Tivoli® OMEGAMON XE for Messaging
Version 7.0 Fix Pack 2

Readme and Documentation Addendum

IBM®

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Version 7.0 Fix Pack 2

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> **Note**
>
> Before using this information and the product it supports, read the information in "Notices" on page 107.

Contents

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Chapter 1. About this fix pack

The readme and documentation addendum file provides instructions about installing the fix pack and describes new product features, enhancements and changes in the IBM® Tivoli® OMEGAMON® XE for Messaging 7.0 fix pack 2.

Product fix history

This fix pack mainly resolved a few installation issues and some critical issues of Tivoli OMEGAMON XE for Messaging V7.0. The following APARs are addressed in this fix pack.

Table 1. APARs addressed in this fix pack

APAR/defect number	Description
IZ40737	The Start Date & Time attribute of a queue manager cannot be updated when the queue manager is restarted after the agent is started.
IZ45047	When a cluster receiver channel prototype is available, the drop-down list is empty.
IZ49402	The event log information is missing after the itmcmd history command is run.
IZ50016	Some state values (Fatal, Minor, Harmless, and Unknown) are not available for some situations with the WebSphere® MQ Monitoring agent.
IZ50213	Parsing failure occurs when an alert is issued from a situation that is based on the MQ Error Log attribute group.
IZ51792	The symbolic variable cannot be updated after changing its initial value.
IZ52591	The value of the Reason Code attribute of the Message Descriptor workplace is displayed as a decimal number without text explanation.
IZ54842	The WebSphere Message Broker Monitoring agent fails with the KQIA005E error message displayed immediately after the agent is started.
IZ55780	The publish/subscribe information is missing for user-defined subscriptions.
IZ56668	The View Actual or Submit MQ Command operation fails and this problem causes the monitoring server to become unresponsive.
IZ56676	When using the tacmd command to export custom navigators that contain the WebSphere MQ Monitoring agent, the XML file contains invalid characters. This problem causes that the custom navigators cannot be imported.
IZ59001	No data is displayed in the Parameter Value column in the Event Parameters workspace and the Resource Name column in the Event Log workspace for version 6.0.1 of the WebSphere MQ Monitoring agent.
IZ59747	The Msgs Put and Msgs Read attribute values are wrong in the Historical Queue Statistics workspace.
IZ59759	The WebSphere MQ Monitoring agent fails to start as an autostart job of the QMQM subsystem.
IZ59827	The fields that are started with SYSTEM.DEF are managed wrongly by the application support of the WebSphere MQ Configuration agent.
IZ60167	The WebSphere MQ Monitoring agent cannot parse the error log files and the agent stops by itself.

Table 1. APARs addressed in this fix pack (continued)

APAR/defect number	Description
IZ60234	The cluster object is resolved as wrong name when a symbolic variable is included in the name.
IZ60536	No character data is displayed in messages from a queue manager in MQ3270 interface.
IZ64475	The kmqlocal process crashes when stopping the WebSphere MQ Monitoring agent.
IZ65709	The kmqlocal process crashes with the KMQMI101E and KMQMI102E error messages displayed.
IZ66272	After WebSphere Message Broker Monitoring agent is upgraded, the existing *<ITM_HOME>/<arch>/*qi directory is not renamed to *<ITM_HOME>/<arch>/*qi_old.
OA29568	Wrong queue manager name is displayed in the Queue Access by Tran/Pgm workspace.

Product compatibility

This section describes the Tivoli OMEGAMON XE for Messaging compatibility with IBM Tivoli Monitoring, IBM WebSphere MQ, and IBM broker products.

For distributed environment

- IBM Tivoli Monitoring 6.2 fix pack 1 at the minimum.
- IBM WebSphere MQ 6.0, 7.0, or 7.0.1
- Any of the following IBM broker products:
  - WebSphere Business Integration Event Broker V5
  - WebSphere Business Integration Message Broker V5
  - WebSphere Business Integration Message Broker with Rules and Formatter Extension V5
  - WebSphere Event Broker V6
  - WebSphere Message Broker V6
  - WebSphere Message Broker with Rules and Formatter Extension V6
  - WebSphere Message Broker V6.1
  - WebSphere Message Broker V7.0

For z/OS environment

- IBM Tivoli Monitoring 6.2 fix pack 1 at the minimum.
- IBM WebSphere MQ V6.0, V7.0, or V7.0.1
- Any of the following IBM broker products:
  - WebSphere Business Integration Event Broker V5
  - WebSphere Business Integration Message Broker V5
  - WebSphere Business Integration Message Broker with Rules And Formatter Extension V5
  - WebSphere Event Broker V6
  - WebSphere Message Broker V6
  - WebSphere Message Broker with Rules and Formatter Extension V6

– WebSphere Message Broker V6.1

Additional compatibility information

This section explains the coexistence scenarios between IBM Tivoli Monitoring and Tivoli OMEGAMON XE for Messaging.

- Tivoli OMEGAMON XE for Messaging application support and Tivoli Enterprise Portal, Tivoli Enterprise Portal Server, Tivoli Enterprise Monitoring Server

  The following table displays the compatibility between the Tivoli OMEGAMON XE for Messaging application support and Tivoli Enterprise Portal, Tivoli Enterprise Portal Server, and Tivoli Enterprise Monitoring Server. In Table 2, Yes means that products of the two levels are compatible and blank means they are incompatible.

Table 2. Compatibility between Tivoli OMEGAMON XE for Messaging application support and Tivoli Enterprise Portal, Tivoli Enterprise Portal Server, and Tivoli Enterprise Monitoring Server

		Tivoli OMEGAMON XE for Messaging application support level							
		V7.0 FP02	V7.0 FP01	V7.0 GA	V6.0.1 FP02	V6.0.1 FP01	V6.0.1 IF03	V6.0.1 GA	From V6.0 FP01 to V6.0 FP01 IF04
Tivoli Enterprise Portal, Tivoli Enterprise Portal Server, and Tivoli Enterprise Monitoring Server level	V6.2.2 FP01	Yes			Yes[*]				
	V6.2.2	Yes[*]			Yes[*]				
	V6.2.1	Yes	Yes		Yes				
	V6.2 FP03	Yes	Yes[*]	Yes[*]	Yes[*]				
	V6.2 FP02	Yes	Yes	Yes[*]	Yes				
	V6.2 FP01	Yes	Yes	Yes	Yes	Yes			
	V6.2 GA				Yes[*]	Yes			
	V6.1 FP07				Yes	Yes	Yes[*]	Yes[*]	Yes[*]
	V6.1 FP06						Yes	Yes	Yes
	V6.1 FP05						Yes	Yes	Yes
	V6.1 FP04								
	V6.1 FP03								
	V6.1 FP02								
	V6.1 FP01								

Table 2. Compatibility between Tivoli OMEGAMON XE for Messaging application support and Tivoli Enterprise Portal, Tivoli Enterprise Portal Server, and Tivoli Enterprise Monitoring Server (continued)

	Tivoli OMEGAMON XE for Messaging application support level							
	V7.0 FP02	V7.0 FP01	V7.0 GA	V6.0.1 FP02	V6.0.1 FP01	V6.0.1 IF03	V6.0.1 GA	From V6.0 FP01 to V6.0 FP01 IF04
Note: Formal tests have not been conducted by IBM. However, support will be provided if you run into any problems.								

- Tivoli OMEGAMON XE for Messaging agent and IBM Tivoli Monitoring agent framework

  The following table displays the compatibility between the Tivoli OMEGAMON XE for Messaging agent and IBM Tivoli Monitoring agent framework. In Table 3, Yes means that products of the two levels are compatible and blank means they are incompatible.

Table 3. Compatibility between Tivoli OMEGAMON XE for Messaging agent and IBM Tivoli Monitoring agent framework

		Tivoli OMEGAMON XE for Messaging agent level							
		V7.0 FP02	V7.0 FP01	V7.0 GA	V6.0.1 FP02	V6.0.1 FP01	V6.0.1 IF03	V6.0.1 GA	From V6.0 FP01 to V6.0 FP01 IF04
IBM Tivoli Monitoring agent framework level	V6.2.2 FP01	Yes			Yes[*]				
	V6.2.2	Yes[*]			Yes[*]				
	V6.2.1	Yes	Yes		Yes				
	V6.2 FP03	Yes	Yes[*]	Yes[*]	Yes[*]				
	V6.2 FP02	Yes	Yes	Yes[*]	Yes				
	V6.2 FP01	Yes	Yes	Yes	Yes	Yes			
	V6.2 GA				Yes[*]	Yes			
	V6.1 FP07				Yes	Yes	Yes[*]	Yes[*]	Yes[*]
	V6.1 FP06						Yes	Yes	Yes
	V6.1 FP05						Yes	Yes	Yes
	V6.1 FP04								
	V6.1 FP03								
	V6.1 FP02								
	V6.1 FP01								
Note: Formal tests have not been conducted by IBM. However, support will be provided if you run into any problems.									

- Tivoli OMEGAMON XE for Messaging application support and Tivoli OMEGAMON XE for Messaging agent coexistence:

  The level of Tivoli OMEGAMON XE for Messaging application support must always be higher than or equal to the highest level of any Tivoli OMEGAMON XE for Messaging agent. The level of Tivoli OMEGAMON XE for Messaging application support on the Tivoli Enterprise Portal, Tivoli Enterprise Portal Server, and Tivoli Enterprise Monitoring Server must always be the same.

- Tivoli OMEGAMON XE for Messaging application support on hub Tivoli Enterprise Monitoring Server and Tivoli OMEGAMON XE for Messaging application support on remote Tivoli Enterprise Monitoring Server coexistence:

  The level of Tivoli OMEGAMON XE for Messaging application support on the hub Tivoli Enterprise Monitoring Server must be equal to the level on a remote Tivoli Enterprise Monitoring Server.

Chapter 2. Installing Tivoli OMEGAMON XE for Messaging 7.0 fix pack 2

Tivoli OMEGAMON XE for Messaging 7.0 fix pack 2 can be used to perform the following tasks:

- **Fresh Install:**

  If you do not have Tivoli OMEGAMON XE for Messaging V7.0 installed, you can use this fix pack to install and upgrade Tivoli OMEGAMON XE for Messaging to version 7.0 fix pack 2 all at once.

- **Upgrade:**

  If you already have any of the following products installed, you can use this fix pack to upgrade to Tivoli OMEGAMON XE for Messaging 7.0 fix pack 2. The installation process backups the configuration files before the installation begins, and reconfigure the components with the previous configuration values after the installation is complete.

  - Tivoli OMEGAMON XE for Messaging V6.0
  - Tivoli OMEGAMON XE for Messaging V6.0.1
  - Tivoli OMEGAMON XE for Messaging V7.0
  - Tivoli OMEGAMON XE for Messaging V7.0 fix pack 1

All agents require that application support files that contain agent-specific information be installed on the Tivoli Enterprise Monitoring Server, Tivoli Enterprise Portal Server, and Tivoli Enterprise Portal desktop client that the agents will connect to.

Use the instructions in the following sections to install application support:

- "Installing application support at the Tivoli Enterprise Monitoring Server" on page 17
- "Installing application support at the Tivoli Enterprise Portal Server" on page 25
- "Installing application support at the Tivoli Enterprise Portal desktop client" on page 32

See "Installing Tivoli OMEGAMON XE for Messaging" on page 35 for instructions about how to install the agents of Tivoli OMEGAMON XE for Messaging on different operating systems.

Prerequisites

This chapter explains a series of steps that must be performed before installing Tivoli OMEGAMON XE for Messaging. The information in this chapter applies to both users who are upgrading from a previous version of Tivoli OMEGAMON XE for Messaging and those who are installing the software for the first time, unless specifically stated otherwise.

General guidelines

Before starting to install Tivoli OMEGAMON XE for Messaging, consider the following points to ensure that your environment is suitable for installation.

1. Ensure that all IBM Tivoli Monitoring components required by Tivoli OMEGAMON XE for Messaging have been installed.

Before installing Tivoli OMEGAMON XE for Messaging, the following IBM Tivoli Monitoring 6.2 fix pack 1 components must be installed and running correctly:

- Tivoli Enterprise Monitoring Server
- Tivoli Enterprise Portal Server
- Tivoli Enterprise Portal desktop client
- The Warehouse Proxy. This component is optional and only required if you intend to use historical reporting or save historical data to a database for reference purposes.

If your system is running a version of IBM Tivoli Monitoring prior to IBM Tivoli Monitoring 6.2 fix pack 1, you must first upgrade it to IBM Tivoli Monitoring 6.2 fix pack 1 or later. For upgrading instructions, see *IBM Tivoli Monitoring Installation and Setup Guide, SC32-9407.*

2. Identify where the systems or applications are running.

   In general, you can install and configure an Tivoli OMEGAMON XE for Messaging agent on every operation system where the queue manager or message broker you want to monitor is running.

3. Identify the communications protocols that are available in your environment.

   Use TCP/IP (IP.UDP on Windows® systems and IP on UNIX® and Linux® systems), IP.PIPE, IP.SPIPE, or SNA for communication between the monitoring agent and the IBM Tivoli Monitoring components.

4. Install the Tivoli Enterprise Monitoring Server, Tivoli Enterprise Portal, or Tivoli Enterprise Portal Server before using the z/OS® data CD to install corresponding application support for the IBM Tivoli Monitoring components that you install.

5. Ensure that the operating system of the computer on which you plan to install Tivoli OMEGAMON XE for Messaging is listed in Appendix D, "Supported operating systems," on page 99. If the operating system you are using is not listed in this section, you might still be able to use WebSphere MQ Monitoring and WebSphere MQ Configuration remote monitoring and configuration functions to monitor and configure WebSphere MQ components remotely. For more information see the following documentation:

   - WebSphere MQ Monitoring: Monitoring events on non-supported platforms in *IBM Tivoli OMEGAMON XE for Messaging: WebSphere MQ Monitoring User's Guide, SC23-7952.*
   - WebSphere MQ Configuration: Configuring a remote queue manager in *IBM Tivoli OMEGAMON XE for Messaging: WebSphere MQ Configuration User's Guide, SC23-7953.*

6. If your environment is protected by a firewall, read the section regarding firewalls in *IBM Tivoli Monitoring Installation and Setup Guide, SC32-9407.*

7. If you plan to use the agent remote deployment feature, ensure that the IBM Tivoli Monitoring OS agent is running on the target operation system where you plan to deploy an agent before installing Tivoli OMEGAMON XE for Messaging. See Chapter 4, "Deploying monitoring across your environment from a central location," on page 75 for information about how to deploy agent remotely.

Collecting information for Tivoli Enterprise Monitoring Server

Use the following worksheet to gather information for the installation. You are required to enter these information during installation:

Table 4. Worksheet for installation

Name of the Tivoli Enterprise Monitoring Server that the agents will connect to	
Host name of the computer on which the monitoring server that the agents will connect to is running	
IP address of the computer on which the monitoring server that the agents will connect to is running	
Encryption key for the hub monitoring server	
Agent product code or codes	
Communications protocol details of the monitoring server that the agents will connect to	
Root user password (UNIX or Linux system)	

UNIX system considerations

This section provides information that you need to know before installing Tivoli OMEGAMON XE for Messaging on UNIX systems.

Using fully qualified path names

Because there are a large number of different versions of UNIX systems and possible user environments, it is good form to use fully qualified path names, without pattern-matching characters, when specifying a directory during the installation process. IBM scripts use the Korn shell, and when a new process or shell is started, use of symbolic links, environment variables, or aliases can cause unexpected results.

Multiple Network Interface Cards

If the computer on which Tivoli Enterprise Monitoring Server is installed has more than one Network Interface Card (NIC), you must identify which NIC to use when specifying the monitoring server name and host name during the installation. It is possible that the host name of the system might not match the interface name, even when only one NIC exists. In either of these situations, for Tivoli OMEGAMON XE for Messaging monitoring agents to be able to connect to the monitoring server, you need to specify an additional variable when configuring the monitoring server or the monitoring agents. This variable is listed under the Optional Primary Network Name in the configuration dialogs or during the command line installation.

Hardware and software prerequisites

See the following sections for information about the software and hardware prerequisites of different operating systems:

- "Windows system prerequisites" on page 9
- "UNIX and Linux system prerequisites" on page 12
- "i5/OS system prerequisites" on page 16

Windows system prerequisites

This section lists the hardware and software prerequisites for installing Tivoli OMEGAMON XE for Messaging on Windows systems.

Software Requirements:

Windows Service Packs:
- Windows 2000 Professional: Service Pack 3 or later
- Windows XP Professional: Service Pack 1 or later

Communications among components: **TCP/IP communications**:
- One of the following must be installed:
  - Microsoft® Winsock (version 1.1 or later)
  - Microsoft TCP/IP protocol stack
- TCP/IP network services (such as NIS, DNS and the HOSTS file) must be configured to return the fully qualified host name.

SNA communications: A 32-bit version of one of the following SNA Server or Client products must be installed:
- IBM PCOMM (version 4.11 or later). Fix IC19970 is required on Windows 2000 Server or Workstation.
- IBM Communications Server (version 5.0 or later). Fixes JR10466 and JR10368 are required for SNA Server version 5.0.
- Microsoft SNA Server (version 3 or later). Service Pack 1 is required for SNA Server version 4.0.
- Attachmate EXTRA! (version 6.2, 6.3, or 6.4). Fix for case number 1221139 is required for versions 6.2 and 6.3. Fix for case number 1274151 is required for version 6.4.
- Walldata RUMBA (version 5.1 or later). Walldata PTF OPK52002 is required for versions 5.2A or earlier.

Hardware Requirements:

Disk space: Before installing Tivoli OMEGAMON XE for Messaging, ensure that the system on which you are installing meets the following disk space requirements:
- 650 MB free disk space on the installation drive
- 10 MB free disk space on the system user drive
- 250 MB temporary free disk space for installation files
- Additional free disk space for log file growth

Memory: Before installing Tivoli OMEGAMON XE for Messaging, ensure that the system on which you are installing meets the following memory requirements:
- Minimum: 512 MB
- Recommended: 1 GB

CPU: Before installing Tivoli OMEGAMON XE for Messaging, ensure that the system on which you are installing meets the following CPU requirements:

RISC architectures:
- Minimum: 1 GHz

Intel architectures:
- Minimum: 1 GHz
- Recommended: 2 GHz

Requirements for individual agents: This table lists the individual requirements for installing each Tivoli OMEGAMON XE for Messaging agent.

Table 5. Windows system installation requirements for each agent

Component name	Windows system version	Hardware	Other requirements
WebSphere Message Broker Monitoring	• Windows 2000 Server or Advanced Server • Windows 2003 Server (32 bit) • Windows XP Professional Edition with service pack 1 or later • Windows 2008 Server	• 18 MB disk space • Additional 210 MB disk space for remote deployment support, if enabled • Additional 150 MB disk space for Tivoli Enterprise Monitoring Agent Framework • Additional 70 MB disk space for the Global Security Toolkit and IBM Java™ Virtual Machine. • Additional disk space for historical data storage, if historical data collection is enabled	One of the following IBM broker products: • WebSphere Business Integration Event Broker 5 • WebSphere Business Integration Message Broker 5 • WebSphere Business Integration Message Broker with Rules and Formatter Extension 5 • WebSphere Event Broker 6 • WebSphere Message Broker 6 • WebSphere Message Broker 6.1 • WebSphere Message Broker 7.0 • WebSphere Message Broker with Rules and Formatter Extension 6
WebSphere MQ Monitoring	• Windows 2000 Server or Advanced Server • Windows 2003 Server • Windows XP Professional Edition with service pack 1 or later • Windows 2008 Server	• 4 MB disk space • Additional 210 MB disk space for remote deployment support, if enabled • Additional 150 MB disk space for Tivoli Enterprise Monitoring Agent Framework • Additional 70 MB disk space for the Global Security Toolkit and IBM Java Virtual Machine. • Additional disk space for historical data storage, if historical data collection is enabled	• WebSphere MQ 6.0, 7.0, or 7.0.1

Table 5. Windows system installation requirements for each agent (continued)

Component name	Windows system version	Hardware	Other requirements
WebSphere MQ Configuration	• Windows 2000 Server or Advanced Server • Windows 2003 Server • Windows XP Professional Edition with service pack 1 or later • Windows 2008 Server	• 4 MB disk space • Additional 210 MB disk space for remote deployment support, if enabled • Additional 150 MB disk space for Tivoli Enterprise Monitoring Agent Framework • Additional 70 MB disk space for the Global Security Toolkit and IBM Java Virtual Machine. • Additional disk space is required for storing the WebSphere MQ configuration database on the system where the hub Tivoli Enterprise Monitoring Server is installed.	• WebSphere MQ 6.0, 7.0, or 7.0.1 The WebSphere MQ Configuration agent requires one of the following databases to store configuration information: • The WebSphere MQ configuration internal configuration database, which is installed automatically as part of Tivoli Enterprise Monitoring Server. • DB2 Universal Database™ (UDB) Workgroup Server Edition 8.1 or later, which must be installed on the same server as the hub Tivoli Enterprise Monitoring Server. If the monitoring server is installed on a z/OS system and you want to use the DB2® configuration database, DB2 8.1 or later is required. If DB2 is not already installed on the z/OS system that hosts the monitoring server, it must be purchased and installed separately.

UNIX and Linux system prerequisites

This section lists the hardware and software prerequisites for installing Tivoli OMEGAMON XE for Messaging on UNIX or Linux systems.

Software Requirements: The software prerequisites for installing Tivoli OMEGAMON XE for Messaging on UNIX or Linux systems are as follows:

Shell: Korn shell command interpreter.

GSKit: GSKit, which is used to provide security between monitoring components. The following table lists the operating system patches required for GSKit:

Table 6. Operating system patches required for GSKit

Operating system	Patches required
Solaris V8	108434-14, 111327-05, 108991, 108993-31, 108528-29, 113648-03, 116602-01, 111317-05, 111023-03, 115827-01
Solaris V9	111711-08
Solaris V10	125100-10
HP-UX V11i	PHSS_26946, PHSS_33033
AIX® V5.x	AIX V5.x xlC.aix50.rte.8.0.0.4 or later

Table 6. Operating system patches required for GSKit (continued)

Operating system	Patches required
RedHat Enterprise Linux 4 Intel®	• compat-gcc-32-c++-3.2.3-46.1.i386.rpm • compat-gcc-32-3.2.3-46.1.i386.rpm • compat-libstdc++-33-3.2.3-47.3.i386.rpm
SUSE Linux Enterprise Server 8 Intel	none
SUSE Linux Enterprise Server 9 Intel	none

Communications:

• Communications between components can use the TCP/IP, SNA, or IP.PIPE protocols.

For TCP/IP communication, and TCP/IP network service can be used (such as NIS, DNS or the /etc/hosts file). These must be configured to return the fully qualified host name, not an abbreviated name. For example, **HostName.ibm.com**

• Ethernet or token ring LAN connection

Hardware Requirements:

Disk space:

• 450 MB free disk space on installation drive
• 10 MB free disk space on system user drive
• 650 MB temporary free disk space for installation files
• Additional disk space for log file growth

Memory: Before installing Tivoli OMEGAMON XE for Messaging, ensure that the system on which you are installing meets the following memory requirements:

• Minimum: 512 MB
• Recommended: 1 GB

Additional Solaris system requirements: On Solaris systems, X Window System Version 11 (X11) support is required. If X11 support is not installed, you must add these two modules to your configuration:

• LIBX11.SO.4
• LIBXEXT.SO.4

Additional AIX system requirements: Supported AIX systems must be at the required maintenance level for IBM Java 1.5. Refer to the following Web site for the Java 5 AIX maintenance level matrix: http://www-128.ibm.com/developerworks/java/jdk/aix/service.html. Component xlC.aix50.rte must be at 8.0.0.4. See the following Web site for installation instructions: http://www-1.ibm.com/support/docview.wss?uid=swg1IY84212. The AIX C++ compiler must be at version 8. For the Tivoli Enterprise Portal Server, AIX 5.3 must be at TL5 SP3 or newer.

Requirements for individual agents: This table lists the individual requirements for installing each Tivoli OMEGAMON XE for Messaging agent.

