page 3 identifies the basic program materials and documentation for OMEGAMON XE for DB2 PE on z/OS.
- 3.0, “Program Support” on page 6 describes the IBM support available for OMEGAMON XE for DB2 PE 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 XE for DB2 PE 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 XE for DB2 PE on z/OS.
- 6.0, “Installation Instructions” on page 24 provides detailed installation instructions for OMEGAMON XE for DB2 PE on z/OS. It also describes the procedures for activating the functions of OMEGAMON XE for DB2 PE on z/OS, or refers to appropriate publications.

Before installing OMEGAMON XE for DB2 PE 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 XE for DB2 PE on z/OS is supplied in a Custom-Built Product Delivery Offering (CBPDO, 5751-CS3). The Program Directory that is provided in softcopy format on the CBPDO tape is identical to the hardcopy format if one was included with your order. All service and HOLDDATA for OMEGAMON XE for DB2 PE on z/OS are included on the CBPDO tape.

Do not use this program directory if you install OMEGAMON XE for DB2 PE on z/OS with a SystemPac or ServerPac. When you use one of those offerings, use the jobs and documentation supplied with the offering. The offering will point you to specific sections of this program directory as needed.

1.1 OMEGAMON XE for DB2 PE on z/OS Description

OMEGAMON XE for DB2 PE on z/OS V5.2 includes an end-to-end response time measurement capability, materializing DB2 for z/OS SQL metrics, making it IBM's most comprehensive DB2 application performance assessment tool. You can use OMEGAMON to evaluate the efficiency of, and optimize the performance of, your DB2 for z/OS database across your heterogeneous application environment. It offers all of the capabilities of IBM Tivoli OMEGAMON XE for DB2 Performance Monitor on z/OS and IBM DB2 Buffer Pool Analyzer for z/OS, in addition to its own unique capabilities. As part of the IBM Tivoli OMEGAMON family of performance monitors for key System z environments, OMEGAMON XE for DB2 PE on z/OS introduces the enhanced 3270 user interface with this release. This new user interface improves DBAs and other technical professionals' ability to monitor, analyze, and optimize the performance of DB2 databases and DB2 on z/OS applications online in real time.

1.2 OMEGAMON XE for DB2 PE on z/OS FMIDs

OMEGAMON XE for DB2 PE on z/OS consists of the following FMIDs:

- HKDB52X
- HKDB520
- HKOB700
- HPMZ520

2.0 Program Materials

An IBM program is identified by a program number. The program number for OMEGAMON XE for DB2 PE on z/OS is 5655-W37.

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

The program announcement material describes the features supported by OMEGAMON XE for DB2 PE on z/OS. Ask your IBM representative for this information if you have not already received a copy.

2.1 Basic Machine-Readable Material

The distribution medium for this program is physical media or downloadable files. This program is in SMP/E RELFILE format and is installed by using SMP/E. See 6.0, "Installation Instructions" on page 24 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 XE for DB2 PE 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 XE for DB2 PE on z/OS.

2.3 Program Publications

The following sections identify the basic publications for OMEGAMON XE for DB2 PE on z/OS.

Figure 1 identifies the basic unlicensed publications for OMEGAMON XE for DB2 PE on z/OS. Publications can be accessed at the IBM Publications Center website at <http://www.ibm.com/shop/publications/order>.

Publication Title	Form Number
<i>Quick Start Guide for the end-to-end SQL monitoring function</i>	GH12-6990
<i>Report Reference</i>	SH12-6991
<i>Report Command Reference</i>	SH12-6992
<i>Messages</i>	GH12-6993

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

Publication Title	Form Number
<i>Monitoring Performance from the OMEGAMON Classic Interface</i>	SH12-6994
<i>Monitoring Performance from Performance Expert Client</i>	SH12-6995
<i>Monitoring Performance from ISPF</i>	SH12-6996
<i>Reporting User's Guide</i>	SH12-6997
<i>Configuration and Customization</i>	GH12-6998
<i>Parameter Reference</i>	GH12-6999
<i>Buffer Pool Analyzer User's Guide</i>	SH12-7029
<i>Buffer Pool Analyzer Configuration Guide</i>	SH12-7030
<i>IBM InfoSphere Optim Performance Manager Installation Guide</i>	GC19-2934
OMEGAMON XE and Tivoli Management Services Common Publications	
<i>IBM Tivoli OMEGAMON XE Monitoring Agents on z/OS Quick Start Guide</i>	GI11-8918
<i>IBM Tivoli OMEGAMON Enhanced 3270 Interface Guide</i>	SC22-5426
<i>IBM Tivoli OMEGAMON XE and Tivoli Management Services on z/OS: Common Planning and Configuration Guide</i>	SC23-9734
<i>IBM Tivoli OMEGAMON XE and Tivoli Management Services on z/OS: Common Parameter Reference</i>	SC14-7280
<i>IBM Tivoli OMEGAMON XE and Tivoli Management Services on z/OS: PARMGEN Reference</i>	SC22-5435
<i>IBM Tivoli OMEGAMON XE and Tivoli Management Services on z/OS: Reports for Tivoli Common Reporting</i>	SC27-2304
<i>IBM Tivoli OMEGAMON XE and Tivoli Management Services on z/OS: Upgrade Guide</i>	SC27-2500

Prior to installing OMEGAMON XE for DB2 PE on z/OS, IBM recommends you review the Quick Start guide as well as the Planning and Configuration guides listed in Figure 1 on page 3.

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.

