OMEGAMON Monitoring Agents on z/OS

Quick Start Guide

This guide describes the process for installing an OMEGAMON monitoring agent on z/OS.

Product overview

The IBM® OMEGAMON® Monitoring Agents on z/OS® are a suite of products that you can run with the commonly shared components of Tivoli® Management Services. These agents monitor and manage system and network applications to track the availability and performance of systems and resources in your enterprise. The Tivoli Enterprise Portal user interface offers expert advice on alerts and corrective actions from one or more designated workstations. The OMEGAMON enhanced 3270 user interface provides predefined workspaces that you can use to monitor the performance of the z/OS systems, applications, and devices in your environment.

This document describes the procedure for installing a new monitoring agent on z/OS for the following releases:
- IBM OMEGAMON for CICS® on z/OS V5.5.0
- IBM OMEGAMON XE for DB2® Performance Expert on z/OS V5.4.0
- IBM OMEGAMON XE for DB2 Performance Monitor on z/OS V5.4.0
- IBM OMEGAMON for IMS™ on z/OS V5.5.0
- IBM OMEGAMON for Networks on z/OS V5.5.0
- IBM OMEGAMON for Messaging on z/OS V7.5.0
- IBM OMEGAMON for Storage on z/OS V5.5.0
- IBM OMEGAMON for z/OS V5.5.0
- IBM OMEGAMON for JVM on z/OS V5.4.0
- IBM OMEGAMON Dashboard Edition on z/OS V5.5.0

If you are upgrading a monitoring agent and Tivoli Management Services, see Upgrade Overview at http://www.ibm.com/support/knowledgecenter/SSAUBV/com.ibm.omegamon_share.doc_6.3.0.2/upgrade/overview_intro_upgrade.htm in the OMEGAMON shared documentation. If you have not done so already, gather the information described in the Preinstallation Requirements and Instructions at http://www.ibm.com/support/docview.wss?uid=swg21318692.

Documentation is no longer provided on DVD. The most current documentation is found in the IBM Knowledge Center. Always refer to the version of the documentation that is consistent with the version of the software that you have installed.

An OMEGAMON monitoring agent on z/OS product package includes the following items:
- z/OS FMIDs (function modification identifiers) either on tape or in electronic format. Product tapes are in Custom-Built Product Delivery Offering (CBPDO) or ServerPac format and contain product-specific FMIDs
- Physical CDs or DVDs, or electronic CD or DVD images that are required for some core product functions

For each monitoring agent, you receive the following product resources:
- Product-specific license information and the IBM International Program License Agreement (IPLA)
- Tivoli Management Services on z/OS V6.3.0 Fix Pack 6 or above (5698-A79) FMIDs are a prerequisite (packaged separately in the OMEGAMON product releases described on page 1).

   Note: The latest available version is V6.3.0 Fix Pack 7 that includes updates and maintenance that you might want. If you have V6.3.0 Fix Pack 6 already, you do not need to upgrade to Fix Pack 7. If you are going to install ITM components, especially on distributed platforms, you can install the latest V6.3.0 Fix Pack 7.
   Tivoli Management Services on z/OS V6.3.0 Fix Pack 6 or above is a prerequisite for monitoring agents at the V5.5.0 level (including OMEGAMON for Messaging V7.5.0). For these products, do not bypass the CBPDO that includes the following important resources:
   - LK5T-8609 IBM Tivoli V6.3.0 Media Kit
   - LK4T-4916 IBM Tivoli zEnterprise® Monitoring Agent Kit
   - LK4T-4913 IBM Jazz™ for Service Management (Includes Tivoli Common Reporting V3.1) V1.1 Kit
   - LK5T-9603-02 IBM Operations Analytics - Log Analysis 1.3.1 Kit
   - LK5T-8611 IBM DB2® for Linux, UNIX, and Windows V 10.1 Enterprise Server Edition Kit
   - LK5T-8604 IBM System Automation for Multiplatforms V3.2.0 Kit
   - FMID HKCI310 for PARMGEN Workflow User Interface at PTF UA91953
   - FMID HKLV630 TMS:Engine
   - FMID HKDS630 for Tivoli Enterprise Monitoring Server on z/OS