Table 7. UNIX system installation requirements for each agent

Component name	Operating system	Hardware	Other requirements

WebSphere Message Broker Monitoring	• AIX V5.2, V5.3, or V6.1 (32/64 bit)
	• Solaris V8, V9, or V10 (32/64 bit)
	• HP-UX V11.i (32/64 bit) with the following Goldpacks installed:
	  – GOLDBASE11i, r=B.11.11.0712.475
	  – GOLDAPPS11i, r=B.11.11.0712.475
	Remember: For HP-UX V11.11 systems, you need to make sure that the PHSS_30970 patch is installed.
	• Linux systems on zSeries® or Intel architectures:
	  – SUSE Enterprise Server 8 (2.4.x kernel level), 9 (2.6.x kernel level), or 10
	  – Red Hat Enterprise Linux 3 (2.4.x kernel level), 4 (2.6.x kernel level), or 5
	• Linux systems on iSeries® and pSeries® architectures:
	  – SUSE Enterprise Server 9 or 10
	  – Red Hat Enterprise Linux 4 or 5
		• 10 MB disk space
		• Additional 210 MB for remote deployment support, if enabled
		• Additional 230 MB for Tivoli Enterprise Monitoring Agent Framework, Global Security Toolkit, and IBM Java Virtual Machine.
		• Additional disk space for historical data storage, if historical data collection is enabled.
			One of the following IBM broker products:
			• WebSphere Business Integration Event Broker V5
			• WebSphere Business Integration Message Broker V5
			• WebSphere Business Integration Message Broker with Rules and Formatter Extension V5
			• WebSphere Event Broker V6
			• WebSphere Message Broker V6
			• WebSphere Message Broker V6.1
			• WebSphere Message Broker V7.0
			• WebSphere Message Broker with Rules and Formatter Extension V6

Table 7. UNIX system installation requirements for each agent (continued)

Component name	Operating system	Hardware	Other requirements

WebSphere MQ Monitoring	• AIX V5.2, V5.3, or V6.1(32/64 bit)
	• Solaris V8, V9, or V10 (32/64 bit)
	• HP-UX V11.i (32/64 bit) with the following Goldpacks installed:
	  – GOLDBASE11i, r=B.11.11.0712.475 or a later version
	  – GOLDAPPS11i, r=B.11.11.0712.475 or a later version
	Remember: For HP-UX V11.11 systems, you need to make sure that the PHSS_30970 patch is installed.
	• Linux systems on zSeries or Intel architectures:
	  – SUSE Enterprise Server 8 (2.4.x kernel level), 9 (2.6.x kernel level), or 10
	  – Red Hat Enterprise Linux 3 (2.4.x kernel level), 4 (2.6.x kernel level), or 5
	• Linux systems on iSeries and pSeries architectures:
	  – SUSE Enterprise Server 9 or 10
	  – Red Hat Enterprise Linux 4 or 5
		• 35 MB disk space
		• Additional 210 MB for remote deployment support, if enabled
		• Additional 230 MB for Tivoli Enterprise Monitoring Agent Framework, Global Security Toolkit, and IBM Java Virtual Machine.
		• Additional disk space for historical data storage, if historical data collection is enabled.
			• WebSphere MQ 6.0, 7.0, or 7.0.1

Table 7. UNIX system installation requirements for each agent (continued)

Component name	Operating system	Hardware	Other requirements
WebSphere MQ Configuration	• AIX V5.2, V5.3, or V6.1 (32/64 bit) • Solaris V8, V9, or V10 (32/64 bit) • HP-UX V11.i (32/64 bit) with the following Goldpacks installed: – GOLDBASE11i, r=B.11.11.0712.475 – GOLDAPPS11i, r=B.11.11.0712.475 **Remember:** For HP-UX V11.11 systems, you need to make sure that the PHSS_30970 patch is installed. • Linux systems on zSeries and Intel architectures: – SUSE Enterprise Server 8 (2.4.x kernel level), 9 (2.6.x kernel level) or 10 – Red Hat Enterprise Linux 3 (2.4.x kernel level), 4 (2.6.x kernel level), or 5 • Linux systems on iSeries and pSeries architectures: – SUSE Enterprise Server 9 or 10 – Red Hat Enterprise Linux 4 or 5	• 35 MB disk space • Additional 210 MB for remote deployment support, if enabled • Additional 230 MB for Tivoli Enterprise Monitoring Agent Framework, Global Security Toolkit, and IBM Java Virtual Machine. • Additional disk space is required for storing the WebSphere MQ configuration database on the system where the hub Tivoli Enterprise Monitoring Server is installed.	• WebSphere MQ 6.0, 7.0, or 7.0.1 The WebSphere MQ Configuration agent requires one of the following databases to store configuration information: • The WebSphere MQ Configuration internal configuration database, which is installed automatically as part of Tivoli Enterprise Monitoring Server. • DB2 Universal Database (UDB) Workgroup Server Edition v8.1 or later, which must be installed on the same server as the hub Tivoli Enterprise Monitoring Server. If the monitoring server is installed on a z/OS system and you want to use the DB2 configuration database, DB2 v8.1 or later is required. If DB2 is not already installed on the z/OS system that hosts the monitoring server, it must be purchased and installed separately.

i5/OS system prerequisites

This section lists the hardware and software prerequisites for installing the WebSphere MQ Monitoring and WebSphere MQ Configuration agents on i5/OS® systems. The WebSphere Message Broker Monitoring agent is not supported on i5/OS systems.

Software requirements:

• i5/OS 5.3, 5.4, or 6.1

• WebSphere MQ 6.0, 7.0, or 7.0.1

• If you are using i5/OS 5.3, ensure that PTF SI12116 - OSP-UNPRED System agent support for i5/OS is installed on your system.

• TCP/IP Communication Utilities

Hardware requirements:

• RISC system

• 5250 non-programmable workstation or any workstation running 5250 emulation connected to an i5/OS system

• 150 MB free disk space for program files

- 50 MB temporary free disk space for running the software

Installing application support at the Tivoli Enterprise Monitoring Server

Depending on the operating system on which the Tivoli Enterprise Monitoring Server is installed, follow the instructions in the following sections to install application support on each monitoring server in your environment:

- "Installing application support at a Tivoli Enterprise Monitoring Server on a Windows system"
- "Installing application support at a Tivoli Enterprise Monitoring Server on a UNIX or Linux system" on page 20
- "Installing application support at a hub Tivoli Enterprise Monitoring Server on a z/OS system" on page 21

Installing application support at a Tivoli Enterprise Monitoring Server on a Windows system

Use the following steps to install required application support on a monitoring server that is running on a Windows system:

Important: The monitoring server is stopped during the process.

1. Log on to Windows system using a user ID with administrator authority.
2. Close any running applications.
3. Insert the Tivoli OMEGAMON XE for Messaging CD for Windows system into your CD-ROM drive. Installation begins automatically.

   A message welcoming you to the setup process is displayed in the InstallShield Wizard window. This window also contains information about what Tivoli products you currently have installed and the name and version of the product contained on the installation CD.

   Tip: If the InstallShield Wizard does not start automatically, use My Computer to open your CD-ROM drive, and double-click the `setup.exe` file in the `/WINDOWS` subdirectory to start the installation process. If the `setup.exe` file still fails to run, you do not have enough disk space to decompress the installation files. Clear some disk space before starting the installation process again.

4. Click **Next** on the Welcome window.

   Remember: If you already have the Tivoli OMEGAMON XE for Messaging agent or application support files installed on this computer, select Modify on the Welcome window to indicate that you are updating an existing installation, and then click Next. And skip to Step 7 on page 18.

5. The Prerequisites window, containing information about prerequisite software that must be installed before continuing with the Tivoli OMEGAMON XE for Messaging installation, is displayed. The prerequisites tested for are the IBM Global Security Toolkit and IBM Java. The version number of each of these products already installed on the host system is displayed, along with the number of the version required by Tivoli OMEGAMON XE for Messaging. If the **Current Version** field is empty, then either the version number of the installed product could not be obtained, or the product is not detected on the host system. If the version number of either of the installed products is earlier than stated in the **Required Version** field, the required version of the prerequisite software is installed automatically. In the **Choose common**

installation drive for both field enter the drive on which to install the software, and then click **Next** to proceed with the installation process.

> **Remember:** If the version number of prerequisite software is earlier than the required version, the required version is installed automatically. When the installation of the prerequisite software is complete, it automatically returns to the Tivoli OMEGAMON XE for Messaging InstallShield Wizard.

6. Click **Accept** on the software license.

7. The Select Features window is displayed. Select **Tivoli Enterprise Monitoring Server**, and click **Next**.

> **Tip:** If you have other components installed on the same computer, such as Tivoli Enterprise Portal desktop client, you can also select these components to install the component-specific application support.
>
> •
>
> • If you are updating an existing installation (you selected Modify on the Welcome window), the Add or Remove Features window is displayed. All check boxes on this window reflect your choices during the initial installation. Clearing a check box has the effect of uninstalling the component. Clear a box only if you want to remove a component.

8. The Agent Deployment window is displayed. If you want to add one or more agents to the deployment depot, select them, and click **Next**. The agent depot is for remote deployment.

9. Review the installation summary details. Click **Next** to start the installation.

10. A message is displayed stating that you will not be able to cancel the installation or upgrade after this point. Click **Yes** to continue.

11. Select **Install application support files for a Local/Remote Tivoli Enterprise Monitoring Server**, and click **Next**.

12. Specify the default values for any monitoring agents to use when they communicate with the Tivoli Enterprise Monitoring Server, and click **OK**.

Table 8. Communications protocol for Tivoli Enterprise Monitoring Server

Option or field	Description
TEMS Type	Specify the type of the Tivoli Enterprise Monitoring Server, hub or remote.
Configuration Auditing	Select if you want auditing to be configured.
Security: Validate User	Select if you want users to be required to enter their user name and password when logging onto the system.
Address Translation	Select this option if the firewall shielding the Tivoli Enterprise Monitoring Server uses address translation.
Tivoli Event Integration Facility	Select this option if you want to forward situation events to IBM Tivoli Enterprise Console®.

Table 8. Communications protocol for Tivoli Enterprise Monitoring Server (continued)

Option or field	Description
Disable Workflow Policy/Tivoli Emitter Agent Event Forwarding	Select this to avoid duplicate event forwarding if you enable event forwarding using the Event Integration Facility and already have policies that contain emitter activities that send events to the Tivoli Enterprise Console.
TEMS name	Enter the name of the Tivoli Enterprise Monitoring Server.
Protocol for this TEMS	You can enter up to three protocols to be used when connecting to the Tivoli Enterprise Monitoring Server. The protocol specified in the Protocol 1 field will be used by default. If connection to the monitoring server using this protocol fails, the protocol specified in the Protocol 2 field will be used, and if connection still fails, the protocol specified in the Protocol 3 field is used. Available protocols are IP.PIPE, IP.SPIPE, SNA and IP.UDP.
Configure Hot Standby TEMS	Select this option to specify a backup Tivoli Enterprise Monitoring Server to be used in the event of the default monitoring server failing. Use the options in this section to select the protocols to use when connecting to the standby monitoring server, as with the Protocol for Tivoli Enterprise Monitoring Server options mentioned previously.

After finishing configuring the Tivoli Enterprise Monitoring Server, click **OK** to accept the settings.

13. Specify the host name (or IP address) and port number of the monitoring server. Click **OK** to continue.

14. The WMQ Configurator Data Source Parameters window is displayed, perform the following steps to configure the database used by Tivoli OMEGAMON XE for Messaging.

   a. Enter the database configuration parameters as show in Table 9:

Table 9. Database configuration parameters

Option	Description
Database Type	Select whether to use the product internal database or an external DB2 database, accessed using ODBC. The other options listed in this table are only applicable to DB2 so if you select the internal database they cannot be modified.
Data source name	Enter the name of the DB2 data source.
Database Administrator ID	Enter the ID and password of the DB2 database administrator.
WebSphere MQ Configurator Database User ID	Enter the ID and password of the WebSphere MQ configuration database.

   b. Click **OK** to accept the settings entered.

    c. If a message is displayed stating that configuration was completed successfully, click **OK**, otherwise, if configuration failed, you will be given the option to return to the configuration window and re-enter the database settings.

15. Specify the location of the monitoring server on which you want to enable application support. Select On this computer, and click **OK**.

16. Select which components for which you want to enable application support. By default, all available application support is selected. Click **OK**.

17. Click **Next** on the message that provides information about installing application support.

18. Click **Finish** to close the installation wizard.

You have now finished installing application support at the Tivoli Enterprise Monitoring Server. If you have other monitoring servers in your environment, install application support on them. After all the monitoring servers are upgraded, go to "Installing application support at the Tivoli Enterprise Portal Server" on page 25 to continue with the installation process.

Installing application support at a Tivoli Enterprise Monitoring Server on a UNIX or Linux system

Use the following steps to install application support on a Tivoli Enterprise Monitoring Server that is running on UNIX or Linux systems:

1. Stop the Tivoli Enterprise Monitoring Server by running the following commands:

   ```
   cd install_dir/bin
   ./itmcmd server stop tems_name
   ```

   where *install_dir* is the directory where the monitoring server is installed. The default directory is /opt/IBM/ITM.

   Tip: If you do not know the name of the monitoring server, view the contents of the *install_dir*/tables directory. The monitoring server name can be found there.

2. Run the following command to create a temporary directory on the computer where the monitoring server is installed. Make sure that the full path of the directory does not contain any spaces:

   ```
   mkdir dir_name
   ```

3. Mount the installation CD for UNIX or Linux systems to the temporary directory you just created.

4. Run the following commands:

   ```
   cd dir_name
   ./install.sh
   ```

   where *dir_name* is the temporary directory you just created.

5. When prompted for the IBM Tivoli Monitoring home directory, press Enter to accept the default directory (/opt/IBM/ITM) or type the full path of the installation directory. If a message is displayed stating that the directory already exists and asking whether to use it, enter 1 (yes) and press enter.

6. The following prompt is displayed:

```
Select one of the following:
 1) Install products to the local host.
 2) Install products to depot for remote deployment (requires TEMS).
 3) Install TEMS support for remote seeding.
 4) Exit install.
Please enter a valid number:
```

Type 1 to start the installation and press Enter.

7. The first part of the software license agreement is displayed. Press Enter to view latter parts of the agreement. After you finish viewing the agreement, enter 1 to accept it or 2 to reject it and press Enter. You must accept the agreement to continue with the installation process.

8. A numbered list of available operating systems and installation components is displayed. Type the number that corresponds to `Tivoli Enterprise Monitoring Server` support and press Enter.

9. Type 1 (yes) to confirm and press Enter. A list of the components for which you can install application support is displayed.

10. Type the number that corresponds to `all of the above` and press Enter.

11. Type 1 (yes) to confirm that your selection is correct. The installation process begins.

12. After all of the components are installed, you are asked whether you want to install additional products or produce support packages. Type 2 (no) and press Enter to exit the installation program.

13. Start the monitoring server by running the following commands:
    ```
    cd install_dir/bin
    ./itmcmd server start tems_name
    ```

    where *install_dir* is the directory where the monitoring server is installed.

14. Run the following command to activate application support on the monitoring server. You must run the command once for each component, using the specific product code of the agent. See Appendix A, "Product codes," on page 93 for a list of product codes.
    ```
    ./itmcmd support -t tems_name pc
    ```

    where *tems_name* is the name of the monitoring server and *pc* is the product code of the agent.

15. Stop and restart the monitoring server by running the following commands:
    ```
    ./itmcmd server stop tems_name
    ./itmcmd server start tems_name
    ```

You have now finished installing application support to the monitoring server. If you have other monitoring servers in your environment, install application support on them. After all the monitoring servers are upgraded, go to "Installing application support at the Tivoli Enterprise Portal Server" on page 25 to continue with the installation process.

Installing application support at a hub Tivoli Enterprise Monitoring Server on a z/OS system

If your hub Tivoli Enterprise Monitoring Server is running on a z/OS system, you must install application support remotely from a Windows system, UNIX system, or Linux system that hosts either a hub portal server or a hub monitoring server.

Remember:

1. The hub monitoring server running on a z/OS system must be started when you add application support to it.

2. Before you do this, make sure you have registered the Tivoli OMEGAMON XE for Messaging agents to the hub monitoring server. For more information about registering the monitoring agents with the hub monitoring server, see *IBM Tivoli OMEGAMON XE for Messaging on z/OS: Configuration Guide, SC23-7951*.

Using Windows systems

If the Tivoli Enterprise Portal Server is running on a Windows system, use Manage Tivoli Enterprise Monitoring Services to install application support on the z/OS monitoring server:

1. On the system where the Tivoli Enterprise Portal Server is installed, open Manage Tivoli Enterprise Monitoring Services by clicking Start > Programs > IBM Tivoli Monitoring > Manage Tivoli Monitoring Services.

2. Right-click the Tivoli Enterprise Portal Server icon, and click Advanced > Add TEMS application support. The Add Application Support to the TEMS window is displayed.

3. Select On a different computer, and click OK. A reminder that the Tivoli Enterprise Monitoring Server running on a z/OS system must be started is displayed.

4. If the Tivoli Enterprise Monitoring Server is not started, start it, and then click OK to continue. The Non-resident TEMS Connection window is displayed.

5. Enter the name of the Tivoli Enterprise Monitoring Server, and select the communications protocol. The monitoring server name must be the same as the CMS_NODEID parameter in the KDSENV member in `&rhilev.` `&rtename.RKANPARU` on the z/OS system where the monitoring server is installed.

   Remember: The communications protocol you select must be the protocol that your monitoring server is configured to use.

6. The Non-resident TEMS Connection settings window is displayed. Enter the following information and click OK to proceed:
   - **Hostname or IP Address**: The fully qualified host name or the IP address of the system on which your monitoring server is running.
   - **Port # and/or Port Pools**: The port number that the Tivoli Enterprise Portal Server uses to communicate with the monitoring server on a z/OS system. The default value is 1918.
   - **Entry Options**: Select Convert to upper case (Tivoli Enterprise Monitoring Server require all information to be in upper case).

7. In the Select the Application Support to Add to the TEMS window, select the agents for which you want to install application support, and then click OK. Available options are:
   - WebSphere MQ Configuration: Configuration Management Support (kcf.sql)
   - WebSphere MQ Monitoring: WebSphere MQ Monitoring Agent Support (kmq.sql)
   - WebSphere Message Broker Monitoring: WebSphere Message Broker Support (kqi.sql)

   Remember: Alternative versions of these files with file names ending in _upg can also be selected. For example, kqi_upg.sql. If you are upgrading from an earlier version of Tivoli OMEGAMON XE for

Messaging, select the _upg versions of application support files. If you are not upgrading from an earlier version, select the standard versions of the files.

8. Recycle the Tivoli Enterprise Monitoring Server. Changes to application support do not take effect until the monitoring server is restarted.

You have now finished installing application support to the Tivoli Enterprise Monitoring Server. If you have other monitoring servers in your environment, install application support on those. After all monitoring servers are upgraded, go to "Installing application support at the Tivoli Enterprise Portal Server" on page 25 to continue with the installation process.

Using UNIX or Linux systems

As a prerequisite, you must install a monitoring server, a portal server or a monitoring agent on the local Linux or UNIX system computer. This step is necessary to make the Manage Tivoli Enterprise Monitoring Services available on the local computer. If you do not have a monitoring server, you must install the support files on the local computer using the procedure described in Installing application support files on a computer with no Tivoli Enterprise Monitoring Server.

Gather the following information about the Tivoli Enterprise Monitoring Server on the remote computer:
- The host name or IP address
- The protocol and port number that is specified when the monitoring server is configured

The monitoring server on the remote computer must be configured to use the IP.UDP, IP.PIPE, or IP.SPIPE communications protocol. This procedure does not support a monitoring server that is configured to use the SNA communications protocol.

In the following instructions, *install_dir* refers to the IBM Tivoli Monitoring installation directory. You can enter either $CANDLEHOME or the name of the directory. The default installation directory on Linux and UNIX systems is /opt/IBM/ITM.

Perform the following steps to add application support SQL files to a hub monitoring server on a non-local system.

1. Your Linux or UNIX system must have a GUI interface. Otherwise, perform the following steps to enable the GUI interface:
    a. Enable X11.
    b. Make sure you have access to a native X-term monitor or an X-Window emulator.
    c. If using an X-Window emulator, enable X11 access to the X-Window server (command example: xhost +).
    d. If using an X-Window emulator, set the display environment variable to point to the X-Window server:
       export DISPLAY=pc_ip_address:0
2. Ensure that the hub monitoring server is running.
3. To start Manage Tivoli Enterprise Monitoring Services, go to the $CANDLEHOME bin directory (example: /opt/IBM/ITM/bin) and run this command:

```
./itmcmd manage &
```

A GUI window opens for Manage Tivoli Enterprise Monitoring Services.

4. Click **Actions > Install product support**.

5. On the Add Application Support to the TEMS window, select **On a different computer**, and click OK.

6. When you are prompted to ensure that the hub monitoring server is configured and running, click OK.

7. On the Non-Resident TEMS Connection window, provide the hub monitoring server name (node ID), and select the communication protocol to use in sending the application support SQL files to the hub monitoring server.

8. Select the appropriate communications protocol, and click OK.

9. On the next window, supply any values required by the selected communication protocol, and click OK.

10. On the Install Product Support window, select the monitoring agents for which you want to add application support to the hub monitoring server, and click Install.

11. In Manage Tivoli Monitoring Services, look for this message:

```
Remote seeding complete!
```

12. Stop and restart the hub monitoring server.

You have now finished installing application support to the Tivoli Enterprise Monitoring Server. If you have other monitoring servers in your environment, install application support on those. After all the monitoring servers are upgraded, go to "Installing application support at the Tivoli Enterprise Portal Server" on page 25 to continue with the installation process.

Installing application support files on a computer with no Tivoli Enterprise Monitoring Server

You can install application support files for a Tivoli Enterprise Monitoring Server on a UNIX or Linux system where no monitoring server is installed and then use the files to configure support on a non-local monitoring server. Use the following procedure to install application support files on computer on which no monitoring server is installed for use on a monitoring server on another computer:

1. Run the following command from the installation media, either the IBM Tivoli Monitoring base media, the product CD for distributed systems, or the data files CD for a z/OS system agents:

```
./install.sh
```

2. When prompted for the IBM Tivoli Monitoring home directory, press Enter to accept the default directory(/opt/IBM/ITM), or enter the full path to the installation directory you used. The following prompt is displayed:

```
Select one of the following:

1) Install products to the local host.
2) Install products to depot for remote deployment (requires TEMS).
3) Install TEMS support for remote seeding
4) Exit install.

Please enter a valid number:
```

3. Type 3 and press Enter. The software license agreement is displayed.

4. Read through the software license agreement, and then type 1 and press Enter to accept the agreement. The installer presents a list of currently installed products, the operating systems for which product packages are available, and component support categories.

5. Type the 32-character encryption key to use and press Enter, or just press enter to use the default value. This key must be the same key as that used during the installation of the Tivoli Enterprise Portal Server to which the client will connect. The installer presents a list of products for which support packages are available.

6. Enter the numbers of the monitoring agents that you want to install or enter the number that corresponds to all of the above. Enter more than one number on the same line separated by spaces or commas (,). A list of the monitoring agents to be installed is displayed.

7. Confirm the selection by pressing Enter. The installation program asks if you want to install additional products or support packages.

8. Type 2 and press Enter. The support packages are installed. When installation is complete, the following message is displayed:

```
... finished postprocessing.
Installation step complete.
```

Installing application support at the Tivoli Enterprise Portal Server

Depending on the operating system on which Tivoli Enterprise Portal Server is installed, follow the instructions in the following sections to install application support on your Tivoli Enterprise Portal Server:

- "Installing application support at a Tivoli Enterprise Portal Server on a Windows system"
- "Installing application support at a Tivoli Enterprise Portal Server on a UNIX or Linux system" on page 26

Installing application support at a Tivoli Enterprise Portal Server on a Windows system

Perform the following steps to install application support on a Tivoli Enterprise Portal Server that is running on a Windows system:

1. Log on to Windows system using a user ID with Administrator authority.

2. Close any running applications.

3. To open the Manage Tivoli Enterprise Monitoring Services window, click Start > Programs > IBM Tivoli Monitoring > Manage Tivoli Monitoring Services.

4. Stop the Tivoli Enterprise Portal Server by right-clicking it and clicking **Stop**.

5. Insert the product CD for Windows system into your CD-ROM drive.

6. In the /WINDOWS subdirectory on the installation media, double-click the setup.exe file to launch the installation.

7. Click **Next** on the Welcome window.

   Remember: If you already have the Tivoli OMEGAMON XE for Messaging agent or application support files installed on this computer, select Modify on the Welcome window to indicate that you are updating an existing installation, and then click Next. Then skip to Step 10 on page 26.

8. The Prerequisites window, containing information about prerequisite software that must be installed before continuing with the Tivoli OMEGAMON XE for Messaging installation, is displayed. The prerequisites tested for are the IBM

Global Security Toolkit and IBM Java. The version number of each of these products already installed on the host system is displayed, along with the number of the version required by Tivoli OMEGAMON XE for Messaging. If the **Current Version** field is empty, then either the version number of the installed product could not be obtained, or the prerequisite software is not detected on the host system. If the version number of either of the installed products is earlier than stated in the **Required Version** field, the prerequisite software is installed later automatically. In the **Choose common installation drive for both** field, enter the drive on which to install the software, then click **Next** to proceed with the installation process.

9. Click **Accept** on the software license agreement.

10. Select **Tivoli Enterprise Portal Server**, and click **Next**.

   Tips:
   - If you have other components installed on the same computer, such as Tivoli Enterprise Portal desktop client, you can also select these components to install the component-specific application support.
   - If you are updating an existing installation (you selected Modify on the Welcome window), the Add or Remove Features window is displayed. All check boxes on this window reflect your choices during the initial installation. Clearing a check box has the effect of uninstalling the component. Clear a box only if you want to remove a component.

11. Ensure that no agents are selected in the Agent Deployment window, and click **Next**.

12. Review the installation summary details. Click **Next** to start the installation.

13. A message is displayed stating that you will not be able to cancel the installation or upgrade after this point. Click **Yes** to continue.

14. The Setup Type window is displayed. Select **Configure Tivoli Enterprise Portal**, and click **Next**.

15. Type the host name of the Tivoli Enterprise Portal Server is in the TEPS Hostname window, and click **Next**.

16. Click **Finish** to complete the installation.

17. Restart the Tivoli Enterprise Portal Server by right-clicking it in the Manage Tivoli Enterprise Monitoring Services window and clicking **Start**.

Installation of application support on the Tivoli Enterprise Portal Server is now complete. Go to "Installing application support at the Tivoli Enterprise Portal desktop client" on page 32 to continue with the installation process.

Installing application support at a Tivoli Enterprise Portal Server on a UNIX or Linux system

Use the following steps to install application support on a Tivoli Enterprise Portal Server that is running on a UNIX or Linux system:

1. Stop the Tivoli Enterprise Portal Server if it is running using the following commands:

   ```
   cd install_dir/bin
   ./itmcmd agent stop cq
   ```

   where *install_dir* is the directory in which you install the IBM Tivoli Monitoring.

2. Run the following command to create a temporary directory on the computer where the Tivoli Enterprise Portal Server is installed. Make sure that the full path of the directory does not contain any spaces:

   ```
   mkdir dir_name
   ```

3. Mount the installation CD for UNIX or Linux systems to the temporary directory you just created.

4. Run the following commands:

   ```
   cd dir_name
   ./install.sh
   ```

   where *dir_name* is the temporary directory you just created.

5. When prompted for the IBM Tivoli Monitoring home directory, press Enter to accept the default directory (/opt/IBM/ITM), or type the full path to the installation directory. If a message is displayed stating that the directory already exists and asking whether to use it, enter 1 (yes), and press Enter.

6. The following prompt is displayed:

   ```
   Select one of the following:
    1) Install products to the local host.
    2) Install products to depot for remote deployment (requires TEMS).
    3) Install TEMS support for remote seeding.
    4) Exit install.
   Please enter a valid number:
   ```

   Type 1 to start the installation, and press Enter.

7. The first part of the software license agreement is displayed. Press Enter to view latter parts of the agreement. After you finish viewing the agreement, enter 1 to accept it or 2 to reject it, and press Enter. You must accept the agreement to continue with the installation process.

8. A numbered list of available operating systems and installation components is displayed. Type the number that corresponds to `Tivoli Enterprise Portal Browser Client` support, and press Enter.

