IBM Tivoli Composite Application Manager Agents for WebSphere Messaging

Version 7.3

Upgrade and Migration Guide

SC14-7522-01

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Note:
Before using this information and the product it supports, read the information in "Notices" on page 33.

This edition applies to version 7.3 of WebSphere MQ Configuration agent, WebSphere MQ Monitoring agent, andWebSphere Message Broker Monitoring agent (product number 5725-I45) and to all subsequent releases and modifications until otherwise indicated in new editions.

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Chapter 1. Before you begin

Upgrading refers to installing the agents in the same location as an existing version of the product. Migrating refers to installing the agents to a new environment and then importing the data from your old environment. This document includes separate sections about upgrading and migrating.

If you are upgrading some components and migrating others, follow the instructions in Chapter 2, "Upgrading the agents from version 7.0, 7.0.1, or 7.1," on page 5, depending on which version you are upgrading from, and refer to Chapter 3, "Migration," on page 11 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 4.

The agent supports a staged migration procedure. This means that when you are migrating to version 7.3, you can have both version 7.3 agents and earlier agent versions running in your environment simultaneously. For example, you might have 7.3 monitoring agents on one z/OS® system (or LPAR) and earlier versions of monitoring agents running on another system. You can even have 7.3 monitoring agents and earlier agent versions running on the same z/OS system.

This document does not replace the installation and configuration guides; instead, it provides a high-level overview of the tasks that are required to successfully upgrade or migrate from earlier versions to version 7.3. It includes upgrade requirements, preinstallation tasks, and steps to complete a upgrade or migration. Also, references to other documentation that provide detailed instructions for completing each step in the upgrade process are also provided.

Remember: You must first upgrade to Tivoli® OMEGAMON® XE for Messaging 7.0, and then upgrade to version 7.3, if you are still using a version earlier than version 7.0.

Version history

The following list shows all the different versions of the agents.

- Version 7.3, which includes the following components on different operating systems:
  - z/OS systems:
    - Tivoli OMEGAMON XE for Messaging for z/OS: WebSphere® MQ Configuration agent 7.3
    - Tivoli OMEGAMON XE for Messaging for z/OS: WebSphere MQ Monitoring agent 7.3
    - Tivoli OMEGAMON XE for Messaging for z/OS: WebSphere Message Broker Monitoring agent 7.3
  - Distributed systems:
    - Tivoli Composite Application Manager for Applications: ITCAM configuration agent for WebSphere MQ 7.3
    - Tivoli Composite Application Manager for Applications: ITCAM agent for WebSphere MQ 7.3

- Tivoli Composite Application Manager for Applications: ITCAM agent for WebSphere Message Broker 7.3

- Version 7.1, which includes the following components on different operating systems:
  - z/OS systems:
    - Tivoli OMEGAMON XE for Messaging for z/OS: WebSphere MQ Configuration agent 7.1
    - Tivoli OMEGAMON XE for Messaging for z/OS: WebSphere MQ Monitoring agent 7.1
    - Tivoli OMEGAMON XE for Messaging for z/OS: WebSphere Message Broker Monitoring agent 7.1
  - Distributed systems:
    - Tivoli Composite Application Manager for Applications: ITCAM configuration agent for WebSphere MQ 7.1
    - Tivoli Composite Application Manager for Applications: ITCAM agent for WebSphere MQ 7.1
    - Tivoli Composite Application Manager for Applications: ITCAM agent for WebSphere Message Broker 7.1
- Version 7.0.1, which includes the following components on different operating systems:
  - z/OS systems:
    - Tivoli OMEGAMON XE for Messaging for z/OS: WebSphere MQ Configuration agent 7.0.1
    - Tivoli OMEGAMON XE for Messaging for z/OS: WebSphere MQ Monitoring agent 7.0.1
    - Tivoli OMEGAMON XE for Messaging for z/OS: WebSphere Message Broker Monitoring agent 7.0.1
  - Distributed systems:
    - Tivoli Composite Application Manager for Applications: ITCAM configuration agent for WebSphere MQ 7.0.1
    - Tivoli Composite Application Manager for Applications: ITCAM agent for WebSphere MQ 7.0.1
    - Tivoli Composite Application Manager for Applications: ITCAM agent for WebSphere Message Broker 7.0.1
- Tivoli OMEGAMON XE for Messaging Version 7.0
  - Tivoli OMEGAMON XE for Messaging: WebSphere MQ Monitoring agent 7.0
  - Tivoli OMEGAMON XE for Messaging: WebSphere MQ Configuration agent 7.0
  - Tivoli OMEGAMON XE for Messaging: WebSphere Message Broker Monitoring agent 7.0
- Tivoli OMEGAMON XE for Messaging Version 6.0.1
  - Tivoli OMEGAMON XE for Messaging: WebSphere MQ Monitoring agent 6.0.1
  - Tivoli OMEGAMON XE for Messaging: WebSphere MQ Configuration agent 6.0.1
  - Tivoli OMEGAMON XE for Messaging: WebSphere Message Broker Monitoring agent 6.0.1
  - Tivoli OMEGAMON XE for Messaging: WebSphere InterChange Server Monitoring agent 6.0.1 (distributed systems only)

- Tivoli OMEGAMON XE for Messaging Version 6.0
  - Tivoli OMEGAMON XE for Messaging: WebSphere MQ Monitoring agent 6.0
  - Tivoli OMEGAMON XE for Messaging: WebSphere MQ Configuration agent 6.0
  - Tivoli OMEGAMON XE for Messaging: WebSphere Message Broker Monitoring agent 6.0
  - Tivoli OMEGAMON XE for Messaging: WebSphere InterChange Server Monitoring agent 6.0 (distributed systems only)
- 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 beginning with version 7.0. When upgrading existing agents, previously installed versions of the WebSphere InterChange Server agent are not affected.

