Installing and Setting up IBM Tivoli OMEGAMON XE for WebSphere MQ on OS/400
Installing and Setting up IBM Tivoli OMEGAMON XE for WebSphere MQ on OS/400
Before using this information and the product it supports, read the information in “Notices” on page 83.
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Introduction

IBM® Tivoli® OMEGAMON® XE for WebSphere® MQ is a component product of the IBM Tivoli OMEGAMON XE for WebSphere Business Integration package.

The IBM Tivoli OMEGAMON XE for WebSphere MQ component product consists of these component products:

- IBM Tivoli OMEGAMON XE for WebSphere MQ Monitoring is an agent that lets you easily collect and analyze WebSphere MQ-specific data for all your remote and local queue managers from a single vantage point.
- IBM Tivoli OMEGAMON XE for WebSphere MQ Configuration is an agent that helps you simplify the time-consuming and resource-intensive tasks of defining and managing your WebSphere MQ configuration.

*Installing and Setting up IBM Tivoli OMEGAMON XE for WebSphere MQ on OS/400®* describes how to install IBM Tivoli OMEGAMON XE for WebSphere MQ on the OS/400 operating system.

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About This Guide

Who should read this guide

This guide is for IT operations staff or administrators who are responsible for the following tasks:

- Installation of applications
- Automation of tasks on the system
- Monitoring new applications
- Trouble-shooting and providing solutions for operators when they have problems
- Fine-tuning the performance of systems (by measuring system capabilities and tweaking configuration settings)

Readers should be familiar with the following topics:

- OS/400 operating system
- IBM’s WebSphere MQ product
- The planned configuration for their OMEGAMON Platform and CandleNet Portal® environment. They should consult with their IBM Tivoli system administrator to ensure that they know where the Candle Management Server® (CMS), CandleNet Portal Servers, Candle Management Workstation® (CMW), CandleNet Portal, and the agents are to be installed.

Note: Before you can install and set up IBM Tivoli OMEGAMON XE for WebSphere MQ, you must have the OMEGAMON Platform installed and configured in your enterprise. For instructions, see “Installing and Setting up OMEGAMON Platform and CandleNet Portal on Windows and UNIX,” which is on the “OMEGAMON Platform version 360 and CandleNet Portal Documentation CD” that accompanied this component product of the IBM Tivoli OMEGAMON XE for WebSphere Business Integration package.

Document set information

This section lists publications in the IBM Tivoli OMEGAMON XE for WebSphere Business Integration version 1.1.0 Documentation CD and the OMEGAMON Platform version 360 and CandleNet Portal Documentation CD that supply information for:

- installation and configuration of the IBM Tivoli OMEGAMON XE for WebSphere MQ component products on other platforms
- operation of IBM Tivoli OMEGAMON XE for WebSphere MQ component products.
- installation, configuration, and use of the prerequisite OMEGAMON Platform and CandleNet Portal component products

The documentation CDs contain the publications that are in the package’s library. The format of the publications is PDF. Refer to the readme file on the CDs for instructions on how to access the documentation.
This section also lists other useful related documents. It also describes how to access Tivoli publications online and how to order Tivoli publications.

**IBM Tivoli OMEGAMON XE for WebSphere Business Integration documentation CD**

The following are useful documents that are available in the *IBM Tivoli OMEGAMON XE for WebSphere Business Integration version 1.1.0 Documentation CD*:

- **Using IBM Tivoli OMEGAMON XE for WebSphere MQ Monitoring**, SC31-6888-00, provides information about using IBM Tivoli OMEGAMON XE for WebSphere MQ in the CandleNet Portal interface.

- **Using IBM Tivoli OMEGAMON XE for WebSphere MQ Configuration**, SC31-6889-00, provides information about the processes involved in preparing IBM Tivoli OMEGAMON XE for WebSphere MQ Configuration to help you design and prototype your WebSphere MQ resources.

- **Configuring IBM Tivoli OMEGAMON XE for WebSphere Business Integration on z/OS**, SC31-6884-00, provides information about configuring and customizing IBM Tivoli OMEGAMON XE for WebSphere MQ and IBM Tivoli OMEGAMON XE for WebSphere Integration Brokers on the z/OS platform.

- **Installing and Setting up IBM Tivoli OMEGAMON XE for WebSphere Business Integration on Windows and UNIX**, SC31-6885-00, provides information about installing and setting up IBM Tivoli OMEGAMON XE for WebSphere MQ, IBM Tivoli OMEGAMON XE for WebSphere Integration Brokers, and IBM Tivoli OMEGAMON XE for WebSphere InterChange Server on the Windows and UNIX platforms.

- **Installing and Setting up IBM Tivoli OMEGAMON XE for WebSphere MQ on HP NonStop Kernel**, SC31-6887-00, provides information about installing and setting up IBM Tivoli OMEGAMON XE for WebSphere MQ on the HP NonStop Kernel platform.

**OMEGAMON Platform and CandleNet Portal documentation CD**

The following are useful documents that are available in the *OMEGAMON Platform version 360 and CandleNet Portal Documentation CD*:

- **Administering OMEGAMON Products: CandleNet Portal**, GC32-9180, describes the support tasks and functions required for the OMEGAMON platform, including CandleNet Portal user administration.

- **Using OMEGAMON Products: CandleNet Portal**, GC32-9182, describes the features of CandleNet Portal and how best to use them with your OMEGAMON products.

- **Historical Data Collection Guide for IBM Tivoli OMEGAMON XE Products**, GC32-9429-00, describes the process of collecting historical data and either warehousing it or converting it to delimited flat files for reporting purposes.

- OMEGAMON Platform Messages manuals provide lists of descriptions that help you to interpret messages that are issued by the component products of the OMEGAMON Platform: CMS, CandleNet Portal, CMW, Warehouse Proxy, Alert Adapter for AF/REMOTE, Alert Adapter for Tivoli Enterprise Console, and Alert Emitter for Tivoli Enterprise Console on Windows and UNIX.
The following are the volumes:

- IBM Tivoli Candle Products Messages Volume 1 (AOP-ETX), SC32-9416-00
- IBM Tivoli Candle Products Messages Volume 2 (EU-KLVGM), SC32-9417-00
- IBM Tivoli Candle Products Messages Volume 3 (KLVHS-KONCT), SC32-9418-00
- IBM Tivoli Candle Products Messages Volume 4 (KONCV-OC), SC32-9419-00
- IBM Tivoli Candle Products Messages Volume 5 (ODC-VEB and Appendixes), SC32-9420-00

Installig and Setting up OMEGAMON Platform and CandleNet Portal on Windows and UNIX, SC32-1768-00, provides information about installing and setting up the component products of the OMEGAMON Platform: CMS, CandleNet Portal, CMW, Warehouse Proxy, Alert Adapter for AF/REMOTE, Alert Adapter for Tivoli Enterprise Console, and Alert Emitter for Tivoli Enterprise Console on Windows and UNIX.

The online glossary for the CandleNet Portal includes definitions for many of the technical terms related to OMEGAMON XE software.

Accessing publications online

IBM posts publications for this and all other Tivoli products, as they become available and whenever they are updated, to the Tivoli software information center Web site. Access the Tivoli software information center by first going to the Tivoli software library at the following Web address:


Scroll down and click the Product manuals link. In the Tivoli Technical Product Documents Alphabetical Listing window, click the IBM Tivoli OMEGAMON XE for WebSphere MQ link to access the product library at the Tivoli software information center.

If you print PDF documents on other than letter-sized paper, set the option in the File -> Print window that allows Adobe Reader to print letter-sized pages on your local paper.

Ordering publications

You can order many Tivoli publications online at the following Web site:


You can also order by telephone by calling one of these numbers:

- In the United States: 800-879-2755
- In Canada: 800-426-4968

In other countries, see the following Web site for a list of telephone numbers:

http://www.ibm.com/software/tivoli/order-lit
**Tivoli technical training**

For Tivoli technical training information, refer to the following IBM Tivoli Education Web site:

http://www.ibm.com/software/tivoli/education

**Support information**

If you have a problem with your IBM software, you want to resolve it quickly. IBM provides the following ways for you to obtain the support you need:

- Searching knowledge bases: You can search across a large collection of known problems and workarounds, Technotes, and other information.
- Obtaining fixes: You can locate the latest fixes that are already available for your product.
- Contacting IBM Software Support: If you still cannot solve your problem, and you need to work with someone from IBM, you can use a variety of ways to contact IBM Software Support.

For more information about these three ways of resolving problems, see “Support Information” on page 77.
Documentation Conventions

Overview

This guide uses several conventions for special terms and actions, and operating system-dependent commands and paths.

Panels and figures

The panels and figures in this document are representations. Actual product panels may differ.

Required blanks

The slashed-b (\) character in examples represents a required blank. The following example illustrates the location of two required blanks.

```
bEBAServiceMonitorb0990221161551000
```

Revision bars

Revision bars (|) may appear in the left margin to identify new or updated material.

Variables and literals

In examples of z/OS command syntax, uppercase letters are actual values (literals) that the user should type; lowercase letters are used for variables that represent data supplied by the user. Default values are underscored.

```
LOGON APPLID (cccccccc)
```

In the above example, you type LOGON APPLID followed by an application identifier (represented by cccccccc) within parentheses.

Symbols

The following symbols may appear in command syntax:

<table>
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<tr>
<td>Symbol</td>
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</tbody>
</table>
Some documents use braces to denote required arguments, or to group arguments for clarity. Example:

```
COMPARE {workload} -
    REPORT={SUMMARY | HISTOGRAM}
```

The `workload` variable is required. The REPORT keyword must be specified with a value of SUMMARY or HISTOGRAM.

Default values are underscored. Example:

```
COPY infile outfile - [COMPRESS={YES | NO}]
```

In this example, the COMPRESS keyword is optional. If specified, the only valid values are YES or NO. If omitted, the default is YES.

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Usage</th>
</tr>
</thead>
</table>
| `{ }`  | Some documents use braces to denote required arguments, or to group arguments for clarity. Example: 

```
COMPARE {workload} -
    REPORT={SUMMARY | HISTOGRAM}
```

The `workload` variable is required. The REPORT keyword must be specified with a value of SUMMARY or HISTOGRAM. |
| `_`    | Default values are underscored. Example: 

```
COPY infile outfile - [COMPRESS={YES | NO}]
```

In this example, the COMPRESS keyword is optional. If specified, the only valid values are YES or NO. If omitted, the default is YES. |
Introduction

OMEGAMON XE operates on an enterprise-wide basis. Its component products run on various machines on various operating system platforms networked together through one of three network protocols. Moreover, the individuals who install or upgrade OMEGAMON XE and its prerequisite software are often geographically-dispersed. For these reasons, ensuring the successful installation of OMEGAMON XE requires coordination, planning, and preparation.

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What Are OMEGAMON XE and OMEGAMON DE?

What OMEGAMON XE does

OMEGAMON XE is a suite of IBM Tivoli products that monitor and manage system and network applications on a variety of platforms. These products keep track of the availability and performance of all parts of your enterprise from one or more designated workstations, and provide reports you can use to track trends and troubleshoot problems.

