Note!

Before using this information and the product it supports, be sure to read the general information under 7.0, “Notices” on page 23.
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1.0 Introduction

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

The program directory contains the following sections:

- 2.0, “Program Materials” on page 3 identifies the basic and optional program materials and documentation for Tivoli OMEGAMON XE on z/OS.
- 3.0, “Program Support” on page 6 describes the IBM support available for Tivoli OMEGAMON XE on z/OS.
- 4.0, “Program and Service Level Information” on page 8 lists the APARs (program level) and PTFs (service level) incorporated into Tivoli OMEGAMON XE on z/OS.
- 5.0, “Installation Requirements and Considerations” on page 9 identifies the resources and considerations required for installing and using Tivoli OMEGAMON XE on z/OS.
- 6.0, “Installation Instructions” on page 16 provides detailed installation instructions for Tivoli OMEGAMON XE on z/OS. It also describes the procedures for activating the functions of Tivoli OMEGAMON XE on z/OS, or refers to appropriate publications.

Before installing Tivoli OMEGAMON XE on z/OS, read the CBPDO Memo To Users and the CBPDO Memo To Users Extension that are supplied with this program in softcopy form, this program directory, and then keep them for future reference. Section 3.2, “Preventive Service Planning” on page 6 tells you how to find any updates to the information and procedures in this program directory.

Tivoli OMEGAMON XE on z/OS is supplied in a Custom-Built Product Delivery Offering (CBPDO, 5751-CS3). The program directory is provided in softcopy form on the CBPDO tape that is identical to the hardcopy form provided with your order. Your CBPDO contains a softcopy preventive service planning (PSP) upgrade for this product. All service and HOLDDATA for Tivoli OMEGAMON XE on z/OS are included on the CBPDO tape.

Do not use this program directory if you are installing Tivoli OMEGAMON XE on z/OS with a SystemPac or ServerPac. When using 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 Tivoli OMEGAMON XE on z/OS Description

Tivoli OMEGAMON XE on z/OS provides comprehensive performance information covering sysplex-level components, such as Workload Manager, Coupling Facility, Cross System Coupling Facility, Global Enqueue, and shared DASD as well as detailed system level information. Tivoli OMEGAMON XE on z/OS V3.1.0 integrates OMEGAMON XE for Sysplex, OMEGAMON XE for OS/390, and OMEGAMON XE for IBM Cryptographic Coprocessors into a single product. This product includes all the functionality of those three products plus new capabilities.

This new release of Tivoli OMEGAMON XE on z/OS V3.1.0 also includes the following features:

- Migration of key features from the previous OMEGAMON II for MVS product into the Tivoli OMEGAMON XE on z/OS product, including detailed CSA usage by address space and Inspect functionality
- Address space-level CPU usage times and percentages
- Enhanced system CPU utilization reporting
- Enhanced zSeries Application Assist Processor (zAAP) usage and reporting

1.2 Tivoli OMEGAMON XE on z/OS FMIDs

Tivoli OMEGAMON XE on z/OS consists of the following FMIDs (function modification identifiers):

HKM5310
HKM2550
HKCI310
HKDS360
HKET550
HKLV190
HKOB550
HKSB550
2.0 Program Materials

An IBM program is identified by a program number. The program number for Tivoli OMEGAMON XE on z/OS is 5698-A59.

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 Tivoli OMEGAMON XE 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. It is installed using SMP/E, and is in SMP/E RELFILE format. See 6.0, “Installation Instructions” on page 16 for more information about how to install the program.

Information about the physical tape for the Basic Machine-Readable Materials for Tivoli OMEGAMON XE on z/OS can be found in the CBPDO Memo To Users Extension.

2.2 Optional Machine-Readable Material

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

2.3 Program Publications

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

2.3.1 Basic Program Publications

Figure 1 identifies the basic program publications for Tivoli OMEGAMON XE on z/OS. All of these publications are on CDs and included when you order the basic materials for Tivoli OMEGAMON XE on z/OS. For additional copies, contact your IBM representative.