9. Type 1 (yes) to confirm, and press Enter. A list of the components to install is displayed.

10. Type the number that corresponds to `all of the above` and press Enter.

11. Type 1 (yes) to confirm the installation. The installation begins.

12. When you are asked whether you want to install additional products or product support packages for a different operating system, type y, and press Enter.

13. Type the number that corresponds to `Tivoli Enterprise Portal Server` support, and press Enter.

14. Type 1 (yes) to confirm, and press Enter. A list of the components to install is displayed.

15. Type the number that corresponds to `all of the above`, and press Enter.

16. Type 1 (yes) to confirm the installation. The installation begins.

17. After all of the components are installed, you are asked whether you want to install components for a different operating system. Type 2 (no), and press Enter.

Application support for Tivoli Enterprise Portal Server is installed. Next step is "Configuring the Tivoli Enterprise Portal Server on a UNIX or Linux system" on page 28.

Configuring the Tivoli Enterprise Portal Server on a UNIX or Linux system

You have two options to configure the Tivoli Enterprise Portal Server on a UNIX or Linux system:

- "Configuring the Tivoli Enterprise Portal Server using the GUI"
- "Configuring the Tivoli Enterprise Portal Server using the command line" on page 31

Configuring the Tivoli Enterprise Portal Server using the GUI

Perform the following steps to configure the Tivoli Enterprise Portal Server using the GUI on a UNIX or Linux system:

1. Navigate to the *install_dir*/bin directory, where *install_dir* is the directory where IBM Tivoli Monitoring is installed. The default directory is /opt/IBM/ITM.

2. Open the Manage Tivoli Enterprise Monitoring Services window by running the following command:

   ./itmcmd manage

   The Manage Tivoli Enterprise Monitoring Services window is displayed.

3. On the Manage Tivoli Enterprise Monitoring Services window, select Tivoli Enterprise Portal Server, right-click it, and click **Configure**.

4. On the Common Event Console Configuration window, click **OK**.

5. The Configure Tivoli Enterprise Portal Server window is displayed, as shown in Figure 1.
   On the **TEMS Connection** tab, perform the following steps:
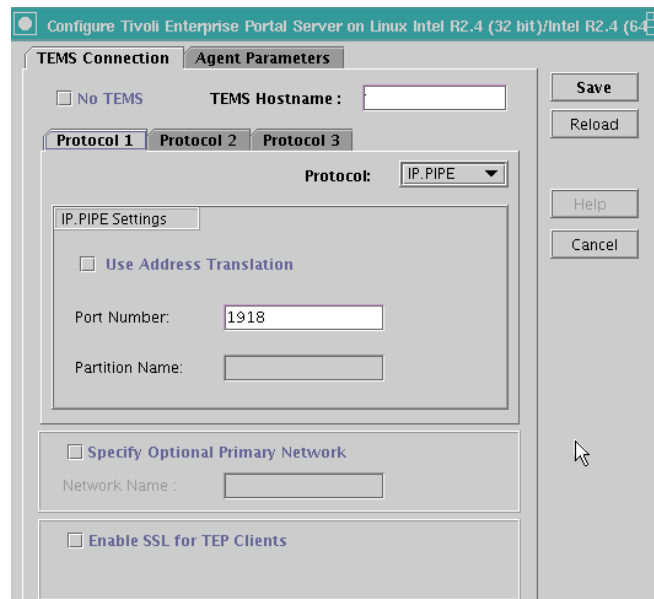
Figure 1. Configuring Tivoli Enterprise Monitoring Server connections

   a. In the **TEMS Hostname** field, enter the host name of the hub Tivoli Enterprise Monitoring Server.

   b. In the **Protocol 1** tab, select the protocol that you want to use to communicate with the hub Tivoli Enterprise Monitoring Server. You have four choices: TCP/IP, SNA, IP.PIPE and IP.SPIPE. Depending on the protocol you select, provide the following information:

Table 10. Tivoli Enterprise Monitoring Server protocols and values on UNIX or Linux systems

Protocol	Value	Definition
TCP/IP	IP port number	The port number of the Tivoli Enterprise Monitoring Server. The default value is 1918.
SNA	Net name	The SNA network identifier for your location.
	LU name	The LU name of the Tivoli Enterprise Monitoring Server. This LU name corresponds to the Local LU Alias in your SNA communications software.
	Log mode	The name of the LU6.2 LOGMODE. The default value is CANCTDCS.
IP.PIPE	IP.PIPE port number	The port number for the Tivoli Enterprise Monitoring Server. The default value is 1918.
	KDC Partition	The KDC partition. The default value is null.
IP.SPIPE	IP.SPIPE port number	The port number for the Tivoli Enterprise Monitoring Server. The default value is 3660.

    c. If you want to set up a backup protocol, select the protocol in the **Protocol 2** tab. For information about how to fill in the fields, see Table 10. You can specify a second backup protocol in the **Protocol 3** tab.

6. The **Agent Parameters** tab is displayed, as shown in Figure 2 on page 30.
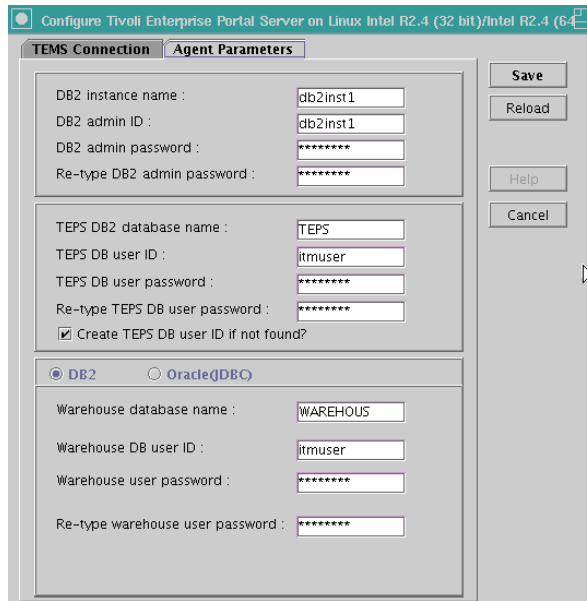
Figure 2. Configuring agent parameters

Perform the following steps:

a. Enter the DB2 instance name. The default value is `db2inst1`.

b. Enter the DB2 administrator ID. The default value is `db2inst1`.

c. Enter the password for the DB2 administrator ID.

d. Confirm the password for the DB2 administrator ID by typing it again.

e. Enter the name of the DB2 database for the Tivoli Enterprise Portal Server. The default value is `TEPS`.

f. Enter the name of the database user ID that the Tivoli Enterprise Portal Server will use to access the database. The default value is `itmuser`.

g. Enter the password for the database user.

h. Confirm the password for the database user by entering it again.

i. Select **Create Tivoli Enterprise Portal Server DB user ID if not found**.

j. Select **DB2** if you are using DB2 to warehouse data. Select **Oracle(JDBC)** if you are using Oracle to warehouse data.

k. Enter the name of the database that the Tivoli Data Warehouse will use. The default value is `WAREHOUS`.

l. Enter the name of the database user that the Tivoli Data Warehouse will use. The default value is `itmuser`.

m. Enter the password for the Warehouse user ID.

n. Confirm the password for the Warehouse user by typing it again.

o. Click **Save** to save your changes.

7. In the Manage Tivoli Enterprise Monitoring Services window, stop the Tivoli Enterprise Portal Server, if it is started, by right-clicking the Tivoli Enterprise Portal Server item and clicking Stop Service.

8. In the Manage Tivoli Enterprise Monitoring Services window, Restart the Tivoli Enterprise Portal Server by right-clicking the Tivoli Enterprise Portal Server item and clicking Start Service.

Installation and configuration of application support on the Tivoli Enterprise Portal Server is now complete. Go to "Installing application support at the Tivoli Enterprise Portal desktop client" on page 32 to continue with the installation process.

Configuring the Tivoli Enterprise Portal Server using the command line

Perform the following steps to configure the Tivoli Enterprise Portal Server on a UNIX or Linux system using the command line:

1. Navigate to the *install_dir*/bin directory, where *install_dir* is the directory where IBM Tivoli Monitoring is installed. The default directory is /opt/IBM/ITM.

2. Run the following command:

   ./itmcmd config -A cq

3. When asked if you want to edit common event console for IBM Tivoli Monitoring settings, enter 2 (no), and press Enter.

4. Enter 1 (yes) when you are asked if the agent connects to a Tivoli Enterprise Monitoring Server.

5. Enter the host name of the hub monitoring server, and press Enter.

6. Enter the protocol that you want to use to communicate with your hub monitoring server. You have four choices: IP, SNA, IP.PIPE, or IP.SPIPE.

7. If you want to set up a backup protocol, enter the name of the protocol and press Enter. If you do not want to use a backup protocol type 0, and press Enter.

8. Depending on the protocols you specified, provide the information in Table 10 on page 29 when prompted.

9. Press Enter to accept the default value (none) for the Optional Primary Network Name.

10. Press Enter to accept the default setting for SSL between the portal server and clients (N). By default, SSL is disabled. To enable SSL, type 1 (yes), and press Enter.

11. Type the DB2 instance name. The default value is db2inst1. Press Enter.

12. Type the DB2 administrator ID. The default value is db2inst1. Press Enter.

13. Type the password for the DB2 administrator ID, and press Enter.

14. Confirm the password for the DB2 administrator ID by typing it again. Press Enter.

15. Type the name of the database used by the Tivoli Enterprise Portal Server. The default value is TEPS. Press Enter.

16. Type the name of the database user that the Tivoli Enterprise Portal Server will use to access the database. The default value is itmuser. Press Enter.

17. Type the password for the database user, and press Enter.

18. Confirm the password for the database user by typing it again. Press Enter.

19. You are asked if it is OK to create the DB2 login user if it does not exist. Type 1 (yes), and press Enter.

20. You are asked whether you are using DB2 or Oracle (JDBC) for data warehousing. Enter the number corresponding to the database you want to use.

21. Type the name of the database that the Tivoli Data Warehouse will use. The default value is WAREHOUS. If you select the DB2 database, this database must be cataloged locally if the warehouse database is on a remote computer. Press Enter.

> **Remember:** If you are using a remote node and database, you must manually configure (catalog) the remote node and the remote database from the Linux system DB2 command line. Run the following commands:
>
> ```
> db2 catalog tcpip node node_name remote host_name server port
> db2 catalog db db_name as dbalias at node node_name
> ```

22. Type the name of the database user ID that the Tivoli Data Warehouse will use. The default value is `itmuser`. Press Enter.

23. Type the password for the Warehouse user ID, and press Enter.

24. Confirm the password for the Warehouse user by typing it again. Press Enter.

25. If you selected the Oracle database in step 20 on page 31, enter the following information when prompted:

    a. JDBC driver class path

    b. JDBC driver name

    c. JDBC driver URL

    d. User-defined attributes

26. You are asked whether you want to validate user with LDAP. Press Enter to accept the default value for the LDAP security.

Installation and configuration of application support on the Tivoli Enterprise Portal Server is now complete. Go to "Installing application support at the Tivoli Enterprise Portal desktop client" to continue with the installation process.

Installing application support at the Tivoli Enterprise Portal desktop client

Depending on the operating system on which Tivoli Enterprise Portal desktop client is installed, follow the instructions in the following sections to install application support on each computer where you are running the Tivoli Enterprise Portal desktop client:

- "Installing application support at a Tivoli Enterprise Portal desktop client on a Windows system"
- "Installing application support at a Tivoli Enterprise Portal desktop client on a Linux system" on page 33

Installing application support at a Tivoli Enterprise Portal desktop client on a Windows system

Use the following steps to install application support on a portal desktop client on Windows systems:

> **Remember:** Stop the Tivoli Enterprise Portal desktop client before performing this procedure.

1. Insert the Tivoli OMEGAMON XE for Messaging CD for Windows system into your CD-ROM drive.

2. In the `/WINDOWS` subdirectory on the installation media, double-click the `setup.exe` file to launch the installation.

3. Click **Next** on the Welcome window.

   > **Remember:** If you already have the Tivoli OMEGAMON XE for Messaging agent or application support files installed on this computer,

select Modify on the Welcome window to indicate that you are updating an existing installation, and then click Next. Then skip to Step 7.

4. The Prerequisites window, containing information about prerequisite software that must be installed before continuing with the Tivoli OMEGAMON XE for Messaging installation, is displayed. The prerequisites tested for are the IBM Global Security Toolkit and IBM Java. The version number of each of these products already installed on the host system is displayed, along with the number of the version required by Tivoli OMEGAMON XE for Messaging. If the **Current Version** field is empty, then either the version number of the installed product could not be obtained, or the product id not detected on the host system. If the version number of either of the installed products is earlier than stated in the **Required Version** field, the required version of the prerequisite software is installed automatically. In the **Choose common installation drive for both** field enter the drive on which to install the software, then click **Next** to proceed with the installation process.

5. Click **Accept** on the software license agreement.

6. If you see a message regarding installed versions being newer than the agent installation, click **OK** to ignore this message.

7. Select **Tivoli Enterprise Portal Desktop Client**, and click **Next**.

   Remember: If you are updating an existing installation (you selected Modify on the Welcome window), the Add or Remove Features window is displayed. All check boxes on this window reflect your choices during the initial installation. Clearing a check box has the effect of uninstalling the component. Clear a box only if you want to remove a component.

8. The Agent Deployment window is displayed. Make sure that no agent is selected. Click **Next**.

9. Review the installation summary details. Click **Next** to start the installation.

10. A message is displayed stating that you will not be able to cancel the installation or upgrade after this point. Click **Yes** to continue.

11. The Setup Type window is displayed. Select **Configure Tivoli Enterprise Portal**, and click **Next**.

12. The TEPS Hostname window is displayed. Type the host name of the server where Tivoli Enterprise Portal Server is and click **Next**. The portal server host name must be the name of the Tivoli Enterprise Portal Server that this portal connects to, it does not change even you change the host name during the configuration.

13. Click **Finish** to complete the installation wizard.

Installing application support at a Tivoli Enterprise Portal desktop client on a Linux system

Perform the following steps to install application support on a portal desktop client on a Linux system:

Remember: Stop the desktop client before performing this procedure.

1. Run the following command to create a temporary directory on the computer where the Tivoli Enterprise Portal desktop client is installed. Make sure that the full path of the directory does not contain any spaces:

   ```
   mkdir dir_name
   ```

2. Mount the installation CD for Linux systems to the temporary directory you just created.

3. Run the following commands:

```
cd dir_name
./install.sh
```

where *dir_name* is the temporary directory you just created.

4. When prompted for the IBM Tivoli Monitoring home directory, press Enter to accept the default directory (/opt/IBM/ITM), or type the full path to the installation directory. If a message is displayed stating that the directory already exists and asking whether to use it, enter 1 (yes), and press Enter.

5. The following prompt is displayed:

```
Select one of the following:
 1) Install products to the local host.
 2) Install products to depot for remote deployment (requires TEMS).
 3) Install TEMS support for remote seeding.
 4) Exit install.
Please enter a valid number:
```

Type 1 (yes) to start the installation, and press Enter.

6. The first part of the software license agreement is displayed. Press Enter to view latter parts of the agreement. After you finish viewing the agreement, enter 1 to accept it or 2 to reject it, and press Enter. You must accept the agreement to continue with the installation process.

7. A numbered list of available operating systems and installation components is displayed. Type the number that corresponds to `Tivoli Enterprise Portal Desktop Client support`, and press Enter.

8. Type 1 (yes) to confirm, and press Enter. A list of the application support components that can be installed is displayed.

9. Type the number that corresponds to `all of the above`, and press Enter.

10. Type 1 (yes) to confirm the installation. The installation begins.

11. After all of the components are installed, you are asked whether you want to install additional products or product support packages. Type 2 (no), and press Enter.

Application support for Tivoli Enterprise Portal desktop client is now installed. Go to "Configuring the Tivoli Enterprise Portal desktop client" to configure the client.

Configuring the Tivoli Enterprise Portal desktop client

Perform the following steps to configure the Tivoli Enterprise Portal desktop client on a UNIX or Linux system:

1. Go to the *install_dir*/bin directory, where *install_dir* is the directory where IBM Tivoli Monitoring is installed. The default value is /opt/IBM/ITM.

2. Run the following command:

```
./itmcmd config -A cj
```

3. Press Enter to accept the default instance name when prompted.

4. Type the host name of the Tivoli Enterprise Portal Server, and press Enter.

5. Type the path of your Web browser when prompted, and press Enter.

6. Press Enter when you are asked if you want to use HTTP Proxy support. The default value is no.

Installing Tivoli OMEGAMON XE for Messaging

This part contains instructions about how to install Tivoli OMEGAMON XE for Messaging. Use the following instructions to install Tivoli OMEGAMON XE for Messaging on different operating systems:

- "Installing Tivoli OMEGAMON XE for Messaging on Windows systems"
- "Installing Tivoli OMEGAMON XE for Messaging on UNIX and Linux systems" on page 39
- "Installing Tivoli OMEGAMON XE for Messaging on i5/OS systems" on page 44

Installing Tivoli OMEGAMON XE for Messaging on Windows systems

There are two methods of installing agents of Tivoli OMEGAMON XE for Messaging on a Windows system. Installation can be performed interactively using the InstallShield Wizard to guide you through the process, or using a silent installation where all installation parameters are specified in a response file before the process begins. For detailed instructions on using either of these methods, see the following sections:

- "InstallShield Wizard installation"
- "Silent installation" on page 37

InstallShield Wizard installation

Use the following steps to install and initialize agents of Tivoli OMEGAMON XE for Messaging with the InstallShield Wizard.

1. Log on to Windows system using a user ID with Administrator authority.
2. Close any running applications.
3. Insert the Tivoli OMEGAMON XE for Messaging CD into your CD-ROM drive. Installation begins automatically. If the InstallShield Wizard does not start automatically, use My Computer to open your CD-ROM drive and run the `setup.exe` file. If the `setup.exe` file still fails to run, you do not have enough disk space to decompress the setup files. Clear some disk space before starting the installation process again.

   A message welcoming you to the setup process is displayed in the InstallShield wizard window. This window also contains information about what IBM Tivoli products you currently have installed and the name and version of the product contained on the installation CD.

   Remember: If you are running Windows 2003 or Windows XP system and have security set to check the software publisher of applications, you might receive an error stating that the `setup.exe` file is from an unknown publisher. Click **Run** to disregard this error message and continue with the installation process.

4. Click Next on the Welcome window.

   Remember: If you already have the Tivoli OMEGAMON XE for Messaging agent or application support files installed on this computer, select Modify on the Welcome window to indicate that you are updating an existing installation, and then click **Next**. Then skip to Step 7 on page 36.

5. The Prerequisites window, containing information about prerequisite software that must be installed before continuing with the Tivoli OMEGAMON XE for Messaging installation, is displayed. The prerequisites tested for are the IBM Global Security Toolkit and IBM Java Virtual Machine (JVM). The version number of each of these products already installed on the host system is displayed, along with the number of the version required by Tivoli OMEGAMON XE for Messaging. If the **Current Version** field is empty, then either the version number of the installed product could not be obtained, or the product is not detected on the host system. If the version number of either of the installed products is earlier than stated in the **Required Version** field, the required version of the prerequisite software is installed automatically. In the **Choose common installation drive for both** field, enter the drive on which to install the software, then click **Next** to proceed with the installation process.

   If the version number of prerequisite software is earlier than the required version, the required version is installed automatically. When the installation of the prerequisite software is complete, it automatically returns to the Tivoli OMEGAMON XE for Messaging InstallShield Wizard.

6. License agreement information is displayed. If you accept the terms of the license agreement, click **Accept** to continue, otherwise click **Decline** to stop the installation process. You muse accept the terms of the license agreement to install Tivoli OMEGAMON XE for Messaging.

7. The Select Features window is displayed. Select the features that you want to install from the list provided by selecting the check box next to the name of the features. To view more detailed information about a particular feature, click the name of the feature. Information about the feature is displayed in the Description panel next to the list of features. After selecting all the features that you want to install, click **Next** to continue.

   Remember: If you are updating an existing installation (you selected Modify on the Welcome window), the Add or Remove Features window is displayed. All check boxes on this window reflect your choices during the initial installation. Clearing a check box has the effect of uninstalling the component. Clear a box only if you want to remove a component.

8. The Agent Deployment window is displayed. Select the agents that you want to configure for remote deployment, and click **Next** to continue. An agent can only be deployed on a remote host if it has been configured for remote deployment during installation.

9. The Start Copying Files window is displayed, summarizing the components that you select to install. Click **Next** to begin installing the listed components.

10. A message is displayed stating that you will not be able to cancel the installation or upgrade after this point. Click **Yes** to continue. Files will now be copied to your computer. This may take several minutes.

11. The Setup Type window is displayed. Select **Configure agents default connection to TEMS** and click **Next**.

12. On the Configuration Defaults for Connecting to a TEMS window:

   a. Select **Connection must pass through firewall** if the agent must cross a firewall to access the Tivoli Enterprise Monitoring Server.

   b. Select **Address Translation Used** if the firewall shielding the Tivoli Enterprise Monitoring Server uses address translation.

   c. Select one or more protocols to be used when connecting to the monitoring server, and click **Next**. You can select up to three protocols. The protocol

specified in the **Protocol 1** field will be used by default. If connection to the monitoring server using this protocol fails, the protocol specified in the **Protocol 2** field will be used, and if connection still fails, the protocol specified in the **Protocol 3** field is used. Available protocols are IP.PIPE, IP.SPIPE, SNA, and IP.UDP.

   d. Refer to the fields in Table 12 on page 44 to define the communications between the agents and the monitoring server.

13. The InstallShield Wizard Complete window is displayed. Select the **Display the README file** option if you want to review the readme file after installation is complete and click **Finish** to exit the installation wizard. Installation is now complete.

Silent installation

Use the silent installation feature to install Tivoli OMEGAMON XE for Messaging using installation parameters specified in a response file, instead of entering parameters interactively during the installation process. This feature is particularly useful if you want to install Tivoli OMEGAMON XE for Messaging on a large number of computers with similar configurations, as the administrator is required to specify installation parameters only once, in the response file, instead of entering them repeatedly for every operation system on which installation is performed.

To perform silent installation, you must first create a response file and then start the installation process.

Creating the response file: To create a response file specifying installation parameters for your environment, perform the following steps:

1. Copy the `silent.txt` file from the product CD to a temporary directory (for example, `c:\temp`).
2. Edit the `silent.txt` file as follows. Note that the following rules apply to this file:
   - Comment lines begin with a semicolon (;), which must be placed in the first column of the commented line.
   - Blank lines are ignored.
   - Parameter lines are PARAMETER=value. Do not use a space before the parameter; you can use a space before or after an equal sign (=).
   - Do not use any of the following characters in any parameter value:
     – Dollar sign ($)
     – Equals sign (=)
     – Pipe sign (|)

Modify the following parameters as appropriate for your environment:

   a. Uncomment the line containing the **License Agreement** parameter. By doing this you agree to the terms of the license agreement.

      Remember: You must agree to the license agreement and uncomment this parameter to be able to proceed with the installation procedure.

   b. Uncomment the **Install Directory** parameter, and specify the directory in which you want to install Tivoli OMEGAMON XE for Messaging. To simplify the management of Tivoli Monitoring products on Windows systems, install Tivoli Monitoring products to the same directory on each component in your environment. If you install to different directories on each component, you will not be able to use the remote features provided by several product configuration dialogs.

If you are installing Tivoli OMEGAMON XE for Messaging on a system where IBM Tivoli Monitoring is already installed, Tivoli OMEGAMON XE for Messaging will be installed to the installation directory of IBM Tivoli Monitoring, regardless of this parameter.

c. If you do not want the Tivoli OMEGAMON XE for Messaging program group to be given the default name specified by the **Install Folder** parameter, uncomment the parameter and enter a new name.

d. Uncomment the **EncryptionKey** parameter, and enter a key with which to encrypt your local passwords and user IDs. The encryption key must be 32 characters in length. If the key specified by this parameter is less than 32 characters, it will be padded with 9s.

e. In the **[FEATURES]** section, uncomment the parameters representing the features that you want to install. The names of features are displayed directly after the equals sign (=) of the parameter, with the component which the feature belongs to displayed in brackets. The component code is displayed before the equals sign.

> **Remember:** If you want to install one or more agents on this system, make sure that you uncomment the following line in addition to the lines that represent the agents that you want to install:
>
> ```
> KGLWICMA=Tivoli Enterprise Monitoring Agent Framework
> ```

For example, uncomment the following lines if you want to install the WebSphere MQ Monitoring agent:

```
KGLWICMA=Tivoli Enterprise Monitoring Agent Framework
KMQWICMA=WebSphere MQ Monitoring Agent
```

Uncomment the following line if you want to install the WebSphere MQ Monitoring agent application support on the Tivoli Enterprise Monitoring Server:

```
KMQWICMS=WebSphere MQ Monitoring Agent Support (TEMS)
```

Uncomment the following line if you want to install the WebSphere MQ Monitoring agent application support on the Tivoli Enterprise Portal Server:

```
KMQWICNS=WebSphere MQ Monitoring Agent Support (TEPS)
```

Uncomment the following line if you want to install the WebSphere MQ Monitoring agent application support on the Tivoli Enterprise Portal client:

```
KMQWIXEW=WebSphere MQ Monitoring Agent Support (TEP Workstation)
```

f. In the **[DEPLOY FEATURES]** section, uncomment the parameters representing the agents that you want to be configured for remote deployment later. For example, uncomment the following line if you want the WebSphere MQ Monitoring agent to be configured for remote deployment later:

```
KMQWICMA=WebSphere MQ Monitoring Agent
```

3. Save the file and close the editor.

> **Remember:** Do not use a long file name if you want to rename the response file. Make sure that the length of the response file name is no longer than eight characters and its file extension is no longer than three characters. A long file name results in a failed installation.

Installing Tivoli OMEGAMON XE for Messaging: To directly install Tivoli OMEGAMON XE for Messaging using a silent installation, perform the following steps:

1. Open a DOS command prompt window.
2. Navigate to the directory that contains the Tivoli OMEGAMON XE for Messaging installation files (where the `setup.exe` file is).
3. Run the following command, you must specify the parameters in the same order as listed below:

   `start /wait setup /z"/sfresponse_file_name" /s /f2"installation_log_file_name"`

   where:

   response_file_name
   > Specifies the full path of the response file containing the parameters of the installation (by default this file is named `silent.txt`). This parameter cannot be omitted.