How you can use OMEGAMON XE

You can use OMEGAMON XE to:

- Create situations (conditions to test when monitoring).
- Establish performance thresholds, and raise alerts when thresholds are exceeded or values are matched.
- Trace the causes leading up to an alert.
- Create and send commands to systems in your managed enterprise by means of the Take Action feature.
- Create comprehensive reports about system conditions.
- Define your own queries, using the attributes from an installed agent or from an ODBC-compliant data source, to monitor conditions of particular interest.

Component products of the OMEGAMON XE platform

The client, server, and agent implementation includes:

- A client, CandleNet Portal, with a Java-based user interface for viewing and monitoring your enterprise. CandleNet Portal offers two modes of operation: desktop and browser.
- A CandleNet Portal Server, placed between the client and the CMS, that enables retrieval, manipulation, and analysis of data from the agents. The CandleNet Portal Server is the central repository for all user data.
- A CMS, which acts as a collection and control point for alerts received from the agents, and collects their performance and availability data. It also serves as a repository for historical data. The CMS runs on z/OS, UNIX, Windows XP Professional Edition, Windows 2000, or Windows 2003 Server.
- Agents installed on the systems or subsystems you want to monitor. These agents collect and distribute data to a CMS.
- (if necessary) A CMW, required primarily for the maintenance task of removing obsolete managed systems from the user interface. Although the CandleNet Portal client replaces the CMW as the user interface for your IBM Tivoli monitored environment, the CMW still offers some features not otherwise available, such as the Universal Message Console and the Policy Microscope.
What OMEGAMON DE does

OMEGAMON DE offers a dashboard view of your enterprise. It gives you a single point of control for managing the resources your business-critical applications rely on, including a range of operating systems, servers, databases, mainframes, and Web components. For example, a typical IT network might have a Web server running on Windows, an application server running on UNIX, a database on z/OS, and a transaction processor on CICS® on the mainframe. OMEGAMON DE brings all these views together in a single window, so you can see when any component is not working as expected.

What CandleNet Portal does

Running on Windows XP Professional Edition, Windows 2000, or Windows 2003 Server, CandleNet Portal is the interface into your OMEGAMON XE products. In the same way you use your browser home page as a starting point for navigating the Internet, you use CandleNet Portal to get a high-level overview of your network environment. One section of the window displays the Navigator, a tree-like view of your monitored network, with alert icons that appear when problems arise. The rest of the window is filled with views pertinent to the chosen item in the Navigator tree. From the top level or from your home workspace, you can navigate to specific locations to check activity and investigate problems.

Two modes of operation

- Desktop mode, whereby the CandleNet Portal client is installed on your workstation and runs as a desktop application.
What Are OMEGAMON XE and OMEGAMON DE?

- Browser mode, whereby you can start CandleNet Portal from your browser, at which time the thin client software is downloaded to your system and thereafter only for software updates.

  When using CandleNet Portal in browser mode, you can start it from any workstation by entering the web server URL.

**CandleNet Portal components**

CandleNet Portal includes its own server and two types of client interface components. Here is a brief description of the components you can install at your site.

- **CandleNet Portal Server:** The CandleNet Portal Server communicates directly with your hub CMS. Install at least one CandleNet Portal Server in your network to deploy CandleNet Portal.

- **CandleNet Portal browser client interface (automatically installed with CandleNet Portal):** In your Internet browser, to start CandleNet Portal browser mode, you can enter the URL for a specific CandleNet Portal browser client installed on your Web server.

- **CandleNet Portal desktop client interface:** The installation choice labeled “CandleNet Portal Client (Desktop Edition)” installs a Java-based graphical user interface on a Windows workstation. Once the desktop client is installed and configured, you can use it to start CandleNet Portal in desktop mode.

**What the agents do**

The agents are the data collectors. The agents monitor systems, subsystems, or applications, collect data, and pass the data to CandleNet Portal or the CMW through the CMS. The agents pass commands from the user to the system, subsystem, or application. An agent interacts with a single system or application and, in most cases, resides on the same machine where the system or application is running.

Types of agents include:

- **Monitoring agents**
  
  These agents collect performance and analysis data for many systems (such as UNIX), subsystems (such as WebSphere), and applications (such as R/3).

- **Alert adapters**

  These agents monitor non-IBM-Tivoli monitoring products for a remote system, subsystem, or application, and relay alert information to the CMS.

  Sources of alerts include console and message logs, network-management products, and system-management products. An alert adapter also may have an alert emitter feature that can export IBM Tivoli alerts to a non-IBM-Tivoli monitoring product.

- **Alert emitters**

  These agents monitor events (that is, exceptions) from any product running under control of the CMS and, if applicable, relay them to the monitored system, subsystem, or application for corrective action.
What Are OMEGAMON XE and OMEGAMON DE?

- **Gateways**
  
  These agents communicate events to a management application running on a supported platform using a network service. Examples include the SNMP gateways, which communicate events to an SNMP management application running on AIX® or Windows.

  Agents run on z/OS, UNIX, Windows XP Professional Edition, Windows 2000, Windows 2003 Server, HP NonStop Kernel, and OS/400; however, not all agents are supported on all platforms.

- **CMS**
  
  The CMS can run as a stand-alone server, or as a remote server in a hierarchy of servers that report to a master server called the hub CMS. A CMS can be installed on UNIX, z/OS, Windows XP Professional Edition, Windows 2000, or Windows 2003 Server.

- **Hub CMS**
  
  The hub CMS serves as the focal point for managing your environment. The hub CMS may receive data from:

  - Agents running on the same or remote systems.
  - Other CMSs running as remote servers in a hierarchical configuration.

  Depending on the complexity of your environment, the number of agents you install, and the amount of data you choose to collect, a single CMS may be all that you need. Or, you may want to configure a hierarchical set of CMSs where remote CMSs report to a hub CMS to distribute the activity.

- **Remote CMSs**
  
  If large amounts of network data are to be collected, excessive traffic can be minimized with the installation of remote CMSs which collect data from the agent and forward it to the hub CMS. Each remote CMS must reside on its own machine and have a unique CMS name (node), but the architectures of various remote CMSs may differ from each other as well as from the hub CMS.
What Are OMEGAMON XE and OMEGAMON DE?

Figure 2. Configuration Including a Remote CMS
Step 1. Checking for Prerequisite Component Products from Other IBM Tivoli Packages and Determining Where to Install the Agents

Purpose of this step

This step ensures that new and existing customers install and configure their CMS, CandleNet Portal, CMW, and CMA (agent) Framework before they do so for the agents. This step ensures that you know where (on which operating systems and which machines) to install IBM Tivoli OMEGAMON XE for WebSphere MQ.

Procedure

Of the component products required to successfully run the IBM Tivoli OMEGAMON XE for WebSphere Business Integration package, only IBM Tivoli OMEGAMON XE for WebSphere MQ is currently supported on the OS/400 platform.


1. Install and configure the prerequisite OMEGAMON Platform and CandleNet Portal component products. This needs to be performed before you attempt to install and configure IBM Tivoli OMEGAMON XE for WebSphere MQ. Follow the directions in the following guides:
   - Installing and Setting up OMEGAMON Platform and CandleNet Portal on Windows and UNIX
   - Configuring Candle Management Server on z/OS

2. Determine where your WebSphere MQ application is running.
   This is where you must install IBM Tivoli OMEGAMON XE for WebSphere MQ.
Step 2. Checking Other Prerequisites

Purpose of this step

This step ensures that prerequisites are in place for installing IBM Tivoli OMEGAMON XE for WebSphere MQ.

Procedure

Review the requirements in the sections below and verify that your site is in compliance before installing the agents.

Note: The space required to run the agents is increased significantly depending upon how many random user-spaces you create. Each user-space requires 16 MB of hard disk space.

Hardware requirements

- RISC system
- 5250 non-programmable workstation or any workstation running 5250 emulation connected to the AS/400® system
- 50 MB disk space to install
- 19 MB disk space to execute

Software Requirements

- WebSphere MQ (version 5.3) running on OS/400 (versions 5r1 or 5r2)
- TCP/IP Communication Utilities

Note: To check for the existence on your system of the TCP/IP Communications Utilities refer to “Step 7. Compiling Information About Your AS/400 System” on page 31.
Step 3. Verifying TCP/IP Configuration, If Necessary

Purpose of this step

This step ensures that your TCP/IP network services are configured to return the fully qualified hostname of the CMS and the agents (for example: “HostName.ibm.com”). This configuration is necessary to minimize the risk of inconsistent values being returned for the host name.

If your site uses SNA for network communications, you do not need to complete this step; skip to “Step 4. Deleting Old Versions of Agents, If Necessary” on page 28.

Procedure

1. If your site uses DNS, verify that it is configured to return the fully qualified hostname of the CMS and the agents (for example: “HostName.ibm.com”).

2. Confirm that you have configured TCP/IP with the correct parameters, as follows:
   1. From an OS/400 command line, enter
      
      CFGTCP
   2. Select “Work with TCP/IP host tables entries”.
   3. Confirm that the first entry in the Host Name column is the fully qualified hostname associated with the IP address of the OS/400 machine where you will install the CMS or agent (for example: “HostName.ibm.com”). If it is not, change it now to the fully qualified host name.
   4. Return to the Configure TCP/IP menu and select “Change TCP/IP domain information”.
   5. Confirm that a host name and domain name are provided and that they match the entry you just confirmed in the TCP/IP Host Table.
   6. Confirm that the first entry for “Host name search priority” is “*LOCAL”.

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Step 4. Deleting Old Versions of Agents, If Necessary

Purpose of this step

You must complete this step if you are currently running any agents and want to replace them with the version supplied at this release. For example, if you are currently running a previous version of the monitoring agent for WebSphere MQ, you must delete it before you install IBM Tivoli OMEGAMON XE for WebSphere MQ Monitoring. Or, if you are currently running a previous version of the configuration agent for WebSphere MQ, you must delete it before you install IBM Tivoli OMEGAMON XE for WebSphere MQ Configuration.

If you are a new customer and are not running any agents, skip to “Step 5. Preparing Your WebSphere MQ Environment, If Necessary” on page 29.

This step deletes from your system any versions of agents prior to the version supplied with this release. This step is necessary due to architectural changes in the new agents.

Procedure

1. Verify that the earlier version of the agent is not running. From an OS/400 command line, enter:

   **ENDOMA**

2. Delete the agent. From an OS/400 command line, enter:

   **DLTLICPGM LICPGM(0Kppvvv)**

where:

   *pp* is:
   - “MQ” for IBM Tivoli OMEGAMON XE for WebSphere MQ Monitoring.
   - “MC” for IBM Tivoli OMEGAMON XE for WebSphere MQ Configuration.

   *vvv* is:

   the earlier version (for example: “430”).
Step 5. Preparing Your WebSphere MQ Environment, If Necessary

Purpose of this step
This step ensures that your site has a properly configured WebSphere MQ environment before proceeding with the installation of IBM Tivoli OMEGAMON XE for WebSphere MQ.