Upgrade requirements

If any of the following items are installed, you must upgrade them to the minimum required version of IBM® Tivoli Monitoring or later, before you upgrade the agents:

- hub Tivoli Enterprise Monitoring Server (hub monitoring server)
- Tivoli Enterprise Portal Server (portal server)
- Tivoli Enterprise Portal desktop clients (portal desktop clients)

You must also upgrade all remote monitoring servers that agents connect to.

Remember: If you are upgrading IBM Tivoli Monitoring to version 6.2.3 or later and the upgrade is performed on 64-bit operating systems, you must complete all the subsequent steps to upgrade the WebSphere MQ Configuration agent before the agent can be started. This includes installing the agent application support on IBM Tivoli Monitoring components. Otherwise, a previous version of the WebSphere MQ Configuration agent and application support is 32-bit and cannot run in the environment of IBM Tivoli Monitoring 6.2.3 on 64-bit operating systems.

The upgrade of WebSphere Message Broker Monitoring agent and WebSphere MQ Monitoring agent can be done later. Earlier versions of these two agents can run correctly with IBM Tivoli Monitoring 6.2.3 and later versions.

Each agent has specific software and hardware prerequisites. To obtain various types of compatibility reports that are related to the product requirements, use the Software Product Compatibility Reports (SPCR) tool.

Preinstallation tasks

Before you do the installation process, complete the following procedures:

WebSphere Message Broker Monitoring agent

- Check whether there is any CandleMonitor node deployed to the monitored broker. If one or more CandleMonitor nodes have been deployed to the broker, stop the broker.
- For Linux or UNIX systems, clear the files whose name contains the `qi` string in the `/tmp` folder. Otherwise, the agent cannot be started after upgrade.
- If you want to upgrade the agent from 7.0.0 FP3 ifix01 to 7.3, or from 7.0.1 FP1 or earlier to 7.3, before you upgrade the agent, check the value of the **defaultPersistentBrokerData** parameter (or the **persistentBrokerData** value of the given broker) in the agent configuration file. The **defaultPersistentBrokerData** parameter controls the persistent data store of all brokers running on the same system. The **persistentBrokerData** parameter controls the persistent data store of the broker specified in the MonitorBroker tag.

  If the **defaultPersistentBrokerData** (or **persistentBrokerData**) value is `Yes`, the following task is required by the brokers of version 7 or later on distributed systems and brokers of all versions on z/OS systems:

  1. Delete the subscription $SYS/Broker/<*broker_label*>/# manually.
     - V6.1 brokers on z/OS systems: Use the WebSphere Message Broker Toolkit
     - V7 or later brokers: Use the WebSphere MQ Explorer or WebSphere MQ command **DELETE SUB**.
  2. Delete the reply queue that is used by the WebSphere Message Broker Monitoring agent. The name of the reply queue is specified by the **defaultReplyQueueName** parameter (or the **replyQueueName** parameter for the given broker).

WebSphere MQ Configuration agent

- If you are upgrading the WebSphere MQ Configuration agent on a UNIX or Linux system, the existing `mc.cfg` and `mc.ini` files are overwritten. If you want to keep your existing configuration files, back up these files before proceeding.
- If you have the WebSphere MQ Configuration agent deployed in your environment, be sure to back up the configuration database by following the instructions in the section that explains how to back up the configuration database in the *IBM Tivoli Composite Application Manager Configuration Agent for WebSphere MQ User's Guide*.

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

Chapter 2. Upgrading the agents from version 7.0, 7.0.1, or 7.1

Follow the upgrade roadmap to upgrade the agents from version 7.0, 7.0.1, or 7.1. Detailed instructions are provided for complicated steps in the roadmap.

Upgrade procedures

To upgrade the agents, perform the following procedures:

1. Stop all the agents that you want to upgrade.
2. If you have not already done so, upgrade the portal and the portal server to the minimum required version of IBM Tivoli Monitoring or a later version. For instructions, see "Distributed systems: Upgrading Tivoli Enterprise Portal Server and Tivoli Enterprise Portal" on page 7.
3. Optional: If you are not already running the latest version, upgrade Tivoli Data Warehouse. For information about installing and configuring the Tivoli Data Warehouse, see the *IBM Tivoli Monitoring Installation and Setup Guide* and *IBM Tivoli Monitoring Administrators Guide*.

   Remember: To upgrade the WebSphere Message Broker Monitoring agent, delete the Node Accounting (kqitasnd) table that exists in the Tivoli Data Warehouse database for the agent before proceeding. Related tables that are generated by using summarization and pruning functions must also be deleted.
4. Upgrade the hub Tivoli Enterprise Monitoring Server.
   - If you are running the hub monitoring server on a distributed system, see "Distributed systems: Upgrading Tivoli Enterprise Monitoring Server" on page 8.
   - If you are running the hub monitoring server on a z/OS system, see "z/OS systems: Upgrading Tivoli Enterprise Monitoring Server and agents" on page 9.