   /s   Specifies that this is a silent install. This causes no responses to be displayed during installation on the installed target workstation.

   installation_log_file_name
   > The full path of the file to which log information is written during the installation process. This file is created during installation, and any existing file with the same name is overwritten. If this parameter is not specified, the `Setup.log` file in the same directory as the `setup.iss` file is used to contain log information.

   For example, if the response file is located in the `C:\temp\SILENT.TXT` directory and you want the InstallShield log to be written to the `C:\temp\silent_setup.log` file, enter the following command to start the silent installation:

   `start /wait setup /z"/sfC:\temp\SILENT.TXT" /s /f2"C:\temp\silent_setup.log"`

Configuring the agent default connection to Tivoli Enterprise Monitoring Server:

1. Open Manage Tivoli Enterprise Monitoring Services by clicking Start > Programs > IBM Tivoli Monitoring > Manage Tivoli Monitoring Services.
2. Click Actions on the menu bar, and then click Set Defaults for All Agents.
3. On the Configuration Defaults for Connecting to a TEMS dialog:
   - If the agent must cross a firewall to access the Tivoli Enterprise Monitoring Server, select **Connection must pass through firewall**.
   - Identify the type of protocol that the agent uses to communicate with the monitoring server.
   - Refer to the fields in Table 12 on page 44 to define the communications between the agents and the monitoring server.

Installing Tivoli OMEGAMON XE for Messaging on UNIX and Linux systems

You have the following two options to install Tivoli OMEGAMON XE for Messaging on a UNIX or Linux system:
- "Installing from the command line"
- "Silent installation" on page 41

Installing from the command line

Instructions for installing Tivoli OMEGAMON XE for Messaging on a UNIX or Linux system computer are as follows:

Important: If you are upgrading a WebSphere MQ Configuration agent from version 6.0, 6.0.1, or 7.0, the existing configuration files, `mc.cfg` and `mc.ini` will be overwritten. If you want to keep your existing configuration files, create a backup before proceeding.

1. You can install IBM Tivoli Monitoring as the root user or a non-root user.

   Remember: If you do not install as the root user, you must change the file permissions of the agent files after you install any monitoring agents to ensure that the non-root user can run the agents successfully. For more information about how to change the file permissions of the agent files on UNIX or Linux systems, see *IBM Tivoli OMEGAMON XE for Messaging: Installation and Setup Guide, GI11-8074* of Tivoli OMEGAMON XE for Messaging 7.0 GA.

2. Run the following command to create a temporary directory on the computer on which you plan to install Tivoli OMEGAMON XE for Messaging. Make sure that the full path of the directory does not contain any spaces:

   `mkdir dir_name`

3. Mount the installation CD for UNIX or Linux system to the temporary directory you just created.

4. Run the following commands:

   ```
   cd dir_name
   ./install.sh
   ```

   where *dir_name* is the temporary directory you just created.

5. When prompted for the IBM Tivoli Monitoring home directory, press Enter to accept the default (`/opt/IBM/ITM`), or type the full path to the installation directory. If a message is displayed stating that the directory already exists and asking whether to use it, enter 1 (yes), and press Enter.

6. If a message containing a list of running processes and warning you that running products will be restarted during installation is displayed, to continue with installation enter 1 (yes), and press Enter.

7. The following prompt is displayed:

   ```
   Select one of the following:
    1) Install products to the local host.
    2) Install products to depot for remote deployment (requires TEMS).
    3) Install TEMS support for remote seeding.
    4) Exit install.
   Please enter a valid number:
   ```

   Type 1 (yes) to start the installation, and press Enter.

8. The first part of the software license agreement is displayed. Press Enter to view latter parts of the agreement. After you finish viewing the agreement, enter 1 to accept it or 2 to reject it, and press Enter. You must accept the agreement to continue with the installation process.

9. Enter a 32-character encryption key, or just press Enter to use the default value.

10. A numbered list of available operating systems is displayed. Type the number for the operating system that you are installing on, and press Enter. The default value is your current operating system.

    Remember:

    - If you are installing Tivoli OMEGAMON XE for Messaging on an EMT64 or AMD64 computer that is running SUSE Linux

Enterprise Server or Red Hat Enterprise Linux, select the `Linux AMD64 R2.6 (64 bit)` item in the list.

- If you are installing Tivoli OMEGAMON XE for Messaging on the AIX version 6.1 operating system, `AIX R5.3 (64 bit)` is the default value for the current operating system. You can accept the default value and proceed with the next step.

11. Type 1 (yes) to confirm that the selected operating system is correct, and press Enter.

12. A numbered list of available components is displayed. Type the number that corresponds to the component that you want to install on this computer. If you want to install more than one component, use a comma (,) or space to separate the numbers for each component, and press Enter.

13. A list of the components to install is displayed. Type 1 (yes) to confirm the selection and start the installation process. Installation begins.

14. After all of the components are installed, you are asked whether you want to install additional products or product support packages. Type 2 (no), and press Enter to exit the installation process.

Important: All the installed agents of Tivoli OMEGAMON XE for Messaging are 32-bit regardless of whether your operating system is 32-bit or 64-bit.

Installation is complete. The next step is to configure to connect an agent to the Tivoli Enterprise Monitoring Server.

Silent installation

Silent installation uses a response file to define what components you want to install. A sample response file is shipped with Tivoli OMEGAMON XE for Messaging. The file name is `silent_install.txt`.

Before editing any of the response files, note the following syntax rules:
- Comment lines begin with a pound sign (#).
- Blank lines are ignored.
- Parameter lines are PARAMETER=value. Do not use a space before the parameter; you can use a space before or after an equal sign (=).
- Do not use any of the following characters in any parameter value:
  - Dollar sign ($)
  - Equal sign (=)
  - Pipe sign (|)

Installing agents with a response file: The `silent_install.txt` file defines the installation parameters of Tivoli OMEGAMON XE for Messaging.

Important: If you are upgrading a WebSphere MQ Configuration agent from version 6.0, 6.0.1, or 7.0, the existing configuration files, `mc.cfg` and `mc.ini`, will be overwritten. If you want to keep your existing configuration files, create a backup before proceeding.

Perform the following steps to run a silent installation:

1. You can install the IBM Tivoli Monitoring software as the root user or a non-root user.

    Remember: If you do not install as the root user, you must change the file permissions of the agent files after you install any monitoring agents to ensure that the non-root user can run the agents

successfully. For more information about how to change the file permissions of the agent files on UNIX/Linux systems, see *IBM Tivoli OMEGAMON XE for Messaging: Installation and Setup Guide, GI11-8074* of Tivoli OMEGAMON XE for Messaging 7.0 GA.

2. Run the following command to create a temporary directory on the computer on which you plan to install Tivoli OMEGAMON XE for Messaging. Make sure that the full path of the directory does not contain any spaces:

   `mkdir` *dir_name*

3. Mount the installation CD for the UNIX or Linux system to the temporary directory you just created.

4. Run the following command:

   `cd` *dir_name*

   where *dir_name* is the directory where the installation CD is mounted.

5. Edit the `silent_install.txt` file to set the parameters described in Table 11 to appropriate values for your environment and save the changes:

Table 11. Parameters in a response file

Parameter	Description
INSTALL_ENCRYPTION_KEY	The data encryption key used to encrypt data sent between systems. This key must be the same as the key that is entered during the installation of IBM Tivoli Monitoring.
INSTALL_FOR_PLATFORM	Use this parameter to install different agents and application support for different components silently. Specify the **INSTALL_FOR_PLATFORM** parameter as follows, depending on which component you want to install application support for: • To install an agent: `INSTALL_FOR_PLATFORM=`*architecture code*, where *architecture code* is the code for the platform on which you are installing the agent. For example, aix513 or sol283. For a complete list of architecture codes, see Appendix C, "Architecture codes," on page 97. • To install application support for Tivoli Enterprise Monitoring Server: `INSTALL_FOR_PLATFORM=tms`. • To install application support for Tivoli Enterprise Portal Server: `INSTALL_FOR_PLATFORM=tps`. • To install application support for Tivoli Enterprise Portal desktop client: `INSTALL_FOR_PLATFORM=tpd` (This applies to Linux systems only because desktop client is not supported on UNIX systems.) • To install application support for Tivoli Enterprise Portal browser client: `INSTALL_FOR_PLATFORM=tpw`.

Table 11. Parameters in a response file (continued)

Parameter	Description

INSTALL_PRODUCT	The product code of the component that you want to install. You can specify **all** to install all the components of Tivoli OMEGAMON XE for Messaging. To install multiple components but not all, repeat this parameter for each component that you want to install. For example, if you want to install two components of which the product codes pc1 and pc2, use the following lines:
	
	`INSTALL_PRODUCT=pc1`
	`INSTALL_PRODUCT=pc2`

> **Remember:** The **INSTALL_FOR_PLATFORM** parameter can be specified only once in the response file. If it is specified multiple times in the response file, only the last value is valid.

6. Run the following command to start silent installation:

   `./install.sh -q -h ` *install_dir* ` -p ` *silent_response_file_path*

   where

   - *install_dir* is the Tivoli OMEGAMON XE for Messaging installation directory. The default location is `/opt/IBM/ITM`.
   - *silent_response_file_path* is the path of the response file that you use to specify the installation parameters.

     > **Remember:** You must specify the full path of this file, not just the file name.

Installation is complete. The next step is "Configuring to connect an agent to the Tivoli Enterprise Monitoring Server."

Configuring to connect an agent to the Tivoli Enterprise Monitoring Server

Use the following procedure to connect an agent to the Tivoli Enterprise Monitoring Server:

1. Go to the `install_dir`/bin directory, where *install_dir* is the directory where IBM Tivoli Monitoring is installed. The default is `/opt/IBM/ITM`.
2. Run the following command from the directory:

   `./itmcmd config -A ` *pc*

   where *pc* is a two-character product code. See Appendix A, "Product codes," on page 93. For example, if you are configuring WebSphere MQ Monitoring agent, use the following command:

   `./itmcmd config -A mq`

3. Press Enter when you are asked if the agent connects to a Tivoli Enterprise Monitoring Server.
4. Type the name of the host system on which the monitoring server that you want the agent to connect to is installed, and press Enter.
5. Type the protocol that you want to use to communicate with the monitoring server. You have four choices: IP, SNA, IP.PIPE, or IP.SPIPE, and press Enter.

6. If you want to set up a backup protocol, enter that protocol and press Enter. If you do not want to use a backup protocol, press Enter without specifying a protocol.

7. Depending on the type of protocol you specified, provide the following information when prompted:

Table 12. Communication protocol settings

Field	Description
IP	
Port number	The listening port number of the Tivoli Enterprise Monitoring Server. The default value is 1918.
IP.PIPE settings	
Port number	The listening port of the Tivoli Enterprise Monitoring Server. The default value is 1918.
KDC Partition	The KDC partition. The default value is null.
IP.SPIPE settings	
Port number	The listening port of the Tivoli Enterprise Monitoring Server. The default value is 3660.
SNA settings	
Network Name	The SNA network identifier of your location.
LU Name	The LU name of the Tivoli Enterprise Monitoring Server. This LU name corresponds to the Local LU Alias in your SNA communications software.
Log Mode	The name of the LU6.2 LOGMODE. The default value is CANCTDCS.

8. When asked if you want to configure a secondary monitoring server, type 2 (no), and press Enter.

9. When asked to enter an optional primary network name, type 0, and press Enter.

10. Restart the agent by running the following command from the `install_dir`/bin directory:

    `./itmcmd agent start pc`

    where *pc* is a two-character product code, and *install_dir* is the Tivoli OMEGAMON XE for Messaging installation directory.

Tivoli Enterprise Monitoring Server connection configuration is now complete.

Installing Tivoli OMEGAMON XE for Messaging on i5/OS systems

Of the Tivoli OMEGAMON XE for Messaging components, only WebSphere MQ Monitoring and WebSphere MQ Configuration are currently supported on i5/OS systems. This sections contains instructions for installing these two agents.

Before you begin, verify that your site is in compliance with the hardware and software prerequisites listed in "i5/OS system prerequisites" on page 16.

Two procedures are provided:

- "Installing from a PC CD-ROM"
- "Installing from an i5/OS system CD-ROM (command line)" on page 47

Use one of the two procedures, whichever is most convenient for you or your site.

Remember:

- Be sure that QMQMADM authority is given to the WebSphere MQ Monitoring user profile as the default setting.
- The same user ID must be used when you install Tivoli OMEGAMON XE for Messaging components as that you used to install WebSphere MQ. Otherwise, there might be potential errors existing. For example, the attribute file can not be read.

Installing from a PC CD-ROM

1. Access an i5/OS system command console.
2. Check that the QALWOBJRST system value is set to *ALL.
   a. Enter this command:

      ```
      WRKSYSVAL QALWOBJRST
      ```

   b. 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 _____

3. Press Enter to continue.
4. If QALWOBJRST is set to *ALL, continue with the next step; otherwise, do the following procedure:
   a. On the Work with System Values dialog, enter 2 to change the values.
   b. On the Change System Value dialog, change the existing values to *ALL.
   c. Press Enter to save your change.
   d. Press F3 to return.
5. At the i5/OS system command line, create an i5/OS system library for installation:

   ```
   CRTLIB KMQ_TMPLIB TEXT('MQ INSTALL LIBRARY')
   ```

6. Create two save file in the KMQ_TMPLIB library:

   ```
   CRTSAVF KMQ_TMPLIB/MQ700CMA TEXT('KMQ INSTALL PRODUCT')
   CRTSAVF KMQ_TMPLIB/MC700CMA TEXT('KMC INSTALL PRODUCT')
   ```

7. Insert the product installation 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 i5/OS system.

9. When prompted, enter your i5/OS system user ID and password.
10. Change the FTP type to binary:

    ```
    BINARY
    ```

11. Transfer the software for WebSphere MQ Monitoring and WebSphere MQ Configuration agents from the CD-ROM to the i5/OS system:

    ```
    PUT e:\OS400\MQ700CMA.savf KMQ_TMPLIB/MQ700CMA
    PUT e:\OS400\MC700CMA.savf KMQ_TMPLIB/MC700CMA
    ```

    where *e* is your PC CD-ROM drive.

12. End your FTP session:

    ```
    QUIT
    ```

13. To install the WebSphere MQ Monitoring and WebSphere MQ Configuration agents, do one of the following procedure:
    - If you are installing Tivoli OMEGAMON XE for Messaging on a system that is English upper and lower case (language ID 2924), do one of the following procedure:
        a. If you want to install WebSphere MQ Monitoring, enter the following command and proceed to step 14 on page 46 :

           ```
           RSTLICPGM LICPGM(0KMQ450) DEV(*SAVF) SAVF(KMQ_TMPLIB/MQ700CMA)
           ```
        b. If you want to install WebSphere MQ Configuration, enter the following command and proceed to step 14 on page 46:

           ```
           RSTLICPGM LICPGM(0KMC450) DEV(*SAVF) SAVF(KMQ_TMPLIB/MC700CMA)
           ```
    - If you are installing on a non-language ID 2924 system, do one of the following procedure:
        a. If you want to install WebSphere MQ Monitoring, check for the existence of the KMQLNG work library:
            1) If the library exists, clear it with the following command:

               ```
               CLRLIB KMQLNG
               ```
            2) Enter the following commands:

               ```
               RSTLICPGM LICPGM(0KMQ450) DEV(*SAVF) RSTOBJ(*PGM) LNG(2924)
                  - SAVF(KMQ_TMPLIB/MQ700CMA)

               RSTLICPGM LICPGM(0KMQ450) DEV(*SAVF) RSTOBJ(*LNG) LNG(2924)
                  - SAVF(KMQ_TMPLIB/MQ700CMA) LNGLIB(KMQLNG)
               ```

               This step creates or re-creates a library named KMQLIB containing all the file transfer utilities components and definitions required to run the software for WebSphere MQ Monitoring.
        b. If you want to install WebSphere MQ Configuration, check for the existence of the KMCLNG work library:
            1) If the library exists, clear it with the following command:

               ```
               CLRLIB KMCLNG
               ```
            2) Enter the following commands:

               ```
               RSTLICPGM LICPGM(0KMC450) DEV(*SAVF) RSTOBJ(*PGM) LNG(2924)
                  - SAVF(KMQ_TMPLIB/MC700CMA)

               RSTLICPGM LICPGM(0KMC450) DEV(*SAVF) RSTOBJ(*LNG) LNG(2924)
                  - SAVF(KMQ_TMPLIB/MC700CMA) LNGLIB(KMCLNG)
               ```

               This step creates or re-creates a library named KMCLIB containing all the file transfer utilities components and definitions required to run the software for WebSphere MQ Configuration.
14. If you want to install another agent, leave the QALWOBJRST value set to *ALL until you finish; otherwise, change it back to the value(s) you recorded earlier.
15. If you are installing the agent on another i5/OS system, use FTP or another file transfer program to copy the save file to it.
16. Delete the installation library, which is no longer needed:

    ```
    DLTLIB KMQ_TMPLIB
    ```

    Installation of the WebSphere MQ Monitoring or WebSphere MQ Configuration is complete.
17. If you are installing the WebSphere MQ Monitoring agent, perform the following procedure:
    a. From an i5/OS system command line, enter the following command:

       ```
       QSH
       ```

b. Run the following command:

    ```
    mkdir /home/kmq
    ```

Installing from an i5/OS system CD-ROM (command line)

1. Access an i5/OS system command console.
2. Check that the QALWOBJRST system value is set to *ALL.
    a. Enter this command:

    ```
    WRKSYSVAL QALWOBJRST
    ```

    b. 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 _____

3. Press Enter to continue.
4. If QALWOBJRST is set to *ALL, continue with the next step; otherwise, do the following procedure:
    a. On the Work with System Values dialog, enter 2 to change the values.
    b. On the Change System Value dialog, change the existing values to *ALL.
    c. Press Enter to save your change.
    d. Press F3 to return.
5. Create an i5/OS system library for installation:

    ```
    CRTLIB KMQ_TMPLIB TEXT('MQ INSTALL LIBRARY')
    ```

6. Insert the product installation CD into the CD-ROM drive, and enter the following command:

    ```
    WRKLNK QOPT
    ```

    The Work with Object Links screen displays the qopt object link.

7. 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 _____

8. Continue to select 5 for each link level until the following path is displayed:

    ```
    /QOPT/volid/AS400
    ```

    where *volid* is the volume ID of the CD-ROM.

9. Look for the `MC700CMA.SAVF` and `MQ700CMA.SAVF` file.
10. Enter the following commands:

    ```
    CPYFRMSTMF FROMSTMF('/QOPT/volid/AS400/MC700CMA.SAVF')
     - TOMBR('/qsys.lib/kmq_TMPLib.lib/MC700CMA.file')

    CPYFRMSTMF FROMSTMF('/QOPT/volid/AS400/MQ700CMA.SAVF')
     - TOMBR('/qsys.lib/kmq_TMPLib.lib/MQ700CMA.file')
    ```

11. To install WebSphere MQ Monitoring and WebSphere MQ Configuration, do one of the following procedure:
    - If you are installing Tivoli OMEGAMON XE for Messaging on a system that is English upper and lower case (language ID 2924), do one of the following procedure:
        a. If you want to install WebSphere MQ Monitoring, enter the following command and proceed to step 14 on page 46:

        ```
        RSTLICPGM LICPGM(0KMQ450) DEV(*SAVF) SAVF(KMQ_TMPLIB/MQ700CMA)
        ```

        b. If you want to install WebSphere MQ Configuration, enter the following command and proceed to step 14 on page 46 :

        ```
        RSTLICPGM LICPGM(0KMC450) DEV(*SAVF) SAVF(KMQ_TMPLIB/MC700CMA)
        ```

- If you are installing on a non-language ID 2924 system, do one of the following procedures:

  a. If you want to install WebSphere MQ Monitoring, check for the existence of the KMQLNG work library.

     1) If the library exists, clear it with the following command:

        ```
        CLRLIB KMQLNG
        ```

     2) Enter the following commands:

        ```
        RSTLICPGM LICPGM(0KMQ450) DEV(*SAVF) RSTOBJ(*PGM) LNG(2924)
          - SAVF(KMQ_TMPLIB/MQ700CMA)

        RSTLICPGM LICPGM(0KMQ450) DEV(*SAVF) RSTOBJ(*LNG) LNG(2924)
          - SAVF(KMQ_TMPLIB/MQ700CMA) LNGLIB(KMQLNG)
        ```

        This step creates or re-creates a library named KMQLIB containing all the file transfer utilities components and definitions required to run the software for WebSphere MQ Monitoring.

  b. If you want to install WebSphere MQ Configuration, check for the existence of the KMCLNG work library.

     1) If the library exists, clear it with the following command:

        ```
        CLRLIB KMCLNG
        ```

     2) Enter the following commands:

        ```
        RSTLICPGM LICPGM(0KMC450) DEV(*SAVF) RSTOBJ(*PGM) LNG(2924)
          - SAVF(KMQ_TMPLIB/MC700CMA)

        RSTLICPGM LICPGM(0KMC450) DEV(*SAVF) RSTOBJ(*LNG) LNG(2924)
          - SAVF(KMQ_TMPLIB/MC700CMA) LNGLIB(KMCLNG)
        ```

        This step creates or re-creates a library named KMCLIB containing all the file transfer utilities components and definitions required to run the software for WebSphere MQ Configuration.

12. If you want to install another agent, leave the QALWOBJRST value set to *ALL until you finish; otherwise, change it back to the values you recorded earlier.

13. Delete the installation objects, which are no longer needed:

    a. Enter this command:

       ```
       DLTLIB KMQ_TMPLIB
       ```

    b. Press F3 to return to the command console.

    Installation of the software for WebSphere MQ Monitoring or WebSphere MQ Configuration is complete.

14. If you are installing the WebSphere MQ Monitoring agent, perform the following procedure:

    a. From an i5/OS system command console, enter the following command:

       ```
       QSH
       ```

    b. Run the following command:

       ```
       mkdir /home/kmq
       ```

Installing the language packs

By default, Tivoli OMEGAMON XE for Messaging is enabled for the English language. If you want to use it in another supported language, you must install the translated language pack on the computers where the Tivoli Enterprise Portal and Tivoli Enterprise Portal Server are installed. The language packs are available on the Tivoli OMEGAMON XE for Messaging Language Pack CD.

Tivoli OMEGAMON XE for Messaging provides language packs in the following languages:

- French
- German
- Italian
- Japanese
- Korean
- Portuguese (Brazilian)
- Simplified Chinese
- Spanish
- Traditional Chinese

Remember: Before you can install a language pack, you must install Tivoli OMEGAMON XE for Messaging in English.

Installing a language pack on Windows systems

To install a language pack, first make sure that you have already installed the product in English, then perform the following steps:

1. Double-click the `lpinstaller.exe` file in the language pack CD to launch the installation program.
2. Select the installer language that you prefer, and click OK.
3. Click Next on the Introduction panel.
4. Click Add/Update, and then click Next.
5. Select the folder where the multicultural support package (NLSPackage) files are located.

   Tip: The NLSPackage files are usually located in the same directory with the installer executable program.
6. Select the language support of the agent, and click Next.

   Tip: You can use the Ctrl key for multiple selection.
7. Select the language (or languages) for which you want to install, and click Next to examine the installation summary.
8. Click Next to start the installation of the language pack.
9. When the installation completes, click Finish to exit the installer.
10. Restart the Tivoli Enterprise Portal (if on the portal) or restart the Tivoli Enterprise Portal Server (if on the portal server).

Installing a language pack on UNIX or Linux systems

To install a language pack on UNIX or Linux systems, first make sure that you have already installed Tivoli OMEGAMON XE for Messaging in English, then perform the following steps:

1. Run the following command to create a temporary directory on the computer. Make sure that the full path of the directory does not contain any spaces:

   `mkdir dir_name`
2. Mount the language pack CD to the temporary directory you just created.
3. Run the following command to start the installation program:

   `cd dir_name`
   `lpinstaller.bin`

where *dir_name* is the directory you just created.

4. Select the installer language that you prefer, and click OK.
5. Click Next on the Introduction panel.
6. Click Add/Update, and then click Next.
7. Select the folder where the multicultural support package (NLSPackage) files are located.

   Tip: The NLSPackage files are usually located in the same directory with the installer executable.
8. Select the language support of the agent, and click Next.

   Tip: You can use the Ctrl key for multiple selection.
9. Select the language(s) for which you want to install, and click Next to examine the installation summary.
10. Click Next to start the installation of the language pack.
11. When the installation completes, click Finish to exit the installer.
12. Restart the Tivoli Enterprise Portal (if on the portal) or restart the Tivoli Enterprise Portal Server (if on the portal server).

Configuration note

For more information, see Chapter 10, "Configuring IBM Tivoli OMEGAMON XE for Messaging on Windows systems", Chapter 11, "Configuring IBM Tivoli OMEGAMON XE for Messaging on UNIX and Linux systems" and Chapter 12, "Configuring IBM Tivoli OMEGAMON XE for Messaging on i5/OS systems" in *IBM Tivoli OMEGAMON XE for Messaging: Installation and Setup Guide, GI11-8074* of Tivoli OMEGAMON XE for Messaging 7.0 GA.

Chapter 3. Upgrading to Tivoli OMEGAMON XE for Messaging 7.0 fix pack 2

Before you begin

This chapter explains how to upgrade or migrate to Tivoli OMEGAMON XE for Messaging 7.0 fix pack 2 from previous product versions. Upgrading refers to installing Tivoli OMEGAMON XE for Messaging 7.0 fix pack 2 directly in the same location as an existing version of the product. Migrating refers to installing Tivoli OMEGAMON XE for Messaging 7.0 fix pack 2 to a new environment and then importing the data from your old environment. This chapter includes separate sections about upgrading and migrating.

If you are upgrading some components and migrating others, follow the instructions in "Upgrading from Tivoli OMEGAMON XE for Messaging 6.0, 6.0.1, or 7.0" on page 54, depending on which version you are upgrading from, and refer to "Migration" on page 61 for those components that you are migrating instead of upgrading. Regardless of whether you are upgrading or migrating, you must first follow the instructions in "Preinstallation tasks" on page 53.