Application support (which contains the predefined workspaces and situations, online help, expert advice, and OMEGAMON data for the Tivoli Enterprise Portal) is also supplied on one of the following DVDs:
- IBM OMEGAMON for Storage on z/OS V5.5.0 Application and Language Support Files:
   - LC27-9503-00 IBM OMEGAMON for Storage on z/OS V5.5.0 Application Support DVD
   - LC27-9504-00 IBM OMEGAMON for Storage on z/OS V5.5.0 Language Pack DVD
- IBM OMEGAMON Application and Language Support Files for z/OS agents:
   - LCD7-5139-12 IBM OMEGAMON Application Support for z/OS 5.4.0, 5.5.0, 7.5.0, and DB2 Query Monitor V3.3 DVD
   - LCD7-5138-11 IBM OMEGAMON z/OS 5.4.0, 5.5.0, 7.5.0 Language Packs DVD

   Application support information including the latest media levels are available at: http://www.ibm.com/support/docview.wss?uid=swg21255545.

Physical orders include CDs and DVDs in the package. Electronic orders provide images electronically under the **CD/DVD Images and Other Material** heading on the primary download page. Electronic orders remain available on the server for 30 days. After the order expires, it can be reordered at no additional charge.
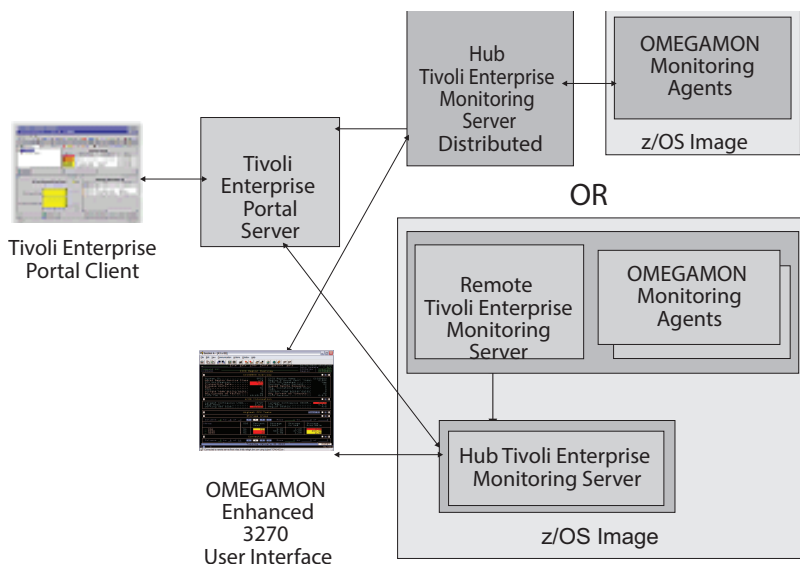
Program directories are provided with all electronic orders. All z/OS product program directories are available as PDFs and can be viewed, downloaded and printed from the IBM Publications Center at http://www.ibm.com/e-business/linkweb/publications/servlet/pti.wss. Program directories continue to be provided in the fulfillment offerings such as CBPDO, ServerPac and SystemPac, which provide information about where to locate the program directories in the offering. You can also find links to program directories in the Knowledge Center of each product.

Each monitoring agent includes the latest level of all product materials. Review the packing list that comes with the product. If you are missing materials or need additional materials, contact IBM by using the contact number and URL on the packing list. Entitled DVDs that are not included in this package are available electronically from an IBM Web Membership (IWM) URL or physically upon request. You can request access to the IWM URL by contacting IBM Support. You can also send an email with your name, customer number, and phone number to **tivzos@us.ibm.com**.

Distributed fixes and updates for monitoring agents can be found on Fix Central at http://www.ibm.com/support/fixcentral/. A registered IBM ID is required to download fixes from this site and to enable IBM to inform you of related updates. z/OS fixes are available through IBMLINK and Shopz (http://www.ibm.com/software/shopzseries/ShopzSeries_public.wss.

The following diagram illustrates the basic topology that results from the installation steps you perform.

The installation process follows this order:

1. Plan the locations of the hub and remote Tivoli Enterprise Monitoring Servers, Tivoli Enterprise Portal Server (if applicable), and the OMEGAMON enhanced 3270 user interface, and decide which agents to install.
2. Install and configure the z/OS components.
3. Install and configure the distributed IBM Tivoli Monitoring components: the hub Tivoli Enterprise Monitoring Server (if not on z/OS), Tivoli Enterprise Portal Server, and Tivoli Enterprise Portal client (optional if you use the browser client).
4. For any agent that does not have the self-describing capability enabled, install the application support files that enable the storage and display of data collected by OMEGAMON monitoring agents on z/OS.