   Remember: If you are upgrading IBM Tivoli Monitoring to version 6.2.3 or later and the upgrade is performed on 64-bit operating systems, you must complete all the subsequent steps to upgrade the WebSphere MQ Configuration agent before the agent can be started. This includes installing the agent application support on IBM Tivoli Monitoring components. Otherwise, a previous version of the WebSphere MQ Configuration agent and application support is 32-bit and cannot run in the environment of IBM Tivoli Monitoring 6.2.3 on 64-bit operating systems.

   The upgrade of WebSphere Message Broker Monitoring agent and WebSphere MQ Monitoring agent can be done later. Earlier versions of these two agents can run correctly with IBM Tivoli Monitoring 6.2.3 and later versions.

   Tip: You can enable the self-describing capability at the hub monitoring server. The WebSphere MQ Monitoring agent and WebSphere Message Broker Monitoring agent support the self-describing capability. With this self-describing capability, you no longer have to manually install the application support on IBM Tivoli Monitoring components (monitoring server and portal server). For more information about how to enable the self-describing capability, see the section about enabling self-describing agent

capability at the hub monitoring server in the *IBM Tivoli Monitoring Installation and Setup Guide* and the *IBM Tivoli Management Services on z/OS: Configuring the Tivoli Enterprise Monitoring Server on z/OS*.

5. Install the agent application support files on all systems where the hub monitoring server, the portal server, or the portal desktop clients are installed. For instructions about how to install application support, see *IBM Tivoli Composite Application Manager Agents for WebSphere Messaging: Installation and Setup Guide*.

   Tip: If you chose to use the self-describing capability that is supported by the WebSphere MQ Monitoring agent and WebSphere Message Broker Monitoring agent, you can skip this step for these two agents.

   Remember:

   a. If multiple IBM Tivoli Monitoring components are installed on the same host system (for example, the portal server and the monitoring server are installed on the same host), you must install application support for all the agents that are running on that host system at the same time.
   b. If the agents are installed on the host system where an IBM Tivoli Monitoring component (portal, portal server, or monitoring server) is installed, you must use the DVDs that are included with the product to upgrade the agent and to install application support at the same time.

6. Upgrade the agents that connect to the hub monitoring server. You do not have to upgrade all the agents that are connected to the hub monitoring server, but new functions are available only for those agents that you upgrade. Agents of different versions can connect to the hub monitoring server simultaneously. On z/OS systems, this function is available only if the agents are not sharing common software inventory (CSI).
   - If you are upgrading agents that are running on distributed systems, see "Windows, UNIX, and Linux systems: Upgrading agents" on page 8 for instructions for upgrading agents on a Windows, UNIX, or Linux system, and "i5/OS systems: Upgrading agents" on page 9 for instructions for upgrading agents running on i5/OS™ systems.
   - If you are upgrading agents running on z/OS systems, see "z/OS systems: Upgrading Tivoli Enterprise Monitoring Server and agents" on page 9 for instructions.

7. Upgrade any remote monitoring server and connected monitoring agents. Any remote monitoring server to which monitoring agents connect that are not upgraded now must have their attribute and catalog files overwritten with the equivalent files from the hub monitoring server. At a later time, you can upgrade any remote monitoring servers that agents do not connect to. Monitoring 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.

   Exception: If the version of a remote monitoring server to be upgraded is earlier than IBM Tivoli Monitoring 6.2.1, you cannot postpone upgrading the remote monitoring server. You must upgrade hub and remote monitoring servers at the same time. After the upgrade, copy the attribute and catalog files from the hub monitoring server to the remote monitoring server before the two can connect. Otherwise, workspaces and situations cannot work on the portal. For instructions, see Appendix C, "Upgrading attribute and catalog files at the remote Tivoli Enterprise Monitoring Server," on page 21.
   - To upgrade a remote monitoring server now, do the following steps:

a. Upgrade the remote monitoring server.
   - For instructions on distributed system, see "Distributed systems: Upgrading Tivoli Enterprise Monitoring Server" on page 8.
   - For instructions on a z/OS system, see "z/OS systems: Upgrading Tivoli Enterprise Monitoring Server and agents" on page 9.

b. Upgrade agents that are connected to the remote monitoring server, if required.
   - For instructions on distributed system, see "Windows, UNIX, and Linux systems: Upgrading agents" on page 8.
   - For instructions on a z/OS system, see "z/OS systems: Upgrading Tivoli Enterprise Monitoring Server and agents" on page 9.

- IBM Tivoli Monitoring 6.2.1 and later versions only: If you do not want to upgrade the remote monitoring server now, you must copy the attribute and catalog files from the hub monitoring server to the remote monitoring server before the two can connect. For instructions, see Appendix C, "Upgrading attribute and catalog files at the remote Tivoli Enterprise Monitoring Server," on page 21.