Tivoli OMEGAMON XE for Messaging 7.0 fix pack 2 supports a staged migrate procedure. This means that as you are migrating to Tivoli OMEGAMON XE for Messaging 7.0 fix pack 2, you can have both version 7.0 fix pack 2 monitoring agents and previous agent versions running in your environment simultaneously. For example, you might have Tivoli OMEGAMON XE for Messaging 7.0 fix pack 2 monitoring agents on one z/OS systems (or LPAR) and older versions of monitoring agents running on another system. You might even have Tivoli OMEGAMON XE for Messaging 7.0 fix pack 2 monitoring agents and older agent versions running on the same z/OS systems.

This document does not replace the product installation and configuration guides; instead, it provides a high level overview of the tasks required to successfully upgrade from earlier versions of Tivoli OMEGAMON XE for Messaging to version 7.0 fix pack 2. It includes upgrade requirements, instructions for performing a staged upgrade, and lists the steps that must be performed to complete a staged upgrade. In addition, references to other documentation that provide detailed instructions for performing each step in the upgrade process are also provided.

OMEGAMON XE for Messaging version history

The following list shows all the different versions of Tivoli OMEGAMON XE for Messaging, and the components they include.

- Tivoli OMEGAMON XE for Messaging, Version 7.0 fix pack 1. This is the GA version of Tivoli OMEGAMON XE for Messaging and includes the following components:
  - WebSphere MQ Monitoring agent 7.0 fix pack 1
  - WebSphere MQ Configuration agent 7.0 fix pack 1
  - WebSphere Message Broker Monitoring agent 7.0 fix pack 1
- Tivoli OMEGAMON XE for Messaging, Version 7.0. This is the GA version of Tivoli OMEGAMON XE for Messaging and includes the following components:
  - WebSphere MQ Monitoring agent 7.0

- WebSphere MQ Configuration agent 7.0
- WebSphere Message Broker Monitoring agent 7.0
- Tivoli OMEGAMON XE for Messaging, Version 6.0.1, which includes the following components:
  - WebSphere MQ Monitoring agent 6.0.1
  - WebSphere MQ Configuration agent 6.0.1
  - WebSphere Message Broker Monitoring agent 6.0.1
  - WebSphere InterChange Server Monitoring agent 6.0.1 (distributed systems only)
- Tivoli OMEGAMON XE for Messaging, Version 6.0, which includes the following components:
  - WebSphere MQ Monitoring agent 6.0
  - WebSphere MQ Configuration agent 6.0
  - WebSphere Message Broker Monitoring agent 6.0
  - WebSphere InterChange Server Monitoring agent 6.0 (distributed systems only)
- IBM Tivoli OMEGAMON XE for WebSphere Business Integration, Version 1.1, which includes the following components:
  - Tivoli OMEGAMON XE for WebSphere MQ Monitoring agent 3.7
  - Tivoli OMEGAMON XE for WebSphere MQ Configuration agent 3.7
  - Tivoli OMEGAMON XE for WebSphere Integration Brokers agent 1.3
  - Tivoli OMEGAMON XE for WebSphere InterChange Server agent 1.1 (distributed systems only)
- Tivoli OMEGAMON XE for WebSphere Business Integration, Version 1.0, which includes the following components:
  - Candle OMEGAMON XE for WebSphere MQ Monitoring agent 3.6
  - Candle OMEGAMON XE for WebSphere MQ Configuration agent 3.6
  - Candle OMEGAMON XE for WebSphere Integration Brokers agent 1.2
  - Candle OMEGAMON XE for WebSphere InterChange Server agent 1.0 (distributed systems only)

> **Important:** Tivoli OMEGAMON XE for WebSphere InterChange Server agent is no longer included in Tivoli OMEGAMON XE for Messaging. When upgrading existing agents, previously installed versions of the Tivoli OMEGAMON XE for Messaging: WebSphere InterChange Server Monitoring agent are not affected.

Tivoli Management Services

If you are upgrading from Tivoli OMEGAMON XE for Messaging 6.0, 6.0.1, or 7.0, you do not need to read this section. Go to section "Upgrade requirements" on page 53

Tivoli OMEGAMON XE for Messaging 7.0 fix pack 2 is based on the common infrastructure known as Tivoli Management Services. The Tivoli Management Services infrastructure, previously known as the OMEGAMON platform, comprises a set of components shared by monitoring agents in the IBM Tivoli Monitoring and IBM Tivoli OMEGAMON XE product suites.

Tivoli Management Services consists of Tivoli Enterprise Portal, Tivoli Enterprise Portal Server, Tivoli Enterprise Monitoring Server, and Tivoli Data Warehouse

components. The Tivoli Management Services components are included on your Tivoli OMEGAMON XE for Messaging 7.0 fix pack 2 installation CDs. Different versions of these components have been distributed under different brand names as shown in the following table, which lists the names of past and current versions of each component and other terminology that has changed. Use it to identify what products each component in your system must be upgraded to.

Table 13. Previous and current Tivoli OMEGAMON XE terminology

Previous Candle names	Current Tivoli names
Candle Management Server (CMS)	Tivoli Enterprise Monitoring Server
CandleNet Portal (CNP)	Tivoli Enterprise Portal
CandleNet Portal Server (CNPS)	Tivoli Enterprise Portal Server
Intelligent Remote Agent (IRA)	Tivoli Enterprise Monitoring Agent
Manage Candle Services	Manage Tivoli Monitoring Services
CT/Engine	IBM Tivoli Monitoring Server : Engine
Agent	Tivoli Enterprise Monitoring Agent
Seeding (CMS)	Adding application support
Candle Data Warehouse	Tivoli Data Warehouse
OMEGAMON Platform	Tivoli Management Services

Upgrade requirements

You must upgrade if any are installed the hub Tivoli Enterprise Monitoring Server (formerly Candle Management Server), Tivoli Enterprise Portal Server (formally CandleNet Portal Server), and Tivoli Enterprise Portal desktop clients (formerly CandleNet Portal), to IBM Tivoli Monitoring 6.2 fix pack 1 or later, before you upgrade the monitoring agents. You must also upgrade all remote monitoring servers that Tivoli OMEGAMON XE for Messaging 7.0 fix pack 2 monitoring agents connect to.

For a detailed list of software and hardware requirements for installing Tivoli OMEGAMON XE for Messaging 7.0 fix pack 2, see "Hardware and software prerequisites" on page 9 for distributed systems and *Program Directory for IBM Tivoli OMEGAMON XE for Messaging on z/OS systems* for z/OS systems.

Preinstallation tasks

Before proceeding with the installation process, you must do the following procedures.

If you are migrating instead of upgrading, do not delete your existing environment until the migration process has been completed and you are sure that your new environment is functioning correctly.

1. If you have components running on a z/OS system and you are performing a staged upgrade (upgrading different components over a period of time), prepare your z/OS systems environment using the System Modification Program/Extended (SMP/E) tool. For instructions, see "Preparing your z/OS system environment for upgrading" on page 70.
2. If you are upgrading WebSphere MQ Configuration, back up your configuration database using Tivoli Enterprise Portal. For instructions, see "Backing up the configuration database" on page 66.

> **Remember:** To back up the configuration database, both the Tivoli Enterprise Monitoring Server and Tivoli Enterprise Portal Server must be running.

3. If you have a previous version of WebSphere Message Broker Monitoring installed on a Windows system where you are planning to install the current version, stop all the brokers on that system. Otherwise, the CandleMonitor node plug-in module will not install correctly.

Upgrading from Tivoli OMEGAMON XE for Messaging 6.0, 6.0.1, or 7.0

This section contains instructions about how to upgrade from Tivoli OMEGAMON XE for Messaging 6.0, 6.0.1, or 7.0.

Upgrade roadmap

Figure 3 shows the procedure for upgrading from Tivoli OMEGAMON XE for Messaging 6.0, 6.0.1, or 7.0 to Tivoli OMEGAMON XE for Messaging 7.0 fix pack 2.
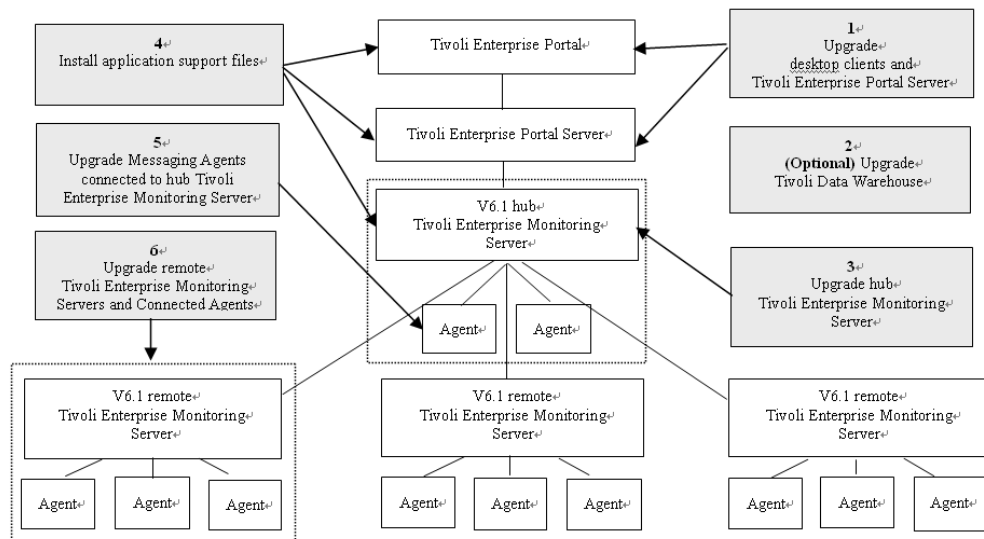

Figure 3. Upgrading Tivoli OMEGAMON XE for Messaging

Perform the following procedure to upgrade Tivoli OMEGAMON XE for Messaging 6.0, 6.0.1, or 7.0:

1. Stop all the components that you want to upgrade.

2. If you have not already done so, upgrade Tivoli Enterprise Portal and Tivoli Enterprise Portal Server to IBM Tivoli Monitoring 6.2 fix pack 1. For instructions, see "Upgrading Tivoli Enterprise Portal Server and Tivoli Enterprise Portal on distributed systems" on page 57.

3. *Optional*: If you are not already running the latest version, upgrade the Tivoli Data Warehouse.

   For details on installing and configuring the Tivoli Data Warehouse, see the *IBM Tivoli Monitoring Installation and Setup Guide, SC32-9407* and *IBM Tivoli Monitoring Administrator's Guide, SC32-9408*. These documents can be downloaded from the IBM Tivoli Monitoring Information Center, at http://publib.boulder.ibm.com/infocenter/tivihelp/v15r1/index.jsp?topic=/com.ibm.itm.doc/welcome.htm.

Important:

- If you are going to upgrade the WebSphere Messaging Broker Monitoring agent, delete the following table that exists in the Tivoli Data Warehouse database for the agent before proceeding. Related tables, which are generated by using summarization and pruning functions, should also be deleted:
  - Node Accounting (kqitasnd)

- If you are going to upgrade the WebSphere MQ Monitoring agent from version 6.0, delete the following tables that exist in the Tivoli Data Warehouse database for the agent before proceeding. Related tables, which are generated by using summarization and pruning functions, should also be deleted:
  - Application Connections (QMCONNAPP)
  - Connection Objects (QMCONNOBJ)
  - Queue Definitions (QMQUEUE)
  - Queue Handle Status (QMQ_HDL_ST)
  - Queue Long-Term History (QMQ_LH)

- If you are going to upgrade the WebSphere MQ Monitoring agent from version 6.0.1, delete the following tables that exist in the Tivoli Data Warehouse database for the agent before proceeding. Related tables, which are generated by using summarization and pruning functions, should also be deleted:
  - Application Connections (QMCONNAPP)
  - Channel Status (QMCHAN_ST)
  - Connection Objects (QMCONNOBJ)
  - Queue Definitions (QMQUEUE)
  - Queue Data (QMQ_DATA)

4. Upgrade the hub Tivoli Enterprise Monitoring Server.
   - If you are running the hub monitoring server on a distributed system, see "Upgrading Tivoli Enterprise Monitoring Server on distributed systems" on page 57.
   - If you are running the hub monitoring server on a z/OS system, see "Upgrading Tivoli Enterprise Monitoring Server and agents on z/OS systems" on page 59.

5. Install the Tivoli OMEGAMON XE for Messaging application support files. Install application support for Tivoli OMEGAMON XE for Messaging on all systems where the hub Tivoli Enterprise Monitoring Server, Tivoli Enterprise Portal Server, or Tivoli Enterprise Portal desktop clients are installed. For instructions, see Chapter 2, "Installing Tivoli OMEGAMON XE for Messaging 7.0 fix pack 2," on page 7 (including instructions for Tivoli Enterprise Monitoring Server running on z/OS systems).

   Remember:

   a. If multiple IBM Tivoli Monitoring components are installed on the same host system (for example, the Tivoli Enterprise Portal Server and Tivoli Enterprise Monitoring Server are installed on the same system), you must install application support for all the components that are running on that host system at the same time.

   b. If Tivoli OMEGAMON XE for Messaging agents have been installed on the host system on which a IBM Tivoli Monitoring component (Tivoli Enterprise Portal, Tivoli Enterprise Portal Server, or Tivoli Enterprise

Monitoring Server) is installed, you must use the installation CDs to upgrade the agent and to install application support at the same time.

6. Upgrade the monitoring agents that connect to the hub Tivoli Enterprise Monitoring Server. You do not need to upgrade all the agents connected to the hub monitoring server, but new functions are available only for those agents that you upgraded. Agents of different versions can connect to the same hub monitoring server simultaneously (on z/OS systems, this feature is only available if the Tivoli OMEGAMON XE for Messaging agents are not sharing the same CSIs). Perform the following procedure:

   • If you are upgrading agents running on distributed systems, see "Upgrading agents on Windows, UNIX, and Linux systems" on page 58 for instructions for upgrading on Windows, UNIX, or Linux systems, and "Upgrading agents on i5/OS systems" on page 58 system for instructions for upgrading agents running on i5/OS systems.

   • If you are upgrading agents running on z/OS systems, see "Upgrading Tivoli Enterprise Monitoring Server and agents on z/OS systems" on page 59 for instructions.

7. Upgrade any remote monitoring server and Tivoli OMEGAMON XE for Messaging agents that are connected to the monitoring server.

   Remote monitoring server to which Tivoli OMEGAMON XE for Messaging agents do not connect can be upgraded at a later time. If remote monitoring server to which Tivoli OMEGAMON XE for Messaging agents connect are not upgraded now, their attribute and catalog files must be overwritten with the equivalent files from the hub monitoring server.

   Tivoli OMEGAMON XE for Messaging agents can also be upgraded at a later time unless they are configured using the same CSI as a remote monitoring server that you are upgrading and to which they connect.

   For each remote monitoring server in your environment, perform one of the following procedures:

   • If you want to upgrade the remote monitoring server now, do the following steps:

      a. Upgrade the remote Tivoli Enterprise Monitoring Server.

         – If the remote monitoring server is running on a distributed system, for instructions, see "Upgrading Tivoli Enterprise Monitoring Server on distributed systems" on page 57.

         – If the remote monitoring server is running on a z/OS system, for instructions, see "Upgrading Tivoli Enterprise Monitoring Server and agents on z/OS systems" on page 59.

      b. Upgrade agents that are connected to the remote monitoring server, if required.

         – If the agents you are upgrading are running on a distributed system, see "Upgrading agents on Windows, UNIX, and Linux systems" on page 58.

         – If the agents you are upgrading are running on a z/OS system, see "Upgrading Tivoli Enterprise Monitoring Server and agents on z/OS systems" on page 59.

   • If you do not want to upgrade the remote monitoring server now, you must copy attribute and catalog files from the hub monitoring server to the remote monitoring server before the two monitoring servers can connect. For instructions, see "Upgrading attribute and catalog files at the remote Tivoli Enterprise Monitoring Server" on page 65.

8. Verify the installation. Check that the hub Tivoli Enterprise Monitoring Server, the Tivoli Enterprise Portal Server, and Tivoli Enterprise Portal desktop clients that are deployed in your environment are all running the same versions of fix packs and equivalent PTFs for both IBM Tivoli Monitoring and Tivoli OMEGAMON XE for Messaging.

9. If you want to use a language other than English, install the required language packs on Tivoli Enterprise Portal and Tivoli Enterprise Portal Server. For instructions, see "Installing the language packs" on page 48.

10. Restart all upgraded or newly installed components.

Upgrading Tivoli Enterprise Portal Server and Tivoli Enterprise Portal on distributed systems

The following instructions assume that components are located on different systems. If any or all of the Tivoli Enterprise Portal Server, Tivoli Enterprise Portal Desktop client and Tivoli Enterprise Monitoring Server components are on the same system, you must combine the steps to upgrade them, because the installation program updates all components on the given system. Perform the following procedures:

1. On the system where portal server is installed, delete the following files from the *candle_home*\CNPS\SQLLIB directory, where *candle_home* is the directory in which the portal server is installed:
   - kic_kcj.sql
   - kic_kcj_del.sql

2. If you did not do so, on each system where Tivoli Enterprise Portal Server or Tivoli Enterprise Portal is installed, upgrade to IBM Tivoli Monitoring 6.2 fix pack 1.

3. (*Optional*): Back up SQL query data by running the migrate-export command from the *ITM_HOME*>\cnps\ directory to generate the saveexport.sql file in the *ITM_HOME*\cnps\SQLLIB directory, which contains all the Tivoli Enterprise Portal Server data. *ITM_HOME* is the IBM Tivoli Monitoring installation directory.

Upgrading Tivoli Enterprise Monitoring Server on distributed systems

To upgrade either a remote or hub Tivoli Enterprise Monitoring Server on distributed systems, perform the following steps:

1. Run the **tacmd removeBundles** command to remove remote deployment files from the previous release. There is no need to back up these files because they can be restored using the **tacmd addBundles** command. These files are not required for the monitoring server to run, but are necessary if you want to use remote deployment.

2. If you did not do so, upgrade to IBM Tivoli Monitoring 6.2 fix pack 1.

   See *IBM Tivoli Monitoring Installation and Setup Guide, SC32-9407* for further information about upgrading the Tivoli Enterprise Portal and Tivoli Enterprise Portal Server. This document can be downloaded from the IBM Tivoli Monitoring Information Center, at http://publib.boulder.ibm.com/infocenter/tivihelp/v15r1/index.jsp?.

   Important: If you are upgrading IBM Tivoli Monitoring on UNIX or Linux systems, when prompted to enter an installation directory, you must use the directory where the old version of IBM Tivoli

Monitoring is installed. When prompted to specify the monitoring server name, you must also use the same name as the previous monitoring server.

3. If you are running Tivoli Enterprise Monitoring Server on UNIX or Linux systems, reconfigure the Tivoli Enterprise Monitoring Server, and ensure that all settings are correct. Even if you do not change any settings, you must reconfigure, otherwise the monitoring server might fail to start.

4. If you are upgrading a remote monitoring server, delete `KCFFEPRB.KCFCCTII` from the KDS_RUN line in the `KBBENV` file to disable MQ Configuration support, which must only be enabled on the Hub Tivoli Enterprise Monitoring Server. The `KBBENV` file can be found in the following locations:

   - On Windows systems: `ITMHOME/cms/KBBENV`
   - On UNIX and Linux systems: `ITMHOME/tables/TEMS/KBBENV`

   ITMHOME is your IBM Tivoli Monitoring installation directory, and *TEMS* is the subdirectory to which the Tivoli Enterprise Monitoring Server is installed.

Upgrading agents on Windows, UNIX, and Linux systems

To upgrade Tivoli OMEGAMON XE for Messaging agents on distributed systems, install Tivoli OMEGAMON XE for Messaging 7.0 fix pack 2 agents. For instructions, see "Installing Tivoli OMEGAMON XE for Messaging" on page 35.

Important:

- If you are upgrading WebSphere MQ Configuration on UNIX or Linux systems, the existing `mc.cfg` and `mc.ini` configuration files are overwritten. If you want to keep your existing configuration files, create a backup before proceeding.
- If you do not upgrade the OS agents when upgrading to IBM Tivoli Monitoring 6.2 fix pack 1, or you are using 64-bit OS agents, you must also install the 32-bit Tivoli Enterprise Service User Interface included with IBM Tivoli Monitoring 6.2 fix pack 1. For more information, see *IBM Tivoli Monitoring Installation and Setup Guide, SC32-9407*.

Upgrading agents on i5/OS systems

To upgrade all Tivoli OMEGAMON XE for Messaging agents, perform the following procedure:

1. Back up the configuration files used by the components that you want to upgrade:

   - For WebSphere MQ Monitoring, back up the following files:
     - Connection information: `/QSYS.LIB/KMQTMP.LIB/kmspanum.KBBENV`
     - Queue manager information: `/QSYS.LIB/KMQLIB.LIB/MQnum.MQSHELL`

     num is a number such as 00001, 00002, depending on the number of agents installed.

     Important: These files are obsolete and cannot be used with Tivoli OMEGAMON XE for Messaging 7.0 fix pack 2 agents. However, you can use them for reference when configuring new versions of agents or if you want to restore the environment of the previous version.

   - For the WebSphere MQ Configuration agent, back up the following file:

     Connection Information: `/QSYS.LIB/KMCTMP.LIB/KMSPARM.KBBENV`

2. Delete old versions of agents if any are installed. For instructions, see Chapter 9 Installing IBM Tivoli OMEGAMON XE for Messaging on i5/OS systems: Preinstallation tasks in *IBM Tivoli OMEGAMON XE for Messaging: Installation and Setup Guide, GI11-8074* of Tivoli OMEGAMON XE for Messaging 7.0 GA.

3. Install Tivoli OMEGAMON XE for Messaging 7.0 fix pack 2 agents. For instructions, see "Installing Tivoli OMEGAMON XE for Messaging on i5/OS systems" on page 44.

4. Configure the newly installed agents. For instructions, see Chapter 12 Configuring IBM Tivoli OMEGAMON XE for Messaging on i5/OS systems in *IBM Tivoli OMEGAMON XE for Messaging: Installation and Setup Guide, GI11-8074* of Tivoli OMEGAMON XE for Messaging 7.0 GA.

   If you want to configure WebSphere MQ Configuration agents with the same parameters that are in your previous environment, you can replace the newly installed configuration files of agents with the files backed up in step 1 on page 58. However, old versions of WebSphere MQ Monitoring configuration files are not compatible with version 7.0 fix pack 2, and WebSphere MQ Monitoring agents must be configured manually, although you can use the files backed up in step 1 on page 58 as a reference during the configuration process.

Upgrading Tivoli Enterprise Monitoring Server and agents on z/OS systems

Upgrading a Tivoli Enterprise Monitoring Server does not mean that you must upgrade the agents at the same time, unless they are configured in the same RTE. The instructions for upgrading these components are combined because many steps can be performed for both at the same time if you are upgrading them together. Where a step is specific to upgrading a particular component, this is indicated in the step. Do not perform any steps that are not required for the component that you are upgrading.

To upgrade a Tivoli Enterprise Monitoring Server or Tivoli OMEGAMON XE for Messaging agents running on a z/OS system to Tivoli OMEGAMON XE for Messaging 7.0 fix pack 2, perform the following procedure:

1. If you are performing a staged upgrade, make sure that you have cloned the existing SMP/E and Installation and Configuration Assistance Tool environment as described in "Preparing your z/OS system environment for upgrading" on page 70.

2. Review the current Preventative Service Planning (PSP) upgrade information for IBM Tivoli Monitoring and Tivoli OMEGAMON XE for Messaging. You can review the current PSP information at http://www14.software.ibm.com/webapp/set2/psp/srchBroker. In the Enter search terms field, enter your PSP upgrade name, as documented in *Program Directory for IBM Tivoli Monitoring* and *Program Directory for IBM Tivoli OMEGAMON XE for Messaging on z/OS*.

3. If you have already upgraded the IBM Tivoli Management Services components in the CSI to IBM Tivoli Monitoring 6.2 (HKCI310, HKDS620 and HKLV620) or later, remove these FMIDs from the following SMP/E jobs:

   - KQIJ0REC: Perform SMP/E RECEIVE
   - KQIJ0APP: Perform SMP/E APPLY
   - KQIJ0ACC: Perform SMP/E ACCEPT

   For further information about performing SMP/E procedures, see *Program Directory for IBM Tivoli OMEGAMON XE for Messaging on z/OS*.

4. Install the maintenance (PTFs) for Tivoli OMEGAMON XE for Messaging 7.0 fix pack 2 and IBM Tivoli Monitoring.

For a complete list of available maintenance levels for Tivoli OMEGAMON XE for Messaging 7.0 fix pack 2 and IBM Tivoli Monitoring, see "Tivoli OMEGAMON XE for Messaging maintenance (z/OS systems only)" on page 73.

5. Set up the Configuration Tool. For instructions, see Setting up your configuration environment in Chapter 4 Configuring your product in *IBM Tivoli Monitoring: Configuring IBM Tivoli Enterprise Monitoring Server on z/OS systems, SC32–9463*.

6. Start the Configuration Tool and perform the B (Build) action on the RTE where the Tivoli Enterprise Monitoring Server, Tivoli OMEGAMON XE for Messaging agents, or both that you are upgrading are configured. This action generates a batch job that allocates the runtime libraries. Review and submit the generated job.

7. If no agents are configured in the RTE built in step 6, you must reregister the Tivoli OMEGAMON XE for Messaging agents with the monitoring server. Follow the procedure in "Registering agents with the Tivoli Enterprise Monitoring Server on z/OS systems" on page 72 and proceed to step 9.

8. If the RTE contains previous versions of Tivoli OMEGAMON XE for Messaging agents, reconfigure all agents now. Follow the procedures in *IBM Tivoli OMEGAMON XE for Messaging on z/OS: Configuration Guide, SC23-7951* for z/OS systems.

   Remember:
   a. Before configuring the persistent datastore for WebSphere MQ Monitoring and WebSphere Message Broker Monitoring agents, you must delete the following old PDS files:
      - WebSphere MQ Monitoring: `&rhilev.&rtename.RKMQPDS`*n*
      - WebSphere Message Broker Monitoring: `&rhilev.&rtename.RKQIPDS`*n*

      The `&rhilev.&rtename` variable is the runtime high-level qualifier, and *n* is the number of PDS files that were previously allocated in this RTE.

   b. After upgrading from Tivoli OMEGAMON XE for Messaging V6.0, the historical data collection is disabled by default in Tivoli OMEGAMON XE for Messaging 6.0.1 and later versions. If you want to use the historical data collection, you must enable it by specifying Y for the Historical Data field in the Specify Configuration Parameters panel.