The OMEGAMON XE for DB2 PE on z/OS product manuals can be found by navigating from the Web site listed below:

<http://www.ibm.com/software/data/db2imstools/library.html>

Select DB2 for z/OS Publications under Technical documentation, which can be found in a panel on the right side of the page. This will take you to a screen where the publications are listed by product. Choose Tivoli OMEGAMON XE for DB2 Performance Expert from the Jump to Product selection box.

Other Tivoli product manuals can be found at the Tivoli Information Center url listed below:

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

2.4 Program Source Materials

No program source materials or viewable program listings are provided for OMEGAMON XE for DB2 PE 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 XE for DB2 PE on 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>	SA22-7773
<i>IBM SMP/E for z/OS Commands</i>	SA22-7771
<i>IBM SMP/E for z/OS Reference</i>	SA22-7772
<i>IBM SMP/E for z/OS Messages, Codes, and Diagnosis</i>	GA22-7770

3.0 Program Support

This section describes the IBM support available for OMEGAMON XE for DB2 PE 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 XE for DB2 PE on z/OS, make sure that you have reviewed the current Preventive Service Planning (PSP) information. Review the PSP Bucket for General Information, Installation Documentation, and the Cross Product Dependencies sections. For the Recommended Service section, instead of reviewing the PSP Bucket, it is recommended you use the IBM.ProductInstall-RequiredService fix category in SMP/E to ensure you have all the recommended service installed. Use the **FIXCAT(IBM.ProductInstall-RequiredService)** operand on the **APPLY CHECK command**. See 6.1.11, "Perform SMP/E APPLY" on page 31 for a sample APPLY command.

If you obtained OMEGAMON XE for DB2 PE on z/OS as part of a CBPDO, HOLDDATA is included.

If the CBPDO for OMEGAMON XE for DB2 PE on z/OS is older than two weeks by the time you install the product materials, you can obtain the latest PSP Bucket information by going to the following website:

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

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

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

PSP Buckets are identified by UPGRADEs, which specify product levels; and SUBSETs, which specify the FMIDs for a product level. The UPGRADE and SUBSET values for OMEGAMON XE for DB2 PE on z/OS are included in Figure 3 on page 7.

This product has an installation requirement for IBM Tivoli Management Services on z/OS V6.2.3 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.

<i>Figure 3. PSP Upgrade and Subset ID</i>		
UPGRADE	SUBSET	Description
5655W37	HKDB52X	OMEGAMON XE for DB2 PE License Key
	HKDB520	OMEGAMON XE for DB2 PE BASE
	HKOB700/1220	OMNIMON Base
	HPMZ520	IBM InfoSphere Optim Data Tools Runtime Client

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 XE for DB2 PE on z/OS.

<i>Figure 4. Component IDs</i>			
FMID	COMPID	Component Name	RETAIN Release
HKDB52X	5655OPE00	OMEGAMON XE for DB2 PE License Key	52X
HKDB520	5655OPE00	OMEGAMON XE for DB2 PE BASE	520
HKOB700	5608A41OB	OMNIMON Base	700
HPMZ520	5724Y9401	IBM InfoSphere Optim Data Tools Runtime Client	520

4.0 Program and Service Level Information

This section identifies the program and relevant service levels of OMEGAMON XE for DB2 PE 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.

One of the program FMIDs for OMEGAMON XE for DB2 PE on z/OS was updated to a new service level (1220) in May 2012. Refer to 4.2, "Service Level Information" for details.

4.1 Program Level Information

The following APAR fixes against previous releases of components included with OMEGAMON XE for DB2 PE on z/OS have been incorporated into this release. They are listed by FMID.

- FMID HKDB520

PM35475 PM37041 PM52174 PM53218 PM57146 PM57463 PM58589 PM59752
PM60459 PM61114 PM62553 PM62653 PM63196 PM63570 PM63664 PM64078
PM64708 PM65229 PM65241 PM65243 PM65348 PM65448 PM65736 PM66261
PM66586 PM67040 PM67047 PM67062 PM67066 PM67068 PM67071 PM67072
PM67158 PM67170 PM67398 PM67774 PM67779 PM68443 PM68500 PM68644
PM68650 PM68880 PM70520 PM70523 PM71020 PM71024 PM71108 PM71782
PM73940 PM74385 PM74809 PM75393 PM76521 PM76616 PM76876 PM77166
PM77873 PM78025 PM78323 PM80113 PM80739 PM80847 PM80977 PM81053
PM81181 PM82353 PM82479 PM82791 PM82817 PM83029 PM83612 PM84049
PM84133 PM84155 PM84768 PM84911 PM84928 PM85025 PM85145 PM85863
PM86651 PM86865 PM87384 PM88212 PM88659 PM89304 PM89963 PM91050
PM91191 PM91604

- FMID HKOB700

0A27272 0A27877 0A27970 0A28103 0A28425 0A28444 0A28724 0A28740
0A29081 0A29294 0A29503 0A30210 0A30669 0A30725 0A30730 0A31413
0A31688 0A31815 0A31937 0A31981 0A32129 0A32140 0A32633 0A33159
0A33889 0A34880 0A35610 0A35624 0A37536 0A37766 0A37926

4.2 Service Level Information

PTFs containing APAR fixes against one of the FMIDs in this release of OMEGAMON XE for DB2 PE on z/OS are incorporated into this product package. They are listed by FMID.

- FMID HKOB700

UA64253 UA65123

5.0 Installation Requirements and Considerations

The following sections identify the system requirements for installing and activating OMEGAMON XE for DB2 PE 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 XE for DB2 PE on z/OS.

5.1.1 Machine Requirements

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

5.1.2 Programming Requirements

Figure 5. Driving System Software Requirements

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

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

The IBM InfoSphere Optim Data Tools Runtime Client component is installed into a file system, either HFS or zFS. Before installing this component, you must ensure that the target system file system data sets are available for processing on the driving system. OMVS must be active on the driving system and the target system file system data sets must be mounted on the driving system.