8. Verify the installation. Check that the hub monitoring server, the portal server, and the portal desktop clients that are deployed in your environment are all running the same fix pack versions and equivalent PTFs for IBM Tivoli Monitoring and the monitoring agents.
9. To use a language other than English, install the required language packs on the portal server and the portal. For instructions, see the chapter that explains how to install the language packs in the *IBM Tivoli Composite Application Manager Agents for WebSphere Messaging: Installation and Setup Guide*.
10. Restart all upgraded or newly installed components.
11. Self-describing agent only: After the application support is automatically refreshed, recycle the Tivoli Enterprise Portal Server if you have not done so. The application support data is automatically replicated from a self-describing agent to its local monitoring server whenever the agent starts up. After the self-describing process is completed, you can find a message similar to the following one in the monitoring server log. The following message indicates that the self-describing process of WebSphere MQ Monitoring agent version 7.3 is completed.

    ```
    Self-Describing Install Completed Successfully for PRODUCT "MQ",
    VER "07300000", ID "TMS", IDVER "07300000".
    ```

Distributed systems: Upgrading Tivoli Enterprise Portal Server and Tivoli Enterprise Portal

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 procedure:

1. If you have not done so, on each system where the portal server or the portal is installed, upgrade to the minimum required version of IBM Tivoli Monitoring or a later version. Follow the instructions in the sections about installing Tivoli Enterprise Portal Server and installing Tivoli Enterprise Portal desktop client in the *IBM Tivoli Monitoring Installation and Setup Guide*. This document can be downloaded from the IBM Tivoli Monitoring Information Center.

2. 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.

Distributed systems: Upgrading Tivoli Enterprise Monitoring Server

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

1. Run the **tacmd removeBundles** command to remove remote deployment files from the previous release. You do not have 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 required to use remote deployment.
2. If you have not done so, upgrade the monitoring server to the minimum required version of IBM Tivoli Monitoring or a later version. Follow the instructions in the sections about installing and configuring hub and remote monitoring servers in the *IBM Tivoli Monitoring Installation and Setup Guide*. This document can be downloaded from the IBM Tivoli Monitoring Information Center.

   Important: If you are upgrading IBM Tivoli Monitoring on a UNIX or Linux system, when prompted to enter an installation directory, you must use the directory where the old version of the monitoring server 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 the monitoring server on a UNIX or Linux system, reconfigure the monitoring server, ensuring 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 the KCFFEPRB.KCFCCTII variable from the KDS_RUN statement in the KBBENV file to disable support for the WebSphere MQ Configuration agent, because it must be enabled only on the hub 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

   where *ITHHOME* is the IBM Tivoli Monitoring installation directory and *TEMS* is the subdirectory where the monitoring server is installed.

Windows, UNIX, and Linux systems: Upgrading agents

To upgrade agents on distributed systems, complete the following procedure:

1. Make sure that you complete all the required tasks listed in "Preinstallation tasks" on page 4 for the agent you want to upgrade.
2. Install the agents. For instructions, see the chapters that explain how to install an agent in the *IBM Tivoli Composite Application Manager Agents for WebSphere Messaging: Installation and Setup Guide* for version 7.3.

   Important: If you did not upgrade the OS agents when upgrading IBM Tivoli Monitoring 6.2.2, or if you are using 64-bit OS agents, you must also install the 32-bit Tivoli Enterprise Service User Interface.

3. If you are upgrading the WebSphere MQ Configuration agent, reconfigure it, ensuring that all settings are correct. Even if you do not change any settings, you must reconfigure, otherwise the agent might not work correctly.

i5/OS systems: Upgrading agents

To upgrade the agents on i5/OS systems, complete the following procedure:

1. Back up the configuration files that are used by the components that you want to upgrade:
   - For the WebSphere MQ Monitoring agent, back up the following files:
     - Connection information: `/QSYS.LIB/KMQTMP.LIB/kmspa[num].KBBENV`
     - Queue manager information: `/QSYS.LIB/KMQLIB.LIB/MQ[num].MQSHELL`

     where [*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 the WebSphere MQ Monitoring agent. However, you can use them for reference when configuring new versions of the 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 older versions of the agents if any are installed. For instructions, see Uninstalling an agent on i5/OS systems in *IBM Tivoli Composite Application Manager Agents for WebSphere Messaging: Installation and Setup Guide*.
3. Install the agents. For instructions, see Installing an agent on i5/OS systems in *IBM Tivoli Composite Application Manager Agents for WebSphere Messaging: Installation and Setup Guide*.
4. Configure the newly installed agents. For instructions, see Configuring an agent on i5/OS systems in *IBM Tivoli Composite Application Manager Agents for WebSphere Messaging: Installation and Setup Guide*.

   To configure the WebSphere MQ Configuration agent with the same parameters that are in your previous environment, you can replace the newly installed configuration files of the agents with the files that are backed up in step 1. However, older versions of configuration files for the WebSphere MQ Monitoring agent are not compatible with version 7.3 and so WebSphere MQ Monitoring agent must be configured manually, although you can use the files that are backed up in step 1 as a reference during the configuration process.

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

For instructions about how to upgrade Tivoli Enterprise Monitoring Sever and agents on z/OS systems, see Upgrading section of the OMEGAMON XE Shared Documentation. This guide covers upgrade requirements and instructions that are common to all OMEGAMON XE products.

Besides the common upgrade requirements that are documented in the Upgrading section of the OMEGAMON XE Shared Documentation, the following requirements are specific to Tivoli OMEGAMON XE for Messaging for z/OS:

- Tivoli OMEGAMON XE for Messaging for z/OS 7.0.1 is the first version that you can configure with the PARMGEN method. If you are upgrading from V7.0 and earlier releases, you must use the Configuration Tool (ICAT).