<table>
<thead>
<tr>
<th>Publication Title</th>
<th>Form Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBM Tivoli OMEGAMON XE on z/OS Release Notes</td>
<td>GI11-4038</td>
</tr>
<tr>
<td>Getting Started with IBM Tivoli OMEGAMON XE on z/OS</td>
<td>SC32-9491</td>
</tr>
</tbody>
</table>
The Tivoli OMEGAMON XE on z/OS Program Directory, and other Tivoli program directories can be found by following links to the product from the support Web site listed below:


2.3.2 Optional Program Publications

No optional publications are provided for Tivoli OMEGAMON XE on z/OS.
2.4 Program Source Materials

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

2.5 Publications Useful During Installation

The publications listed in Figure 2 can be useful during the installation of Tivoli OMEGAMON XE on z/OS. To order copies, contact your IBM representative or visit the IBM Publications Center at the following Web site:

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

<table>
<thead>
<tr>
<th>Publication Title</th>
<th>Form Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBM SMP/E for z/OS and OS/390 User's Guide</td>
<td>SA22-7773</td>
</tr>
<tr>
<td>IBM SMP/E for z/OS and OS/390 Commands</td>
<td>SA22-7771</td>
</tr>
<tr>
<td>IBM SMP/E for z/OS and OS/390 Reference</td>
<td>SA22-7772</td>
</tr>
<tr>
<td>IBM SMP/E for z/OS and OS/390 Messages, Codes, and Diagnosis</td>
<td>GA22-7770</td>
</tr>
</tbody>
</table>
3.0 Program Support

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

3.1 Program Services

Contact your IBM or Tivoli representative for specific information about available program services. You can find information in the IBM Software Support Handbook at the following Web site:

http://techsupport.services.ibm.com/guides/handbook.html

The handbook provides information about how to contact IBM Software Support, depending on the severity of your problem, and the following information:

- Registration and eligibility
- Telephone numbers and e-mail addresses, depending on the country in which you are located
- What information you need to gather before contacting support

3.2 Preventive Service Planning

Before installing Tivoli OMEGAMON XE on z/OS, you should review the current Preventive Service Planning (PSP) information. If you obtained Tivoli OMEGAMON XE on z/OS as part of a CBPDO, there is HOLDDATA and PSP information included on the CBPDO.

If the CBPDO for Tivoli OMEGAMON XE on z/OS is more than two weeks old when you install it, contact IBM Software Support or use S/390 SoftwareXcel to obtain the current PSP Bucket.

For program support, access the Software Support Web site at:

http://www-3.ibm.com/software/support/

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

<table>
<thead>
<tr>
<th>UPGRADE</th>
<th>SUBSET</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>OMXEM5310</td>
<td>HKM5310</td>
<td>OMEGAMON XE on z/OS</td>
</tr>
<tr>
<td>HKM2550</td>
<td></td>
<td>OMEGAMON II for MVS</td>
</tr>
<tr>
<td>HKCII310</td>
<td></td>
<td>Configuration Assistance Tool</td>
</tr>
<tr>
<td>HKDS360</td>
<td></td>
<td>Candle Management Server on z/OS</td>
</tr>
</tbody>
</table>
3.3 Statement of Support Procedures

Report any difficulties you have using this program to IBM Software Support. If an APAR is required, they will provide the address to which any needed documentation can be sent.

Figure 4 identifies the component IDs (COMPID) for Tivoli OMEGAMON XE on z/OS.

---

**Figure 3 (Page 2 of 2). PSP Upgrade and Subset ID**

<table>
<thead>
<tr>
<th>UPGRADE</th>
<th>SUBSET</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HKET550</td>
<td></td>
<td>End-To-End</td>
</tr>
<tr>
<td>HKLV190</td>
<td></td>
<td>CT/Engine</td>
</tr>
<tr>
<td>HKOB550</td>
<td></td>
<td>OMNIMON Base</td>
</tr>
<tr>
<td>HKS8550</td>
<td></td>
<td>Shared Probes</td>
</tr>
</tbody>
</table>