Information sources:

- For a list of supported operating systems and to install distributed components, see the IBM Tivoli Monitoring: Installation and Setup Guide (http://www.ibm.com/support/knowledgecenter/SSTFXA_6.3.0.2/com.ibm.itm.doc_6.3fp2/install/itm_install.htm).
- For shared components and all monitoring agents on z/OS, see the Overview topics of the OMEGAMON shared documentation (http://www.ibm.com/support/knowledgecenter/SSAUBV/com.ibm.omegamon_share.doc_6.3.0.2/zcommonconfig/overview_cpcg.htm) and the product-specific planning and configuration guides.
- For the PARMGEN configuration method, see the following additional sources:
  - OMEGAMON shared documentation V6.3.0 Fix Pack 2 and above Scenarios and how-tos topics (http://www.ibm.com/support/knowledgecenter/SSAUBV/com.ibm.omegamon_share.doc_6.3.0.2/parmgenref/scenarios.htm) to find implementation or deployment scenarios that match your needs
  - OMEGAMON shared documentation V6.3.0 Fix Pack 2 and above Planning and Configuring topics for general planning and configuration flow
  - OMEGAMON shared documentation V6.3.0 Fix Pack 2 and above Common parameters topics (http://www.ibm.com/support/knowledgecenter/SSAUBV/com.ibm.omegamon_share.doc_6.3.0.2/commonparmref/commonparms_intro_dita.htm) for definitions of common parameters
  - Agent-specific parameter reference guides for parameters used by a single agent
  - PARMGEN Technote found at http://www.ibm.com/support/docview.wss?uid=swg21417935 for late-breaking news

3   Step 3: Perform the SMP/E installation of the components that run on z/OS

SMP/E is used to install and maintain software on z/OS systems. For information about supported levels of the SMP/E program and other related SMP/E installation requirements, see the product-specific program directories. See Step 1 for information about locating your program directory.

The product media (physical or electronic) includes all the z/OS components. If you have an earlier version of any of these components installed in the same SMP/E CSI (consolidated software inventory), those components will be automatically replaced by the new version and release provided on the tape. If the CSI already has the same version or a higher-level version of the components, the new version is not installed. The following features and components are part of the monitoring agent package:
- z/OS Configuration Tool (PARMGEN Workflow User Interface)*
- Tivoli Enterprise Monitoring Server on z/OS*
- Tivoli Management Services: Engine (TMS:Engine)*
- OMNIMON base, including the OMEGAMON subsystem and OMEGAMON enhanced 3270 user interface
- Shared probes (Storage and z/OS agents only)
- Reporter and Buffer Pool Analyzer (IBM OMEGAMON XE for DB2 Performance Expert)
- The monitoring agents on z/OS

* Part of the no-charge IBM Tivoli Management Services on z/OS (5698-A79) mandatory prerequisite.

Perform the SMP/E installation of the monitoring agent before starting the configuration procedures. Check the PSP and Upgrade information in the Recommended Maintenance Service Levels for OMEGAMON products on ITM V6.*x* technote for recommended maintenance: http://www.ibm.com/support/docview.wss?uid=swg21290883. If recommended maintenance is available, obtain and apply the maintenance.

Information sources:

See the *IBM Tivoli Management Services on z/OS: Program Directory* and program directories for your monitoring agents on z/OS.

4   Step 4: Configure components and products on z/OS

If you have chosen to run your hub monitoring server on z/OS, use the PARMGEN configuration method to set up your monitoring server. As you create your hub monitoring server on z/OS, you also create the required runtime environments and the persistent data store.

If you have chosen to run your hub monitoring server on a distributed system, use the PARMGEN configuration method to set up other components on z/OS such as the monitoring agents. You must confirm the IP hostname of the distributed system where the hub monitoring server will be deployed on so that you can specify the value for the `CT_CMSLIST` parameters (for example the `Kpp_TEMS_TCP_HOST` parameters) of z/OS agents. This parameter establishes connections via enabled protocol between the z/OS agents and their primary TEMS and backup TEMS (if enabled) to report data to.

As part of the same configuration process, the PARMGEN method performs the configuration required for infrastructure components and each monitoring agent on z/OS.