- If you are upgrading your runtime environment in place, you must delete and reallocate the following persistent data store data sets for WebSphere MQ Monitoring agent and WebSphere Message Broker Monitoring agent:
  - WebSphere MQ Monitoring agent: &*rhilev*.&*rtename*.RKMQPDS*n*
  - WebSphere Message Broker Monitoring agent: &*rhilev*.&*rtename*.RKQIPDS*n*

  where &*rhilev*.&*rtename* is the runtime high-level qualifier and *n* is the number of persistent data store files that were previously allocated in this runtime environment.

Chapter 3. 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 portal server to a new host system, instead of upgrading the existing portal server in your old environment. To do this, you must install the 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 that are 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 the monitoring and configuration agents in a new environment and additional tasks that are specific to migration.

Important: Do not delete your old environment until all data is successfully migrated and you are sure that your new environment is working correctly.

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 that is stored in this database includes user IDs, navigator views, custom workspaces, and custom queries.

Because different versions of the portal server use different data storage formats, data can only be transferred if the portal server in each environment is the same version. For example, data exported from CandleNet Portal Server 197 cannot be imported into version 6.2 of the portal server. Data might also be incompatible between different IBM Tivoli Monitoring 6.2 fix packs.

Complete the following steps to install a new portal server and to migrate data from the portal server that is in your old environment:

1. Upgrade the old portal server to the minimum required version of IBM Tivoli Monitoring or later. For information about installation instructions, see the IBM Tivoli Monitoring Information Center.
2. Install the minimum required version of IBM Tivoli Monitoring or later on the host system where you want to deploy the portal server in your new environment.
3. Install the monitoring agents on the host system where you deployed the portal server in your new environment. For instructions, see *IBM Tivoli Composite Application Manager Agents for WebSphere Messaging: Installation and Setup Guide*.
4. Follow the procedure documented that is in the chapter that explains how to replicate the Tivoli Enterprise Portal Server database in the *IBM Tivoli*

Monitoring: Administrator's Guide to export customized workspaces and queries from the portal server in your old environment and to import them to the portal server in your new environment.

5. Copy the following files from your old portal server installation directory to the new portal server directory. On UNIX and Linux systems, the target directory is *<itm_install>*/*<arch_code>*/cw, where *<itm_install>* is the directory where IBM Tivoli Monitoring is installed and *<arch_code>* is the architecture code. On Windows systems, the target directory is *<itm_install>*\CNB directory.
   - UNIX and Linux systems:
     - *<itm_install>*/*<arch_code>*/cw/classes/candle/kmq/resources/config/mq_dd_0*nnn*00000.xml
     - *<itm_install>*/*<arch_code>*/cw/classes/candle/kqi/resources/config/qi_dd_0*nnn*00000.xml
   - Windows systems:
     - *<itm_install>*\CNB\classes\candle\kmq\resources\config\mq_dd_0*nnn*00000.xml
     - *<itm_install>*\CNB\classes\candle\kqi\resources\config\qi_dd_0*nnn*00000.xml

     where *nnn* is a 3-digit number to indicate the version of the agent, for example, 700 stands for version 7.0.0.

Installing the hub Tivoli Enterprise Monitoring Server and migrating data

Situations, policies, templates, and managed system lists that are customized by the user are stored in the hub Tivoli Enterprise Monitoring Server database. The configuration database of WebSphere MQ Configuration agent is also stored at the hub 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 that is running on the same platform.

Migration procedure on distributed systems

1. If you configured WebSphere MQ Configuration support on the hub monitoring server in your old environment, back up the configuration database as described in the instructions in the *IBM Tivoli Composite Application Manager Configuration Agent for WebSphere MQ User's Guide*.
2. Upgrade the hub Tivoli Enterprise Monitoring Server in your old environment to the minimum required version of IBM Tivoli Monitoring or later. For installation instructions, see the IBM Tivoli Monitoring Information Center.
3. Install the minimum required version of IBM Tivoli Monitoring or later on the host system in your new environment where you will deploy the hub monitoring server. You must configure the hub monitoring server in the new environment with the same settings as the hub monitoring server in the old environment.
4. Install and configure the monitoring agents:
   a. Install the agents on the system where you deployed the new hub monitoring server.
   b. Start the new hub monitoring server.

c. If you choose not to use the agent self-describing capability or if the self-describing capability is not available to the agent that you want to upgrade, add application support for the agents to the hub monitoring server locally. For detailed instructions on how to install application support, see *IBM Tivoli Composite Application Manager Agents for WebSphere Messaging: Installation and Setup Guide*.

5. Copy the EIB files from the system on which the old hub monitoring server is installed to the system on which the new hub 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/<*cms_name*>

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

   Tip: After you complete the migration, redistribute migrated user-defined situations before use.
6. If you backed up the configuration database in step 1 on page 12, restore it to the new monitoring server. For instructions, see the instructions in the section that explains how to restore the configuration database in the *IBM Tivoli Composite Application Manager Configuration Agent for WebSphere MQ User's Guide*.
7. Recycle the hub monitoring server.

Migration on z/OS systems

To upgrade the hub Tivoli Enterprise Monitoring Server, follow the instructions in "z/OS systems: Upgrading Tivoli Enterprise Monitoring Server and agents" on page 9.