If you plan to install this component in a zFS file system, this requires that zFS be active on the driving system. Information on activating and using zFS can be found in z/OS Distributed File Service zSeries File System Administration, SC24-5989.

5.2 Target System Requirements

This section describes the environment of the target system required to install and use OMEGAMON XE for DB2 PE on z/OS.

OMEGAMON XE for DB2 PE on z/OS installs in the z/OS (Z038) SREL.

5.2.1 Machine Requirements

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

5.2.2 Programming Requirements

5.2.2.1 Installation Requisites

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

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

Figure 6. Target System Mandatory Installation Requisites

Program Number	Product Name	Minimum VRM	Minimum Service Level will satisfy these APARs	Included in the shipped product?
5694-A01	z/OS	V01.12.00	N/A	No
5650-ZOS	z/OS	V02.01.00	N/A	No
5698-A79	IBM Tivoli Management Services on z/OS	V06.02.03	N/A	No

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

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

OMEGAMON XE for DB2 PE on z/OS has no conditional installation requisites.

5.2.2.2 Operational Requisites

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

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

Figure 7. Target System Mandatory Operational Requisites

Program Number	Product Name and Minimum VRM/Service Level
5694-A01	z/OS V01.12.00 or higher
5698-A79	IBM Tivoli Management Services on z/OS V06.02.03 or higher
Any one of the following:	
5635-DB2	IBM DB2 for z/OS V09.01.00
5605-DB2	IBM DB2 for z/OS V10.01.00
5615-DB2	IBM DB2 for z/OS V11.00.00
5697-P12	IBM DB2 Value Unit Edition V09.01.00
5697-P31	IBM DB2 Value Unit Edition V10.01.00
5697-P43	IBM DB2 Value Unit Edition V11.00.00

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.

<i>Figure 8. Target System Conditional Operational Requisites</i>	
Program Number	Product Name and Minimum VRM/Service Level
<i>One or more of the following:</i>	
5655-M15	CICS Transaction Server for z/OS V03.01.00 or higher
5655-S97	CICS Transaction Server for z/OS V04.01.00 or higher
5655-Y04	CICS Transaction Server for z/OS V05.01.00
5635-A02	IBM IMS V11.01.00
5635-A03	IBM IMS V12.01.00

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 XE for DB2 PE 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 XE for DB2 PE on z/OS has no negative requisites.

5.2.3 DASD Storage Requirements

OMEGAMON XE for DB2 PE 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.

<i>Figure 9 (Page 1 of 2). Total DASD Space Required by OMEGAMON XE for DB2 PE on z/OS</i>	
Library Type	Total Space Required in 3390 Trks
Target	3054
Distribution	3219

Figure 9 (Page 2 of 2). Total DASD Space Required by OMEGAMON XE for DB2 PE on z/OS

Library Type	Total Space Required in 3390 Trks
File System	200

Notes:

1. If you are installing into an existing environment that has the data sets in Figure 12 on page 15 and Figure 14 on page 17 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 28.

4. Abbreviations used for the file system path type are as follows.

- N** New path, created by this product.
- X** Path created by this product, but might already exist from a previous release.
- P** Previously existing path, created by another product.

5. 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.

6. 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.

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

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

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

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

Library DDNAME	T Y P E	O R G A N I Z A T I O N	R E C O R D S	L E N G T H	Prim No. of Trks 3390	Sec No. of Trks 3390	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 on page 15. Check the space and directory block allocation and reallocate the data sets, if necessary.

Figure 11. Storage Requirements for SMP/E Data Sets

Library DDNAME	T Y P E	O R G M	R E C F M	L R E C L	Prim No. of 3390 Trks	Sec No. of 3390 Trks	No. of DIR Blks
SMPLTS	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 14 on page 17 describe the target and distribution libraries and file system paths 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 18 for more information.

The storage requirements of OMEGAMON XE for DB2 PE on z/OS must be added to the storage required by other programs having data in the same library or path.

Figure 12 (Page 1 of 2). Storage Requirements for OMEGAMON XE for DB2 PE on z/OS Target Libraries

Library DDNAME	Member Type	Target Volume	T Y P E	O R G M	R E C F M	L R E C L	No. of 3390 Trks	No. of DIR Blks
SEIWPKGI	Data	Any	U	PDS	FB	80	2	44
TKANCLI	CLIST	Any	S	PDS	FB	80	2	44
TKANCUS	CLIST	Any	E	PDS	FB	80	59	20
TKANDATV	Data	Any	E	PDS	VB	6160	154	3
TKANEXEC	EXEC	Any	S	PDS	VB	255	5	44
TKANHENU	Help	Any	E	PDS	FB	80	131	78
TKANISP	CLIST	Any	S	PDS	FB	80	2	44
TKANMAC	Macro	Any	E	PDS	FB	80	9	2
TKANMOD	LMOD	Any	E	PDS	U	0	892	532
TKANMODL	LMOD	Any	E	PDS	U	0	117	11
TKANMODP	LMOD	Any	S	PDSE	U	0	67	N/A

Figure 12 (Page 2 of 2). Storage Requirements for OMEGAMON XE for DB2 PE on z/OS Target Libraries