Procedure
Verify that you are in compliance with the prerequisites below:

- IBM Tivoli OMEGAMON XE for WebSphere MQ uses a WebSphere MQ license. Verify that your site has enough licenses to install the agent.
- The instructions in this guide assume that WebSphere MQ default objects, such as SYSTEM.DEFAULT.MODEL.QUEUE, exist. If they do not currently exist in your environment, you must create them before attempting to start the agent.
- If you want to monitor WebSphere MQ events, ensure that the following WebSphere MQ parameters are enabled (refer to your WebSphere MQ documentation if necessary):
  - INHIBTEV
  - LOCALEV
  - PERFMEV
  - REMOTEEV
  - STRSTPEV
Step 6. Checking the Installer’s Authority Level

Purpose of this step
This step ensures that the user that will install and configure IBM Tivoli OMEGAMON XE for WebSphere MQ has the proper authority.

Procedure
Verify that the user who will install and configure IBM Tivoli OMEGAMON XE for WebSphere MQ has Security Officer (*SECOFR) authority on the AS/400 system where the installation will take place.
Step 7. Compiling Information About Your AS/400 System

Purpose of this step
This step provides information that is needed before or during the installation and configuration of IBM Tivoli OMEGAMON XE for WebSphere MQ.

Procedure
Review each section below and complete the steps to obtain the information.

Verifying that the IBM OMEGAMON/400 agent is not installed
IBM Tivoli OMEGAMON XE for WebSphere MQ and the IBM OMEGAMON/400 agent cannot be installed on the same system.

Before installing IBM Tivoli OMEGAMON XE for WebSphere MQ, you must check for the existence of the IBM OMEGAMON/400 agent and delete it if it is present using the steps below.

1. Access an OS/400 command line and enter the following command:
   GO LICPGM
2. At the Work with Licensed Programs, enter
   12
   (Delete licensed programs).
3. Check in the Licensed Program column for entry “57xxES1” (the IBM Omegamon/400 agent).
4. If the entry exists, enter
   4
   in the Option column next to it to delete.

Verifying which version of OS/400 you are running
1. Access an OS/400 command line and enter the following command:
   DSPSFRWRSC
2. Press “F11” to display software resources.
3. In the Resource ID column, look for “57xx999”.
4. Check the corresponding Release column for the version number; for example, “V5R1M0”.

Verifying that the TCP/IP Utilities is installed, if necessary
If the installation requires the TCP/IP Utilities, check for its presence as follows:
1. Access an OS/400 command line, and enter the following command:
   GO LICPGM
2. At the Work with Licensed Programs enter
   10
   (Display installed licensed programs).

3. Look for the following entry: "COMPATIBLE TCP/IP Connectivity Utilities for AS/400".

4. If the TCP/IP Utilities is not installed, you must install it. It is supplied as part of the
   operating system

Verifying the primary language of your AS/400 system

During installation you will be required to know whether or not the primary language of
your AS/400 system is English. To determine this, complete the steps below:

1. Access an OS/400 command line and enter the following command:
   GO LICPGM

2. Enter
   20
   (Display installed secondary languages).
   The Display Installed Secondary Languages dialog is displayed.

3. Note the primary language and description displayed in the upper left corner. An English
   system is primary language "2924", description "English".

4. Press "Enter" to continue.
Configuring OMEGAMON XE Across a Firewall

Overview

This section provides an overview of IBM’s implementation of firewall support. It explains basic concepts and gives sample scenarios of various configurations. This section does not include specific steps for configuring OMEGAMON XE across a firewall; those steps can be found either in the installation chapters of this guide or in the other platform-specific installation guides, depending upon which operating systems you are configuring on.

Basic implementation

At this release, OMEGAMON XE supports most common firewall configurations, including those that use address translation (application proxy firewall is a notable exception). To enable this support, IBM uses the IPPPIPE socket address family, a TCP-based protocol that opens a single port on the firewall for communication by OMEGAMON XE components. If your target OMEGAMON XE environment includes a firewall between any components, you must specify IPPPIPE as your communication protocol during configuration. No other special configuration is needed unless your firewall also uses address translation.

Implementation with address translation

Address translation is an enhanced security feature of some firewall configurations. With this feature, components that must be reached across the firewall have two unique, but corresponding addresses: the external address (valid for components outside the firewall) and the internal address (valid for components inside the firewall).

With regard to OMEGAMON XE, the component that typically must be reached for connection is the CMS; however, the Warehouse Proxy, which runs on Windows as a server-type application, must also be accessible to clients and would also require an external and internal address. A component on either side of the firewall only knows about the address that is valid for its side (its “partition”).

To accommodate sites with address translation, IBM uses a partition-naming strategy. This strategy requires two steps:

- The creation of a text file called a partition file as part of the configuration of a hub or remote CMS (or Warehouse Proxy). The partition file contains an entry that defines that component’s address in the other partition.
- The specification of a partition name (any alphanumeric string up to 32 characters), as part of the configuration of any agent, a hub or remote CMS, a CMW, or Warehouse Proxy. A partition name must be specified for each component regardless of which side of the firewall it resides in.

Sample scenarios

Assuming that your site has one firewall, there would be two partitions: one outside the firewall, one inside the firewall. In the sample scenarios that follow we will specify the
names OUTSIDE and INSIDE, respectively, for these partitions. (If your site's configuration includes more than one firewall, IBM recommends that you contact IBM Software Support for assistance in configuring OMEGAMON XE.)

**Note:** Whatever the platform, the command-line examples in the following scenarios adhere to the UNIX and Windows text formatting conventions for literals and variables.

### Scenario 1: hub CMS INSIDE, agents and CMW OUTSIDE

As part of the configuration of the hub CMS, we specify the name of the partition that it resides in INSIDE. We also create a partition file parthub.txt, containing the following entry:

```
OUTSIDE ip.pipe:hub's_external_address
```

**OUTSIDE** is the partition name outside the firewall and **hub’s_external_address** is the address of the hub CMS that is valid for the agents and the CMW.

As part of the configuration of each agent and the CMW, we specify the name of the partition that each resides in OUTSIDE.

When an agent or the CMW starts, parthub.txt is searched for an entry that matches the partition name **OUTSIDE** and sees the CMS address that is valid for the agents and the CMW (the external address).

### Scenario 2: hub and remote CMSs INSIDE, agents OUTSIDE

**Note:** In Scenarios 2 and 3 we will assume that all agents report to the remote CMS.

As part of the configuration of the hub CMS, we specify the name of the partition that it resides in INSIDE. No partition file is needed because the only component that reports to it (the remote CMS) is also inside the firewall.

As part of the configuration of the remote CMS, we specify the name of the partition that it resides in INSIDE. A partition file partremote.txt must also be created at the remote CMS. It contains the following entries:

```
OUTSIDE ip.pipe:remote's_external_address
```

When configuring the agents (all of which are outside the firewall, reporting to the remote CMS), we specify the name of the partition that they reside in OUTSIDE. When the agents start, partremote.txt is searched for an entry that matches the partition name **OUTSIDE** and sees the remote CMS address that is valid for them (the external address).

### Scenario 3: hub CMS INSIDE, remote CMS and agents OUTSIDE

As part of the configuration of the hub CMS, we specify the name of the partition that it resides in INSIDE. We also create a partition file parthub.txt, containing the following entry:

```
OUTSIDE ip.pipe:hub's_external_address
```

**OUTSIDE** is the partition name outside the firewall and **hub’s_external_address** is the address of the hub CMS that is valid for the remote CMS.
As part of the configuration of both the agents and the remote CMS, we specify the name of the partition they reside in OUTSIDE.

A partition file partremote.txt also must be created at the remote CMS. It contains the following entry:

```
INSIDE ip.pipe:remote's_internal_address
```

If the hub CMS needs to communicate with the remote CMS (for example, to issue a report request from an agent that is connected to the remote CMS), partremote.txt is searched for an entry that matches the partition name `INSIDE` and sees the remote CMS address that is valid for it (the internal address).
Installing the Component Products

Introduction

This chapter contains instructions for installing IBM Tivoli OMEGAMON XE for WebSphere MQ.

Before you begin, verify that your site is in compliance with the agents’ hardware and software prerequisites listed in “Step 2. Checking Other Prerequisites” on page 26.

Note: Be sure that QMQMADM authority is given to the KMQ User Profile as the default setting.

Chapter contents

Step 1. Installing or Upgrading the Component Products .................................38
Step 1. Installing or Upgrading the Component Products

Purpose of this step
This step loads the software for IBM Tivoli OMEGAMON XE for WebSphere MQ from the IBM Tivoli OMEGAMON XE for WebSphere Business Integration CD and uses the Restore Licensed Program to complete its installation.

Two procedures are provided:
- Install from a PC CD-ROM
- Install from an AS/400 CD-ROM

Use one of the two procedures, whichever is most convenient for your site. These procedures assume that you have completed the steps in “Preparing for Installation” on page 19.

Installing from a PC CD-ROM

1. Access an OS/400 command line.
2. Check that the system value QALWOBJRST is set to “*ALL”.
   1. Enter this command:
      \texttt{WRKSYSVAL QALWOBJRST}
   2. Select “5” (Display), and verify that the value is set to “*ALL”. If it is set to any other value(s), record those value(s) below:
      \texttt{QALWOBJRST_____________________________________________}
   3. Press “Enter” to continue.
3. If QALWOBJRST was set to “*ALL”, continue with the next step below; otherwise, do the following:
   1. On the Work with System Values dialog, enter
      \texttt{2}
      to change the values.
   2. On the Change System Value dialog, change the existing values to *ALL.
   3. Press “Enter” to save your change.
   4. Press “F3” to return.
4. At the OS/400 command line, create an AS/400 library for OMEGAMON XE installation:
   \texttt{CRTLIB KMQ_TMPLIB TEXT('MQ INSTALL LIBRARY')}
5. Create a save file in the KMQ_TMPLIB library:
   \texttt{CRTSAVF KMQ_TMPLIB/MQCMAPKG TEXT('MQ INSTALL PRODUCT')}
7. Insert the IBM Tivoli OMEGAMON XE for WebSphere Business Integration CD into the CD-ROM drive.

8. From a DOS prompt, start an FTP session:
   
   FTP machinename
   
   where machinename is the name of the target OS/400 machine.

9. When prompted, enter your OS/400 user ID and password.

10. Change the FTP type to binary:
    
    BINARY

11. Transfer the software for IBM Tivoli OMEGAMON XE for WebSphere MQ from the CD-ROM to the OS/400 machine:
    
    PUT e:\OS400\CMA\MQCMAPKG.SAV KMQ_TMPLIB/MQCMAPKG (REPLACE
    
    where e is your PC CD-ROM drive.

12. End your ftp session:
    
    QUIT

13. From an OS/400 command line, type this command:
    
    RSTOBJ OBJ(*ALL) SAVLIB(KMQ_TMPLIB) DEV(*SAVF) SAVF(KMQ_TMPLIB/MQCMAPKG)

14. Install the software for IBM Tivoli OMEGAMON XE for WebSphere MQ (do one of the following):

   ▪ If you are installing the product on a system that is English upper and lower case (language ID 2924), do one of the following:

      A. If you want to install both IBM Tivoli OMEGAMON XE for WebSphere MQ Monitoring and IBM Tivoli OMEGAMON XE for WebSphere MQ Configuration, enter the following commands:

         CHGCURLIB KMQ_TMPLIB
         CALL INSTALL

         and proceed to step 15. below.