You can choose to migrate customized objects such as modified situations, templates, and managed objects, to a cloned runtime environment. For instructions, see the information about migrating customized objects to a cloned runtime environment in the chapter that introduces interactive upgrade scenarios by using the Configuration Tool in the *Upgrading section of the OMEGAMON XE Shared Documentation*.

To restore the configuration database of the WebSphere MQ Configuration agent to the new monitoring server, follow the instructions in the section that explains how to restore the configuration database in the *IBM Tivoli Composite Application Manager Configuration Agent for WebSphere MQ User's Guide*.

Migrating remote Tivoli Enterprise Monitoring Server, agents, and Tivoli Enterprise Portal Desktop

The remote Tivoli Enterprise Monitoring Server, the agents, and Tivoli Enterprise Portal desktop can be installed in a new environment with no need to import data from the old environment. Install the minimum required version of IBM Tivoli Monitoring or later and then install the agents.

Appendix A. Accessibility

Accessibility features help users with a physical disability, such as restricted mobility or limited vision, to use software products successfully. With this product, you can use assistive technologies to hear and navigate the interface. You can also use the keyboard instead of the mouse to operate all features of the graphical user interface.

For additional information, see the Accessibility appendix in the user's guide for the agent.

Appendix B. Upgrade notes

Besides the step-by-step upgrade procedures, there are some other things that you better know about the upgrade.

Brokers with a CandleMonitor node

If the brokers that you want to monitor have message flows that use a CandleMonitor node, you must restart the brokers after the upgrade. Otherwise, the CandleMonitor node will not function correctly.

Customized workspaces

When upgrading from version 6.0.1, all predefined workspaces are replaced with workspaces of version 7.3. If you customized any predefined workspaces before upgrading, changes are lost unless you saved the workspace with an alternative name.

When upgrading from version 6.0, predefined workspaces are only replaced if they were not modified. In this case new functions that are introduced in the version 7.3 workspace will not be available to you. If you want to replace an old workspace that was not upgraded with the version 7.3 of the workspace, perform the following procedure:

1. Navigate to the workspace that you want to restore in Tivoli Enterprise Portal.
2. Click **File** > **Restore the original workspace**.
3. Close Tivoli Enterprise Portal.
4. Open Tivoli Enterprise Portal again. The version 7.3 of the workspace is now displayed instead of the old customized version.

Historical data tables

After upgrading IBM Tivoli Monitoring and the monitoring agents, the attribute group name that was configured for historical data collection before the upgrade is changed automatically when the attribute group is displayed in Tivoli Enterprise Portal after the upgrade. The displayed new name is the default file name for historical data with a K*xx*_ prefix, where *xx* is the product code. For a list of the attribute history tables and the corresponding file names, see *IBM Tivoli Composite Application Manager Agent for WebSphere MQ User's Guide* or *IBM Tivoli Composite Application Manager Agent for WebSphere Message Broker User's Guide* depending on which agent you are using.

For example, in an earlier version, you configured the Application Connections attribute group for historical data collection. The file name for the Application Connections attribute history table is QM_APAL. After upgrading to version 7.3, the Application Connections attribute group is displayed as KMQ_QM_APAL in the Tivoli Enterprise Portal GUI.

Backup files

If you are upgrading your system, some files are backed up automatically when the agents are upgraded. You can view the files with a text editor. These files might be useful when you configure your newly installed environment.

The backup files are stored in the *<ITM_HOME>*\BACKUP\messaging\v*nnn* directory, where *<ITM_HOME>* is the installation directory and *nnn* is a the 3-digit version number of the agent (such as 700 and 701).

The following files are backed up during the upgrade:

- On the systems where the agents are installed: `mc.cfg`, `kqi.xml`, `mq.cfg`, and `kmqenv`
- On the monitoring server that is installed on a Windows system: `KMQWICMS.lvl` and `KMCWICMS.lvl`

The mq.cfg and kqi.xml files (UNIX and Linux systems only)

On UNIX and Linux systems, when you upgrade WebSphere MQ Monitoring agent or WebSphere Message Broker Monitoring agent to version 7.3, the `mq.cfg` and `kqi.xml` files that are used to configure the agents are not overwritten. The new files are renamed as follows:

- `mq.cfg` is renamed to `mqbkup.cfg`
- `kqi.xml` is renamed to `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 the agents of version 7.3, 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.

Historical data files on UNIX and Linux systems

On UNIX and Linux systems, the historical data that is collected by the WebSphere MQ Monitoring agent and the WebSphere Message Broker Monitoring agent before upgrade is usually backed up during the upgrade process. Although the data that is contained within these files are not available in Tivoli Enterprise Portal workspaces after the upgrade, you can still view the data with a text editor.

If the architecture codes of the operating system that you are using are different between version 7.3 and the version that 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 F, “Architecture codes,” on page 27. 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 at the 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 Composite Application Manager Agent for WebSphere MQ User's Guide*.

Historical data files are backed up to the following locations during the upgrade process:

- WebSphere MQ Monitoring agent: *<ITM_HOME>*/BACKUP/messaging/v*nnn*/*<arch_code>*/mq/hist

- WebSphere Message Broker Monitoring agent: <*ITM_HOME*>/BACKUP/messaging/v*nnn*/<*arch_code*>/qi/hist

where <*ITM_HOME*> is the directory where IBM Tivoli Monitoring is installed, *nnn* is the 3-digit version number of the agent (such as 700 and 701), and <*arch_code*> is the architecture code of the operating system. For a list of architecture codes, see Appendix F, "Architecture codes," on page 27.