Library DDNAME	Member Type	Target Volume	T Y P E	O R G	R E C F M	L R E C L	No. of 3390 Trks	No. of DIR Blks
TKANMODS	LMOD	Any	E	PDS	U	0	61	2
TKANOSRC	Data	Any	S	PDS	VB	255	2	44
TKANPAR	Parm	Any	E	PDS	FB	80	15	3
TKANPENU	Panel	Any	E	PDS	FB	80	589	228
TKANPKGI	Data	Any	E	PDS	FB	80	48	4
TKANSAM	Sample	Any	E	PDS	FB	80	12	6
TKANSAMV	Sample	Any	S	PDS	VB	255	18	44
TKANWENU	Panel	Any	S	PDS	FB	80	64	88
TKOBDATF	Data	Any	S	PDS	FB	80	2	44
TKOBHELP	Help	Any	S	PDS	FB	80	20	176
TKO2DATA	Data	Any	S	PDS	VB	9072	8	44
TKO2DBRM	Data	Any	S	PDS	FB	80	62	44
TKO2EXEC	EXEC	Any	S	PDS	FB	80	37	44
TKO2HELP	Help	Any	S	PDS	FB	80	18	176
TKO2MENU	Message	Any	S	PDS	FB	80	8	44
TKO2PENU	Panel	Any	S	PDS	FB	80	266	748
TKO2PROC	Panel	Any	S	PDS	FB	80	185	1100
TKO2SAMP	Sample	Any	S	PDS	FB	80	170	88
TKO2SLIB	Sample	Any	S	PDS	FB	80	3	44
TKO2TENU	Table	Any	S	PDS	FB	80	10	44
TKO2WS01	Data	Any	S	PDS	VB	256	16	44

Figure 13. OMEGAMON XE for DB2 PE on z/OS File System Paths

DDNAME	T Y P E	Path Name
SEIWLIB	N	/usr/lpp/opmei/v520/lib/IBM

Figure 14 (Page 1 of 2). Storage Requirements for OMEGAMON XE for DB2 PE on z/OS Distribution Libraries

Library DDNAME	T Y P E	O R G	R E C F M	L R E C L	No. of 3390 Trks	No. of DIR Blks
AEIWLIB	U	PDS	VB	255	165	44
AEIWPKGI	U	PDS	FB	80	2	44
DKANCLI	S	PDS	FB	80	2	44
DKANCUS	E	PDS	FB	80	59	20
DKANDATV	E	PDS	VB	6160	154	3
DKANEXEC	S	PDS	VB	255	5	4
DKANHENU	E	PDS	FB	80	131	78
DKANISP	S	PDS	FB	80	2	44
DKANMAC	E	PDS	FB	80	9	2
DKANMOD	E	PDS	U	0	892	532
DKANMODL	E	PDS	U	0	117	11
DKANMODP	S	PDSE	U	0	67	N/A
DKANMODS	E	PDS	U	0	61	2
DKANOSRC	S	PDS	VB	255	2	2
DKANPAR	E	PDS	FB	80	15	3
DKANPENU	E	PDS	FB	80	589	228
DKANPKGI	E	PDS	FB	80	48	4
DKANSAM	E	PDS	FB	80	12	6
DKANSAMV	S	PDS	VB	255	18	44
DKANWENU	S	PDS	FB	80	64	88
DKOBDATF	S	PDS	FB	80	2	44
DKOBHELP	S	PDS	FB	80	20	176
DKO2DATA	S	PDS	VB	9072	8	44
DKO2DBRM	S	PDS	FB	80	62	44
DKO2EXEC	S	PDS	FB	80	37	44
DKO2HELP	S	PDS	FB	80	18	176
DKO2MENU	S	PDS	FB	80	8	44
DKO2PENU	S	PDS	FB	80	266	748
DKO2PROC	S	PDS	FB	80	185	1100

Figure 14 (Page 2 of 2). Storage Requirements for OMEGAMON XE for DB2 PE on z/OS Distribution Libraries

Library DDNAME	T Y P E	O R G	R E C F M	L R E C L	No. of 3390 Trks	No. of DIR Blks
DKO2SAMP	S	PDS	FB	80	170	88
DKO2SLIB	S	PDS	FB	80	3	44
DKO2TENU	S	PDS	FB	80	10	44
DKO2WS01	S	PDS	VB	256	16	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 15. Storage Requirements for HKDB52X 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	2	1
TKANMOD	LMOD	Any	E	PDS	U	0	1	1
TKANPKGI	Data	Any	E	PDS	FB	80	4	2
DKANCUS			E	PDS	FB	80	2	1
DKANMOD			E	PDS	U	0	1	1
DKANPKGI			E	PDS	FB	80	4	2

Figure 16 (Page 1 of 3). Storage Requirements for HKDB520 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	2	1
TKANCUS	CLIST	Any	E	PDS	FB	80	44	5
TKANDATV	Data	Any	E	PDS	VB	6160	154	3
TKANEXEC	EXEC	Any	S	PDS	VB	255	3	3