      B. If you want to install just IBM Tivoli OMEGAMON XE for WebSphere MQ Monitoring, enter the following command:

         RSTLICPGM LICPGM(0KMQ450) DEV(*SAVF) SAVF(KMQ_TMPLIB/MQCMAPKG)

         and proceed to step 15. below.

      C. If you want to install just IBM Tivoli OMEGAMON XE for WebSphere MQ Configuration, enter the following command:

         RSTLICPGM LICPGM(0KMC450) DEV(*SAVF) SAVF(KMQ_TMPLIB/MQCMAPKG)

         and proceed to step 15. below.

   ▪ If you are installing on a non-language ID 2924 system, do one of the following:
Step 1. Installing or Upgrading the Component Products

A. If you want to install both IBM Tivoli OMEGAMON XE for WebSphere MQ Monitoring and IBM Tivoli OMEGAMON XE for WebSphere MQ Configuration, check for the existence of the KMQLNG and KMCLNG work libraries.
   a. If the libraries exist, clear them:
      
      **CLRLIB KMQLNG**
      
      **CLRLIB KMCLNG**
      
   b. If the libraries do not exist, create them:
      
      **CRTLIB KMQLNG**
      
      **CRTLIB KMCLNG**
      
      c. Enter the following commands:
         
         **RSTLICPGM LICPGM(0KMQ450) DEVENT(*) SAVF(KMQ_TMPLIB/MQCMAPPKG)**
         
         **RSTLICPGM LICPGM(0KMC450) DEVENT(*) SAVF(KMQ_TMPLIB/MQCMAPPKG)**
         
         **RSTLICPGM LICPGM(0KMQ450) DEVENT(*) LNG(2924) SAVF(KMQ_TMPLIB/MQCMAPPKG) LNGLIB(QKMQLNG)**
         
         **RSTLICPGM LICPGM(0KMC450) DEVENT(*) LNG(2924) SAVF(KMQ_TMPLIB/MQCMAPPKG) LNGLIB(QKMCLNG)**
         
         **SAVF(KMQ_TMPLIB/MQCMAPPKG)**

      This creates or recreates libraries named KMQLIB and KMCLIB containing all the file transfer utilities components and definitions required to run the software for IBM Tivoli OMEGAMON XE for WebSphere MQ.

B. If you want to install just IBM Tivoli OMEGAMON XE for WebSphere MQ Monitoring, check for the existence of the KMQLNG work library.
   a. If the library exists, clear it:
      
      **CLRLIB KMQLNG**
      
   b. If the library does not exist, create it:
      
      **CRTLIB KMQLNG**
      
      c. Enter the following commands:
         
         **RSTLICPGM LICPGM(0KMQ450) DEVENT(*) SAVF(KMQ_TMPLIB/MQCMAPPKG)**
         
         **RSTLICPGM LICPGM(0KMC450) DEVENT(*) LNG(2924) SAVF(KMQ_TMPLIB/MQCMAPPKG) LNGLIB(QKMQLNG)**
         
         **SAVF(KMQ_TMPLIB/MQCMAPPKG)**

      This creates or recreates a library named KMQLIB containing all the file transfer utilities components and definitions required to run the software for IBM Tivoli OMEGAMON XE for WebSphere MQ Monitoring.

C. If you want to install just IBM Tivoli OMEGAMON XE for WebSphere MQ Configuration, check for the existence of the KMCLNG work library.
   a. If the library exists, clear it:
Step 1. Installing or Upgrading the Component Products

Installing from an AS/400 CD-ROM:

1. Access an OS/400 command line.
2. Check that the system value QALWOBJRST is set to "*ALL."
3. Enter this command:
   
   WRKSYSVAL QALWOBJRST

4. Select “5” (Display), and verify that the value is set to “*ALL”. If it is set to any other value(s), record those value(s) below:
   
   QALWOBJRST ________________________________

5. Press “Enter” to continue.

6. If QALWOBJRST was set to “*ALL”, continue with the next step; otherwise, do the following:

   1. On the Work with System Values dialog, enter
      
      2

      to change the values.

   15. If you intend to install another agent, leave the QALWOBJRST value set to "*ALL" until you are finished; otherwise, change it back to the value(s) you recorded earlier.

   16. If you will be installing the agent on another AS/400 machine, use ftp or another file transfer program to copy the save file to it.

   17. Delete the installation library, which is no longer needed:

      DTLIB KMQ_TMPLIB

      Installation of the software for IBM Tivoli OMEGAMON XE for WebSphere MQ is complete.

   18. Proceed to “Configuring IBM Tivoli OMEGAMON XE for WebSphere MQ Configuration” on page 47 or “Configuring IBM Tivoli OMEGAMON XE for WebSphere MQ Monitoring” on page 55.
2. On the Change System Value dialog, change the existing values to *ALL.
3. Press “Enter” to save your change.
4. Press “F3” to return.

7. Create an AS/400 library for OMEGAMON XE installation:
   ```
   CRTLIB KMQ_TMPLIB TEXT('MQ INSTALL LIBRARY')
   ```
8. Create a save file in the KMQ_TMPLIB library:
   ```
   CRTSAVF KMQ_TMPLIB/MQCMAPKG TEXT('MQ INSTALL PRODUCT')
   ```
9. Create a work folder.
   1. Enter this command:
      ```
      WRKFLR
      ```
   2. Select “1” (Create Folder), then specify MQFLR for the folder name.
10. Insert the IBM Tivoli OMEGAMON XE for WebSphere Business Integration CD into the CD-ROM drive and enter:
    ```
    WRKLNK QOPT
    ```
    The Work with Object Links screen displays the qopt object link.
11. Select “5” (Next Level) at the qopt object link to select the next object link, the volume ID (volid) of the CD-ROM.
    Record this value for use during installation:
    ```
    VOL ID _____________________________________________________
    ```
12. Continue to select “5” for each link level until the following path is displayed:
    ```
    /QOPT/volid/OS400/CMA
    ```
    where valid is the volume ID of the CD-ROM.
13. Look for file MQCMAPKG.SAV.
14. Copy this .SAV file to QDLS:
    ```
    CPY OBJ('/QOPT/volid/OS400/CMA/MQCMAPKG.SAV')TODIR('/QDLS/MQFLR')
    ```
    where valid is the volume ID of the CD-ROM.
15. From an OS/400 command line, start an ftp session:
    ```
    FTP machinename
    ```
    where machinename is the name of the target OS/400 machine.
16. Enter your user ID and password.
17. Change the file type to binary:
    ```
    BINARY
    ```
Step 1. Installing or Upgrading the Component Products

18. Enter
   NAMEFMT 1

19. On the command line, enter
   
   ```
   PUT /QDLS/MQFLR/MQCMAPKG.SAV /QSYS.LIB/KMQ_TMPLIB.LIB/MQCMAPKG
   ```

20. End your ftp session:
   QUIT

21. From an OS/400 command line, type this command:
   
   ```
   RSTOBJ OBJ(*ALL) SAVLIB(KMQ_TMPLIB) DEV(*SAVF)
   SAVF(KMQ_TMPLIB/MQCMAPKG)
   ```

22. Install the software for IBM Tivoli OMEGAMON XE for WebSphere MQ (do one of the following):

   - If you are installing the product on a system that is English upper and lower case (language ID 2924), do one of the following:
     A. If you want to install both IBM Tivoli OMEGAMON XE for WebSphere MQ Monitoring and IBM Tivoli OMEGAMON XE for WebSphere MQ Configuration, enter the following commands:
        
        ```
        CHGCURLIB KMQ_TMPLIB
        CALL INSTALL
        ```
        and proceed to step 15. below.
     B. If you want to install just IBM Tivoli OMEGAMON XE for WebSphere MQ Monitoring, enter the following command:
        
        ```
        RSTLICPGM LICPGM(0KMQ450) DEV(*SAVF) SAVF(KMQ_TMPLIB/MQCMAPKG)
        ```
        and proceed to step 15. below.
     C. If you want to install just IBM Tivoli OMEGAMON XE for WebSphere MQ Configuration, enter the following command:
        
        ```
        RSTLICPGM LICPGM(0KMC450) DEV(*SAVF) SAVF(KMQ_TMPLIB/MQCMAPKG)
        ```
        and proceed to step 15. below.

   - If you are installing on a non-language ID 2924 system, do one of the following:
     A. If you want to install both IBM Tivoli OMEGAMON XE for WebSphere MQ Monitoring and IBM Tivoli OMEGAMON XE for WebSphere MQ Configuration, check for the existence of the KMQLNG and KMCLNG work libraries.
        a. If the libraries exist, clear them:
           
           ```
           CLRLIB KMQLNG
           CLRLIB KMCLNG
           ```
        b. If the libraries do not exist, create them:
           
           ```
           CRTLIB KMQLNG
           CRTLIB KMCLNG
           ```
        c. Enter the following commands:
Step 1. Installing or Upgrading the Component Products

RSTLICPGM LICPGM(0KMQ450) DEV(*SAVF) RSTOBJ(*PGM)
SAVF(KMQ_TMPLIB/MQCMAPKG)

RSTLICPGM LICPGM(0KMC450) DEV(*SAVF) RSTOBJ(*PGM)
SAVF(KMQ_TMPLIB/MQCMAPKG)

RSTLICPGM LICPGM(0KMQ450) DEV(*SAVF) RSTOBJ(*LNG) LNG(2924)
SAVF(KMQ_TMPLIB/MQCMAPKG) LNGLIB(QKMQLNG)

RSTLICPGM LICPGM(0KMC450) DEV(*SAVF) RSTOBJ(*LNG) LNG(2924)
SAVF(KMQ_TMPLIB/MQCMAPKG) LNGLIB(QKMCLNG)
SAVF(KMQ_TMPLIB/MQCMAPKG)

This creates or recreates libraries named KMQLIB and KMCLIB containing all the
file transfer utilities components and definitions required to run the software for
IBM Tivoli OMEGAMON XE for WebSphere MQ.

B. If you want to install just IBM Tivoli OMEGAMON XE for WebSphere MQ
Monitoring, check for the existence of the KMQLNG work library.
   a. If the library exists, clear it:
      CLRLIB KMQLNG
   b. If the library does not exist, create it:
      CRTLIB KMQLNG
   c. Enter the following commands:
      RSTLICPGM LICPGM(0KMQ450) DEV(*SAVF) RSTOBJ(*PGM)
      SAVF(KMQ_TMPLIB/MQCMAPKG)
      RSTLICPGM LICPGM(0KMQ450) DEV(*SAVF) RSTOBJ(*LNG) LNG(2924)
      SAVF(KMQ_TMPLIB/MQCMAPKG) LNGLIB(QKMQLNG)
      SAVF(KMQ_TMPLIB/MQCMAPKG)

      This creates or recreates a library named KMQLIB containing all the file transfer
      utilities components and definitions required to run the software for IBM Tivoli
      OMEGAMON XE for WebSphere MQ Monitoring.

