OMEGAMON Monitoring Agents on z/OS Quick Start Guide

IBM

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OMEGAMON 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. You can access the data collected by the agents using the following user interfaces:

- 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.
- IBM Z OMEGAMON Web UI uses Grafana dashboards to provide visualization and analysis of performance data gathered by OMEGAMON monitoring agents.
- The Tivoli Enterprise Portal user interface offers expert advice on alerts and corrective actions from one or more designated workstations.

This document describes the procedure for installing a monitoring agent on z/OS® for the following releases:

- IBM Z OMEGAMON AI for CICS 6.1
- IBM Z OMEGAMON AI for Db2 6.1
- IBM OMEGAMON for IMS on z/OS 5.5
- IBM Z OMEGAMON AI for Networks 6.1
- IBM OMEGAMON for Messaging on z/OS 7.5
- IBM Z OMEGAMON AI for Storage 6.1
- IBM Z OMEGAMON AI for z/OS 6.1
- IBM Z OMEGAMON AI for JVM 6.1

You can also install the following OMEGAMON component releases:

- IBM Z OMEGAMON AI Insights 2.2
- IBM Z OMEGAMON Web UI 2.1
- IBM Z OMEGAMON Data Provider 1.1

If you are upgrading a monitoring agent and Tivoli® Management Services, see Upgrading in the OMEGAMON® shared documentation. If you have not done so already, gather the information described in the Pre-installation requirements and checklist.

Product documentation is available in IBM Documentation. Always refer to the version of the documentation that is consistent with the version of the software that you have installed.

Step 1: Access the software and documentation

Use this information to access the software and documentation necessary to install OMEGAMON agents.

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® (5698-A79) FMIDs, which are a prerequisite and packaged separately from the agent

  > **Note:** Tivoli Management Services on z/OS 6.3.0 Fix Pack 6 (or later) is a prerequisite for the OMEGAMON products listed in "OMEGAMON product overview" on page 4. The latest available version of Tivoli® Management Services on z/OS® is 6.4.0, which includes updates and maintenance that you might want or are required for the latest features. Tivoli Management Services on z/OS 6.3.0, 6.3.1, and 6.3.2 have been withdrawn from marketing by IBM.

- Application and language support, which includes the predefined workspaces and situations, online help, expert advice, and other OMEGAMON® data, for the z/OS agents. Application support information, including the latest media levels, is available at Locating IBM Z Monitoring Suite Application Support Files.

  > **Note:** For earlier OMEGAMON product releases, see Locating ITM Workspace Application Support Files for z/OS Agents.

Program Directories provide information about installing each component. All z/OS® product Program Directories are available as PDF files and can be viewed, downloaded, and printed from Program Directories. Program Directories are also provided in the fulfillment offerings such as CBPDO, ServerPac, and SystemPac®. You can also find links to Program Directories in the documentation for 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® Support.

Distributed fixes and updates for monitoring agents can be found on Fix Central. A registered IBMid is required to download fixes from this site and to enable IBM® to inform you of related updates.