Figure 16 (Page 2 of 3). Storage Requirements for HKDB520 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
TKANHENU	Help	Any	E	PDS	FB	80	129	77
TKANMOD	LMOD	Any	E	PDS	U	0	792	448
TKANMODL	LMOD	Any	E	PDS	U	0	108	10
TKANPAR	Parm	Any	E	PDS	FB	80	13	2
TKANPENU	Panel	Any	E	PDS	FB	80	589	228
TKANPKGI	Data	Any	E	PDS	FB	80	34	1
TKANSAM	Sample	Any	E	PDS	FB	80	8	4
TKANSAMV	Sample	Any	S	PDS	VB	255	16	18
TKANWENU	Panel	Any	S	PDS	FB	80	52	36
TKO2DATA	Data	Any	S	PDS	VB	9072	7	1
TKO2DBRM	Data	Any	S	PDS	FB	80	54	23
TKO2EXEC	EXEC	Any	S	PDS	FB	80	33	8
TKO2HELP	Help	Any	S	PDS	FB	80	16	103
TKO2MENU	Message	Any	S	PDS	FB	80	7	19
TKO2PENU	Panel	Any	S	PDS	FB	80	232	518
TKO2PROC	Panel	Any	S	PDS	FB	80	161	759
TKO2SAMP	Sample	Any	S	PDS	FB	80	148	45
TKO2SLIB	Sample	Any	S	PDS	FB	80	3	3
TKO2TENU	Table	Any	S	PDS	FB	80	9	3
TKO2WS01	Data	Any	S	PDS	VB	256	14	3
DKANCLI			S	PDS	FB	80	2	1
DKANCUS			E	PDS	FB	80	44	5
DKANDATV			E	PDS	VB	6160	154	3
DKANEXEC			S	PDS	VB	255	3	3
DKANHENU			E	PDS	FB	80	129	77
DKANMOD			E	PDS	U	0	792	448
DKANMODL			E	PDS	U	0	108	10
DKANPAR			E	PDS	FB	80	13	2
DKANPENU			E	PDS	FB	80	589	228

Figure 16 (Page 3 of 3). Storage Requirements for HKDB520 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
DKANPKGI			E	PDS	FB	80	34	1
DKANSAM			E	PDS	FB	80	8	4
DKANSAMV			S	PDS	VB	255	16	18
DKANWENU			S	PDS	FB	80	52	36
DKO2DATA			S	PDS	VB	9072	7	1
DKO2DBRM			S	PDS	FB	80	54	23
DKO2EXEC			S	PDS	FB	80	33	8
DKO2HELP			S	PDS	FB	80	16	103
DKO2MENU			S	PDS	FB	80	7	19
DKO2PENU			S	PDS	FB	80	232	518
DKO2PROC			S	PDS	FB	80	161	759
DKO2SAMP			S	PDS	FB	80	148	45
DKO2SLIB			S	PDS	FB	80	3	3
DKO2TENU			S	PDS	FB	80	9	3
DKO2WS01			S	PDS	VB	256	14	3

Figure 17 (Page 1 of 2). Storage Requirements for HKOB700 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	14
TKANEXEC	EXEC	Any	S	PDS	VB	255	2	1
TKANHENU	Help	Any	E	PDS	FB	80	2	1
TKANISP	CLIST	Any	S	PDS	FB	80	2	1
TKANMAC	Macro	Any	E	PDS	FB	80	9	2
TKANMOD	LMOD	Any	E	PDS	U	0	99	83
TKANMODL	LMOD	Any	E	PDS	U	0	9	1
TKANMODP	LMOD	Any	S	PDSE	U	0	59	N/A
TKANMODS	LMOD	Any	E	PDS	U	0	61	2

Figure 17 (Page 2 of 2). Storage Requirements for HKOB700 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
TKANOSRC	Data	Any	S	PDS	VB	255	2	2
TKANPAR	Parm	Any	E	PDS	FB	80	2	1
TKANPKGI	Data	Any	E	PDS	FB	80	10	1
TKANSAM	Sample	Any	E	PDS	FB	80	4	2
TKANWENU	Panel	Any	S	PDS	FB	80	4	6
TKOBDATF	Data	Any	S	PDS	FB	80	2	1
TKOBHELP	Help	Any	S	PDS	FB	80	18	100
DKANCUS			E	PDS	FB	80	13	14
DKANEXEC			S	PDS	VB	255	2	1
DKANHENU			E	PDS	FB	80	2	1
DKANISP			S	PDS	FB	80	2	1
DKANMAC			E	PDS	FB	80	9	2
DKANMOD			E	PDS	U	0	99	83
DKANMODL			E	PDS	U	0	9	1
DKANMODP			S	PDSE	U	0	59	N/A
DKANMODS			E	PDS	U	0	61	2
DKANOSRC			S	PDS	VB	255	2	2
DKANPAR			E	PDS	FB	80	2	1
DKANPKGI			E	PDS	FB	80	10	1
DKANSAM			E	PDS	FB	80	4	2
DKANWENU			S	PDS	FB	80	4	6
DKOBDATF			S	PDS	FB	80	2	1
DKOBHELP			S	PDS	FB	80	18	100

Figure 18 (Page 1 of 2). Storage Requirements for HPMZ520 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
SEIWPKGI	Data	Any	U	PDS	FB	80	2	1

Figure 18 (Page 2 of 2). Storage Requirements for HPMZ520 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
AEIWLIB			U	PDS	VB	255	144	1
AEIWPKGI			U	PDS	FB	80	2	1

5.3 FMIDs Deleted

Installing OMEGAMON XE for DB2 PE 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 XE for DB2 PE on z/OS into separate SMP/E target and distribution zones.

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

5.4 Special Considerations

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

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

The installation of OMEGAMON XE for DB2 PE 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 - UA69076
 HKDS623 - UA64468 UA64469 UA66248
 HKLV623 - UA64470 UA64471
 HKOB700 - UA70618

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.
- If you want OMEGAMON XE for DB2 PE on z/OS and the Data Studio Workbench feature of DB2 Accessories Suite to coexist, ensure they are installed in different CSI target zones. Then separate run-time environments of OMEGAMON XE for DB2 PE and Data Studio Workbench can be configured to coexist in a given LPAR.

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 XE for DB2 PE on z/OS.

Please note the following points:

- If you want to install OMEGAMON XE for DB2 PE on z/OS into its own SMP/E environment, consult the SMP/E manuals for instructions on creating and initializing the SMP/CSI and the SMP/E control data sets. Additionally, to assist you in doing this, IBM has provided samples at the following Website to help you create an SMP/E environment.