C. If you want to install just IBM Tivoli OMEGAMON XE for WebSphere MQ
Configuration, check for the existence of the KMCLNG work library.
   a. If the library exists, clear it:
      CLRLIB KMCLNG
   b. If the library does not exist, create it:
      CRTLIB KMCLNG
   c. Enter the following commands:
      RSTLICPGM LICPGM(0KMC450) DEV(*SAVF) RSTOBJ(*PGM)
      SAVF(KMQ_TMPLIB/MQCMAPKG)
      RSTLICPGM LICPGM(0KMC450) DEV(*SAVF) RSTOBJ(*LNG) LNG(2924)
      SAVF(KMQ_TMPLIB/MQCMAPKG) LNGLIB(QKMQLNG)
      SAVF(KMQ_TMPLIB/MQCMAPKG)
This creates or recreates a library named KMCLIB containing all the file transfer utilities components and definitions required to run the software for IBM Tivoli OMEGAMON XE for WebSphere MQ Configuration.

23. If you intend to install another agent, leave the QALWOBJRST value set to “*ALL” until you are finished; otherwise, change it back to the values you recorded earlier.

24. Delete the installation objects that are no longer needed
   1. Enter this command:
      DTLIB KMQ_TMPLIB
   2. Delete MQCMAPKG.SAV from your folder:
      WRKDOC FLR(MQFLR)
   3. Select “4” for MQCMAPKG.SAV.
   4. Press “Enter” to delete.
   5. Press “F3” to return to the command line.
   6. Delete the installation folder:
      WRKFLR
   7. Select “4” for MQFLR.
   8. Press “Enter” to delete.
   9. Press “F3” to return to the command line.
   Installation of the software for IBM Tivoli OMEGAMON XE for WebSphere MQ is complete.

25. Proceed to “Configuring IBM Tivoli OMEGAMON XE for WebSphere MQ Configuration” on page 47 or “Configuring IBM Tivoli OMEGAMON XE for WebSphere MQ Monitoring” on page 55.
Step 1. Installing or Upgrading the Component Products
Introduction

This chapter contains step-by-step instructions for configuring and verifying installation and configuration of IBM Tivoli OMEGAMON XE for WebSphere MQ Configuration.

Chapter contents

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Step 2. Verifying the Installation and Configuration ................................. 51
Starting and Stopping the Agent from a Command Line ......................... 53
Step 1. Configuring IBM Tivoli OMEGAMON XE for WebSphere MQ Configuration

Purpose of this step

This step establishes the necessary network connections between IBM Tivoli OMEGAMON XE for WebSphere MQ Configuration and the CMS to which it will report. Online Help is available by pressing “F1”.

Procedure

1. From an OS/400 command line, enter this command
   
   GO OMAMC

2. Enter
   
   4

   to select Configure CCC for MQSeries Configuration Agent.

   The Configure OMA (CFGOMAMC) dialog is displayed.

3. Enter your site’s values for the displayed parameters using the guidelines below.

   If your site is using a firewall through which component products of any IBM Tivoli packages will communicate, be sure to read “Configuring OMEGAMON XE Across a Firewall” on page 33 before you begin this step.

Table 2. Parameters for the Configure OMA (CFGOMAMC) Dialog

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMS SNA location</td>
<td>The SNA location of the CMS that this agent will report to. If you will not use SNA, enter “*NONE”. If the correct SNA location was previously defined, enter “*SAME” to retrieve it. If you need to define a new SNA location (which can be the Control Point Name or the remote location name) enter its name (for example: S10B6322).</td>
</tr>
<tr>
<td>CMS TCP/IP address</td>
<td>The TCP/IP address or host name of the machine where the CMS that this agent will report to resides. If you will not use TCP/IP, enter “*NONE”. If the correct TCP/IP address or host name was previously defined, enter “*SAME” to retrieve it. If you need to define a different TCP/IP address or host name, enter it (for example: 129.0.132.45 or NEWYORK).</td>
</tr>
<tr>
<td>CMS IP.PIPE Address</td>
<td>If IBM Tivoli OMEGAMON XE for WebSphere MQ Configuration must connect to the CMS through a firewall, you must use IP.PIPE. Specify the IP.PIPE address or host name of the machine where the CMS resides. If you will not use IP.PIPE, enter “*NONE”.</td>
</tr>
<tr>
<td>Secondary CMS SNA location</td>
<td>The SNA location of a secondary CMS that this agent will report to if it cannot communicate with the primary CMS at startup.</td>
</tr>
</tbody>
</table>
### Table 2. Parameters for the Configure OMA (CFGOMAMC) Dialog (continued)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secondary CMS IP address</td>
<td>The TCP/IP address or host name of the machine where a secondary CMS resides. The agent will report to this CMS if it cannot communicate with the primary CMS at startup.</td>
</tr>
<tr>
<td>Secondary CMS IPPPIPE Address</td>
<td>The IPPPIPE address or host name of the machine where a secondary CMS resides. The agent will report to this CMS if it cannot communicate with the primary CMS at startup.</td>
</tr>
<tr>
<td>Partition Name</td>
<td>(Required only by sites with firewalls that use address translation.) The name of the partition that this instance of IBM Tivoli OMEGAMON XE for WebSphere MQ Configuration resides in (up to 32 alphanumeric characters).</td>
</tr>
<tr>
<td>Firewall in use</td>
<td>If IBM Tivoli OMEGAMON XE for WebSphere MQ Configuration must connect to the CMS through a firewall, enter &quot;*YES&quot;. If not, retain the default of &quot;*NO&quot;.</td>
</tr>
<tr>
<td>CMS TCP/IP port address</td>
<td>The listening port of the CMS that this agent will report to (usually 1918). If your site uses SNA or IPPPIPE, ignore this field. If the correct port address was previously defined, enter &quot;*SAME&quot; to retrieve it. If you need to specify a different CMS port address, enter it (up to six numeric characters).</td>
</tr>
<tr>
<td>CMS SNA port address</td>
<td>The listening port of the CMS that this agent will report to (usually 1918). If your site uses TCP/IP or IPPPIPE, ignore this field. If the correct port address was previously defined, enter &quot;*SAME&quot; to retrieve it. If you need to specify a different CMS port address, enter it (up to six numeric characters).</td>
</tr>
<tr>
<td>CMS IPPPIPE port address</td>
<td>The listening port of the CMS that this agent will report to (usually 1918). If your site uses TCP/IP or SNA, ignore this field. If you need to specify a different CMS port address, enter it (up to six numeric characters).</td>
</tr>
<tr>
<td>Action user profile</td>
<td>The user authority under which user action should be administered. Retain the default value of QAUTOMON to grant user system operator authority.</td>
</tr>
<tr>
<td>SNA transaction program</td>
<td>This prompt is displayed only if you entered a value (or &quot;*SAME&quot;) for CMS SNA location. The name of the SNA transaction program. IBM recommends retaining the default value of KDTMSNAP.</td>
</tr>
<tr>
<td>Library</td>
<td>This prompt is displayed only if you entered a value (or &quot;*SAME&quot;) for SNA location. The name of the SNA transaction program library. IBM recommends retaining the default value of KMSCMS.</td>
</tr>
<tr>
<td>Transaction program (backup)</td>
<td>This prompt is displayed only if you entered a value (or &quot;*SAME&quot;) for Secondary CMS SNA location. The name of the SNA transaction program. IBM recommends retaining the default value of KDTMSNAP.</td>
</tr>
</tbody>
</table>
Step 1. Configuring IBM Tivoli OMEGAMON XE for WebSphere MQ Configuration

50 Installing and Setting up IBM Tivoli OMEGAMON XE for WebSphere MQ on OS/400

Table 2. Parameters for the Configure OMA (CFGOMAMC) Dialog (continued)

| Library | This prompt is displayed only if you entered a value (or “*SAME”) for Secondary CMS SNA location. The name of the SNA transaction program library. IBM recommends retaining the default value of KMSCMS. |

**Note:** You can specify values for CMS SNA Location, CMS TCP/IP address, and IPPPIPE address. The system will check them in order. If you specify *NONE for all CMS and Secondary CMS parameters, IBM Tivoli OMEGAMON XE for WebSphere MQ Configuration looks for your CandleLight® workstation at start-up.

If you are reconfiguring the agent, the changes will take effect the next time the agent is started.

Configuration of IBM Tivoli OMEGAMON XE for WebSphere MQ Configuration is complete.

Step 2. Verifying the Installation and Configuration

Purpose of this step

This step starts (and optionally stops) IBM Tivoli OMEGAMON XE for WebSphere MQ Configuration, verifying that it has been installed and configured properly.

**Note:** If you are using SNA for your agent-to-CMS connection, you may need to complete additional configuration steps. Refer to “Additional Configuration Steps for SNA Environments” on page 65 before you attempt to start the agent.

Procedure

Start the agent

1. Verify that the CMS that the agent connects to is started.
2. From an OS/400 command line, enter this command:
   
   ```
   GO OMAMC
   ```
3. Enter
   
   ```
   2
   ```
   to select Start CCC for MQSeries Configuration Agent.
4. Verify that the following messages are displayed:
   
   Omegamon Monitoring Agent startup in progress
   
   Candle Management Server located
   
   **Note:** It may be several minutes before the “Online” status is shown in the CandleNet Portal Managed System Status workspace (log on to CandleNet Portal, right-click the Enterprise icon and, from the pop-up menu, select “Workspace > Managed System Status”) or, if you installed a CMW, in the managed system list at your CMW.
5. Repeat the above steps on each system where you want to start IBM Tivoli OMEGAMON XE for WebSphere MQ Configuration.

Stopping the agent (optional)

To stop IBM Tivoli OMEGAMON XE for WebSphere MQ Configuration, use the following procedure:

1. From an OS/400 command line enter this command:
   
   ```
   GO OMAMC
   ```
2. Enter
   
   ```
   3
   ```
   to select End CCC for MQSeries Configuration Agent.
3. Press “F4” to see options for ending the agent, and specify one of the following:
Step 2. Verifying the Installation and Configuration

- “*IMMED” to shut down immediately
- “*CNTRLD” for a controlled shutdown. With a controlled shutdown, you can also specify the following options:
  - “Delay time”, in seconds. Shutdown is delayed for the time interval that you specify, allowing the agent to complete operations.
  - “Allow abnormal end if needed (YES, NO)”. If you enter “YES”, any jobs that have not ended normally after 10 minutes will shut down abnormally.

4. Look for a message that states that Omegamon Monitoring Agent ended.

Verification of the installation and configuration of IBM Tivoli OMEGAMON XE for WebSphere MQ Configuration is complete.
Starting and Stopping the Agent from a Command Line

Purpose of this step
This procedure enables you to start or stop IBM Tivoli OMEGAMON XE for WebSphere MQ Configuration from an AS/400 command line.

Starting
To start your agent from an AS/400 command line, type this command:

STROMAMC

Stopping
To stop your agent from an AS/400 command line, type this command:

ENDOMAMC
Introduction

This chapter contains step-by-step instructions for configuring and verifying installation and configuration of IBM Tivoli OMEGAMON XE for WebSphere MQ Monitoring.