---

**Figure 4. Component IDs**

<table>
<thead>
<tr>
<th>FMID</th>
<th>COMPID</th>
<th>Component Name</th>
<th>RETAIN Release</th>
</tr>
</thead>
<tbody>
<tr>
<td>HKM5310</td>
<td>5698A5900</td>
<td>OMEGAMON XE on z/OS</td>
<td>310</td>
</tr>
<tr>
<td>HKM2550</td>
<td>5608A0400</td>
<td>OMEGAMON II for MVS</td>
<td>550</td>
</tr>
<tr>
<td>HKCI310</td>
<td>5608A41CC</td>
<td>Configuration Assistance Tool</td>
<td>310</td>
</tr>
<tr>
<td>HKDS360</td>
<td>5608A2800</td>
<td>Candle Management Server on z/OS</td>
<td>360</td>
</tr>
<tr>
<td>HKET550</td>
<td>5608A41EE</td>
<td>End-To-End</td>
<td>550</td>
</tr>
<tr>
<td>HKLV190</td>
<td>5608A41CE</td>
<td>CT/Engine</td>
<td>190</td>
</tr>
<tr>
<td>HKOB550</td>
<td>5608A41OB</td>
<td>OMNIMON Base</td>
<td>550</td>
</tr>
<tr>
<td>HKS8550</td>
<td>5608A41SP</td>
<td>Shared Probes</td>
<td>550</td>
</tr>
</tbody>
</table>
4.0 Program and Service Level Information

This section identifies the program and any relevant service levels of Tivoli OMEGAMON XE on z/OS. The program level refers to the APAR fixes incorporated into the program. The service level refers to the PTFs incorporated into the program.

4.1 Program Level Information

The following APAR fixes against previous releases of Tivoli OMEGAMON XE on z/OS have been incorporated into this release. They are listed by FMID.

- FMID HKM5310
  OA09429 OA09483 OA09668 OA10050 OA10512 OA11792 OA11827 OA12014 OA12612 OA12716
  OA12813
- FMID HKM2550
  OA09481 OA09658 OA09669 OA09720 OA09746 OA09747 OA09779 OA10044 OA10195
  OA10388 OA10454 OA10667 OA10669 OA10848 OA10876 OA10913 OA11317 OA11427 OA11466
  OA11541 OA11681 OA11705 OA11778 OA12126 OA12148 OA12268 OA12353 OA12619 OA12653
  OA12888 OA12964 OA13018 OA13323 OA13385 OA13501
- FMID HKCI310
  OA09405 OA09526 OA09527 OA09528 OA09529 OA09530 OA09531 OA09532
- FMID HKDS360
  OA09463
- FMID HKET550
  OA09472 OA09627 OA11152 OA12192
- FMID HKLV190
  OA09477 OA09583 OA09762
- FMID HKOB550
  OA09425 OA09814 OA10043 OA10324 OA10724 OA10902
- FMID HKSB550
  OA09460 OA09837 OA10187 OA12410 OA13239

4.2 Service Level Information

No PTFs against this release of Tivoli OMEGAMON XE on z/OS have been incorporated into the product tape.
5.0 Installation Requirements and Considerations

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

- **Driving system**: the system used to install the program.
- **Target system**: the system on which the program is installed.

In many cases, the same system can be used as both a driving system and a target system. However, you may want to set up a clone of your system to use as a target system by making a separate IPL-able copy of the running 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.

Some cases where two systems must be used include the following:

- When installing a new level of a product that is already installed, the new product will delete the old one. By installing onto a separate target system, you can test the new product while still keeping the old one in production.
- When installing a product that shares libraries or load modules with other products, the installation can disrupt the other products. Installing onto a test system or clone will allow you to assess these impacts without disrupting your production system.

5.1 Driving System Requirements

This section describes the environment of the driving system required to install Tivoli OMEGAMON XE 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

<table>
<thead>
<tr>
<th>Program Number</th>
<th>Product Name and Minimum VRM/Service Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any one of the following:</td>
<td></td>
</tr>
<tr>
<td>5694-A01</td>
<td>z/OS V1.4 or later</td>
</tr>
<tr>
<td>5655-G44</td>
<td>IBM SMP/E for z/OS and OS/390 V3.2.0 or later</td>
</tr>
</tbody>
</table>
5.2 Target System Requirements

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

Tivoli OMEGAMON XE 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

An installation requisite is defined as a product that is required and *must* be present or one that is not required but *should* be present on the system for the successful installation of this product.

A mandatory installation requisite identifies products that are required, without exception, or this product will *not install* on your system. This includes products specified as PREs or REqs.

<table>
<thead>
<tr>
<th>Program Number</th>
<th>Product Name and Minimum VRM/Service Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>5694-A01</td>
<td>z/OS V1.4 or later</td>
</tr>
</tbody>
</table>

A conditional installation requisite identifies products that are *not* required for successful install but may resolve such things as certain warning messages at installation time. They include products that are specified as IF REqs.

Tivoli OMEGAMON XE on z/OS has no conditional installation requisites.