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

If you do not want to upgrade the remote monitoring server at the same time as the hub monitoring server, you must copy the attribute (ATR) and catalog (CAT) files from the upgraded hub monitoring server system to the remote monitoring server system. 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 subdirectory where the 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 1.

Table 1. Attribute and catalog file names. The table lists the names of the attribute and catalog files on distributed and z/OS systems.

Agent	ATR file names	CAT file names
WebSphere MQ Configuration agent	• Distributed systems: kcf.atr, kmc.atr • z/OS systems: kcfatr, kmcatr	• Distributed systems: kcf.cat, kmc.cat • z/OS systems: kcfcat, kmccat
WebSphere MQ Monitoring agent	• Distributed systems: kmq.atr • z/OS systems: kmqatr	• Distributed systems: kmq.cat • z/OS systems: kmqcat
WebSphere Message Broker Monitoring agent	• Distributed systems: kqi.atr • z/OS systems: kqiatr	• Distributed systems: kqi.cat • z/OS systems: kqicat

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

- If both the hub and remote monitoring server are running on distributed systems, copy the appropriate files that are listed in Table 1 from the hub monitoring server to the remote monitoring server.
- If both the hub and remote monitoring server are running on a z/OS system, use FTP to copy the appropriate files that are listed in Table 1 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 system and the remote monitoring server is running on a distributed system, use FTP to copy the appropriate files that are listed in Table 1 from the RKANDATV library of the hub monitoring server to the appropriate directory on the distributed system.

Rename each file with the its equivalent file name on distributed systems, as shown in Table 1 on page 21. For example, change `kmqatr` to `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 that are listed in Table 1 on page 21 to a temporary directory. Rename each files with the its equivalent file name on the z/OS system, as shown in Table 1 on page 21. For example, change `kmq.atr` to `kmqatr`. Use FTP to copy all the files from the temporary directory on the distributed system to the RKANDATV library of the hub monitoring server.

Appendix D. Backing up and restoring the configuration database

You can back up and restore the configuration database when upgrading the WebSphere MQ Configuration agent to version 7.3. For instructions on how to back up and restore the configuration database, see the related chapter in the *IBM Tivoli Composite Application Manager Configuration Agent for WebSphere MQ User's Guide*.

Appendix E. Product codes

The following table lists product codes that identify the agents and indicates whether each agent requires its application support at the Tivoli Enterprise Monitoring Server. Use these codes when running commands.

Table 2. Product codes

Product	Code	Application Support Required at Tivoli Enterprise Monitoring Server?
Tivoli Enterprise Monitoring Server Configurator (Must add application support data for WebSphere MQ Configuration agent)	cf	Yes
WebSphere Message Broker Monitoring agent	qi	Yes
WebSphere MQ Configuration agent (See product code **cf**)	mc	No
WebSphere MQ Monitoring agent	mq	Yes

Appendix F. Architecture codes

IBM Tivoli software products use abbreviations to represent the various operating system architectures. The following table shows the most current listing of these abbreviations.

This information can also be found in the following file on a UNIX system: *install_dir*/registry/archdsc.tbl.

Table 3. Operating system architecture abbreviations

Abbreviation	OS Architecture
aix4	AIX® R4.1
aix42	AIX R4.2
aix420	AIX R4.2.0
aix421	AIX R4.2.1
aix43	AIX R4.3
aix433	AIX R4.3.3
aix513	AIX R5.1 (32 bit)
aix516	AIX R5.1 (64 bit)
aix523	AIX R5.2 (32 bit)
aix526	AIX R5.2 (64 bit)
aix533	AIX R5.3 (32 bit) AIX R6.1 (32 bit)
aix536	AIX R5.3 (64 bit) AIX R6.1 (64 bit)
hp10	HP-UX R10.01/10.10
hp102	HP-UX R10.20
hp11	HP-UX R11 (32 bit)
hp116	HP-UX R11 (64 bit)
hpi113	HP-UX R11 Integrity (32 bit)
hpi116	HP-UX R11 Integrity (64 bit)
li622	Linux Intel R2.2
li6223	Linux Intel R2.2 (32 bit)
li624	Linux Intel R2.4
li6242	Linux Intel R2.4 GCC 2.9.5 (32 bit)
li6243	Linux Intel R2.4 (32 bit)
li6245	Linux Intel R2.4 GCC 2.9.5 (64 bit)
li6246	Linux Intel R2.4 (64 bit)
li6262	Linux Intel R2.6 GCC 2.9.5 (32 bit)
li6263	Linux Intel R2.6 (32 bit)
li6265	Linux Intel R2.6 GCC 2.9.5 (64 bit)
li6266	Linux Intel R2.6 (64 bit)
ls322	Linux S390 R2.2
ls3223	Linux S390 R2.2 (32 bit)

Table 3. Operating system architecture abbreviations (continued)