      For more information about specifying parameters in ICAT, see *IBM Tivoli OMEGAMON XE for Messaging on z/OS: Configuration Guide, SC23-7951*.

9. Perform the L (Load) operation on the RTE. This action generates a batch job that loads the runtime environment libraries from the SMP/E target libraries. Review and submit the generated job.

   Remember: If you are sharing runtime environments, both the master runtime environment and the sharing runtime environment must be loaded.

10. If you are upgrading a hub monitoring server and you want to keep your existing configuration data, restore the old WebSphere MQ configuration database. For instructions, see "Restoring the configuration database" on page 67.

11. You might need to update the started task procedures for the Tivoli Enterprise Monitoring Server and the agents that you are upgrading in your procedure library (PROCLIB). Review the new started task procedures created in the RKANSAMU library and those in the system procedure library to see if updating is necessary.

Migration

If you upgrade IBM Tivoli Monitoring components (Tivoli Enterprise Portal, Tivoli Enterprise Portal Server, and Tivoli Enterprise Monitoring Server) directly from your old environment, all user-defined objects, such as customized workspaces and situations, are available after you complete the upgrade. However, during the upgrade process, you might want to move some components to different host systems. This is known as migration.

For example, you might want to deploy the current Tivoli Enterprise Portal Server to a new host system, instead of upgrading the existing Tivoli Enterprise Portal Server in your old environment. To do this, you must install the existing Tivoli Enterprise Portal Server on the new host, and copy all customized workspaces and other information from the old host system. You can transfer this information using the migrate-export and migrate-import tools provided with IBM Tivoli Monitoring to first export the data from your old environment, and then import it into the new environment.

This section contains instructions for migrating old data to the new environment for each of the IBM Tivoli Monitoring components. These instructions include installing Tivoli OMEGAMON XE for Messaging in a new environment and additional tasks specific to migration.

Remember:
1. Do not delete your old environment until all data is successfully migrated and you are sure that your new environment is working correctly.
2. At some points you are instructed to perform tasks involving the Tivoli Enterprise Portal Server, Tivoli Enterprise Portal, or Tivoli Enterprise Monitoring Server.

Installing Tivoli Enterprise Portal Server and migrating data

With the exception of situations, policies and managed system lists, Tivoli Enterprise Portal Server customizations are stored at the portal server in the portal server database. Information stored in this database includes user IDs, Navigator views, custom workspaces, and custom queries.

Because different version of portal server use different data storage formats, data can only be transferred if the Tivoli Enterprise Portal Server in each environment is the same version. For example, data exported from Tivoli Enterprise Portal Server 6.1 cannot be imported into Tivoli Enterprise Portal Server 6.2. Data might also be incompatible between different IBM Tivoli Monitoring 6.2 fix packs.

Perform the following steps to install a new Tivoli Enterprise Portal Server, and migrate data from the portal server in your old environment:
1. Upgrade the old Tivoli Enterprise Portal Server to IBM Tivoli Monitoring 6.2 fix pack 1.
2. Install IBM Tivoli Monitoring 6.2 fix pack 1 on the host system on which you want to deploy the Tivoli Enterprise Portal Server in your new environment.
3. Install Tivoli OMEGAMON XE for Messaging 7.0 fix pack 2 on the host system on which you have deployed the Tivoli Enterprise Portal Server in your new environment. For instructions, see "Installing Tivoli OMEGAMON XE for Messaging" on page 35.
4. Follow the procedure documented in the Replicating the Tivoli Enterprise Portal Server database section in Chapter 13 of the *IBM Tivoli Monitoring*

Administrator's Guide, SC32-9408 to export customized workspaces and queries from the Tivoli Enterprise Portal Server in your old environment, and import them to the Tivoli Enterprise Portal Server in your new environment.

5. Copy the following files from your old Tivoli Enterprise Portal Server installation directory to the Tivoli Enterprise Portal Server *ITM HOME*\CNB directory, where *ITM HOME* is the directory in which IBM Tivoli Monitoring is installed:

   - OMEGAMON XE for Messaging 6.0

     ITM HOME\CNB\classes\candle\kmq\resources\config\mq_dd_060000000.xml

     ITM HOME\CNB\classes\candle\kqi\resources\config\qi_dd_060000000.xml

   - OMEGAMON XE for Messaging 6.0.1

     ITM HOME\CNB\classes\candle\kmq\resources\config\mq_dd_060100000.xml

     ITM HOME\CNB\classes\candle\kqi\resources\config\qi_dd_060100000.xml

   - OMEGAMON XE for Messaging 7.0

     itm_home\CNB\classes\candle\kmq\resources\config\mq_dd_070000000.xml

     itm_home\CNB\classes\candle\kqi\resources\config\qi_dd_070000000.xml

Installing the hub Tivoli Enterprise Monitoring Server and migrating data

Situations, policies, template and managed system lists that have been customized by the user are stored in the hub Tivoli Enterprise Monitoring Server database. The WebSphere Configuration database is also stored at the hub Tivoli Enterprise Monitoring Server.

Important: With the exception of the configuration database, user-customized objects, such as situations, policies, and templates, can only be migrated to another monitoring server running on the same platform.

Migration procedure on distributed systems

1. If you configured WebSphere MQ Configuration support on the hub Tivoli Enterprise Monitoring Server in your old environment, back up the configuration database as described in "Backing up the configuration database" on page 66.

2. Upgrade the hub Tivoli Enterprise Monitoring Server in your old environment to IBM Tivoli Monitoring 6.2 fix pack 1.

   For information about installing and configuring the IBM Tivoli Monitoring, see the *IBM Tivoli Monitoring Installation and Setup Guide, SC32-9407*. This documents can be downloaded from the IBM Tivoli Monitoring Information Center, at http://publib.boulder.ibm.com/infocenter/tivihelp/v15r1/index.jsp?topic=/com.ibm.itm.doc/welcome.htm.

3. Install IBM Tivoli Monitoring 6.2 fix pack 1 on the host system in your new environment where you want to deploy the hub monitoring. You must configure the hub Tivoli Enterprise Monitoring Server in the new environment with the same settings as the hub monitoring server in the old environment.

4. Install and configure Tivoli OMEGAMON XE for Messaging 7.0 fix pack 2.

   a. Install Tivoli OMEGAMON XE for Messaging 7.0 fix pack 2 on the system where you deployed the new hub monitoring server.

   b. Start the new hub monitoring server.

c. Add application support for OMEGAMON XE for Messaging to the hub monitoring server locally. For instructions, see "Installing application support at the Tivoli Enterprise Monitoring Server" on page 17.

5. Copy the EIB files from the system on which the old hub Tivoli Enterprise Monitoring Server is installed to the system on which the new hub Tivoli Enterprise Monitoring Server is installed, overwriting any existing files. The EIB files have .DB and .IDX file extensions, and are stored in the following locations:

   - Windows systems: *install_dir*\CMS
   - UNIX and Linux systems: *install_dir*/tables/*tems_name*

   where *install_dir* is the directory in which IBM Tivoli Monitoring is installed, and *tems_name* is the name of the monitoring server.

   Important: After you complete migration, you must redistribute migrated user-defined situations before use.

6. If you backed up the configuration database in step 1 on page 62, restore it to the new Tivoli Enterprise Monitoring Server. For instructions, see "Restoring the configuration database" on page 67.

7. Recycle the hub Tivoli Enterprise Monitoring Server.

Migration procedure on z/OS systems

1. If you configured WebSphere MQ Configuration support on the hub Tivoli Enterprise Monitoring Server in your old environment, back up the configuration database as described in "Backing up the configuration database" on page 66.

2. In a new CSI environment, follow the SMP/E procedures documented in *Program Directory for OMEGAMON XE for Messaging on z/OS systems* to install Tivoli OMEGAMON XE for Messaging on z/OS systems.

3. Upgrade the new CSI environment with any available maintenance for IBM Tivoli Monitoring and Tivoli OMEGAMON XE for Messaging 7.0 fix pack 2, as listed in "Tivoli OMEGAMON XE for Messaging maintenance (z/OS systems only)" on page 73.

4. Configure the hub Tivoli Enterprise Monitoring Server in a new RTE and register the Tivoli OMEGAMON XE for Messaging agents with it.

5. To migrate and restore user-customized objects, see the Step 8. (If desired) Migrate customized objects in Scenario A: Staged upgrade in a cloned environment in Chapter 4: Upgrading a monitoring server to the new release, of *Configuring Tivoli Enterprise Monitoring Server on z/OS systems, SC32–9463*.

6. If you backed up the configuration database in step 1, restore it to the new Tivoli Enterprise Monitoring Server. For instructions, see "Restoring the configuration database" on page 67.

7. Start the new hub Tivoli Enterprise Monitoring Server.

8. Add application support forTivoli OMEGAMON XE for Messaging to the hub monitoring server remotely using Manage Tivoli Enterprise Monitoring Services or the kdstsns utility on a distributed system. For instructions, see "Installing application support at the Tivoli Enterprise Monitoring Server" on page 17.

9. Recycle the hub Tivoli Enterprise Monitoring Server.

Migrating remote Tivoli Enterprise Monitoring Server, agents, and Tivoli Enterprise Portal desktop client

The remote Tivoli Enterprise Monitoring Server, Tivoli OMEGAMON XE for Messaging agents, and Tivoli Enterprise Portal desktop client can be installed in a

new environment with no need to import data from the old environment. Install IBM Tivoli Monitoring 6.2 fix pack 1, and then install Tivoli OMEGAMON XE for Messaging 7.0 fix pack 2.

Additional instructions

This section presents some additional instructions to help you upgrade Tivoli OMEGAMON XE for Messaging 7.0 fix pack 2.

Backup files

If you are upgrading your system, some files are backed up automatically when OMEGAMON XE for Messaging components are upgraded. The files can be viewed using a text editor and might be useful when you configure your newly installed environment. The files are stored in the `ITM_HOME`\backup*datetime* directory, where *ITM_HOME* is the directly in which IBM Tivoli Monitoring is installed, and *datetime* is a directory name that has the date and time that the backup is performed.

Backed up files include the `mq.cfg` file, the `kqi.xml` file, the `mq.cfg` file, the `kmqcma.ini` file, and the `kmqenv` file, which are backed up on the systems where the agents are installed, the `KMQWICMS.lvl` and `KMCWICMS.lvl` files at the Tivoli Enterprise Monitoring Server, and the `KFWCMA.INI` file at the Tivoli Enterprise Portal Server.

The mq.cfg and kqi.xml files

When you upgrade OMEGAMON XE for Messaging agents to Tivoli OMEGAMON XE for Messaging 7.0 fix pack 2, the `mq.cfg` and `kqi.xml` files used to configure the agents are not overwritten. The new files included with Tivoli OMEGAMON XE for Messaging 7.0 fix pack 2 are renamed as follows:

- the `mq.cfg` file is renamed `mqbkup.cfg`
- the `kqi.xml` file is renamed `kqibkup.xml`

These files are provided for reference purposes; it is not necessary to replace your existing configuration files. If you want to use options specified by the new parameters that are available in Tivoli OMEGAMON XE for Messaging 7.0 fix pack 2, you can add these as necessary to your existing files, thus preserving your original configuration parameters. If you do not specify new parameters, the agents use the pre-configured default settings.

Tivoli OMEGAMON XE for Messaging 6.0, 6.0.1 and 7.0 historical data files on UNIX and Linux systems

On UNIX and Linux systems, historical data collected by WebSphere MQ Monitoring and WebSphere Message Broker Messaging Version 6.0, 6.0.1 and 7.0 agents before upgrading to version 7.0 fix pack 2 is usually backed up during the upgrade process. Although the data contained within these files are not available in Tivoli Enterprise Portal workspaces after upgrade, the data can still be viewed using a text editor.

If the architecture codes of the operating system you are using are different between Tivoli OMEGAMON XE for Messaging 7.0 fix pack 2 and the version you are upgrading from, historical data is not backed up. In all other cases historical data is backed up. For a list of architecture codes, see Appendix C, "Architecture codes," on page 97. You can compare these codes with the architecture codes of the version that you are upgrading from to determine whether historical data is backed up.

Historical data files are stored at the agent or the Tivoli Enterprise Monitoring Server, depending on where historical data is collected in your environment. For more information about configuring where historical data is collected, see *IBM Tivoli OMEGAMON XE for Messaging: WebSphere MQ Monitoring User's Guide, SC23-7952*.

Historical data files are backed up to the following locations during the upgrade process:
- WebSphere MQ Monitoring: `ITM_HOME`/BACKUP/messaging/v`nnn`/`arch_code`/mq/hist
- WebSphere Message Broker Monitoring: `ITM_HOME`/BACKUP/messaging/v`nnn`/`arch_code`/qi/hist

where *ITM_HOME* is the directory in which IBM Tivoli Monitoring is installed, *nnn* is three digits of the version number, such as 600, 601 or 700, and *arch_code* is the architecture code of the operating system. For a list of architecture codes, see Appendix C, "Architecture codes," on page 97.

Upgrading attribute and catalog files at the remote Tivoli Enterprise Monitoring Server

If you do not want to upgrade the remote Tivoli Enterprise Monitoring Server at the same time as the hub Tivoli Enterprise Monitoring Server, CAT and ATR files must be copied from the upgraded hub monitoring server to the remote monitoring server. These files are stored in the following locations, where *itm_home* is the directory in which IBM Tivoli Monitoring is installed and *TEMS* is the sub directory where Tivoli Enterprise Monitoring Server is installed:
- Windows systems:
  - ATR files: `itm_home`/cms/ATTRLIB
  - CAT files: `itm_home`/cms/RKDSCATL
- UNIX and Linux systems:
  - ATR files: `itm_home`/tables/`TEMS`/ATTRLIB/
  - CAT files: `itm_home`/tables/`TEMS`/ RKDSCATL
- z/OS libraries:
  - ATR and CAT files: `RKANDATV` library

The file names on different systems are shown in Table 14.

Table 14. Tivoli OMEGAMON XE for Messaging ATR and CAT file names

	ATR File Names		CAT File Names	
Agent	**Distributed Systems**	**z/OS systems**	**Distributed Systems**	**z/OS systems**
WebSphere MQ Configuration	kcf.atr	kcfatr	kcf.cat	kcfcat
	kmc.atr	kmcatr	kmc.cat	kmccat
WebSphere MQ Monitoring	kmq.atr	kmqatr	kmq.cat	kmqcat
WebSphere Message Broker Monitoring	kqi.atr	kqiatr	kqi.cat	kqicat

Perform one of the following procedures, depending on the systems on which the hub and remote monitoring servers are running:

- If both the hub and remote monitoring servers are running on distributed systems, copy the appropriate files listed in Table 14 on page 65 from the hub monitoring server to the remote monitoring server.
- If both the hub and remote monitoring servers are running on a z/OS system, use FTP to copy the appropriate files listed in Table 14 on page 65 from the RKANDATV library on the hub monitoring server to the RKANDATV library on the remote monitoring server.
- If the hub monitoring server is running on a z/OS systems and the remote monitoring server is running on a distributed system, use FTP to copy the appropriate files listed in Table 14 on page 65 from the RKANDATV library of the hub monitoring server to the appropriate folder on the distributed system. Rename each files with the its equivalent file name on distributed systems, as shown in Table 14 on page 65. For example, kmqatr becomes kmq.atr.
- If the hub monitoring server is running on a distributed system and the remote monitoring server is running on a z/OS system, copy the appropriate files listed in Table 14 on page 65 to a temporary directory. Rename each files with the its equivalent file name on the z/OS system, as shown in Table 14 on page 65. For example, kmq.atr becomes kmqatr. Use FTP to copy all files from the temporary folder on the distributed system to the RKANDATV library of the hub monitoring server.

The configuration database

The section describes how to back up and restore the configuration database when upgrading to Tivoli OMEGAMON XE for Messaging 7.0 fix pack 2.

Backing up the configuration database

You perform a backup using a Tivoli Enterprise Portal client. The backup process does not interfere with the functioning of the configuration manager, nor does the Tivoli Enterprise Monitoring Server need to be disabled in order to run the backup process.

The backup begins only when there are no outstanding deferred database updates pending; the backup also waits until all database commits have completed. While the backup is running, it is possible to get records from the database as required by other transactions; however, any deferred database updates that are created while the backup is running remain queued until the backup completes; other update transactions continue to run.

The format of the backup file is platform independent; therefore, you can use the backup process to migrate the configuration data from one platform to another. If you use FTP, you must specify ASCII format. Also, if you transfer a backup file to z/OS systems, the LRECL of the receiving data must be defined as follows:

```
RECFM=FB,LRECL=440,BLKSIZE=<some multiple of 440>
```

There is only one procedure to back up the configuration database file regardless of the type of database (the product-provided Internal type or the DB2 Universal Database type) that your site uses for the configuration database.

To back up the configuration database to a file, do the following procedure:
1. Ensure that you are in update mode.

   The Configuration View is displayed.
2. In the Configuration View, click Backup configuration database.

   You are prompted to supply a file name.

3. Enter the name of the file, on the hub monitoring server, where you want the configuration database backed up. The format of the file name is dependant upon the operating system on which the monitoring server runs:

   - If the monitoring server is running on a UNIX or Linux system, this name identifies a file in the *$install_dir*/tables/*TEMS_Name* directory, where *install_dir* is the directory into which you installed this monitoring server and *TEMS_Name* is the name of your monitoring server. If the file does not exist, it is created; if it does exist, its current contents are overwritten.

   - If the monitoring server is running on Windows systems, this name identifies a file in the current monitoring server working directory (for example, `C:\IBM\ITM\CMS`). If the file does not exist, it is created; if it does exist, its current contents are overwritten.

   - If the monitoring server is running on z/OS systems, this name references a predefined sequential data set. Do *not* enclose the name in quotation marks. The dataset must be allocated manually. The DCB information required for this dataset is as follows:

     `RECFM=FB,LRECL=440,BLKSIZE=<some multiple of 440>`

   After you enter the name of the file, click OK.

4. Wait for the message that indicates that the configuration database was successfully backed up, and click OK.

Restoring the configuration database

Restoring the configuration database is performed at the hub Tivoli Enterprise Monitoring Server.

If you want to restore the contents of the configuration database from the backup file, use one of the restore utilities described in the following sections. Use the restore utility that is appropriate for the type of configuration database that is used by your hub monitoring server.

Restoring the product-provided internal configuration database: Use the following utilities to restored the configuration database, depending on which system it is running on:

- If the monitoring server is running on a UNIX or Linux system, use the KCFCRSTR utility located in the current monitoring server working directory (the default directory is /opt/IBM/ITM/*arch_code*/ms/bin/, where *arch_code* is the architecture code of the operating system. See Appendix C, "Architecture codes," on page 97 for a list of architecture codes).

- If the monitoring server is running on a Windows system, use the KCFCRSTR utility located in the current monitoring server working directory (the default directory is `C:\IBM\ITM\CMS`).

- If the monitoring server is running on a z/OS system, use the KCFARSM utility. For sample JCL to run the KCFARSM utility, see the member named KCFRCDBJ that is located in the &RHILEV..TKANSAM library.

To restore the product-provided internal type of configuration database from a backup file that you previously created, perform the following steps:

1. Stop the Tivoli Enterprise Monitoring Server if it is running.

2. If the monitoring server is running on a Windows, Linux, or UNIX systems, perform the following steps:

   a. Go to the directory where the KCFCRSTR utility is located.

      If the monitoring server is running on a UNIX or Linux system, by default the KCFCRSTR utility is located in the /opt/IBM/ITM/*arch_code*/ms/bin/

directory, where *arch_code* is the architecture code of the operating system. See Appendix C, "Architecture codes," on page 97 for a list of architecture codes. If the monitoring server is running on a Windows system, by default the KCFCRSTR utility is located in the `C:\IBM\ITM\CMS` directory.

   b. Run the following command:

      KCFCRSTR -i *input_file* -o *database_name*

      input_file is the name of the configuration database backup file and *database_name* is the full path of the configuration database file, for example:

      ```
      KCFCRSTR -i opt/IBM/ITM/tables/tems1/RKCFbackup.txt
               -o opt/IBM/ITM/tables/tems1/RKCFAPLD
      ```

      > **Important:** At the command prompt, you can enter KCFCRSTR with no operands to display usage information for this utility.

   If the Tivoli Enterprise Monitoring Server is running on a z/OS system, see the member named KCFRCDBJ that is located in the &RHILEV..TKANSAM library. Modify the sample JCL found in this member that is appropriate for your environment, then submit it to run the KCFARSM utility.

Restoring the DB2 Universal Database configuration database: Use the following utilities to restore the configuration database, depending on which system it is running on:

- If the monitoring server is running on a UNIX or Linux system, use the kcfcrst2 utility located in the current monitoring server working directory (the default directory is `/opt/IBM/ITM/`*arch_code*`/ms/bin/`, where *arch_code* is the architecture code of the operating system. See Appendix C, "Architecture codes," on page 97 for a list of architecture codes.)

- If the monitoring server is running on a Windows system, use the KCFCRST2 utility located in the current monitoring server working directory (for example, `C:\IBM\ITM\CMS`).

- If the monitoring server is running on a z/OS system, use the KCFCRST2 utility. For sample JCL to run the KCFCRST2 utility, see the sample member named KCFRSDB2 that is located in the &RHILEV..TKANSAM library.

To restore the DB2 UDB type of configuration database from a backup file that you previously created, perform the following steps:

Important: The current contents of the configuration database will be completely replaced by the contents of the backup file.

1. Stop the Tivoli Enterprise Monitoring Server if it is running.
2. Source the DB2 environment.
3. If the Tivoli Enterprise Monitoring Server is running on a UNIX or Linux system do the following steps:

   a. You must have permission to use the configuration database; if you are going to stop and then restart the monitoring server on a UNIX or Linux system, you must have appropriate permissions to successfully work with the configuration database. The monitoring server stops if the user starting the monitoring server does not have permissions to the configuration database schema (KCFT) and tables (KCFT.KCFATTRIBUTES, and KCFT.KCFOBJECT). A restored database has to be granted permissions for users or groups. The DB2 GRANT commands must be run to give users permission to work with the database. For a user named usr2, these commands are as follows:

```
GRANT CREATEIN, ALTERIN ON SCHEMA KCFT TO USER usr2
GRANT ALL ON KCFT.KCFATTRIBUTES TO USER usr2
GRANT ALL ON KCFT.KCFOBJECT TO USER usr2
```

These DB2 GRANT commands are different from the commands used to install and set up the DB2 UDB configuration database on a UNIX or Linux system.

b. Go to the current monitoring server working directory and run the following command:

```
kcfcrst2 -i input_file -d database_name -u userid -p password
```

- The *input_file* value is the full name and path of the configuration database backup file.
- The *database_name* value is the name of the DB2 configuration database into which the data in the file specified by the *input_file* value is to be restored.
- The *userid* value is the user ID that is used to start to Tivoli Enterprise Monitoring Server. It must have write access to the DB2 database.
- The *password* value is the password of the user ID that is used to administer the DB2 database.

Tip: At the command line, you can enter `kcfcrst2` with no operands to display usage information for this utility.

4. If the monitoring server is running on a Windows system, issue the following command at a command prompt when you are in the current monitoring server working directory (for example, C:\IBM\ITM\CMS):

```
kcfcrst2 -i input_file -d database_name -u userid -p password
```

- The *input_file* value is the full name and path of the configuration database backup file.
- The *database_name* value is the name of the DB2 configuration database into which the data in the file specified by the *input_file* value is to be restored.
- The *userid* value is the user ID that is used to start to Tivoli Enterprise Monitoring Server. It must have write access to the DB2 database.
- The *password* value is the password that is used to administer the DB2 database.

Tip: At the command prompt, you can enter `kcfcrst2` with no operands to display usage information for this utility.

For example, if your configuration database backup file is named C:\IBM\ITM\CMS\RKCFbackup, your DB2 configuration database is named rkcfaplt, your user ID is db2admin, and your password is db2, issue the following command.

```
kcfcrst2 -i c:\IBM\ITM\CMS\RKCFbackup -d rkcfaplt -u db2admin -p db2
```

5. If the Tivoli Enterprise Monitoring Server is running on a z/OS system, see the sample member named KCFRSDB2 that is located in the *&RHILEV*..TKANSAM library. Modify the sample JCL found in this member to suit your environment, then submit it to run the KCFCRST2 utility.

Making the CandleMonitor node available in WebSphere Message Broker Toolkit 7.0

If you are using WebSphere Message Broker Toolkit 7.0, do the following steps to make the CandleMonitor node available in the toolkit:

1. Find the CandleMonitor node file. The node file name depends on the operating system where the WebSphere Message Broker Monitoring agent is running:
   - Windows systems: `kqicm600.exe` (by default, it is located in the `C:\IBM\ITM\TMAITM6` directory)
   - Linux systems: `kqicm600.tar` (by default, it is located in the `/opt/IBM/ITM/`*arch*`/qi/bin` directory, where *arch* specifies the architecture code of the operating system. See Appendix C, "Architecture codes," on page 97 for a list of architecture codes)

2. Extract the CandleMonitor node file. Two subdirectories are included in the node file:
   - `com.candle.monitor_6.0.0` (contains all the necessary plugin support files)
   - `com.candle.monitor.nl1_6.0.0` (contains all the native language support files)

   Note: The version number in the subdirectory name, such as 6.0.0, indicates the latest version of OMEGAMON XE for Messaging in which changes are made to the plugin support files. It is not necessarily the same as the version of OMEGAMON XE for Messaging that is installed in your environment.

3. Import the two projects (com.candle.monitor_6.0.0 and com.candle.monitor.nl1_6.0.0) into WebSphere Message Broker Toolkit 7.0.

4. In the Package Explorer view, clean the two projects by selecting the project and clicking **Project > Clean Project**. Two subdirectories named com.candle.monitor and com.candle.monitor.nl1 are created in the workspace directory of the current toolkit.

5. Expand the com.candle.monitor project and double-click the `plugin.xml` manifest file.

6. In the **Dependencies** section, select the com.ibm.etools.mft.api plugin in the **Required Plug-ins** list, type `7.0.0` in the **Version to match** field, and save your changes.