Information sources:
- OMEGAMON shared documentation V6.3.0 Fix Pack 2 and above First time deployment guide topics (http://www.ibm.com/support/knowledgecenter/SSAUBV/com.ibm.omegamon_share.doc_6.3.0.2/ftu/ftu_cfg_intro.htm) for the instructions of setting up a simple POC environment.
- OMEGAMON shared documentation V6.3.0 Fix Pack 2 and above Scenarios and how-tos topics (http://www.ibm.com/support/knowledgecenter/SSAUBV/com.ibm.omegamon_share.doc_6.3.0.2/parmgenref/scenarios.htm) for the configuration scenario that matches your requirements.
- OMEGAMON shared documentation V6.3.0 Fix Pack 2 and above Configuring topics (http://www.ibm.com/support/knowledgecenter/SSAUBV/com.ibm.omegamon_share.doc_6.3.0.2/common/configuring_intro_kc.htm), the product-specific configuration documentation, the configuration profile, and the product-specific parameter reference documentation to configure the monitoring agent and the persistent data store for your monitoring agent.

5   Step 5: Complete the setup of the z/OS environment

To make the OMEGAMON monitoring agents on z/OS and the monitoring server on z/OS fully operational, you must perform some z/OS environment setup tasks on each system where any monitoring agent will be running. You must also complete some product-specific post-PARMGEN steps. These steps must be completed before you start the components.

Information sources:
- The topics in Completing the configuration outside the configuration software in the OMEGAMON shared documentation (http://www.ibm.com/support/knowledgecenter/SSAUBV/com.ibm.omegamon_share.doc_6.3.0.2/zcommonconfig/complete_cpcg.htm).
- OMEGAMON shared documentation V6.3.0 Fix Pack 2 and above Completing configuration of a Tivoli Enterprise Monitoring Server topics (http://www.ibm.com/support/knowledgecenter/SSAUBV/com.ibm.omegamon_share.doc_6.3.0.2/ztemsconfig/complete_zostems.htm) to configure the z/OS monitoring server.
- The product-specific configuration documentation for product-specific steps.
- **Perform post configuration steps** option on the Parameter Generator (PARMGEN) Workflow - Primary Option Menu.

6   Step 6: Install the distributed components

You need to complete this step under one of the following circumstances:
- Your hub monitoring server is on a distributed system.
- You do not have the self-describing agent capability configured regardless of the platform where the hub monitoring server, remote monitoring server, or monitoring agents will be deployed. Review the upgrade documentation to determine whether the level of product you are installing supports the self-describing agent capability.

Add application support (predefined workspaces and situations, online help, expert advice, and OMEGAMON data for Tivoli Monitoring) from the appropriate application support media described in Step 2.

If you are installing the OMEGAMON XE for DB2 Performance Expert, you can also install product-specific distributed components, such as the Performance Expert Agent for DB2 Connect™ Monitoring.

Information sources:
- To perform administrative tasks for the distributed components of IBM Tivoli Monitoring, see IBM Tivoli Monitoring: Administrator's Guide (http://www.ibm.com/support/knowledgecenter/SSTFXA_6.3.0.2/com.ibm.itm.doc_6.3fp2/adminuse/itm_admin.htm).
- To install and configure the distributed components of OMEGAMON XE for DB2 Performance Expert, see IBM Tivoli OMEGAMON XE for DB2 Performance Expert on z/OS (http://www.ibm.com/support/knowledgecenter/SSUSPS_5.4.0/com.ibm.omegamon.xe.pe_db2.doc_5.4.0/ko2welcome_pe.htm).

7   Step 7: Set up user security

Completing security setup is not mandatory until after step 9. If your hub monitoring server is running on z/OS, then you need to configure the Resource Access Control Facility (RACF®) or your system authorization facility (SAF) product to authenticate your Tivoli Enterprise Portal users. Additional RACF authorization might be described in your product-specific configuration guide.

Information sources:
- For information on setting up Tivoli Enterprise Portal user accounts and enabling authentication, see IBM Tivoli Monitoring: Administrator's Guide (http://www.ibm.com/support/knowledgecenter/SSTFXA_6.3.0.2/com.ibm.itm.doc_6.3fp2/adminuse/itm_admin.htm).
- For information about enabling authentication on a z/OS hub, see the topics on Configuring a Tivoli Enterprise monitoring server in the OMEGAMON shared documentation (http://www.ibm.com/support/knowledgecenter/SSAUBV/com.ibm.omegamon_share.doc_6.3.0.2/zcommonconfig/parmgen_custprofile_cfgtems_cpcg.htm).