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

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

6.1 Installing OMEGAMON XE for DB2 PE on z/OS

6.1.1 SMP/E Considerations for Installing OMEGAMON XE for DB2 PE on z/OS

Use the SMP/E RECEIVE, APPLY, and ACCEPT commands to install this release of OMEGAMON XE for DB2 PE on z/OS.

6.1.2 SMP/E Options Subentry Values

The recommended values for certain SMP/E CSI subentries are shown in Figure 19. 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 19. 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 XE for DB2 PE on z/OS uses the CALLLIBS function provided in SMP/E to resolve external references during installation. When OMEGAMON XE for DB2 PE on z/OS is installed, ensure that DDDEFs exist for the following libraries:

- CSSLIB
- SCEELKED
- SCEERUN
- SDSNLOAD
- SEZACMTX

Note: The DDDEFs above are used only to resolve the link-edit for OMEGAMON XE for DB2 PE on z/OS using CALLLIBS. These data sets are not updated during the installation of OMEGAMON XE for DB2 PE on 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 have to be installed to get the latest updates for the product table. It is recommended you use this job generation utility to create a set of jobs to install the product package when installing into an existing environment rather than using the sample jobs provided for each product.

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

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

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

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

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

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

6.1.4.1 Introduction to the Job Generator

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

Processing Steps

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

Process Log

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

6.1.4.2 Product Selection

You can select one or more products from a table that will determine the set of FMIDs to install. You must select at least one product and you should always select the appropriate version of the IBM Tivoli Management Services on z/OS product (5698-A79) 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 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 XE for DB2 PE 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 20 are provided as part of the product to help you install OMEGAMON XE for DB2 PE on z/OS.

Figure 20. Sample Installation Jobs

Job Name	Job Type	Description	RELFILE
KDBX3ALO	ALLOCATE	Sample job to allocate target and distribution libraries	IBM.HKDB52X.F4
KDBX4DDF	DDDEF	Sample job to define SMP/E DDDEFs	IBM.HKDB52X.F4
KDBX5REC	RECEIVE	Sample RECEIVE job	IBM.HKDB52X.F4
KDBX6BDI	MKDIR	Sample job to invoke the supplied EIWMKDIR EXEC to allocate file system paths	IBM.HKDB52X.F4
KDBX7APP	APPLY	Sample APPLY job	IBM.HKDB52X.F4
KDBX8ACC	ACCEPT	Sample ACCEPT job	IBM.HKDB52X.F4

The installation of OMEGAMON XE for DB2 PE 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 a SMP/E RECEIVE (refer to 6.1.8, “Perform SMP/E RECEIVE” on page 29), then copy the jobs from the relfiles to a work data set for editing and submission. See Figure 20 to find the appropriate relfile data set.

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

```
//STEP1 EXEC PGM=IEBCOPY,REGION=4M
//SYSPRINT DD SYSOUT=*
//TAPEIN DD DSN=IBM.HKDB52X.F4,UNIT=tunit,
// VOL=SER=volser,LABEL=(x,SL),
// DISP=(OLD,KEEP)
//FILEIN DD DSN=IBM.HKDB52X.F4,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=(KDBX3ALO,KDBX4DDF,KDBX5REC,KDBX7APP,KDBX8ACC)
SELECT MEMBER=(KDBX6BDI)
/*
```

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

If using TAPEIN:

tunit is the unit value that matches the product tape.

volser is the volume serial that matches the product tape.

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

Refer to the documentation provided by CBPDO to see where IBM.HKDB52X.F4 is on the tape.

If using FILEIN:

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

OUT:

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

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

SYSIN:

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

6.1.6 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 XE for DB2 PE on z/OS.

If you are not using the generated allocation job, select the sample job KDBX3ALO. 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 XE for DB2 PE on z/OS.

If you are not using the generated job, select the sample job KDBX4DDF. 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 XE for DB2 PE on z/OS as part of a CBPDO, use the RCVPDO job in the CBPDO RIMLIB data set to receive the OMEGAMON XE for DB2 PE on z/OS FMIDs, service, and HOLDDATA that are included on the CBPDO package. For more information, see the documentation that is included in the CBPDO.

You can also choose to edit and submit the generated job KCIJGREC or the sample job KDBX5REC to perform the SMP/E RECEIVE for OMEGAMON XE for DB2 PE on z/OS. Consult the instructions in the sample job for more information.

Expected Return Codes and Messages: 0

6.1.9 Allocate, create and mount ZFS Files - Optional

This job allocates, creates a mountpoint, and mounts zFS data sets.

You can choose to create a new file system for this product installation by copying, editing, and submitting the JCL below. Add a job card and change all occurrences of the following lowercase variables to values suitable for your installation before submitting.

- #zfsdsn - The dsname of your zFS directory.
- #volser - The volume serial number for the DASD that will contain the new file system.
- #zfsdir - The zFS directory where this product will be installed.
The zFS directory tree is case sensitive. Ensure #zfsdir