Chapter contents

Step 1. Configuring IBM Tivoli OMEGAMON XE for WebSphere MQ Monitoring ..............56
Step 2. Verifying the Installation and Configuration ................................................59
Starting and Stopping the Agent from a Command Line .......................................61
Step 3. Customizing Monitoring Options (optional) .................................................62
Step 1. Configuring IBM Tivoli OMEGAMON XE for WebSphere MQ Monitoring

Purpose of this step

This step establishes the necessary network connections between IBM Tivoli OMEGAMON XE for WebSphere MQ Monitoring and the CMS to which it will report. Online Help is available by pressing “F1”.

Procedure

1. From an OS/400 command line enter this command
   WRKOMAMQ

   The Add OMEGAMON Agent for WebSphere MQ dialog displays.

   (If this is not the first access, a different dialog displays; press “F6” to display the Add OMEGAMON Agent for WebSphere MQ dialog.)

2. Enter the name of the Queue Manager that this agent will monitor, along with a text description, and press “Enter”.

   The Configure OMA (CFGOMAMQ) dialog displays.

3. Enter your site’s values for the displayed parameters using the guidelines below.

   If your site is using a firewall through which component products of any IBM Tivoli package will communicate, be sure to read “Configuring OMEGAMON XE Across a Firewall” on page 33 before you begin this step.

Table 3. Parameters for the Configure OMA (CFGOMAMQ) Dialog

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMS SNA location</td>
<td>The SNA location of the CMS that this agent will report to. If you will not use SNA, enter “*NONE”. If the correct SNA location was previously defined, enter “*SAME” to retrieve it. If you need to define a new SNA location (which can be the Control Point Name or the remote location name) enter its name (for example: S10B6322).</td>
</tr>
<tr>
<td>CMS TCP/IP address</td>
<td>The TCP/IP address or host name of the machine where the CMS that this agent will report to resides. If you will not use TCP/IP, enter “*NONE”. If the correct TCP/IP address or host name was previously defined, enter “*SAME” to retrieve it. If you need to define a different TCP/IP address or host name, enter it (for example: 129.0.132.45 or NEWYORK).</td>
</tr>
<tr>
<td>CMS IPPIPE Address</td>
<td>If IBM Tivoli OMEGAMON XE for WebSphere MQ Monitoring must connect to the CMS through a firewall, you must use IPPIPE. Specify the IPPIPE address or host name of the machine where the CMS resides. If you will not use IPPIPE, enter “*NONE”.</td>
</tr>
</tbody>
</table>
### Table 3. Parameters for the Configure OMA (CFGOMAMQ) Dialog (continued)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secondary CMS SNA location</td>
<td>The SNA location of a secondary CMS that this agent will report to if it cannot communicate with the primary CMS at startup.</td>
</tr>
<tr>
<td>Secondary CMS IP address</td>
<td>The TCP/IP address or host name of the machine where a secondary CMS resides. The agent will report to this CMS if it cannot communicate with the primary CMS at startup.</td>
</tr>
<tr>
<td>Secondary CMS IP.PIPE Address</td>
<td>The IP.PIPE address or host name of the machine where a secondary CMS resides. The agent will report to this CMS if it cannot communicate with the primary CMS at startup.</td>
</tr>
<tr>
<td>Partition Name</td>
<td>(Required only by sites with firewalls that use address translation.) The name of the partition that this instance of IBM Tivoli OMEGAMON XE for WebSphere MQ Monitoring resides in (up to 32 alphanumeric characters).</td>
</tr>
<tr>
<td>Firewall in use</td>
<td>If IBM Tivoli OMEGAMON XE for WebSphere MQ Monitoring must connect to the CMS through a firewall, enter “*YES”. If not, retain the default of *NO.</td>
</tr>
<tr>
<td>CMS TCP/IP port address</td>
<td>The listening port of the CMS that this agent will report to (usually 1918). If your site uses SNA or IP.PIPE, ignore this field. If the correct port address was previously defined, enter “*SAME” to retrieve it. If you need to specify a different CMS port address, enter it (up to six numeric characters).</td>
</tr>
<tr>
<td>CMS SNA port address</td>
<td>The listening port of the CMS that this agent will report to (usually 1918). If your site uses TCP/IP or IP.PIPE, ignore this field. If the correct port address was previously defined, enter “*SAME” to retrieve it. If you need to specify a different CMS port address, enter it (up to six numeric characters).</td>
</tr>
<tr>
<td>CMS IP.PIPE port address</td>
<td>The listening port of the CMS that this agent will report to (usually 1918). If your site uses TCP/IP or SNA, ignore this field. If you need to specify a different CMS port address, enter it (up to six numeric characters).</td>
</tr>
<tr>
<td>Action user profile</td>
<td>The user authority under which user action should be administered. Retain the default value of QAUTOMON to grant user system operator authority.</td>
</tr>
<tr>
<td>SNA transaction program (backup)</td>
<td>This prompt is displayed only if you entered a value (or “*SAME”) for CMS SNA location. The name of the SNA transaction program. IBM recommends retaining the default value of KDTMSNAP.</td>
</tr>
<tr>
<td>Library</td>
<td>This prompt is displayed only if you entered a value (or “*SAME”) for SNA location. The name of the SNA transaction program library. IBM recommends retaining the default value of KMSCMS.</td>
</tr>
<tr>
<td>Transaction program (backup)</td>
<td>This prompt is displayed only if you entered a value (or “*SAME”) for Secondary CMS SNA location. The name of the SNA transaction program. IBM recommends retaining the default value of KDTMSNAP.</td>
</tr>
</tbody>
</table>
Table 3. Parameters for the Configure OMA (CFGOMAMQ) Dialog (continued)

| Library | This prompt is displayed only if you entered a value (or “*SAME”) for Secondary CMS SNA location. The name of the SNA transaction program library. IBM recommends retaining the default value of KMSCMS. |

Note: You can specify values for CMS SNA Location, CMS TCP/IP address, and IPPPIPE address. The system will check them in order. If you specify “*NONE” for all CMS and Secondary CMS parameters, IBM Tivoli OMEGAMON XE for WebSphere MQ Monitoring looks for your CandleLight workstation at start-up.

4. Read the Options choices and Function Key choices available for each dialog to determine which keys to press to save and exit the dialog.

If you are reconfiguring the agent, the changes will take effect the next time the agent is started.

5. If you are configuring multiple instances of IBM Tivoli OMEGAMON XE for WebSphere MQ Monitoring, repeat these steps. The first instance added is automatically assigned suffix 00001, the second instance added is automatically assigned suffix 00002, and so on.

Configuration of IBM Tivoli OMEGAMON XE for WebSphere MQ Monitoring is complete.

Step 2. Verifying the Installation and Configuration

Purpose of this step
This step starts (and optionally stops) IBM Tivoli OMEGAMON XE for WebSphere MQ Monitoring, verifying that it has been installed and configured properly.

Note: If you are using SNA for your agent-to-CMS connection, you may need to complete additional configuration steps. Refer to “Additional Configuration Steps for SNA Environments” on page 65 before you attempt to start the agent.

Procedure

Starting the agent
1. Verify that the CMS that the agent connects to is started.
2. From an OS/400 command line, enter this command:
   
   WRKOMAMQ

   The Work with Candle Monitoring Agent for WebSphere MQ dialog displays.
3. Enter
   
   14

   in the Option column next to the agent that you want to start.

   The Status column indicates when the agent is started.
4. Enter
   
   5

   in the Option column next to the agent to display its log. Verify that the following message is displayed (Scroll up to the top of the log to see it):

   Candle Management Server located

   Note: It may be several minutes before the online status is shown in the CandleNet Portal Managed System Status workspace (log on to CandleNet Portal, right-click the Enterprise icon and, from the pop-up menu, select “Workspace > Managed System Status”) or, if you installed a CMW, in the managed system list at your CMW.
5. Repeat these steps on each system where you want to start IBM Tivoli OMEGAMON XE for WebSphere MQ Monitoring.

Stopping the agent (optional)
To stop IBM Tivoli OMEGAMON XE for WebSphere MQ Monitoring, use the following procedure:
1. From an OS/400 command line, enter this command:

   WRKOMAMQ

   The Work with Candle Monitoring Agent for WebSphere MQ dialog displays.
2. Enter
   15
in the Option column next to the agent that you want to stop (end).
The End OMEGAMON Monitoring Agent dialog displays.

3. Recommended default values are supplied in the dialog. Here are options for ending the agent:
   - "*CNTRLD" for a controlled shutdown. With a controlled shutdown, you can also specify the following options:
     - "Delay time", in seconds. Shutdown is delayed for the time interval that you specify, allowing the agent to complete operations.
     - "Allow abnormal end if needed (YES, NO)"). If you enter "YES", any jobs that have not ended normally after 10 minutes will shut down abnormally.
   Press "Enter" to proceed.

4. The Work with Candle Monitoring Agent for WebSphere MQ dialog displays.
The Status column indicates the agent is “Ending...” then, eventually, “Not Started”.

5. Enter
   5
in the Option column next to the agent to display its log.
Look for a message that states that job KMQnnnnnn completed normally.
Verification of the installation and configuration of IBM Tivoli OMEGAMON XE for WebSphere MQ Monitoring is complete.

Starting and Stopping the Agent from a Command Line

Purpose of this step

This procedure enables you to start or stop IBM Tivoli OMEGAMON XE for WebSphere MQ Monitoring from an AS/400 command line.

Starting

To start your agent from an AS/400 command line, type this command:

`STROMAMQA SUFFIX(xxxxx)`

where `xxxxx` is a unique number, starting with 00001, to identify each Websphere MQ Queue Manager.

Note: If you do not know the suffix associated with this instance of the WebSphere MQ Queue Manager, type this command at an AS/400 command line:

`WRKOMAMQ`

In the dialog that displays, the suffix will appear to the right of the associated instance that is listed.

Stopping

To stop your agent from an AS/400 command line, type this command:

`ENDOMAMQA SUFFIX(xxxxx)`

where `xxxxx` is a unique number, starting with 00001, to identify each Websphere MQ Queue Manager.

Note: If you do not know the suffix associated with this instance of the WebSphere MQ Queue Manager, type this command at an AS/400 command line:

`WRKOMAMQ`

In the dialog that displays, the suffix will appear to the right of the associated instance that is listed.
Step 3. Customizing Monitoring Options (optional)

Purpose of this step

This step enables you to customize monitoring options for a single queue manager. Default monitoring options are set at installation; however, you can change the defaults by using the agent management program to specify options in the KMQLIB/MQnnnnnn monitoring file associated with the agent. This file is read when IBM Tivoli OMEGAMON XE for WebSphere MQ Monitoring is started.

Procedure

To edit the monitoring file, follow these steps.

1. If you are unfamiliar with the various monitoring options and the commands to enable them, refer to Using IBM Tivoli OMEGAMON XE for WebSphere MQ Monitoring. If you want to collect historical data, you must set the HISTORY option to “YES” on the PERFORM STARTMON statement in the monitoring file. Refer also to Historical Data Collection Guide for IBM Tivoli OMEGAMON XE Products for additional instructions related to historical data collection.