8   Step 8: Start all components and test your installation

After completing the previous steps, you will have installed and configured all required components. Use the following steps to start and test your installation for each environment:

1. Start the OMEGAMON Subsystem.
2. Start the Tivoli Enterprise Monitoring Server. Check the job log for any errors. (If the hub monitoring server is not configured in this environment, start the hub before you start the local monitoring server.)
3. For agents configured to run in their own address space, start the started task for each monitoring agent on z/OS. Check the log for errors. If you are using the classic component, start the classic collector before you start the OMEGAMON monitoring agent.
4. Start the OMEGAMON enhanced 3270 user interface started task (default IBMTOM). Check the job logs for errors.
5. Start the Tivoli Enterprise Portal Server and Tivoli Enterprise Portal (required if the self-describing agent feature is not enabled).
6. Verify that the monitoring agent is collecting data.

Note: If you do not want to start the components individually, the PARMGEN configuration method provides a composite *rte_stc_prefix*STRT member in the RKANSAMU dataset of each runtime environment that has the startup commands for all configured products in the order that they should be started. The composite *rte_stc_prefix*STRT member can be copied to your system procedure dataset. Refer to the KCIJPSYS job for more information.

Information source: The product-specific configuration documentation or the Configuring topics in the V6.3.0 Fix Pack 2 and above OMEGAMON shared documentation (http://www.ibm.com/support/knowledgecenter/SSAUBV/com.ibm.omegamon_share.doc_6.3.0.2/common/configuring_intro_kc.htm).

9   Step 9: Deploy the configured agent to other z/OS images

After you have configured a runtime environment, you can use the PARMGEN Workflow user interface to replicate that environment to other z/OS images.

Information sources:
- The Deployment scenarios (http://www.ibm.com/support/knowledgecenter/SSAUBV/com.ibm.omegamon_share.doc_6.3.0.2/parmgenref/scenarios_deployment_intro.htm) in the OMEGAMON shared documentation.

10   Step 10: Configure historical data collection

Historical data collection is an optional feature that is enabled through the Tivoli Enterprise Portal or the OMEGAMON enhanced 3270 user interface. The tasks required to enable historical reporting can be performed at any time after you have verified your installation. If you enable historical data collection, monitoring agents are instructed to take data samples at a specified interval and store it. The collected data can be displayed in workspaces in either interface, warehoused for in-depth analyses and long-term data reporting, and exported to third-party tools for reporting and analysis. (Note that not all historical data that is displayed in the Tivoli Enterprise Portal can be displayed in the enhanced 3270 user interface, and not all the near-term history displayed in the enhanced 3270 user interface can be displayed in the Tivoli Enterprise Portal.)

Note:
- The OMEGAMON enhanced 3270 user interface cannot display data from the Tivoli Data Warehouse, and you cannot configure the Warehouse Proxy agent or the Summarization and Pruning agent from the OMEGAMON enhanced 3270 user interface.
- Using the Tivoli Data Warehouse is optional for the DB2 Performance Expert monitoring agent. The agent offers other long-term storage options.
- The z/OS persistent data store data sets, where some of the historical data is stored on z/OS, should have been configured earlier during Steps 4.

Information sources:
- To install and configure the Tivoli Data Warehouse, set up the Warehouse Proxy agent and configure the Summarization and Pruning agent, and configure and enable data collection, the IBM Tivoli Monitoring: Installation and Setup Guide (http://www.ibm.com/support/knowledgecenter/SSTFXA_6.3.0.2/com.ibm.itm.doc_6.3fp2/install/itm_install.htm).
- To configure the persistent data store for your monitoring agent, your product-specific configuration guide and the Configuring topics of the OMEGAMON shared documentation (http://www.ibm.com/support/knowledgecenter/SSAUBV/com.ibm.omegamon_share.doc_6.3.0.2/common/configuring_intro_kc.htm).

More information

Tivoli Management Services on z/OS and the OMEGAMON products are available in a ServerPac offering that lets you install them without the need to install the z/OS operating system.

- Application support for monitoring agents on z/OS at http://www.ibm.com/support/docview.wss?uid=swg21255545
- IBM Tivoli Monitoring and OMEGAMON Family documentation on the IBM Knowledge Center at http://www.ibm.com/support/knowledgecenter/SSAUBV/.
- IBM Support website at http://www.ibm.com/software/sysmgmt/products/support/
- If you have problems ordering products or services or understanding how to use a Shop zSeries Electronic Download page, see the "Ordering Products and Maintenance through Shop zSeries" technote at http://www.ibm.com/support/docview.wss?uid=swg21225816&rs=2271.
- For other issues, send an email with your name, customer number, and phone number to **tivzos@us.ibm.com**.