5.2.2.2 Operational Requisites

An operational requisite is defined as a product that is required and *must* be present or a product that is not required but *should* be present on the system for this product to operate all or some of its functions.

A mandatory operational requisite identifies products that are required, without exception, or this product will *not operate* its basic function unless the requisite is met. This includes products specified as PREs or REqs.
A conditional operational requisite identifies products that are not required for the basic function but are needed at run time for this product to utilize specific functions. They can include products specified as IF REQs.

Tivoli OMEGAMON XE on z/OS has no conditional operational requisites.

### 5.2.2.3 Tolerance/Coexistence Requisites

A tolerance/coexistence requisite is defined as a product that must be present on a shared system. 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 at different time intervals.

Tivoli OMEGAMON XE on z/OS has no tolerance/coexistence requisites.

### 5.2.2.4 Incompatibility (Negative) Requisites

A negative requisite identifies products that must not be installed on the same system as this product.

Tivoli OMEGAMON XE on z/OS has no negative requisites.

### 5.2.3 DASD Storage Requirements

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

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

<table>
<thead>
<tr>
<th>Library Type</th>
<th>Total Space Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Target</td>
<td>5235 tracks of 3390</td>
</tr>
<tr>
<td>Distribution</td>
<td>5033 tracks of 3390</td>
</tr>
</tbody>
</table>

A conditional operational requisite identifies products that are not required for the basic function but are needed at run time for this product to utilize specific functions. They can include products specified as IF REQs.

Tivoli OMEGAMON XE on z/OS has no conditional operational requisites.

### 5.2.2.3 Tolerance/Coexistence Requisites

A tolerance/coexistence requisite is defined as a product that must be present on a shared system. 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 at different time intervals.

Tivoli OMEGAMON XE on z/OS has no tolerance/coexistence requisites.

### 5.2.2.4 Incompatibility (Negative) Requisites

A negative requisite identifies products that must not be installed on the same system as this product.

Tivoli OMEGAMON XE on z/OS has no negative requisites.

### 5.2.3 DASD Storage Requirements

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

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

<table>
<thead>
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</tr>
</thead>
<tbody>
<tr>
<td>Target</td>
<td>5235 tracks of 3390</td>
</tr>
<tr>
<td>Distribution</td>
<td>5033 tracks of 3390</td>
</tr>
</tbody>
</table>
Notes:

1. If you are installing into an existing environment that has the data sets in Figure 9 on page 13 and Figure 10 on page 14 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. The following abbreviations are used for the data set type:

   U  Unique data set, allocated by this product and used only by this product. To determine the correct storage needed for this data set, this table provides all required information; no other tables (or program directories) need to be referenced for the data set size.

   S  Shared data set, allocated by this product and used by this product and others. To determine the correct storage needed for this data set, the storage size given in this table needs to be added to 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 others. This data set is NOT allocated by this product. To determine the correct storage needed for this data set, the storage size given in this table needs to be added to other tables (perhaps in other program directories). This existing data set 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 one and reclaim the space used by the old release and any service that had been installed. You can determine whether or not 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 on the names and sizes of the required data sets, please refer to 6.1.6, “Allocate SMP/E Target and Distribution Libraries” on page 18.

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.
   - The data set may be either a PDS or a PDSE.

5. All target libraries listed have the following attributes:
   - The data set may be SMS-managed.
   - It is not required for the data set to be SMS-managed.
   - It is not required for the data set to reside on the IPL volume.
   - The values in the "Member Type" column are not necessarily the actual SMP/E element types identified in the SMPMCS.

6. All target libraries listed that 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.

Figure 9 and Figure 10 on page 14 describe the target and distribution libraries required to install Tivoli OMEGAMON XE on z/OS. The storage requirements of Tivoli OMEGAMON XE on z/OS must be added to the storage required by other programs having data in the same library or path.