2. When you are ready to customize the monitoring file, from an OS/400 command line enter the following command:

   WRKOMAMQ

The main dialog for working with IBM Tivoli OMEGAMON XE for WebSphere MQ Monitoring displays

<table>
<thead>
<tr>
<th>Option</th>
<th>Agent for MQ Manager...</th>
<th>Suffix</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>2=Change, 4=Delete, 5=Display OMA Log, 14=Start, 15=End</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>MYSYSTEM</td>
<td>00001</td>
<td>Not Started</td>
</tr>
</tbody>
</table>

On this dialog, multiple instances of IBM Tivoli OMEGAMON XE for WebSphere MQ Monitoring can be listed. These instances on an OS/400 system are differentiated by a unique 5-character numeric suffix. The first instance Added is automatically assigned suffix 00001, the second instance Added is automatically assigned suffix 00002, and so on.

The files associated with each instance are also automatically suffixed. For example, the monitoring file for each instance is named in the form: MQnnnnnn where nnnnnn is the automatically assigned 5-character numeric suffix.
3. Enter

2

in the Option column next to the instance whose monitoring file you want to change. The dialog for changing IBM Tivoli OMEGAMON XE for WebSphere MQ Monitoring displays.

4. Press “F8” to change the monitoring file associated with the agent. An editing dialog opens.

5. Insert, delete, or modify monitoring option commands, as your site requires. Adhere to these editing rules:
   - To continue a command onto the next line, end the current line with a hyphen (“-”).
   - Parameters you set when grouping objects are effective for all the objects in the group.
   - You can override parameters for an object in a group by explicitly defining parameters for that object.

6. When you have finished customizing the monitoring file, press “F3” to save your changes and exit. Press “F3” twice more to exit the interface.

7. Verify that the queue manager and its command server are running.

8. Restart the agent for your changes to take effect.

Customization of IBM Tivoli OMEGAMON XE for WebSphere MQ Monitoring is complete.
Step 3. Customizing Monitoring Options (optional)
Introduction

This appendix contains additional agent configuration steps that must be performed by sites that meet all of the following criteria:

- Your site is using the SNA communications protocol.
- The agents you installed on AS/400 are all reporting to the same CMS.
- The CMS that the agents report to resides on a different system.

Two sets of additional configuration steps are given:

- Steps for sites that will run OMEGAMON XE for OS/400 (an IBM Tivoli product from a previous release)
- Steps for sites that will not run OMEGAMON XE for OS/400

Complete one set of steps. In either case, be sure that you have already completed the basic installation and configuration steps for the agents as described in the installation chapters.

Appendix contents

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If Your Site Does Not Run OMEGAMON XE for OS/400 .................................69
If Your Site Also Runs OMEGAMON XE for OS/400

Who must complete this step

You must complete this step if the following conditions are true:

- Your CMS is running on a platform other than AS/400.
- OMEGAMON XE for OS/400 is running on this system.
- All agents on this system report to the same CMS.

Prerequisites

Before you begin, verify the following:

1. The subsystem to which the communications device has been allocated has been verified. One method of verification involves varying the device off and on, then examining the QSYSOPR message queue for the CPF1273 message: “Communications device device_name was allocated to subsystem subsystem_name”. You can also check for this message using the following command:

   DSPLOG LOG(QHST) MSGID(CPF1273)

2. If the device was not allocated to the production subsystem (QAUTOMON), add a communications entry to the subsystem where the device was allocated (in other words, if the subsystem is QCMN, the command would be:

   ADDCMNE SBSD(QCMN) DEV(*APPC) JOBD(QAUTOMON/QAUTOMON)
   DFTUSR(QAUTOMON) MODE(CANCTDCS))

3. Once the entry has been made, the device must be varied off and on to pick up the change.

   Note: You may want to look for any subsystem that has a communications entry for “*ALL” devices and “*ANY” mode. This communications entry will cause the subsystem to try to allocate your device if your current subsystem is ended. In this case you will need to add a communications entry to this subsystem description as well.

Configuration steps

1. Make the following file update for IBM Tivoli OMEGAMON XE for WebSphere MQ Monitoring:
   1. Edit physical file member KMQTMP/KMSPARM(KBBENV).
   2. Change the first line of this file from “CMS_TABLEPATH=KMQTMP” to CMS_TABLEPATH=QAUTOTMP

2. Make the following file update for IBM Tivoli OMEGAMON XE for WebSphere MQ Configuration:
   1. Edit physical file member KMCTMP/KMSPARM(KBBENV).
   2. Change the first line of this file from “CMS_TABLEPATH=KMCTMP” to CMS_TABLEPATH=QAUTOTMP
If Your Site Also Runs OMEGAMON XE for OS/400

CMS_TABLEPATH=QAUTOTMP

Agent startup steps

1. Verify that OMEGAMON XE for OS/400 has been started first before IBM Tivoli OMEGAMON XE for WebSphere MQ Monitoring and IBM Tivoli OMEGAMON XE for WebSphere MQ Configuration (or any other agent).

2. Verify that an LU6.2 connection is active between this system and the one where the CMS is located.

3. Start IBM Tivoli OMEGAMON XE for WebSphere MQ Monitoring, as follows, from an OS/400 command line (you may want to use these commands to create a CL program for future use):

   ```
   ADDLIBLE LIB(QCPA)
   ADDLIBLE LIB(KMQLIB)
   ADDLIBLE LIB(KMQTMP)
   ADDLIBLE LIB(QAUTOTMP)
   CHGCURLIB CURLIB(KMQTMP)
   SBMJOB CMD(CALL PGM(KMQLIB/KMQAGENT) PARM('KMQLIB/SAMPLE(TXT)'))
   JOBD(KMQLIB/KMQJOBD) JOBQ(QAUTOMON/QAUTOMON) JOB(MQAGENT)
   USER(KMQ)
   ```

4. Start IBM Tivoli OMEGAMON XE for WebSphere MQ Configuration, as follows, from an OS/400 command line (you may want to use these commands to create a CL program for future use):

   ```
   ADDLIBLE LIB(QCPA)
   ADDLIBLE LIB(KMCLIB)
   ADDLIBLE LIB(KMCTMP)
   ADDLIBLE LIB(QAUTOTMP)
   CHGCURLIB CURLIB(KMCTMP)
   SBMJOB CMD(CALL PGM(KMCLIB/KMC_AGENT) PARM('KMCLIB/QAUTOMON/QAUTOMON') JOBQ(QAUTOMON/QAUTOMON) JOB(MCAGENT)
   USER(KMC)
   ```

Agent shutdown steps

**Note:** If you shut down OMEGAMON XE for OS/400, it will shut down all agents currently running. Follow the steps below if you want to shut down only IBM Tivoli OMEGAMON XE for WebSphere MQ Configuration and IBM Tivoli OMEGAMON XE for WebSphere MQ Monitoring.

**Shutting down IBM Tivoli OMEGAMON XE for WebSphere MQ Monitoring**

1. To stop IBM Tivoli OMEGAMON XE for WebSphere MQ Monitoring, issue the following command:
WRKACTJOB SBS(QAUTOMON)

2. Search for the job MQAGENT with a type of BCH and end this job by pressing “OPTION(*CNTRL-D)”, which will end all of the MQAGENT jobs in the subsystem QAUTOMON.

When all MQAGENT jobs (type BCH and BCI) have ended, the agent is stopped.

Shutting down IBM Tivoli OMEGAMON XE for WebSphere MQ Configuration

1. To stop IBM Tivoli OMEGAMON XE for WebSphere MQ Configuration, issue the following command:

   WRKACTJOB SBS(QAUTOMON)

2. Search for the job MCAGENT with a type of BCH and end this job by pressing “OPTION(*CNTRL-D)”, which will end all of the MCAGENT jobs in the subsystem QAUTOMON.

When all MCAGENT jobs (type BCH and BCI) have ended, the agent is down.

Agent cleanup steps

1. Verify that the agents are not running.

2. To perform a cleanup of IBM Tivoli OMEGAMON XE for WebSphere MQ Monitoring, issue the following command:

   DLTDTAQ DTAQ(KMQTMP/QA1*)

3. To perform a cleanup of IBM Tivoli OMEGAMON XE for WebSphere MQ Configuration, issue the following command:

   DLTDTAQ DTAQ(KMCTMP/QA1*)
If Your Site Does Not Run OMEGAMON XE for OS/400

Who must complete this step

You must complete this step if the following conditions are true:

- Your CMS is running on a platform other than AS/400.
- OMEGAMON XE for OS/400 is not running on this system.
- All agents on this system report to the same CMS.

Prerequisite

The communications device must be allocated to subsystem KMQLIB. One method of verification involves examining the QSYSOPR message queue for the CPF1273 message: “Communications device device_name was allocated to subsystem KMQLIB”. You can also check for this message using the following command:

```
DSPLOG LOG(QHST) MSGID(CPF1273)
```

Configuration steps

1. Configure IBM Tivoli OMEGAMON XE for WebSphere MQ Monitoring as described in “Step 1. Configuring IBM Tivoli OMEGAMON XE for WebSphere MQ Monitoring” on page 56.

2. Issue the following commands:

   ```
   CHGPJE SBSD(KMQLIB/KMQLIB) PGM(KMQLIB/KDTMSNAP) USER(KMQ)
   CRTLIB KMSCMS
   CRTDUPOBJ OBJ(KDTMSNAP) FROMLIB(KMQLIB) OBJTYPE(*PGM) TOLIB(KMSCMS)
   ```

3. Configure IBM Tivoli OMEGAMON XE for WebSphere MQ Configuration as described in “Step 1. Configuring IBM Tivoli OMEGAMON XE for WebSphere MQ Configuration” on page 48.

4. Update physical file member KMCTMP/KMSPARM(KBBENV), as follows:

   ```
   Change the first line of this file from "CMS_TABLEPATH=KMCTMP" to CMS_TABLEPATH=KMQTMP
   ```

Agent startup steps

1. Verify that the LU6.2 connection between this system and the one where the CMS resides is not active.

2. To start IBM Tivoli OMEGAMON XE for WebSphere MQ Monitoring, issue the following commands from an OS/400 command line:

   ```
   ADDLIBLE LIB(QCPA)
   ```
ADDLIBLE LIB(KMQLIB)
ADDLIBLE LIB(KMQTMP)
CHGCURLIB CURLIB(KMQTMP)
STRSBS SBSD(KMQLIB/KMQLIB)

3. Vary on the device for the system you are planning to connect to and verify that it was allocated to subsystem KMQLIB.

   1. One method of verification involves examining the QSYSOPR message queue for the CPF1273 message: “Communications device device_name was allocated to subsystem KMQLIB”. You can also check for this message using the following command:

   DSPLOG LOG(QHST) MSGID(CPF1273)

   2. Issue the following commands:

   STRPJ SBS(KMQLIB) PGM(KMQLIB/KDTMSNAH)
   STRPJ SBS(KMQLIB) PGM(KMQLIB/KDTMSNAP)
   SBMJOB CMD(CALL PGM(KMQLIB/KMQAGENT) PARM(‘KMQLIB/SAMPLE(TXT)’) JOB(MQAGENT) JOBD(KMQLIB/KMQJOBD) JOBQ(KMQLIB/KMQJOBQ) USER(KMQ)

4. To start IBM Tivoli OMEGAMON XE for WebSphere MQ Configuration, begin the startup of the agent once the subsystem KMQLIB has been verified and the two pre-start jobs have been started. To start the agent, issue the following from an OS/400 command line (you may want to use these commands to create a CL program for future use):

ADDLIBLE LIB(QCPA)
ADDLIBLE LIB(KMCLIB)
ADDLIBLE LIB(KMCTMP)
CHGCURLIB CURLIB(KMCTMP)
SBMJOB CMD(CALL PGM(KMCLIB/KMC_AGENT) JOBD(MQAGENT) JOBD(KMQLIB/KMQJOBD) JOBQ(KMQLIB/KMQJOBQ) USER(KMQ)

Agent shutdown steps

Shutting down IBM Tivoli OMEGAMON XE for WebSphere MQ Monitoring

1. To stop IBM Tivoli OMEGAMON XE for WebSphere MQ Monitoring, issue the following command:

   WRKACTJOB SBS(KMQLIB)

2. Search for the job MQAGENT with a type of BCH and end this job by pressing “OPTION(*CNTRL-D)”, which will end all of the MQAGENT jobs in the subsystem KMQLIB.