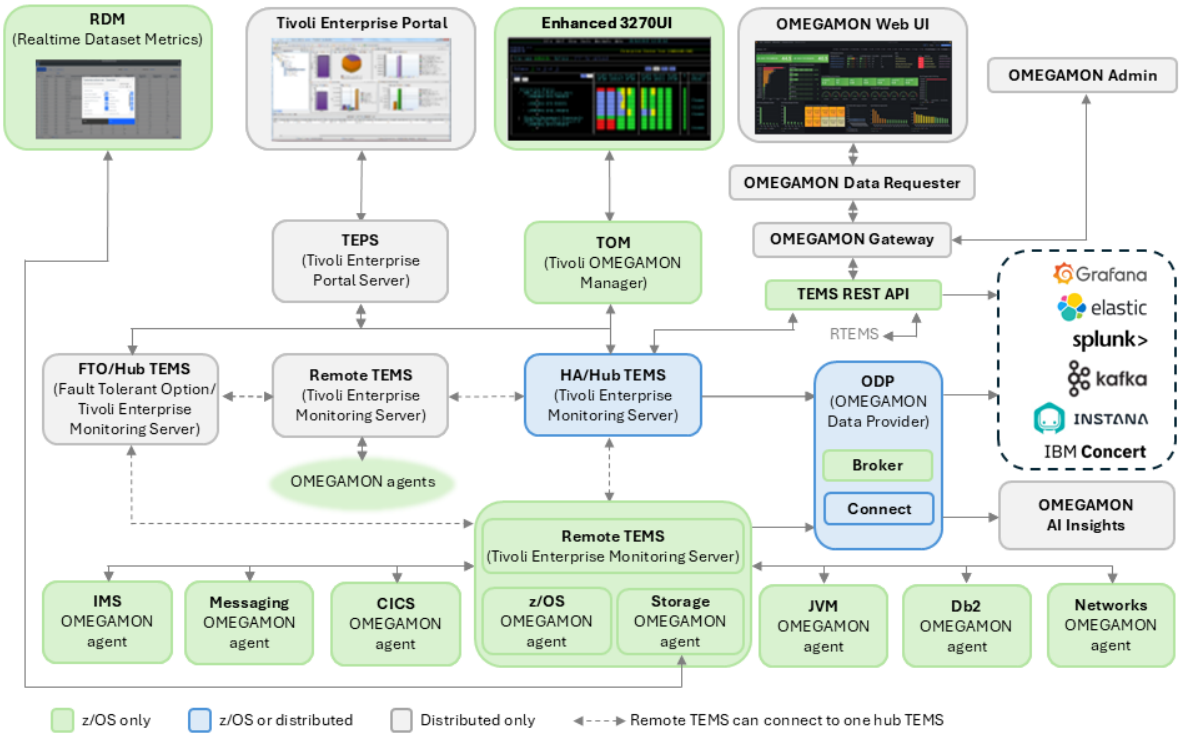
z/OS® fixes are available through IBM Shopz.

Product documentation is available in IBM Documentation. Always refer to the version of the documentation that is consistent with the version of the software that you have installed.

Step 2: Review the product components and installation steps

Use this information to understand the basic OMEGAMON components and topology.

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.
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.
- For shared components and all monitoring agents on z/OS®, see the Overview topics of the *OMEGAMON® shared documentation*.
- For the Configuration Manager configuration method, see the following additional sources:
  - *OMEGAMON® shared documentation*: Configuration Manager topics for configuring an OMEGAMON runtime environment from a set of parameters that you specify.
  - *OMEGAMON® shared documentation*: Planning and Configuring topics for general planning and configuration flow.
  - *OMEGAMON® shared documentation*: Parameters for definitions of parameters.
  - Agent-specific parameter reference guides for parameters used by a single agent.
- For OMEGAMON Web UI, see IBM Z OMEGAMON Web UI.

- For OMEGAMON AI Insights, see IBM Z OMEGAMON AI Insights.
- For OMEGAMON Data Provider (ODP), see IBM Z OMEGAMON Data Provider.

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

SMP/E is used to install and maintain OMEGAMON 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 (Configuration Manager)*
- 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 Z® OMEGAMON® AI for Db2)
- 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. 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®.

Step 4: Configure components and products on z/OS

If you have chosen to run your hub monitoring server on z/OS®, use Configuration Manager 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 Configuration Manager 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.

Initially, you might configure a new runtime environment to be stand-alone, with its own hub monitoring server. Later, you can integrate that runtime environment with the rest of your monitoring topology by converting its hub monitoring server to a remote monitoring server that communicates with a central hub.