**Figure 9. Storage Requirements for Tivoli OMEGAMON XE on z/OS Target Libraries**

<table>
<thead>
<tr>
<th>Library DDNAME</th>
<th>Member Type</th>
<th>Target Volume</th>
<th>RECL No. of 3390 Trks</th>
<th>LRECL No. of DIR Blks</th>
</tr>
</thead>
<tbody>
<tr>
<td>TKA CLI</td>
<td>CLIST</td>
<td>Any S PDS FB</td>
<td>80</td>
<td>2</td>
</tr>
<tr>
<td>TKANCMD</td>
<td>Data</td>
<td>Any S PDS FB</td>
<td>80</td>
<td>3</td>
</tr>
<tr>
<td>TKANCUS</td>
<td>CLIST</td>
<td>Any S PDS FB</td>
<td>80</td>
<td>1082</td>
</tr>
<tr>
<td>TKANDATV</td>
<td>Data</td>
<td>Any S PDS VB</td>
<td>6160</td>
<td>117</td>
</tr>
<tr>
<td>TKANHENU</td>
<td>Help</td>
<td>Any S PDS FB</td>
<td>80</td>
<td>133</td>
</tr>
<tr>
<td>TKANISP</td>
<td>CLIST</td>
<td>Any S PDS FB</td>
<td>80</td>
<td>3</td>
</tr>
<tr>
<td>TKANMAC</td>
<td>Macro</td>
<td>Any S PDS FB</td>
<td>80</td>
<td>23</td>
</tr>
<tr>
<td>TKANMOD</td>
<td>LMOD</td>
<td>Any S PDS U</td>
<td>0</td>
<td>664</td>
</tr>
<tr>
<td>TKANMODL</td>
<td>LMOD</td>
<td>Any S PDS U</td>
<td>0</td>
<td>1128</td>
</tr>
<tr>
<td>TKANMODS</td>
<td>LMOD</td>
<td>Any S PDS U</td>
<td>0</td>
<td>285</td>
</tr>
<tr>
<td>TKANPAR</td>
<td>Data</td>
<td>Any S PDS FB</td>
<td>80</td>
<td>14</td>
</tr>
<tr>
<td>TKANPENU</td>
<td>Panel</td>
<td>Any S PDS FB</td>
<td>80</td>
<td>1210</td>
</tr>
<tr>
<td>TKANPKGI</td>
<td>Data</td>
<td>Any S PDS FB</td>
<td>80</td>
<td>138</td>
</tr>
<tr>
<td>TKANSAM</td>
<td>Sample</td>
<td>Any S PDS FB</td>
<td>80</td>
<td>72</td>
</tr>
<tr>
<td>TCIINST</td>
<td>CLIST</td>
<td>Any S PDS FB</td>
<td>80</td>
<td>102</td>
</tr>
<tr>
<td>TKEPHELP</td>
<td>HELP</td>
<td>Any S PDS FB</td>
<td>80</td>
<td>10</td>
</tr>
<tr>
<td>TKNSLOCL</td>
<td>Data</td>
<td>Any S PDS VB</td>
<td>6160</td>
<td>73</td>
</tr>
<tr>
<td>TKB HELP</td>
<td>HELP</td>
<td>Any S PDS FB</td>
<td>80</td>
<td>21</td>
</tr>
<tr>
<td>TKOMHELP</td>
<td>HELP</td>
<td>Any S PDS FB</td>
<td>80</td>
<td>62</td>
</tr>
<tr>
<td>TKOMPROC</td>
<td>PNL</td>
<td>Any S PDS FB</td>
<td>80</td>
<td>93</td>
</tr>
</tbody>
</table>
5.3 FMIDs Deleted

Installing Tivoli OMEGAMON XE on z/OS may result in the deletion of other FMIDs. To see what FMIDs will be deleted, examine the ++VER statement in the product's SMPMCS.

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

Note: These FMIDs will not automatically be deleted from the Global Zone. Consult the SMP/E manuals for instructions on how to delete FMIDs from the Global Zone.
5.4 Special Considerations

Tivoli OMEGAMON XE on z/OS includes several components that are referred to as common components because they are also included in other OMEGAMON products. If you install into an existing environment, you might need to delete the FMIDs for these components from the SMP/E installation jobs to avoid errors because they are already installed.

These common components are:

- HKCI310
- HKDS360
- HKET550
- HKLV190
- HKOB550
- HKS8550

Tivoli OMEGAMON XE on z/OS was also designed to allow it to install into common target and distribution libraries with other OMEGAMON products. If you install into an existing environment, you might need to delete libraries from the installation jobs to avoid errors because the libraries 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 Tivoli OMEGAMON XE on z/OS is used with the IBM Tivoli OMEGAVIEW product, they should both be installed in the same CSI target and distribution zones. This ensures the maintenance level of the CT/Engine and Candle Management Server (CMS) 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 CT/Engine and Candle Management Server components in both zones are the same or at a compatible level. This is also true for your runtime library environments (RTE).