   When all MQAGENT jobs (type BCH and BCI) have ended, the agent is stopped.
Shutting down IBM Tivoli OMEGAMON XE for WebSphere MQ Configuration

1. To stop IBM Tivoli OMEGAMON XE for WebSphere MQ Configuration, issue the following command:
   
   **WRKACTJOB SBS(KMQLIB)**

2. Search for the job MCAGENT with a type of BCH and end this job by pressing “OPTION(*CNTRL-D)”, which will end all of the MCAGENT jobs in the subsystem KMQLIB.
   
   When all MCAGENT jobs (type BCH and BCI) have ended, the agent is stopped.

Agent cleanup steps

1. Verify that the agent is not running.

2. To perform a cleanup of IBM Tivoli OMEGAMON XE for WebSphere MQ Monitoring, issue the following command:
   
   **DLTDTAQ DTAQ(KMQTMP/QA1*)**

3. To perform a cleanup of IBM Tivoli OMEGAMON XE for WebSphere MQ Configuration, issue the following command:

   **DLTDTAQ DTAQ(KMCTMP/QA1*)**
Introduction

As supplied on the *IBM Tivoli OMEGAMON XE for WebSphere Business Integration* CD, IBM Tivoli OMEGAMON XE for WebSphere MQ is configured to report real-time monitoring data. However, your site may have decided to reconfigure the agent to collect historical monitoring data as well.

Historical data is stored in special files called historical data files. The default file size of each of these files is 13000 records. Depending upon the amount of data you are collecting, your site may need to increase the file size.

If you find it necessary to alter the size of your historical data files, use the procedure below. If you would like more information about how to configure the agent to collect historical data, refer to:

- Using IBM Tivoli OMEGAMON XE for WebSphere MQ Monitoring
- Using IBM Tivoli OMEGAMON XE for WebSphere MQ Configuration

Procedure

To alter the size of historical data files, do the following:

1. From an AS/400 command prompt, enter this command:

   ```
   CRTPF FILE(QUSRSYS)/filename) RCDLEN(length) SIZE(primary secondary numexts)
   ```

   where:

   - `filename` is QMQ_LH for Queue Statistics or QMCH_LH for Channel Statistics.
   - `length` is 436 for Queue Statistics, 672 for Channel Statistics, and 2516 for Event History.
   - `primary` is the number of records initially allocated.
   - `secondary` is the number of records allocated per file extension.
   - `numexts` is the number of extensions.

Example
To alter the size of the Queue Statistics historical file so that it has an initial size of 11000 records, with four extensions of 1000 to a total length of 15000 records, you would enter the following command:

```
CRTPT FILE(QUSRSYS)/QMQ_LH) RCDLEN(436) SIZE (11000 1000 4)
```
Uninstalling the Product

Introduction

This appendix explains how to uninstall the agents from your system.

Procedure

Complete the steps below for each instance of the agent that you want to uninstall.

1. Stop both the CMS and the agent.
2. Press “F3” to exit from the product menu to release the object lock.
3. From an OS/400 command line, enter
   
   **DSPSFWRSC**

4. Scroll down until you see in the Description column the IBM Tivoli OMEGAMON XE for WebSphere MQ name.
5. Record the licensed program ID for the component product, which is on the left under the column for Resource ID.
   
   Licensed program ID ____________________________________________

6. Press “Enter” to continue.
7. From an OS/400 command line, enter:
   
   **DLTLICPGM LICPGM(licpgm)**

   where licpgm is the licensed program ID that you recorded in step 5.
If you have a problem with your IBM software, you want to resolve it quickly. This section describes the following options for obtaining support for IBM software products:

- “Searching knowledge bases” on page 77
- “Obtaining fixes” on page 78
- “Receiving weekly support updates” on page 78
- “Contacting IBM Software Support” on page 79

**Searching knowledge bases**

You can search the available knowledge bases to determine whether your problem was already encountered and is already documented.

**Searching the information center**

IBM provides extensive documentation that can be installed on your local computer or on an intranet server. You can use the search function of this information center to query conceptual information, instructions for completing tasks, and reference information.

**Searching the Internet**

If you cannot find an answer to your question in the information center, search the Internet for the latest, most complete information that might help you resolve your problem.

To search multiple Internet resources for your product, use the Web search topic in your information center. In the navigation frame, click Troubleshooting and support > Searching knowledge bases and select Web search. From this topic, you can search a variety of resources, including the following:

- IBM technotes
- IBM downloads
- IBM Redbooks®
- IBM developerWorks®
- Forums and newsgroups
- Google
Obtaining fixes

A product fix might be available to resolve your problem. To determine what fixes are available for your IBM software product, follow these steps:

2. Click Downloads and drivers in the Support topics section.
3. Select the Software category.
4. Select a product in the Sub-category list.
5. In the Find downloads and drivers by product section, select one software category from the Category list.
6. Select one product from the Sub-category list.
7. Type more search terms in the Search within results if you want to refine your search.
8. Click Search.
9. From the list of downloads returned by your search, click the name of a fix to read the description of the fix and to optionally download the fix.

For more information about the types of fixes that are available, IBM Software Support Handbook at http://techsupport.services.ibm.com/guides/handbook.html.

Receiving weekly support updates

To receive weekly e-mail notifications about fixes and other software support news, follow these steps:

2. Click My Support in the upper right corner of the page.
3. If you have already registered for My Support, sign in and skip to the next step. If you have not registered, click register now. Complete the registration form using your e-mail address as your IBM ID and click Submit.
4. Click Edit Profile.
5. In the Products list, select Software. A second list is displayed.
6. In the second list, select a product segment, for example, Application servers. A third list is displayed.
7. In the third list, select a product sub-segment, for example, Distributed Application & Web Servers. A list of applicable products is displayed.
8. Select the products for which you want to receive updates, for example, IBM HTTP Server and WebSphere Application Server.
9. Click Add products.
10. After selecting all products that are of interest to you, click Subscribe to email on the Edit profile tab.
11. Select Please send these documents by weekly email.
12. Update your e-mail address as needed.

13. In the Documents list, select Software.

14. Select the types of documents that you want to receive information about.

15. Click Update.

If you experience problems with the My support feature, you can obtain help in one of the following ways:

Online: Send an e-mail message to erchelp@ca.ibm.com, describing your problem.

By phone: Call 1-800-IBM-4You (1-800-426-4968).

Contacting IBM Software Support

IBM Software Support provides assistance with product defects.

Before contacting IBM Software Support, your company must have an active IBM software maintenance contract, and you must be authorized to submit problems to IBM. The type of software maintenance contract that you need depends on the type of product you have:

- For IBM distributed software products (including, but not limited to, Tivoli, Lotus®, and Rational® products, as well as DB2® and WebSphere® products that run on Windows or UNIX operating systems), enroll in Passport Advantage® in one of the following ways:
  - Online: Go to the Passport Advantage Web page (http://www.lotus.com/services/passport.nsf/WebDocs/Passport_Advantage_Home) and click How to Enroll
  - By phone: For the phone number to call in your country, go to the IBM Software Support Web site at http://techsupport.services.ibm.com/guides/contacts.html and click the name of your geographic region.

- For customers with Subscription and Support (S & S) contracts, go to the Software Service Request Web site at https://techsupport.services.ibm.com/ssr/login.


- For IBM eServer™ software products (including, but not limited to, DB2 and WebSphere products that run in zSeries, pSeries, and iSeries environments), you can purchase a software maintenance agreement by working directly with an IBM sales representative or an IBM Business Partner. For more information about support for eServer software products, go to the IBM Technical Support Advantage Web site at http://www.ibm.com/servers/eserver/techsupport.html.

If you are not sure what type of software maintenance contract you need, call 1-800-IBMSERV (1-800-426-7378) in the United States. From other countries, go to the contacts page of the IBM Software Support Handbook on the Web at
To contact IBM Software Support, follow these steps:

1. “Determining the business impact” on page 80
2. “Describing problems and gathering information” on page 80
3. “Submitting problems” on page 81

### Determining the business impact

When you report a problem to IBM, you are asked to supply a severity level. Therefore, you need to understand and assess the business impact of the problem that you are reporting. Use the following criteria:

<table>
<thead>
<tr>
<th>Severity 1</th>
<th>The problem has a critical business impact. You are unable to use the program, resulting in a critical impact on operations. This condition requires an immediate solution.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Severity 2</td>
<td>The problem has a significant business impact. The program is usable, but it is severely limited.</td>
</tr>
<tr>
<td>Severity 3</td>
<td>The problem has some business impact. The program is usable, but less significant features (not critical to operations) are unavailable.</td>
</tr>
<tr>
<td>Severity 4</td>
<td>The problem has minimal business impact. The problem causes little impact on operations, or a reasonable circumvention to the problem was implemented.</td>
</tr>
</tbody>
</table>

### Describing problems and gathering information

When explaining a problem to IBM, be as specific as possible. Include all relevant background information so that IBM Software Support specialists can help you solve the problem efficiently. To save time, know the answers to these questions:

- What software versions were you running when the problem occurred?
- Do you have logs, traces, and messages that are related to the problem symptoms? IBM Software Support is likely to ask for this information.
- Can you re-create the problem? If so, what steps were performed to re-create the problem?
- Did you make any changes to the system? For example, did you make changes to the hardware, operating system, networking software, and so on.
- Are you currently using a workaround for the problem? If so, be prepared to explain the workaround when you report the problem.
- What software versions were you running when the problem occurred?
Submitting problems

You can submit your problem to IBM Software Support in one of two ways:

- **Online**: Click **Submit and track problems** on the IBM Software Support site at http://www.ibm.com/software/support/probsub.html. Type your information into the appropriate problem submission form.

- **By phone**: For the phone number to call in your country, go to the contacts page of the IBM Software Support Handbook (http://techsupport.services.ibm.com/guides/contacts.html) and click the name of your geographic region.

If the problem you submit is for a software defect or for missing or inaccurate documentation, IBM Software Support creates an Authorized Program Analysis Report (APAR). The APAR describes the problem in detail. Whenever possible, IBM Software Support provides a workaround that you can implement until the APAR is resolved and a fix is delivered. IBM publishes resolved APARs on the Software Support Web site daily, so that other users who experience the same problem can benefit from the same resolution.
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