7. Copy the two subdirectories (com.candle.monitor and com.candle.monitor.nl1) from the toolkit `workspaces` folder to the following folder depending on the operating system where the toolkit is installed:
   - Windows systems: *WMBT_installdir*`\plugins`
   - Linux systems: *WMBT_installdir*`/plugins`

   where *WMBT_installdir* is the installation directory of Message Broker Toolkit.

Preparing your z/OS system environment for upgrading

If you plan to perform a staged upgrade or migration, you must clone your common software inventory (CSI) and corresponding Installation and Configuration Assistance Tool INST* files before you begin your upgrade. Otherwise, your existing agents will not function correctly with the components that you upgraded. The libraries are as follows:

- &shilev.INSTDATA
- &shilev.INSTDATW
- &shilev.INSTJOBS
- &shilev.INSTLIB
- &shilev.INSTLIBW
- &shilev.INSTQLCK

- &shilev.INSTSTAT

where &shilev is the installation high-level qualifier

The SMP/E Modification Control Statements included with product FMIDs deletes previous versions of the components being upgraded. Cloning your CSI and Configuration Tool INST* files ensures that if you need to perform maintenance or modify the configuration of your existing components before they are upgraded, you can do so.

After cloning your Configuration Tool INST* files, you must start the Configuration Tool in the environment where the CSI name changed, unlock your SMP/E high level qualifiers, and point to the high-level qualifier of the modified CSI. This method provides you with two CSIs and two Configuration Tool environments. One represents the new Tivoli OMEGAMON XE for Messaging 7.0 fix pack 2 and the other represents the earlier release.

If you choose not to clone your CSI environment and the corresponding Configuration Tool INST* files, you cannot apply maintenance or modify configurations for older systems until they are upgraded. If you intend to stage the deployment of the new release, you can clone the SMP/E environment to keep your SMP/E environments intact for upgraded and non-upgraded RTEs.

Perform the following procedure to clone and update the cloned SMP/E CSI DDDEFs to point to your SMP/E data set names:

1. Run the following job, where *oHilev* is your old high level qualifier and *nHilev* is your new high level qualifier:

```
//COPY   EXEC PGM=ADRDSSU,REGION=0M
//SYSPRINT DD SYSOUT=*
//SYSIN DD *
 COPY ALLDATA(*) &endash;
 CATALOG &endash;
 DS(INCLUDE(oHilev.**)) &endash;
 OUTDYNAM(volser) - or STORCLAS(storage class) or nothing if ACS routines will
 take care of placement
 RENUNC(oHilev.**,nHilev.**)
/*
//ZEDIT  EXEC PGM=GIMSMP,REGION=6M,DYNAMNBR=120,PARM=&csqg;PROCESS=WAIT&csqg;
//SYSPRINT DD SYSOUT=*
//SMPOUT DD SYSOUT=*
//SMPRPT DD SYSOUT=*
//SMPLOGA DD SYSOUT=*
//SMPSNAP DD DUMMY
//SMPCSI DD DISP=SHR,DSN=nHilev.CSI
//SMPLOG DD SYSOUT=*
//SMPCNTL DD *
 SET BDY(GLOBAL).
  UCLIN.
   REP GLOBALZONE ZONEINDEX(
    (CANTZ1,nHilev.CSI,TARGET)
    (CANDZ1,nHilev.CSI,DLIB) ).
   REP DDDEF(SMPTLIB)
    VOLUME(volser) UNIT(3390). /* change volser if needed */
   REP OPTIONS(CANOPT1)
    DSPREFIX(nHilev).
  ENDUCL.
  ZONEEDIT DDDEF.
   CHANGE DATASET(oHilev.*,nHilev.*).
  ENDZONEEDIT.
 SET BDY(CANTZ1).
  ZONEEDIT DDDEF.
```

```
   CHANGE DATASET(oHilev.*,nHilev.*).
  ENDZONEEDIT.
 SET BDY(CANDZ1).
  ZONEEDIT DDDEF.
   CHANGE DATASET(oHilev.*,nHilev.*).
  ENDZONEEDIT.
/*
```

2. Start the Configuration Tool in the new environment by selecting options S, 1, and then entering Y when prompted.

3. Change all instances of the old High Level Qualifier to the new High Level Qualifier. You are now ready to apply maintenance to new and upgraded components.

Registering agents with the Tivoli Enterprise Monitoring Server on z/OS systems

Perform the following procedure to register Tivoli OMEGAMON XE for Messaging agents with a hub or remote monitoring server on z/OS systems.

Important: Before performing this procedure, Tivoli OMEGAMON XE for Messaging 7.0 fix pack 2 on z/OS systems must be installed in the SMP/E CSI environment where the z/OS Tivoli Enterprise Monitoring Server is installed.

1. Start the Configuration Tool in the CSI environment where the Tivoli Enterprise Monitoring Server is installed, and navigate to the Runtime Environments (RTE) panel.

2. On the PRODUCT SELECTION menu, select IBM Tivoli OMEGAMON XE for Messaging on z/OS systems.

3. Enter C (Configure) to select the runtime environment on which the Tivoli Enterprise Monitoring Server is located, and make one of the following three selections.

   - If you want the Tivoli Enterprise Monitoring Server to support the WebSphere MQ Configuration agent, select OMEGAMON XE for WebSphere MQ Configuration on the PRODUCT COMPONENT SELECTION.

      a. On the WEBSPHERE MQ CONFIGURATION menu, select Register with local Tivoli Enterprise Monitoring Server.

      b. When prompted in the SPECIFY CONFIGURATION PARAMETERS window, enter the appropriate values, and press Enter.

      c. Review the JCL and submit the job. Press F3 to return to the WEBSPHERE MQ CONFIGURATION menu.

      d. Select Configure Persistent Datastore (in Tivoli Enterprise Monitoring Server) and complete the fields in the displayed window. Press F3 to return to the WEBSPHERE MQ CONFIGURATION menu.

   - If you want the Tivoli Enterprise Monitoring Server to support the WebSphere MQ Monitoring agent, select OMEGAMON XE for WebSphere MQ Monitoring on the PRODUCT COMPONENT SELECTION menu.

      a. On the CONFIGURE WEBSPHERE MQ MONITORING menu, select Register with local Tivoli Enterprise Monitoring Server.

      b. Review the JCL and submit the job. Press F3 to return to the CONFIGURE WEBSPHERE MQ MONITORING menu.

      c. Press F3 to return to the PRODUCT COMPONENT SELECTION menu.

- If you want the Tivoli Enterprise Monitoring Server to support the WebSphere Message Broker Monitoring agent, select OMEGAMON XE for WebSphere Message Broker Monitoring on the PRODUCT COMPONENT SELECTION menu.
  a. On the CONFIGURE WEBSPHERE MESSAGE BROKER MONITORING menu, select Register with local Tivoli Enterprise Monitoring Server.
  b. Review the JCL and submit the job. Press F3 to return to the CONFIGURE WEBSPHERE MQ MONITORING menu.
  c. Press F3 to return to the PRODUCT COMPONENT SELECTION MENU.
4. Press F3 to return to the Runtime Environments (RTEs) window.
5. Enter L to load the target libraries to the runtime libraries for the runtime environment.
6. To exit the Configuration Tool, press F3 (End) repeatedly until you see the TSO Command Processor.

Important: If the primary monitoring server of the agent is a remote monitoring server and is connected to a hub monitoring server that is running on a z/OS system, you must also register the agent in the runtime environment where the hub z/OS monitoring server is configured.

Tivoli OMEGAMON XE for Messaging maintenance (z/OS systems only)

The following table lists available updates for Tivoli OMEGAMON XE for Messaging 7.0 fix pack 2 Maintenance running on z/OS systems.

Table 15. Table of Tivoli OMEGAMON XE for Messaging 7.0 fix pack 2 Maintenance (z/OS systems only)

FMID	COMPID	Maintenance level	Support Website
HKCF700	5608A3301	APAR OA31499 (PTF UA51914)	http://www-01.ibm.com/support/docview.wss?uid=swg1OA31499
HKMC700	5608A3300	APAR OA31500 (PTF UA51915)	http://www-01.ibm.com/support/docview.wss?uid=swg1OA31500
HKMQ700	5608A1100	APAR OA31918 (PTF UA52475)	http://www-01.ibm.com/support/docview.wss?uid=swg1OA31918
HKQI700	5698A87MB	APAR OA31502 (PTF UA51931)	http://www-01.ibm.com/support/docview.wss?uid=swg1OA31502

Chapter 4. Deploying monitoring across your environment from a central location

With Tivoli OMEGAMON XE for Messaging, you can deploy the following agents remotely from a central location, the Tivoli Enterprise Monitoring Server:

- WebSphere MQ Monitoring agent
- WebSphere MQ Configuration agent
- WebSphere Message Broker Monitoring agent

Before you can remotely deploy Tivoli OMEGAMON XE for Messaging agents, identify the operating system where you want to deploy the agents and ensure that the following requirements are filled in your monitoring environment:

- An OS agent is installed or deployed on the computer where you want to remotely deploy the agents. For example, if you want to deploy the agents on the computer where the Windows operating system is running, you must have the monitoring agent for Windows OS installed on that computer. For information about how to install the OS agent, see *IBM Tivoli Monitoring Installation and Setup Guide, SC32-9407*.
- The agent depot is populated on the Tivoli Enterprise Monitoring Server from which you deploy agents and maintenance packages across your environment. For example, if you want to deploy the WebSphere MQ Configuration agent, you must have the agent depot for WebSphere MQ Configuration populated on the Tivoli Enterprise Monitoring Server. For detailed information about how to populate the agent depot, see "Populating your agent depot."

Tip: If your monitoring environment includes multiple Tivoli Enterprise Monitoring Servers (a hub monitoring server and multiple remote monitoring servers), you can put your agent depot in a central location, such as a shared file system, and access the depot from all of the monitoring servers. For information about how to use one agent depot for all the Tivoli Enterprise Monitoring Servers in your monitoring environment, see "Sharing an agent depot across your environment" on page 79.

Populating your agent depot

The agent depot is an installation directory on the Tivoli Enterprise Monitoring Server from which you deploy agents and maintenance packages across your environment. Before you can deploy any agents from a Tivoli Enterprise Monitoring Server, you must first populate the agent depot with bundles. A bundle is the agent installation image and any prerequisites.

When you add a bundle to the agent depot, you need to add the bundle that supports the operating system to which you want to deploy the agent. Because Tivoli OMEGAMON XE for Messaging provides different CDs for each operating system type (for example, Windows, AIX, Solaris, HP-UX, and Linux systems), you need to add the bundle from the specific platform CD. For example, if you want to deploy a WebSphere MQ Monitoring agent to a computer running HP-UX system, add the HP-UX-specific agent bundle to the depot. If your depot directory is on a Windows system and you want to deploy a WebSphere MQ Monitoring agent to HP-UX systems, load the HP-UX bundle from the Tivoli OMEGAMON XE for Messaging installation CD for HP-UX systems.

You can have an agent depot on each monitoring server in your environment or share an agent depot, as described in "Sharing an agent depot across your environment" on page 79. If you choose to have an agent depot for each monitoring server, you can customize the agent depot based on the types of agents that you want to deploy and manage from that monitoring server. For example, if you have a monitoring server that is dedicated to monitoring the WebSphere MQ Monitoring agents in your environment, populate the agent depot with bundles for WebSphere MQ Monitoring agents.

Exception: Agent depots cannot be populated on the monitoring server that is running on z/OS or i5/OS systems.

There are two ways to populate the agent depot:
- If you are populating your agent depot with bundles for the same operating system as the Tivoli Enterprise Monitoring Server, you can use the installation image to populate your agent depot. For example, you can use installation image to add the bundle for a Windows system agent to a monitoring server running on the Windows system, but you cannot use the Linux system installation image to add the bundle for a Linux system agent to a monitoring server running on a Windows system. For instructions about how to use the installation image to populate the agent depot, see "Populating the agent depot from the installation image"
- If you want to add agent bundles for an operating system that is different from the one on which the monitoring server is running, use the **tacmd addBundles** command. For instructions about how to use the use the **tacmd addBundles** command to populate the agent depot, see "Populating the agent depot with the tacmd addBundles command" on page 78

By default, the agent depot is located in the `install_dir`\CMS\depot directory on Windows systems and `install_dir`/tables/`tems_name`/depot directory on UNIX and Linux systems, where *install_dir* is the installation directory for IBM Tivoli Monitoring, and *tems_name* is the name of the monitoring server. The **tacmd addBundles** command puts the agent bundle in that location unless another location is defined in the configuration file of monitoring server for the **DEPOTHOME** variable. You can also change this location before populating the agent depot, see "Changing the agent depot location" on page 79.

Populating the agent depot from the installation image

Use the following instructions to populate your agent depot from the installation image:
- "Windows systems: Populating the agent depot during installation" on page 77
- "UNIX and Linux systems: Populating the agent depot during installation" on page 77

You can use the installation image to populate your agent depot only when you are populating your agent depot with bundles for the same operating system as the monitoring server. For example, you can use the Windows installation image to add the bundle for a Windows agent to a monitoring server running on a Windows system, but you cannot use the Linux installation image to add the bundle for a Linux agent to a monitoring server running on a Windows system. If you want to add agent bundles for an operating system that is different from the one on which the monitoring server is running, use the **tacmd addBundles** command, as described in "Populating the agent depot with the tacmd addBundles command" on page 78.

Windows systems: Populating the agent depot during installation

Perform the following steps to populate the agent depot from the Windows installation image:

1. Double-click the `setup.exe` file in the `\Windows` subdirectory of the installation image. The InstallShield wizard window is displayed with a message welcoming you to the setup process.

2. Select Modify on the Welcome window, and click Next. The following message is displayed:

   ```
   The features you have installed on the system are selected in the following
    panel.
    Select a new item to install it.
    Clear an item to remove it.
   ```

3. Click OK.

4. Click Next on the Add or Remove Features window without making any changes. (Do not clear any selected items because this removes them from the computer.)

5. On the Agent Deployment window, select the agents whose bundles you want to add to the depot and click **Next**.

6. Review the installation summary and Click **Next** to begin the installation. A message is displayed stating that you will not be able to cancel the installation or upgrade after this point.

7. Click OK to continue. After the bundles of the agents are added to the agent depot, a configuration window called Setup Type window is displayed.

8. Clear all selected components. You have already configured all components on this computer and do not need to reconfigure any now. Click **Next**.

9. Click **Finish** to complete the installation.

UNIX and Linux systems: Populating the agent depot during installation

Perform the following steps to populate the agent depot from the UNIX or Linux installation image:

1. Run the following command to create a temporary directory on the computer. Make sure that the full path of the directory does not contain any spaces:

   ```
   mkdir dir_name
   ```

2. Mount the installation CD for UNIX or Linux systems to the temporary directory you just created.

3. Run the following commands:

   ```
   cd dir_name
   ./install.sh
   ```

   where *dir_name* is the temporary directory you just created.

4. When prompted for the IBM Tivoli Monitoring installation directory, press Enter to accept the default (/opt/IBM/ITM). If the monitoring server is installed in a different directory, type the full path to that directory, and press Enter.

5. If the directory you specified already exists, you are asked whether to use it. Type 1, and press Enter.

6. The following prompt is displayed:

   ```
   Select one of the following:
   1) Install products to the local host.
   2) Install products to depot for remote deployment (requires TEMS).
   3) Install TEMS support for remote seeding
   4) Exit install.
   ```

Type 2, and press Enter to start installation. The end user license agreement is displayed.

7. Press Enter to read through the agreement.

8. Type 1 to accept the agreement and press Enter.

9. Type the number that corresponds to the agent or agents whose bundles you want to add to the agent depot, and press Enter.

   Tip: If you want to add more than one agent, use a comma (,) to separate the numbers. To select all available agents, type `all`. You can select multiple agents with consecutive corresponding numbers by typing the first and last numbers for the agents, separated by a hyphen (-). For example, to add all of the agents between 8 and 12, type 8-12.

10. After specifying all the agents whose bundles you want to add to the agent depot, type E, and press Enter to exit.

Populating the agent depot with the tacmd addBundles command

To populate the agent depot using the **tacmd addBundles** command, run the following command:

```
tacmd addBundles [-i IMAGE_PATH]
                 [-t PRODUCT_CODE]
                 [-p OPERATING_SYSTEM]
                 [-v VERSION]
                 [-n]
                 [-f]
```

Remember: Before you issue the **tacmd addBundles** command, you must log into the monitoring server where you will populate the agent depot with the **tacmd login** command. The following command logs into the monitoring server of which the host name is L3D8296 with the user ID, *administrator*, the password, *mypassword*, and a login expiration time of 1440 minutes.

```
tacmd login -s L3D8296 -u administrator -p mypassword -t 1440
```

For further information about this command, including parameter descriptions, see *IBM Tivoli Monitoring Installation and Setup Guide, SC32-9407* and *IBM Tivoli Monitoring Command Reference, SC23–6045*.

The following example copies every agent bundle, including its prerequisites into the agent depot on a UNIX system from the installation media (CD image) located in the /mnt/cdrom/ directory:

```
tacmd addbundles -i /mnt/cdrom/unix
```

The following example copies the agent bundle for the WebSphere MQ Monitoring agent into the agent depot on a UNIX system from the installation media (cd image) located in the /mnt/cdrom/ directory:

```
tacmd addbundles -i /mnt/cdrom/unix -t mq
```

The following example copies the agent bundle for the WebSphere MQ Monitoring agent into the agent depot on a Windows system from the installation media (cd image) located in the D:\WINDOWS\Deploy directory:

```
tacmd addbundles -i D:\WINDOWS\Deploy -t mq
```

The following example copies the agent bundle for the WebSphere MQ Monitoring agent that runs on the AIX 5.1.3 system into the agent depot on a UNIX computer from the installation media (cd image) located in the /mnt/cdrom/ directory:

```
tacmd addbundles -i /mnt/cdrom/unix -t mq -p aix523
```

Changing the agent depot location

To change the location of the agent depot, perform the following steps before you run the **tacmd addBundles** command:

1. Open the KBBENV monitoring server configuration file located in the *install_dir*/CMS directory on Windows systems and the *install_dir*/tables/ *tems_name* directory on UNIX and Linux systems.
2. Locate the **DEPOTHOME** variable. If it does not exist, add it to the file.
3. Type the path to the directory that you want to use for the agent depot.
4. Save and close the file.
5. (UNIX and Linux systems only) Add the same variable and location to the kbbenv.ini file located in the *install_dir*/config directory.

   Remember: If you do not add the variable to the kbbenv.ini file, it is deleted from the KBBENV file the next time the monitoring server is reconfigured.

Sharing an agent depot across your environment

If your monitoring environment includes multiple Tivoli Enterprise Monitoring Servers (a hub monitoring server and remote monitoring servers), you can put your agent depot in a central location, such as a shared file system, and access the depot from all of the monitoring servers.

After populating your agent depot with either of the methods described in "Populating your agent depot" on page 75, perform the following steps to share the agent depot:

1. Open the KBBENV monitoring server configuration file located in the *install_dir*\CMS directory on Windows systems and the *install_dir*/tables/ *tems_name* directory on UNIX and Linux systems.
2. Locate the **DEPOTHOME** variable. If it does not exist, add it to the file.
3. Type the path to the directory that you want to use for the agent depot.
4. Save and close the file.
5. (UNIX and Linux systems only) Add the same variable and location to the kbbenv.ini file located in *install_dir*/config directory.

   Remember: If you do not add the variable to the kbbenv.ini file, it is deleted from the KBBENV file the next time the monitoring server is reconfigured.

If you are using a Windows monitoring server connecting to a depot on another Windows system, you must set the service ID for the Windows monitoring server to **Administrator**. Also, instead of specifying a mapped drive letter for the path to the depot directory, use the UNC path (such as \\server\share).

Perform the following steps to change the service ID:

1. From the Control Panel, double-click **Administrative Tools**.
2. Double-click **Services**.

3. Right-click **Tivoli Enterprise Monitoring Svcs**, and click **Properties**.
4. On the **Log On** tab, select **This Account**.
5. Type `Administrator` in the **This Account** field.
6. Type the password for the administrator in the **Password** field. Confirm the password by typing it again in the **Confirm password** field.
7. Click **Enable**.

Remember: If the Administrator user does not have Logon as a service right, you are prompted to add it.

Deploying agents

You can deploy agents through the Tivoli Enterprise Portal or from the command line. Before you attempt to deploy the agents of Tivoli OMEGAMON XE for Messaging on a computer, you must have already installed or deployed an OS agent on that computer, and the OS agent must be running when you deploy the agents on the computer.

Deploying through Tivoli Enterprise Portal

Perform the following steps to deploy an agent through the Tivoli Enterprise Portal:

Important: Before you attempt to deploy the agents of Tivoli OMEGAMON XE for Messaging on a computer, you must have already installed or deployed an OS agent on that computer, and the OS agent must be running when you deploy the agents on the computer.

1. Log into the Tivoli Enterprise Portal.
2. In the Navigator view, navigate to the computer where you want to deploy the agent.
3. Right-click the computer, and click **Add Managed System**. The Select a Monitoring Agent window is displayed. The agent, for which you have added bundles into the agent depot is listed in the window.

   Tip: You can use the Deploy Depot Package List workspace to get the information about the agent depot that has been populated on the system. To access this workspace, right-click the **Enterprise** node in the Navigator view, and then click **Workspace > Deploy Depot Package List**.
4. Select the agent that you want to deploy, and click **OK**.
5. Complete the configuration fields required for the agent. If you do not specify the parameter values, the default values are used when the agent is deployed.
6. Click **Finish**.
7. If the computer where you are deploying the agent already has a version of that agent installed, you can stop the deployment, add a new instance of the agent, if possible, or reconfigure the existing agent.
8. If the agent is being deployed to a Windows system, restart the system to which you are deploying it.

After the agent has been deployed, it connects to the Tivoli Enterprise Monitoring Server and then displayed in the Tivoli Enterprise Portal.

Remember: If you deployed the WebSphere Message Broker Monitoring agent on UNIX or Linux system and want to use the CandleMonitor node, you must create the required links manually. For information about how to

install the CandleMonitor node, see *IBM Tivoli OMEGAMON XE for Messaging: WebSphere Message Broker Monitoring User's Guide, SC23-7954*.

Deploying through the command line

To deploy Tivoli OMEGAMON XE for Messaging agents from the command line, run the following command:

```
tacmd addSystem -t pc
               [-n MANAGED-OS]
               [-p NAME=VALUE]
```

For further information about the **tacmd CLI** commands, including parameter descriptions, see *IBM Tivoli Monitoring Installation and Setup Guide, SC32-9407* and *IBM Tivoli Monitoring: Command Reference, SC23–6045*. For a list of product codes for agents, see Appendix A, "Product codes," on page 93.

The following example deploys the WebSphere MQ Monitoring agent (product code mq) to the monitoring system named AF66359F:

```
tacmd addsystem -t mq -n Primary:AF66359F:NT
```

Tips:

1. If you do not know the name of the managed system you want to configure, you can use the **tacmd listSystems** command to display a list of all the known managed systems. The following example shows the command used to list the WebSphere MQ Monitoring (product code mq) systems:

   ```
   tacmd listSystems -t mq
   ```

2. Each agent bundle has its own unique configuration properties that you need to provide in the **tacmd addSystem** command (using the **-p** option). You can view the configuration parameters by running the **tacmd describeSystemType** command. The following example shows the options that are available to use with the **tacmd addSystem** command for the WebSphere Message Broker Monitoring (product code qi) to be installed on a remote Windows system (platform WINNT):

   ```
   tacmd describeSystemType -t qi -p WINNT
   ```

Chapter 5. Uninstalling the agents of Tivoli OMEGAMON XE for Messaging

Follow the instructions in the following sections to uninstall the agents of Tivoli OMEGAMON XE for Messaging:

- "Uninstalling agents on Windows systems"
- "Uninstalling agents on UNIX or Linux systems" on page 85
- "Uninstalling agents on i5/OS systems" on page 86
- "Uninstalling remote deployment files (all systems)" on page 87

Uninstalling agents on Windows systems

If you want to uninstall a component from a Windows system, perform the following steps.

1. Click Start > Settings > Control Panel.
2. Click **Add or Remove Programs**.
3. Select IBM Tivoli OMEGAMON XE for Messaging.
4. Click Change/Remove.
5. The Welcome window is displayed to let you modify or remove the program. If you want to completely remove Tivoli OMEGAMON XE for Messaging and all of its features, select **Remove**. If you want to remove some of its features, select **Modify**. Click **Next**.
6. If you selected **Remove** in step 5, you will be asked if you want to completely remove the selected application and all of its features. Click **OK**. The uninstallation process will start and remove Tivoli OMEGAMON XE for Messaging and all of its features. You do not need to perform the following steps.
7. If you selected **Modify** in step 5, a message is displayed stating that on the following panel, items that you have already installed are pre-selected, selecting a new item installs that item, and deselecting an item uninstalls that item. Click **OK** to proceed.
8. On the Add or Remove Features window, click the plus sign (+) next to each main feature to expand the tree.
9. Clear the check boxes next to the names of components that you want to uninstall, and click Next.
10. On the Agent Deployment window, clear the check boxes next to the agents to remove the files for remote deployment.
11. On the Start Copying Files window, review the list of features or types of support that will be removed. Click Back if you want to go back and change any of the selections. When you are ready, click Next to begin uninstall.
12. A message is displayed stating that you will not be able to cancel the installation or upgrade after this point. Click **Yes** to continue.
13. On the Setup Type window, clear the check boxes and click **Next**.
14. On the InstallShield Wizard Complete window, click Finish.
15. The Maintenance Complete window is displayed stating that InstallShield Wizard has finished performing maintenance operations on Tivoli OMEGAMON XE for Messaging and reboot can be done at your earliest convenience. Click **Finish**.

Now the uninstallation is complete.

Remember: If you are using DB2 as the WebSphere MQ configuration database, then when you uninstall WebSphere MQ Configuration agent support at the Tivoli Enterprise Monitoring Server, the database is not removed. If you want to remove it, you must delete the RKCFAPLT database manually (see your DB2 documentation for information about deleting a database).

Silent uninstallation

For silent uninstallation, perform the following steps to remove Tivoli OMEGAMON XE for Messaging and all its components from a Windows system computer :

1. Copy the `silent.txt` file from the Tivoli OMEGAMON XE for Messaging CD to a temporary directory (for example, `C:\temp`).