The maintenance level needed for the CT/Engine and Candle Management Server components released with OMEGAVIEW V3.0 is listed below. This is the level of maintenance that matches the component maintenance level included in this product release.

- CT/Engine (AKLV180): APAR (OA09762, OA09797) PTF (UA17184)
- CMS (AKDS350): APAR (OA09988, OA10129, OA10230, OA10409, OA10521, OA10557, OA10573, OA10900) PTF (UA17185)

The PSP bucket will have the most current information and must be reviewed before installation. The OMEGAVIEW 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 Tivoli OMEGAMON XE on z/OS.

Note the following information:

- If you want to install Tivoli OMEGAMON XE 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 to help you create an SMP/E environment at the following Web site:
  http://www-1.ibm.com/support/docview.wss?rs=660&context=SSZJDU&uid=swg21066230

- Sample jobs have been provided to help perform some or all of the installation tasks. The SMP/E jobs assume that all DDDEF entries required for SMP/E execution have been defined in the appropriate zones.

- The SMP/E dialogs can be used instead of the sample jobs to accomplish the SMP/E installation steps.

6.1 Installing Tivoli OMEGAMON XE on z/OS

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

This release of Tivoli OMEGAMON XE on z/OS is installed using the SMP/E RECEIVE, APPLY, and ACCEPT commands. The SMP/E dialogs can be used to accomplish the SMP/E installation steps.

6.1.2 SMP/E Options Subentry Values

The suggested values for some SMP/E CSI subentries are shown in Figure 11. Use of values lower than these can result in failures in the installation process. DSSPACE is a subentry in the GLOBAL options entry. PEMAX is a subentry of the GENERAL entry in the GLOBAL options entry. Refer to the SMP/E manuals for instructions on updating the global zone.

<table>
<thead>
<tr>
<th>SUB-ENTRY</th>
<th>Value</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSSPACE</td>
<td>300,300,1200</td>
<td>Use 1200 directory blocks</td>
</tr>
<tr>
<td>PEMAX</td>
<td>SMP/E Default</td>
<td>Use the SMP/E default for PEMAX.</td>
</tr>
</tbody>
</table>
6.1.3 SMP/E CALLLIBS Processing

Tivoli OMEGAMON XE on z/OS does not use the CALLLIBS function.

6.1.4 Sample Jobs

The sample jobs provided expect a CSI to exist already. If one does not exist, see the information at the beginning of the installation section for creating one. The following sample installation jobs are provided as part of the product to help you install Tivoli OMEGAMON XE on z/OS:

You can access the sample installation jobs by performing an SMP/E RECEIVE and then copying the jobs from the relfiles to a work data set for editing and submission. See Figure 12 to find the appropriate relfile data set.