is an absolute path name and begins with a slash (/).

```

//*****
/* ALLOCZ This step allocates your zFS data set.          *
//*****
//ALLOCZ EXEC PGM=IDCAMS
//SYSPRINT DD SYSOUT=*
//SYSIN DD *
    DEFINE CLUSTER(NAME(#zfsdsn) -
    LINEAR CYLINDERS(15 5) SHAREOPTIONS(3) VOLUMES(#volser))
/*
//*****
/* FORMAT This step formats your newly created zFS data set. *
/* When executing the IOEAGFMT program you must have      *
/* superuser authority (UID 0) or READ authority to the    *
/* SUPERUSER.FILESYS.PFSCTL profile in the UNIXPRIV class. *
//*****
//FORMAT EXEC PGM=IOEAGFMT,REGION=0M,
// PARM=(' -aggregate #zfsdsn -compat')
//STEPLIB DD DSN=IOE.SIOELMOD,DISP=SHR
//SYSPRINT DD SYSOUT=*
//*****
/* MAKEDIR This step creates the directory path for your  *
/* Mount Point                                           *
//*****
//MAKEDIR EXEC PGM=IKJEFT01
//SYSTSPRT DD SYSOUT=*
//SYSTSIN DD *
    PROFILE WTPMSG MSGID
    MKDIR '#zfsdir' MODE(7,5,5)
    PROFILE
/*
//*****
/* MOUNT This step MOUNTS your newly created zFS File System *
/* using the AGGRGROW parameter.                          *
//*****
//MOUNT EXEC PGM=IKJEFT01
//SYSTSPRT DD SYSOUT=*
//SYSPRINT DD SYSOUT=*
//SYSTSIN DD *
    MOUNT FILESYSTEM('#zfsdsn') +
    TYPE(ZFS) MODE(RDWR) PARM('AGGRGROW') +
    MOUNTPOINT('#zfsdir')
/*

```

Expected Return Codes and Messages: 0

6.1.10 Allocate File System Paths

If you are installing the IBM InfoSphere Optim Data Tools Runtime Client component, edit and submit the generated job KCIJGBDI to define the file system paths.

If you are not using the generated job, select the sample job KDBX6BDI. Edit and submit it after making appropriate changes for your environment. Consult the instructions in the sample job for more information. Consider the following items before submitting the job.

Important Notes:

1. The Relfile containing the EIWMKDIR exec must be available prior to running this job. The Relfile needed is HPMZ520.F2 and should be available after running the Receive job.
2. This job must be run before the Apply job.
3. This job must be run by a user ID that has superuser authority (UID=0) or read access to resource BPX.SUPERUSER under the FACILITY profile and superuser authority must be activated.
4. The user ID must have read access to the BPX.FILEATTR.APF resource profile in the RACF FACILITY class.
5. If you plan to create a new file system for this product, ensure it is created before submitting this job to define file system paths.
6. The file system must be in read/write mode before this job is run.
7. If you create a new file system for OMEGAMON XE for DB2 PE on z/OS, consider updating the BPXPRMxx PARMLIB member to mount the new file system at IPL time. This action can be helpful if an IPL occurs before the installation is completed.

Expected Return Codes and Messages: 0

6.1.11 Perform SMP/E APPLY

Ensure that you have the latest HOLDDATA, then edit and submit the generated job KCIJGAPP to perform an SMP/E APPLY CHECK for OMEGAMON XE for DB2 PE on z/OS.

If you are not using the generated job, select the sample job KDBX7APP 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.

Important Notes:

1. If the IBM InfoSphere Optim Data Tools Runtime Client component is being installed, the APPLY job must be run by a user ID that has superuser authority (UID=0) or read access to resource BPX.SUPERUSER under the FACILITY profile and superuser authority must be activated.
2. The user ID must also have read access to the BPX.FILEATTR.APF resource profile in the RACF FACILITY class. This is required for the script to execute successfully and maintain the APF-authorized attributes for all executables and DLLs during unpax.

3. The file system must be in read/write mode before this job is run.

The latest HOLDDATA is available through several different portals, including <http://service.software.ibm.com/holdata/390holddata.html>. The latest HOLDDATA may identify HIPER and FIXCAT APARs for the FMIDs you will be installing. An APPLY CHECK will help you determine if any HIPER or FIXCAT APARs are applicable to the FMIDs you are installing. If there are any applicable HIPER or FIXCAT APARs, the APPLY CHECK will also identify fixing PTFs that will resolve the APARs, if a fixing PTF is available.

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

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

Here are sample APPLY commands:

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

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

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

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

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

```

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

```

This method is the quicker, but requires subsequent review of the Exception SYSMOD report produced by the REPORT ERRSYSMODS command to investigate any unresolved HIPERs. If you have received the latest HOLDDATA, you can also choose to use the REPORT MISSINGFIX command and specify Fix Category IBM.ProductInstall-RequiredService to investigate missing recommended service.

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

Expected Return Codes and Messages from APPLY CHECK: 0

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

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

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

```

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

```

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

```

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

```

Expected Return Codes and Messages from APPLY: 4

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

```

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

```

```

GIM23913W LINK-EDIT PROCESSING FOR SYSMOD aaaaaaa

```

WAS SUCCESSFUL FOR MODULE bbbbbbb IN
 LMOD ccccccc IN THE ddddddd LIBRARY. THE
 RETURN CODE WAS ee. DATE yy.ddd -- TIME
 hh:mm:ss -- SEQUENCE NUMBER nnnnnn --
 SYSPRINT FILE ffffffff.

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

Figure 21 contains a list of elements that might be marked as not selected during the APPLY and ACCEPT processes. This might occur because a VERSION parameter was supplied in an FMID indicating that it contained a higher level version of the same element provided by another FMID being processed at the same time. The higher version element is selected for processing and the lower version is not selected for processing. It might also occur because maintenance is being installed at the same time as the FMIDs.