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

Information sources:

- *OMEGAMON® shared documentation*: Configuring products and components on z/OS for instructions on configuring OMEGAMON products and their common framework components on z/OS.
- *IBM Z Monitoring Configuration Manager*: Creating your first, minimal runtime environment for the instructions on setting up a simple POC environment.
- *IBM Z Monitoring Configuration Manager*: Creating or updating a runtime environment for the configuration scenario that matches your requirements.
- *IBM Z Monitoring Configuration Manager*: Converting a hub monitoring server to a remote monitoring server for instructions on converting a hub monitoring server to a remote monitoring server that communicates with a central hub.

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 Configuration Manager steps. These steps must be completed before you start the components.

Information sources:

- *OMEGAMON® shared documentation*: Completing the configuration outside the configuration software for additional steps outside the configuration software to complete the configuration of your runtime environment.
- *OMEGAMON® shared documentation*: Complete the configuration of a Tivoli Enterprise Monitoring Server to configure the z/OS® monitoring server.
- *OMEGAMON® shared documentation*: Complete the configuration for OMEGAMON monitoring agents for product-specific configuration steps.

Step 6: Install the distributed components

You must install the distributed components when your hub monitoring server is on a distributed system or when you do not have self-describing agent capability configured.

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 (SDA) 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. To active the SDA capability on a monitoring suite level, use tacmd editSdaInstallOptions or SPUFIL.

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 IBM Z® OMEGAMON® AI for Db2, you can also install product-specific distributed components, such as IBM Z® OMEGAMON® AI for Db2 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.
- To install and configure the distributed components of IBM Z® OMEGAMON® AI for Db2, see Installing IBM Z OMEGAMON AI for Db2 Agent for Db2 Connect Monitoring.

Step 7: Set up user security

Use this information to set up user security for Tivoli Enterprise Portal users.

Completing security setup is not mandatory until after step 8. 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.
- For information about enabling authentication on a z/OS® hub, see Configure a Tivoli Enterprise Monitoring Server.

Step 8: Start all components and test your installation

Use this information to 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 OMEGTOM). 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.

Information source: The product-specific configuration documentation or the Configuring products and components on z/OS topics in the *OMEGAMON® shared documentation*.

Step 9: 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 the user interfaces, warehoused for in-depth analysis and long-term data reporting, used as a data source for OMEGAMON Data Provider, and exported to third-party tools for reporting and analysis.

OMEGAMON Web UI supports historical visualizations through Tivoli Enterprise Monitoring Server REST services (TEMS REST API). To view historical data in the starter dashboards, you must enable historical data collection using either the Tivoli Enterprise Portal or the enhanced 3270UI. For a complete list of available dashboards for OMEGAMON agents and the corresponding attribute groups that require history collection, refer to the OMEGAMON Web UI documentation.

Notes:

- Not all historical data that is displayed in the Tivoli® Enterprise Portal can be displayed in the enhanced 3270UI, and not all the near-term history displayed in the enhanced 3270UI can be displayed in the Tivoli® Enterprise Portal.
- The enhanced 3270UI cannot display data from the Tivoli® Data Warehouse, and you cannot configure the Warehouse Proxy agent or the Summarization and Pruning agent from the enhanced 3270UI.
- Using the Tivoli® Data Warehouse is optional for the IBM Z® OMEGAMON® AI for Db2 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 Step 4.

Information sources:

- *OMEGAMON® shared documentation*: Persistent data store V2 (PDS V2) to configure the persistent data store for your monitoring agent.
- IBM Tivoli Monitoring Installation and Setup Guide 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.
- OMEGAMON Web UI

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.

- For application support file information, see Locating IBM Z Monitoring Suite Application Support Files.

  > **Note:** For earlier OMEGAMON product releases, see Locating ITM Workspace Application Support Files for z/OS Agents.

- For IBM® Support, see Let's troubleshoot.
- If you have problems ordering products or services or understanding how to use a Shop zSeries® Electronic Download page, see Ordering Products and Maintenance through Shop zSeries.