You may also choose to copy the jobs from the tape or product files by 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
//SYSPRINT DD SYSOUT=rcna4y
//TAPEIN DD DSN=IBM.HKM531rzerodot.F1rzerodot,UNIT=tunit,
// VOL=SER=volser,LABEL=(x,SL),
// DISP=(OLD,KEEP)
//FILEIN DD DSN=IBM.HKM531rzerodot.F1rzerodot,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))
//SYSSIN DD *
COPY INDO=xxxxIN,OUTDD=OUT
SELECT MEMBER=(KM5J0REC,KM5J0ALO,KM5J0APP,KM5J0DDF,KM5J0ACC)
/*
```

Figure 12. Sample Installation Jobs

<table>
<thead>
<tr>
<th>Job Name</th>
<th>Job Type</th>
<th>Description</th>
<th>RELFILE</th>
</tr>
</thead>
<tbody>
<tr>
<td>KM5J0REC</td>
<td>RECEIVE</td>
<td>Sample RECEIVE job</td>
<td>IBM.HKM5310.F10</td>
</tr>
<tr>
<td>KM5J0ALO</td>
<td>ALLOCATE</td>
<td>Sample job to allocate target and distribution libraries</td>
<td>IBM.HKM5310.F10</td>
</tr>
<tr>
<td>KM5J0DDF</td>
<td>DDDEF</td>
<td>Sample job to define SMP/E DDDEFs</td>
<td>IBM.HKM5310.F10</td>
</tr>
<tr>
<td>KM5J0APP</td>
<td>APPLY</td>
<td>Sample APPLY job</td>
<td>IBM.HKM5310.F10</td>
</tr>
<tr>
<td>KM5J0ACC</td>
<td>ACCEPT</td>
<td>Sample ACCEPT job</td>
<td>IBM.HKM5310.F10</td>
</tr>
</tbody>
</table>
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.HKM5310.F10 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
- `xxxxIN` is either TAPEIN or FILEIN depending on your input DD statement.

### 6.1.5 Perform SMP/E RECEIVE

Having obtained Tivoli OMEGAMON XE on z/OS as part of a CBPDO, use the RCVPDO job found in the CBPDO RIMLIB data set to RECEIVE the Tivoli OMEGAMON XE on z/OS FMIDs as well as any service, HOLDDATA, or preventive service planning (PSP) information included on the CBPDO tape. For more information, refer to the documentation included with the CBPDO.

You can also choose to edit and submit sample job KM5J0REC to perform the SMP/E RECEIVE for Tivoli OMEGAMON XE on z/OS. Consult the instructions in the sample job for more information.

**Expected Return Codes and Messages: 0**

### 6.1.6 Allocate SMP/E Target and Distribution Libraries

Edit and submit sample job KM5J0ALO to allocate the SMP/E target and distribution libraries for Tivoli OMEGAMON XE on z/OS. Consult the instructions in the sample job for more information.

**Expected Return Codes and Messages: 0**

### 6.1.7 Create DDDEF Entries

Edit and submit sample job KM5J0DDF to create DDDEF entries for the SMP/E target and distribution libraries for Tivoli OMEGAMON XE on z/OS. Consult the instructions in the sample job for more information.

**Expected Return Codes and Messages: 0**
6.1.8 Perform SMP/E APPLY

Edit and submit sample job KM5J0APP to perform an SMP/E APPLY CHECK for Tivoli OMEGAMON XE on z/OS. 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 following on the APPLY CHECK: PRE, ID, REQ, and IFREQ. This is because the SMP/E root cause analysis identifies the cause only of **ERRORS** and not of **WARNINGS** (SYSMODs that are bypassed are treated as warnings, not errors, by SMP/E).

Enhanced HOLDDATA introduced ERROR HOLDs against FMIDs for HIPER APARs. Prior to installing, ensure you have the latest Enhanced HOLDDATA (available at [http://service.software.ibm.com/holdata/390holddata.html](http://service.software.ibm.com/holdata/390holddata.html)). The FMIDs can be installed regardless of the status of unresolved HIPERs, however, the software must not be deployed until the unresolved HIPERs have been analyzed to determine applicability.

There are two methods to complete an FMID installation where ++HOLDs for HIPERs exist for the FMIDs being installed:

1. To ensure that all critical service is installed with the FMIDs, add the SOURCEIDs of PRP, and HIPER to the APPLY command. There may be PE or HIPER APARs that do not have resolving PTFs available yet. You need to analyze the symptom flags to determine if you want to BYPASS the specific ERROR HOLDs and continue the FMID installation.

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

   This method requires more initial research, but will provide resolution for all HIPERs that have fixes available and are not in a PE chain. There may still be unresolved PEs or HIPERs that require the use of BYPASS.

2. To install an FMID as it was installed prior to Enhanced HOLDDATA, you can add a BYPASS(HOLDCLASS(HIPER)) operand to the APPLY command. This allows the FMID to be installed even though there are HIPER ERROR HOLDs against it. Note that not all ERROR HOLDs were bypassed, only the HIPER ERROR HOLDs. After the FMIDs are installed, you must run the SMP/E REPORT ERRSYSMODS command to identify any missing HIPER maintenance.

   ```
   APPLY S(fmid,fmid,...)
   BYPASS(HOLDCLASS(HIPER))
   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 bypass any HOLDs during the installation of the FMIDs because PTFs were not yet available you can use the APAR Status Tracking (AST) function of ServiceLink or the APAR Tracking function of ResourceLink to be notified when the PTF is available.
After you have taken any actions 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 apply all requisite SYSMODs. The requisite SYSMODS might be applicable to other functions.

**Expected Return Codes and Messages from APPLY CHECK: 0**

**Expected Return Codes and Messages from APPLY: 4**

You can receive many of the following messages depending on your environment.

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

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

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

IEW2646W ESD RMODE(24) CONFLICTS WITH USER-SPECIFIED
  RMODE(ANY) FOR SECTION section-name.

IEW2651W ESD AMODE amode-value CONFLICTS WITH
  USER-SPECIFIED AMODE amode-value FOR ENTRY
  POINT entry-point-name.