2. Uncomment the following lines in the `silent.txt` file to uninstall:

   ```
   [ACTION TYPE]
   UNINSTALLALL=Yes

   [FEATURES]
   KGLWICMA=Tivoli Enterprise Monitoring Agent Framework

   KMCWICMS=WebSphere MQ Configuration Agent Support
   KMCWIXEW=WebSphere MQ Configuration Agent Support
   KMCWICNS=WebSphere MQ Configuration Agent Support
   KMCWICMA=WebSphere MQ Configuration Agent

   KMQWICMS=WebSphere MQ Monitoring Agent Support
   KMQWIXEW=WebSphere MQ Monitoring Agent Support
   KMQWICNS=WebSphere MQ Monitoring Agent Support
   KMQWICMA=WebSphere MQ Monitoring Agent

   KQIWICMS=WebSphere Message Broker Monitoring Agent Support
   KQIWIXEW=WebSphere Message Broker Monitoring Agent Support
   KQIWICNS=WebSphere Message Broker Monitoring Agent Support
   KQIWICMA=WebSphere Message Broker Monitoring Agent
   ```

   You can specify the products to uninstall in the [FEATURES] section.

   For example, uncomment the following lines if you want to uninstall the WebSphere MQ Monitoring agent:

   ```
   [ACTION TYPE]
   UNINSTALLALL=Yes
   [FEATURES]
   KMQWICMS=WebSphere MQ Monitoring Agent Support
   KMQWIXEW=WebSphere MQ Monitoring Agent Support
   KMQWICNS=WebSphere MQ Monitoring Agent Support
   KMQWICMA=WebSphere MQ Monitoring Agent
   ```

3. Open a DOS command prompt window.

4. Navigate to the directory that contains the Tivoli OMEGAMON XE for Messaging installation files (where the `setup.exe` file is).

5. Run the following command. You must specify the parameters in the same order as listed below:

   `start /wait setup /z"/sfresponse_file_name" /s /f2"uninstallation_log_file_name"`

   where

   response_file_name

   Specifies the full path of the response file (by default this file is named `silent.txt`). This parameter cannot be omitted.

/s   Specifies that this is a silent uninstall. This causes no responses to be displayed during uninstallation.

uninstallation_log_file_name
         The full path of the file to which log information is written during the uninstallation process. This file is created during uninstallation, and any existing file with the same name is overwritten. If this parameter is not specified, the `Setup.log` file in the same directory as `setup.iss` is used to write log information.

For example, if the response file is located in `C:\temp\SILENT.TXT` and you want the log information to be written to the `C:\temp\silent_setup.log` directory, enter the following command to start the silent uninstallation:

```
start /wait setup /z"/sfC:\temp\SILENT.TXT" /s /f2"C:\temp\silent_setup.log"
```

Now the silent uninstallation is complete and Tivoli OMEGAMON XE for Messaging and all its components are removed from the Windows system.

Uninstalling agents on UNIX or Linux systems

Perform the following steps to uninstall a component from a UNIX or Linux system computer:

1. If Tivoli Enterprise Monitoring Server, Tivoli Enterprise Portal Server, Tivoli Enterprise Portal desktop client or any monitoring agents are running on the computer where the component you want to uninstall is located, stop them.

2. From a command prompt, run the following command to change to the appropriate `/bin` directory:

   ```
   cd install_dir/bin
   ```

   where *install_dir* is the installation directory for Tivoli OMEGAMON XE for Messaging.

3. Run the following command:

   ```
   ./uninstall.sh
   ```

   A numbered list of product codes, architecture codes, version and release numbers, and product titles is displayed for all installed products.

4. For each component that you want to uninstall, perform the following procedure:

   a. Type the number that represents the agent or component that you want to uninstall, and press Enter.

   b. Type 1 (yes) when prompted to confirm your selection. The component is removed.

5. If you do not want to uninstall any more components, type 99 and press Enter to exit the uninstall program.

6. Navigate to the `install_dir/config` directory and delete the following files, depending on which agent you are uninstalling:

   - WebSphere MQ Monitoring: `*mq*.cfg` and `mq.ini`, where * represents any combination of alphanumeric characters.
   - WebSphere MQ Configuration: `*mc*.cfg` and `mc.ini`, where * represents any combination of alphanumeric characters.
   - WebSphere Message Broker Monitoring: `*kqi*.xml` and `kqi.ini`, where * represents any combination of alphanumeric characters.

When the uninstallation is complete, the results are written to uninstall-process.trc that is located in the *install_dir*/logs directory, where *install_dir* is the Tivoli OMEGAMON XE for Messaging installation directory.

Important: If any processes belonging to the component being uninstalled are still running during the uninstallation process, the uninstallation program ends without removing the component. However, it is possible to override this by using the -i option. In this case the component is removed even while its process is still running. You can then stop these processes manually.

Silent uninstallation

For silent uninstallation, run the following command to remove Tivoli OMEGAMON XE for Messaging and all its components from a UNIX or Linux system, where *product_code* is a two-letter code for the product to be uninstalled, and *arch_code* is the architecture code (such as aix523, sol286, hp11) for the product.

. /uninstall.sh [-f] [-i] [-h candle_directory] [*product_code arch_code*]

- The -f option forces delete, suppressing confirmation messages and prompts.
- The -i option ignores all running processes.

For example, the following command removes WebSphere MQ Configuration from the Linux system:

./uninstall.sh mc li6263

Uninstalling agents on i5/OS systems

The following section explains how to uninstall the components from i5/OS systems.

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

1. Press F3 to exit from the menu to release the object lock.
2. From an i5/OS system command console, enter

   DSPSFWRSC
3. Scroll down until you see the name of WebSphere MQ Monitoring or WebSphere MQ Configuration in the Description column.
4. Record the licensed program ID for the component, which is on the left under the column for Resource ID.

   Licensed program ID _____
5. Press Enter to continue.
6. From an i5/OS system command console, enter the following command:

   DLTLICPGM LICPGM(*licpgm*)

   where *licpgm* is the licensed program ID that you recorded in step 4.
7. *Optional*: If you are uninstalling the WebSphere MQ Monitoring agent, perform the following additional steps:

   a. From an i5/OS system command console, enter the following command:

      QSH
   b. In QSHELL environment, run the following command:

      rm -fr /home/kmq

Now the uninstallation is complete.

Uninstalling remote deployment files (all systems)

Files that are required for using remote deployment features are installed at the monitoring server when Tivoli OMEGAMON XE for Messaging application support is installed. To remove these files, run the **tacmd removeBundles** command . See appendix E of the *IBM Tivoli Monitoring Installation and Setup Guide, SC32-9407* for more information.

Chapter 6. Known limitation and troubleshooting information

This chapter describes problem determination and resolution information for the issues associated with Tivoli OMEGAMON XE for Messaging 7.0 fix pack 2.

Troubleshooting problems with WebSphere MQ Configuration agent

Cannot generate XML files with the Export extended option

Problem: When clicking **Export > Extended** to export information about the selected object, the XML files cannot be generated correctly.

Solution: This problem is caused by the JVM limitation of the Microsoft Internet Explore browser. Do not use the Internet Explore browser to export large data.

Limitations for WebSphere Message Broker Monitoring agent

The WebSphere Message Broker Monitoring agent that is included in this fix pack provides toleration support for WebSphere Message Broker 7.0. There are the following known limitations you should consider when you use the WebSphere Message Broker Monitoring agent to monitor WebSphere Message Broker 7.0.

No data is available in publish/subscribe workspaces

In WebSphere Message Broker Version 7.0, publish/subscribe is controlled entirely from WebSphere MQ. The following workspaces provided by the WebSphere Message Broker Monitoring agent contains no data if you are monitoring version 7.0 brokers:

- ACL Entries
- Multicast Group Statistics
- Multicast Summary Statistics
- Multicast Topic Statistics
- Neighbor Broker Information
- Neighbors
- Publish-Subscribe Statistics
- Retained Publications
- Subscriptions

You can use the information in the following workspaces to monitor version 7.0 brokers, but not all attributes in these workspaces are available:

- Broker Information
- Broker Status
- Broker Summary
- Execution Group Information
- Execution Group Topology
- Message Flow Information
- Message Flow Topology
- Message Processing Node Attributes
- Message Processing Node Information

- Message Processing Nodes with Queue

The CandleMonitor node is not installed automatically

If WebSphere Message Broker 7.0 exists in your environment, the CandleMonitor node might not be installed automatically. If you want to use the CandleMonitor node with WebSphere Message Broker 7.0, you must install the node manually by doing one of the following procedures depending on the operating system where the broker is running:

- To install the CandleMonitor node in a broker running on Windows systems, perform the following steps:
  1. Stop the broker if it is running.
  2. Copy the `kqipnode.lil` file from the `<install_dir>\TMAITM6` directory to the broker `bin` directory, where *<install_dir>* is the installation directory of OMEGAMON XE for Messaging.
  3. Restart the broker.
- To install the CandleMonitor node in a broker running on UNIX or Linux systems, perform the following steps:
  1. Navigate to the `/user/bin` directory.
  2. Run the following commands to create a set of soft links:

     ```
     ln -sf <install_dir>/<arch>/qi/bin/kqipnode.lil
             /<broker_dir>/lil/kqipnode.lil
     ln -sf <install_dir>/<arch>/qi/bin/kqipnode.cfg
             /<<broker_dir>/lil/kqipnode.cfg
     ln -sf <install_dir>/<arch>/qi/bin/<langcode>/CandleMonitorNode.cat
             /<broker_dir>/messages/<langcode>/CandleMonitorNode.cat
     ```

     where, *<install_dir>* is the installation directory of OMEGAMON XE for Messaging, *<langcode>* is the code for the installed language pack, *<broker_dir>* is the full path of the broker installation directory, and *<arch>* is the architecture code. See Appendix B, "Language codes," on page 95 for a list of language codes and Appendix C, "Architecture codes," on page 97 for a list of architecture codes.
  3. Create another link by running one of the following commands depending on which operating system you are using:
     - AIX:

       ```
       ln -sf <install_dir>/<arch>/qi/bin/<langcode>/CandleMonitorNode.cat
               /usr/lib/nls/msg/<langcode>/CandleMonitorNode.cat
       ```
     - Solaris:

       ```
       ln -sf <install_dir>/<arch>/qi/bin/<langcode>/CandleMonitorNode.cat
               /usr/lib/locale/C/LC_MESSAGES/CandleMonitorNode.cat
       ```
     - HP-11:

       ```
       ln -sf <install_dir>/<arch>/qi/bin/<langcode>/CandleMonitorNode.cat
               /usr/lib/nls/msg/C/CandleMonitorNode.cat
       ```
     - Intel-based Linux:

       ```
       ln -sf <install_dir>/<arch>/qi/bin/<langcode>/CandleMonitorNode.cat
               /usr/share/locale/C/LC_MESSAGES/CandleMonitorNode.cat
       ```
     - Linux for zSeries:

       ```
       ln -sf <install_dir>/<arch>/qi/bin/<langcode>/CandleMonitorNode.cat
               /usr/share/locale/C/LC_MESSAGES/CandleMonitorNode.cat
       ```
  4. To take full advantage of 64-bit architectures, if you are running the CandleMonitor node on a 64-bit AIX, Solaris, or HP-UX (PA-RISC, not Itanium®) system you must also create links to an additional 64-bit version of

the CandleMonitor node file. To do this, repeat step 2 on page 90, replacing the `kqipnode.lil` file name with `kqipnode64.lil`.

5. If you are running Linux on zSeries systems, define the required environment variable, as described in "Defining the required environment variable (Linux zSeries only)" in the GA version of *IBM Tivoli OMEGAMON XE for Messaging: Installation and Setup Guide, GI11-8074*.

6. Restart the broker.

Appendix A. Product codes

The following table lists product codes that identify the Tivoli OMEGAMON XE for Messaging agents. Use these codes when running commands.

Table 16. Product codes

Product	Code
WebSphere Message Broker Monitoring	qi
WebSphere MQ Configuration	mc
WebSphere MQ Monitoring	mq
Tivoli Enterprise Monitoring Server Configurator	cf

Appendix B. Language codes

Table 17 lists the languages supported by the Tivoli OMEGAMON XE for Messaging, and their corresponding language codes.

Table 17. Language codes for the supported languages

Language	code
English	en_US
German	de_DE
Spanish	es_ES
French	fr_FR
Italian	it_IT
Japanese	ja_JP
Korean	ko_KR
Portuguese (Brazilian)	pt_BR
Simplified Chinese	zh_CN
Traditional Chinese	zh_TW

Appendix C. Architecture codes

IBM Tivoli uses abbreviations to represent the various operating system architectures. The table below shows the most current listing of these abbreviations.

This information can also be found in the following file on UNIX systems: *install_dir*/registry/archdsc.tbl.

Table 18. Operating system architecture abbreviations

Abbreviation	OS Architecture
aix516	AIX v5.1 (64 bit)
aix523	AIX v5.2 (32 bit)
aix526	AIX v5.2 (64 bit)
aix533	AIX v5.3 (32 bit)
aix536	AIX v5.3 (64 bit)
citrix	Citrix Metaframe
hp10	HP-UX v10.01/10.10
hp102	HP-UX v10.20
hp11	HP-UX v11
hp116	HP-UX v11 (64 bit)
li622	Linux Intel v2.2
li6223	Linux Intel v2.2 (32 bit)
li624	Linux Intel v2.4
li6242	Linux Intel v2.4 GCC 2.9.5 (32 bit)
li6243	Linux Intel v2.4 (32 bit)
li6245	Linux Intel v2.4 GCC 2.9.5 (64 bit)
li6246	Linux Intel v2.4 (64 bit)
li6262	Linux Intel v2.6 GCC 2.9.5 (32 bit)
li6263	Linux Intel v2.6 (32 bit)
li6265	Linux Intel v2.6 GCC 2.9.5 (64 bit)
li6266	Linux Intel v2.6 (64 bit)
ls322	Linux zSeries, 2.2 kernel
ls3223	Linux zSeries, v2.2 (32 bit)
ls3226	Linux zSeries, v2.2 (64 bit)
ls324	Linux zSeries, v2.4
ls3243	Linux zSeries, v2.4 (32 bit)
ls3246	Linux zSeries, v2.4 (64 bit)
ls3262	Linux S390 v2.6 GCC 2.9.5 (32 bit)
ls3263	Linux S390 v2.6 (32 bit)
ls3265	Linux S390 v2.6 GCC 2.9.5 (64 bit)
ls3266	Linux S390 v2.6 (64 bit)

Table 18. Operating system architecture abbreviations (continued)

Abbreviation	OS Architecture
osf1	Digital UNIX (prior to V5.0)
os390	OS/390® or z/OS
os400	OS/400® system
sol24	Solaris v2.4
sol25	Solaris v2.5
sol26	Solaris v2.6
sol273	Solaris v7 (32 bit)
sol276	Solaris v7 (64 bit)
sol283	Solaris v8 (32 bit)
sol286	Solaris v8 (64 bit)
sol293	Solaris v9 (32 bit)
sol296	Solaris v9 (64 bit)
sol503	Solaris v10 (32 bit)
sol506	Solaris v10 (64 bit)
sol603	Solaris v10 Opteron (32 bit)
sol606	Solaris v10 Opteron (64 bit)
tsf50	Tru64 v5.0
unix	UNIX
winnt	Windows 2000 and Windows 2003 Server

Appendix D. Supported operating systems

The following tables show which operating systems are supported for different components of Tivoli OMEGAMON XE for Messaging: WebSphere MQ Monitoring, WebSphere MQ Configuration, and WebSphere Message Broker Monitoring.

Table 19 shows the support for Tivoli OMEGAMON XE for Messaging agents on Windows system computers.

Table 19. Supported Windows operating systems

Operating System	WebSphere MQ Monitoring	WebSphere MQ Configuration	WebSphere Message Broker Monitoring
Windows 2000 Server	X	X	X
Windows 2000 Advanced Server	X	X	X
Windows XP Professional (32 bit)[1]	X	X	X
Windows Server 2003 SE (32 bit)[2]	X	X	X
Windows Server 2003 EE (32 bit)[2]	X	X	X
Windows 2003 R2 SE (32 bit)	X	X	X
Windows 2003 R2 EE (32 bit)	X	X	X
Windows Server 2003 SE (64 bit)	X	X	
Windows Server 2003 EE (64 bit)	X	X	
Windows 2003 R2 SE (64 bit)	X	X	
Windows 2003 R2 EE (64 bit)	X	X	
Windows Server 2008 (Longhorn) (32 bit)	X	X	
Windows Server 2008 (Longhorn) (64 bit)	X	X	

Notes:

1. For the Windows XP operating systems, the Microsoft End User License Agreement (EULA) does not license these operating systems to function as a server. Tivoli products that function as a server on these operating systems are supported for demonstration purposes only.
2. For Windows Server 2003: If you do not plan to deploy Service Pack 1 in your environment at this time, you must download and install Microsoft Installer 3.1 (KB893803), which is available from the Microsoft Download Web site (www.microsoft.com/downloads).

Table 20 shows the support for Tivoli OMEGAMON XE for Messaging agents on UNIX system (non-Linux system), i5/OS, and z/OS system computers.

Table 20. Supported UNIX, i5/OS and z/OS operating systems

Operating System	WebSphere MQ Monitoring	WebSphere MQ Configuration	WebSphere Message Broker Monitoring
AIX V5.2 (32/64 bit)	X	X	X
AIX V5.3 (32/64 bit)	X	X	X
AIX V6.1 (32/64 bit)	X	X	X
Solaris V8 (SPARC)	X	X	X
Solaris V9 (SPARC)	X	X	X
Solaris V10 (SPARC)	X	X	X
Solaris V10 (x86-64)	X	X	X
HP-UX 11i v1 (B.11.11) on PA-RISC	X	X	X
HP-UX 11i v2 (B.11.23) (32/64 bit) on PA-RISC	X	X	X
HP-UX 11i v2 (B.11.23) on Integrity (Itanium)	X	X	X
HP-UX 11i v3 on PA-RISC	X	X	X
HP-UX 11i v3 on IA64 (Itanium)	X	X	X
i5/OS 5.3	X	X	
i5/OS 5.4	X	X	
i5/OS 6.1	X	X	
z/OS 1.6	X	X	X
z/OS 1.7	X	X	X
z/OS 1.8	X	X	X
z/OS 1.9	X	X	X
z/OS 1.10	X	X	X

Notes:

1. For information about installing Tivoli OMEGAMON XE for Messaging on a z/OS system, see the Program Directory that comes with it.

2. Remote deployment is not supported for HP-UX 11i v2 (B.11.23) on Integrity (IA64).

Table 21 shows support for Tivoli OMEGAMON XE for Messaging agents on Linux system computers.

Table 21. Supported Linux operating systems

Operating System	WebSphere MQ Monitoring	WebSphere MQ Configuration	WebSphere Message Broker Monitoring
RedHat Enterprise Linux 3 on Intel 32-bit	X	X	X

Table 21. Supported Linux operating systems (continued)

Operating System	WebSphere MQ Monitoring	WebSphere MQ Configuration	WebSphere Message Broker Monitoring
RedHat Enterprise Linux 3 on zSeries	X	X	X
RedHat Enterprise Linux 4 on Intel 32-bit	X	X	X
RedHat Enterprise Linux 4 on AMD64/EM64T 64-bit	X	X	X
RedHat Enterprise Linux 4 on zSeries	X	X	X
RedHat Enterprise Linux 4 on iSeries and pSeries	X	X	X
RedHat Enterprise Linux 5 on Intel 32-bit	X	X	X
RedHat Enterprise Linux 5 on AMD64/EM64T 64-bit	X	X	X
RedHat Enterprise Linux 5 on zSeries	X	X	X
RedHat Enterprise Linux 5 on iSeries and pSeries	X	X	X
SUSE Linux Enterprise Server 8 Intel 32-bit	X	X	X
SUSE Linux Enterprise Server 8 for zSeries	X	X	X
SUSE Linux Enterprise Server 9 Intel 32-bit	X	X	X
SUSE Linux Enterprise Server 9 on AMD64/EM64T	X	X	X
SUSE Linux Enterprise Server 9 for zSeries	X	X	X
SUSE Linux Enterprise Server 9 for iSeries and pSeries	X	X	X
SUSE Linux Enterprise Server 10 Intel 32-bit	X	X	X

Table 21. Supported Linux operating systems (continued)

Operating System	WebSphere MQ Monitoring	WebSphere MQ Configuration	WebSphere Message Broker Monitoring
SUSE Linux Enterprise Server 10 on AMD64/EM64T	X	X	X
SUSE Linux Enterprise Server 10 for zSeries	X	X	X
SUSE Linux Enterprise Server 10 for iSeries and pSeries	X	X	X

Notes:

1. For RedHat Enterprise Linux 4 on AMD64/EM64T, you must install the following libraries:
   - libstdc++.so.5 l
   - ibstdc++.so.5(CXXABI_1.2)
   - libstdc++.so.5(GLIBCPP_3.2)
   - libstdc++-3.4.3-9.EL4
   - libgcc-3.4.4-2.i386.rpm
   - libstdc++-3.4.4-2.i386.rpm
   - compat-libstdc++-33-3.2.3-47.3.i386.rpm
   - compat-libstdc++-296-2.96-132.7.2.i386.rpm

2. For SUSE Linux Enterprise Server 9 on AMD64/EM64T, you must install the compat-libstdc++-lsb-4.0.2_20050901-0.4.x86_64.rpm library. This library is available in the SUSE Linux Enterprise Server 9 for AMD64 and Intel EM64T Service Pack 3.

3. See Technote 1247529 for minor known problems and workarounds for SUSE Linux Enterprise Server 10 on 64-bit operating systems.

4. Red Hat Linux 5 is supported only when operating system settings for SELinux Security and Firewall Security are set to disabled.

5. If you are running WebSphere Message Broker Monitoring on RedHat Enterprise Linux 5 for 32-bit Intel architectures, for best performance use RedHat Enterprise Linux 5 Update 2.

Appendix E. Operating systems supported for Tivoli Enterprise Monitoring Server, Tivoli Enterprise Portal Server, and Tivoli Enterprise Portal client

The following tables show which operating systems are supported for the IBM Tivoli Monitoring components in IBM Tivoli Monitoring 6.2 fix pack 1: Tivoli Enterprise Monitoring Server, Tivoli Enterprise Portal Server, and Tivoli Enterprise Portal client.

Table 22 shows the support for Tivoli Enterprise Monitoring Server, Tivoli Enterprise Portal Server, and Tivoli Enterprise Portal client on Windows system computers.

Table 22. Supported Windows operating systems

Operating system	Tivoli Enterprise Monitoring Server	Tivoli Enterprise Portal Server	Tivoli Enterprise Portal client[1]
Windows 2000 Server	X	X	X
Windows 2000 Advanced Server	X	X	X
Windows XP (32 bit)[2]			X
Windows Server 2003 SE (32 bit)[3]	X	X	X
Windows Server 2003 EE (32 bit)[3]	X	X	X
Windows 2003 R2 SE (32 bit)	X	X	X
Windows 2003 R2 EE (32 bit)	X	X	X
Windows Vista (32 bit)[2]			X
Windows Vista (64 bit)[2]			X

Notes:

1. The Tivoli Enterprise Portal desktop client is supported on marked platforms. However, the browser client can be accessed only from Windows system computers running Internet Explorer 6 or 7.
2. For the Windows XP, and Windows Vista operating systems, the Microsoft End User License Agreement (EULA) does not license these operating systems to function as a server. Tivoli products that function as a server on these operating systems are supported for demonstration purposes only.
3. For Windows Server 2003: If you do not plan to deploy Service Pack 1 in your environment at this time, you must download and install Microsoft Installer 3.1 (KB893803), which is available from the Microsoft Download Web site (www.microsoft.com/downloads).

Table 23 on page 104 shows the support for Tivoli Enterprise Monitoring Server, Tivoli Enterprise Portal Server, and Tivoli Enterprise Portal client on UNIX system (non-Linux system), i5/OS, and a z/OS system computers.

Table 23. Supported UNIX, i5/OS, and z/OS operating systems

Operating system	Tivoli Enterprise Monitoring Server	Tivoli Enterprise Portal Server	Tivoli Enterprise Portal Client
AIX V5.2 (32/64 bit)	X		
AIX V5.3 (32/64 bit)	X	X	
AIX V6.1 (32/64 bit)	X	X	
Solaris V9 (SPARC) (32/64 bit)	X		
Solaris V10 (SPARC) (32/64 bit)	X		
Solaris V10 (x86-64) (64 bit)	X		
HP-UX 11i v2 (B.11.23) on Integrity (IA64)	X		
HP-UX 11i v3 (B.11.31) on Integrity (IA64)	X		
z/OS 1.6	X		
z/OS 1.7	X		
z/OS 1.8	X		
z/OS 1.9	X		
z/OS 1.10	X		

Table 24 shows the support for Tivoli Enterprise Monitoring Server, Tivoli Enterprise Portal Server, and Tivoli Enterprise Portal client on Linux system computers.

Table 24. Supported Linux operating systems

Operating system	Tivoli Enterprise Monitoring Server	Tivoli Enterprise Portal Server	Tivoli Enterprise Portal Client
Asianux 2.0 for Intel	X	X	X
Red Flag 4.1 for Intel	X	X	X
Red Flag 5.1 for Intel	X	X	X
RedHat Enterprise Linux 4 Intel 32-bit	X	X	X
RedHat Enterprise Linux 4 on AMD64/EM64T 64-bit	X		
RedHat Enterprise Linux 4 on z/Series	X	X	
RedHat Enterprise Linux 5 Intel 32-bit	X	X	X
RedHat Enterprise Linux 5 on AMD64/EM64T	X		
RedHat Enterprise Linux 5 on z/Series	X	X	

Table 24. Supported Linux operating systems (continued)

Operating system	Tivoli Enterprise Monitoring Server	Tivoli Enterprise Portal Server	Tivoli Enterprise Portal Client
SUSE Linux Enterprise Server 9 Intel 32-bit	X	X	X
SUSE Linux Enterprise Server 9 for z/Series	X	X	
SUSE Linux Enterprise Server 10 Intel 32-bit	X	X	X
SUSE Linux Enterprise Server 10 for z/Series 64-bit	X	X	

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