<i>Figure 21 (Page 1 of 2). SMP/E Elements Not Selected</i>					
KCASMFM4	KCCIDC	KCCTAB	KCNSSAM2	KIAIANL5	KIAMDCL5
KOBABOUT	KOBACERR	KOBAG2	KOBAUINT	KOBBASEM	KOBCATTC
KOBCBLK\$	KOBCBLK@	KOBCBLKQ	KOBCENV\$	KOBCENV@	KOBCENVG
KOBCENVV	KOBCFGAP	KOBCIIPM	KOBCIIRR	KOBCIOBE	KOBCIOST
KOBCJUMP	KOBCLOCK	KOBCMAP\$	KOBCMAP@	KOBCMAPI	KOBCRACF
KOBCSOC\$	KOBCSOC@	KOBCSOCK	KOBCSTIO	KOBCSTLB	KOBCSTRN
KOBCTHR\$	KOBCTHR@	KOBCTHRD	KOBCTIME	KOBCTRAC	KOBCTREE
KOBCTYPE	KOBCUA	KOBCULKS	KOBCUNIS	KOBCUXIO	KOBCVSTG
KOBCWTOL	KOBCZDIO	KOBDINFO	KOBDSPCT	KOBDVTM	KOBENUS
KOBENV#T	KOBESAIS	KOBEXCDM	KOBFRR00	KOBFSCOM	KOBGATW0
KOBGWCND	KOBGWCV\$	KOBGWCV#	KOBGWCV@	KOBGWCVA	KOBGWLPA
KOBGWOBV	KOBGWRE\$	KOBGWRE@	KOBGWREG	KOBHELP	KOBHUBID
KOBICMDM	KOBICM2M	KOBICM3M	KOBINDEX	KOBINITM	KOBINPWM
KOBINT1M	KOBIPROM	KOBLGINI	KOBLGSND	KOBLGSRV	KOBLGTBL
KOBLGWTO	KOBLISTN	KOBLOFLT	KOBLOGON	KOBMSLS	KOBMSNS
KOBM5IN1	KOBNTCBS	KOBOBVA\$	KOBOBVA@	KOBOBVAP	KOBODIL\$
KOBODIL@	KOBODILD	KOBODISC	KOBODUTL	KOBOMIOM	KOBOSPC
KOBO4SRV	KOBPDSI0	KOBPEEKT	KOBREGAP	KOBRRUI\$	KOBRRUI@
KOBRRUIA	KOBRRWK\$	KOBRRWK@	KOBRRWKR	KOBRSMGR	KOBRSMG1
KOBSAFX0	KOBSHART	KOBSHUTD	KOBSRBDM	KOBSSYSV	KOBSTART
KOBSUB#M	KOBSUBET	KOBSUB1M	KOBSUB4T	KOBTERMM	KOBTHRMT
KOBTHRSH	KOBTIMEO	KOBUICM0	KOBUICS0	KOBUIDG0	KOBUIEP0

<i>Figure 21 (Page 2 of 2). SMP/E Elements Not Selected</i>					
KOBUIFD0	KOBUIGD0	KOBUIGL0	KOBUIGO0	KOBUIGP0	KOBUIGS0
KOBUIHL0	KOBUILG0	KOBUILO0	KOBUIMC0	KOBUIMG0	KOBUIML0
KOBUIM10	KOBUIM20	KOBUIM30	KOBUIM40	KOBUIM50	KOBUIM60
KOBUIM70	KOBUINI0	KOBUINV0	KOBUIPA0	KOBUIPS0	KOBUIPT0
KOBUISC0	KOBUISD0	KOBUSERS	KOBXMZPM	KOB70CCU	KOB70CU1
KOB70DFI	KOB70SS1	KOB700CB			

After installing new function, you should perform two operations:

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

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

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

6.1.12 Perform SMP/E ACCEPT

Edit and submit the generated job KCIJGACC to perform an SMP/E ACCEPT CHECK for OMEGAMON XE for DB2 PE on z/OS.

If you are not using the generated job, select the sample job KDBX8ACC to perform an SMP/E ACCEPT CHECK. Edit and submit it after making appropriate changes for your environment. Consult the instructions in the sample job for more information.

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

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

Expected Return Codes and Messages from ACCEPT CHECK: 0

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

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

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

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

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

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

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

Expected Return Codes and Messages from ACCEPT: 4

Figure 21 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.

6.1.13 Cleaning Up Obsolete Data Sets, Paths, and DDDEFs

The following file system paths, which were created and used by the previous release of this product, are no longer used in this release. You can delete these obsolete file system paths after you delete the previous release from your system.

- #hfmdir/usr/lpp/opmei/v511/lib/IBM
- #hfmdir/usr/lpp/opmei/v511/lib
- #hfmdir/usr/lpp/opmei/v511

However, in order to keep the existing configuration file (pdq.properties) you might want to copy this file into the new "/usr/lpp/opmei/v520/lib/IBM" path before you delete the obsolete file system paths. The alternative is to create the same configuration again in the new path.

6.2 Activating OMEGAMON XE for DB2 PE on z/OS

Prior to activating OMEGAMON XE for DB2 PE on z/OS, IBM recommends you review the Quick Start guide, the PARMGEN Reference manual, as well as the Planning and Configuration guides listed in Figure 1 on page 3, if you have not already done so. These books focus on the things you will need to know for a successful installation and configuration of this product.

The publication *Configuration and Customization, GH12-6998* contains the step-by-step procedures to activate the functions of OMEGAMON XE for DB2 PE on z/OS.

These publications can be found online at:

<http://www.ibm.com/software/data/db2imstools/library.html>

Select DB2 Tools Publications under Product Publications, which can be found in a panel on the right side of the page. This will take you to a screen where the publications are listed by product. Choose Tivoli OMEGAMON XE for DB2 Performance Expert from the Jump to Product selection box.

6.2.1 File System Execution

If you mount the file system in which you have installed the IBM InfoSphere Optim Data Tools Runtime Client component in read-only mode during execution, then you do not have to take further actions.

7.0 Notices

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

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