The following table contains a list of elements that might be marked as not selected during the APPLY and ACCEPT processes. This occurs 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.

<table>
<thead>
<tr>
<th>Figure 13 (Page 1 of 2). SMP/E Elements Not Selected</th>
<th>KAGCDSVE</th>
<th>KAGCEXIT</th>
<th>KAGCVCFG</th>
<th>KAGSASTC</th>
<th>KAGSDCFM</th>
<th>KAGSSVU2</th>
</tr>
</thead>
<tbody>
<tr>
<td>KAGSSYSV</td>
<td>KDSBHELP</td>
<td>KDSCBLD</td>
<td>KDSCDSVE</td>
<td>KDSCEXIT</td>
<td>KDSCMGVS</td>
<td></td>
</tr>
<tr>
<td>KDSCRSLV</td>
<td>KDSCBEX</td>
<td>KDSDICT</td>
<td>KDSDINFO</td>
<td>KDSHRSLV</td>
<td>KDSHRSLW</td>
<td></td>
</tr>
<tr>
<td>KDSHWRN1</td>
<td>KDSHWRN2</td>
<td>KDSPRSLV</td>
<td>KDSPWRN1</td>
<td>KDSSBATO</td>
<td>KDSSDREM</td>
<td></td>
</tr>
<tr>
<td>KDSSRUNF</td>
<td>KDSSV00</td>
<td>KDSSV01</td>
<td>KDSSVU2</td>
<td>KDSSVSYS</td>
<td>KDSZ00</td>
<td>KDSZ01</td>
</tr>
</tbody>
</table>
6.1.9 Perform SMP/E ACCEPT

Edit and submit sample job KM5J0ACC to perform an SMP/E ACCEPT CHECK for Tivoli OMEGAMON XE on z/OS. 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 following on the ACCEPT CHECK: PRE, ID, REQ, and IFREQ. This is because the SMP/E root cause analysis identifies the cause only of **ERRORS** and not of **WARNINGS** (SYSMODs that are bypassed are treated as warnings, not errors, by SMP/E).

Before using SMP/E to load new distribution libraries, set the ACCJCLIN indicator in the distribution zone. This causes entries produced from JCLIN to be saved in the distribution zone whenever a SYSMOD containing inline JCLIN is accepted. For more information on the ACCJCLIN indicator, see the description of inline JCLIN in the SMP/E manuals.

After you have taken any actions 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 accept all requisite SYSMODs. The requisite SYSMODS might be applicable to other functions.

**Expected Return Codes and Messages from ACCEPT CHECK:** 0

If PTFs containing replacement modules are being accepted, SMP/E ACCEPT processing linkedit/binds the modules into the distribution libraries. During this processing, the Linkage Editor or Binder can issue messages documenting unresolved external references, resulting in a return code of 4 from the ACCEPT step. These messages can be ignored, because the distribution libraries are not executable and the unresolved external references will not affect the executable system libraries.

**Expected Return Codes and Messages from ACCEPT if no PTFs are being installed:** 0

---

**Figure 13 (Page 2 of 2). SMP/E Elements Not Selected**

<table>
<thead>
<tr>
<th>KDSZ02</th>
<th>KDSZ03</th>
<th>KDSZ04</th>
<th>KM2BHELP</th>
<th>KM2CEIXT</th>
<th>KM2DDICT</th>
</tr>
</thead>
<tbody>
<tr>
<td>KM2DINFO</td>
<td>KM2SBATO</td>
<td>KM2SSVA0</td>
<td>KM2SSVJ2</td>
<td>KM2SSYSV</td>
<td>KPDZ10</td>
</tr>
<tr>
<td>KDSLLIST</td>
<td>KRALLIST</td>
<td>KSDM1A</td>
<td>KSDM1B</td>
<td>KSDM1C</td>
<td>KSDM2A</td>
</tr>
<tr>
<td>KSDM2B</td>
<td>KSDM2C</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
6.2 Activating Tivoli OMEGAMON XE on z/OS

The publication *Configuring IBM Tivoli OMEGAMON XE on z/OS, SC32-9364* contains the step-by-step procedures to activate the functions of Tivoli OMEGAMON XE on z/OS. This publication can be found online at:

http://publib.boulder.ibm.com/tividd/td/IBMTivoliOMEGAMONXEforOS3903.1.html
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