Abbreviation	OS Architecture
ls3226	Linux S390 R2.2 (64 bit)
ls324	Linux S390 R2.4
ls3242	Linux S390 R2.4 GCC 2.9.5 (32 bit)
ls3243	Linux S390 R2.4 (32 bit)
ls3245	Linux S390 R2.4 GCC 2.9.5 (64 bit)
ls3246	Linux S390 R2.4 (64 bit)
ls3262	Linux S390 R2.6 GCC 2.9.5 (32 bit)
ls3263	Linux S390 R2.6 (32 bit)
ls3265	Linux S390 R2.6 GCC 2.9.5 (64 bit)
ls3266	Linux S390 R2.6 (64 bit)
lx8243	Linux x86_64 R2.4 (32 bit)
lx8246	Linux x86_64 R2.4 (64 bit)
lx8263	Linux x86_64 R2.6 (32 bit)
lx8266	Linux x86_64 R2.6 (64 bit)
lia246	Linux ia64 R2.4 (64 bit)
lia266	Linux ia64 R2.6 (64 bit)
lpp246	Linux ppc R2.4 (64 bit)
lpp263	Linux ppc R2.6 (32 bit)
lpp266	Linux ppc R2.6 (64 bit)
mvs	MVS™
osf1	Digital UNIX
os2	OS/2
os400	i5/OS system
sol24	Solaris R2.4
sol25	Solaris R2.5
sol26	Solaris R2.6
sol273	Solaris R7 (32 bit)
sol276	Solaris R7 (64 bit)
sol283	Solaris R8 (32 bit)
sol286	Solaris R8 (64 bit)
sol293	Solaris R9 (32 bit)
sol296	Solaris R9 (64 bit)
sol503	Solaris R10 (32 bit)
sol506	Solaris R10 (64 bit)
sol603	Solaris R10 Opteron (32 bit)
sol606	Solaris R10 Opteron (64 bit)
ta6046	Tandem Itanium (64 bit)
tv6256	Tandem MIPS (64 bit)
tsf50	Tru64 V5.0
unix	UNIX

Table 3. Operating system architecture abbreviations (continued)

Abbreviation	OS Architecture
winnt	Windows NT
wix64	Windows 86-x64

Appendix G. Product library

This following documents provide information about WebSphere MQ Configuration agent, WebSphere MQ Monitoring agent, and WebSphere Message Broker Monitoring agent:

- *IBM Tivoli Composite Application Manager Agent for WebSphere MQ User's Guide*

  Provides instructions for using the WebSphere MQ Monitoring agent.
- *IBM Tivoli Composite Application Manager Configuration Agent for WebSphere MQ User's Guide*

  Provides instructions for using the WebSphere MQ Configuration agent.
- *IBM Tivoli Composite Application Manager Agent for WebSphere Message Broker User's Guide*

  Provides instructions for using the WebSphere Message Broker Monitoring agent.
- *IBM Tivoli Composite Application Manager Agents for WebSphere Messaging: Troubleshooting Guide*

  Provides problem determination and resolution information for the issues most commonly encountered with WebSphere MQ Configuration agent, WebSphere MQ Monitoring agent, and WebSphere Message Broker Monitoring agent.
- *IBM Tivoli Composite Application Manager Agents for WebSphere Messaging: Upgrade and Migration Guide*

  Provides information about how to upgrade or migrate from previous versions of WebSphere MQ Configuration agent, WebSphere MQ Monitoring agent, and WebSphere Message Broker Monitoring agent to version 7.3.

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Glossary

This glossary includes terms and definitions for ITCAM Agents for WebSphere Messaging.

The following cross-references are used in this glossary:

- See refers you from a term to a preferred synonym, or from an acronym or abbreviation to the defined full form.
- See also refers you to a related or contrasting term.

To view glossaries for other IBM products, go to www.ibm.com/software/globalization/terminology (opens in new window).

A

access The ability to read, update, or otherwise use a resource. Access to protected resources is usually controlled by system software.

access management
The process of controlling access to IT services, data, or other assets.

address space
The range of addresses available to a computer program or process. Address space can refer to physical storage, virtual storage, or both. See also buffer pool.

agent Software that is installed to monitor systems. An agent collects data about an operating system, a subsystem, or an application.

aggregation
The process of collecting, interpreting, and sorting data from various locations into a single file.

alert A message or other indication that signals an event or an impending event. See also event.

attribute

1. The application properties that are measured and reported on, such as the amount of memory that is used or a message ID. See also attribute group.
2. Data that is associated with a component. For example, a host name, IP address, or the number of hard drives can be attributes associated with a server component.

attribute group
A set of related attributes that can be combined in a view or a situation. See also attribute, situation, view.

audit A process that logs modifications to the database and plan.

B

batch

1. Pertaining to a group of jobs to be run on a computer sequentially with the same program with little or no operator action.
2. A group of records or data processing jobs brought together for processing or transmission.

batch job
A predefined group of processing actions submitted to the system to be performed with little or no interaction between the user and the system.

batch mode
The condition established so that batch processing can be performed.

BPM See business performance management.

broker
A set of execution processes that host one or more message flows. See also execution group, message flow.

buffer pool
An area of memory into which data pages are read and in which they are modified and held during processing. See also address space.

bundle
A packaged collection of software products that is purchased as one item and that has its own product identifier (PID).

business performance management (BPM)
The monitoring, management, and tuning

of business performance in real time through the analysis of business relevant information.

C

channel
A WebSphere MQ object that defines a communication link between two queue managers (message channel) or between a client and a queue manager (MQI channel). See also queue manager.

client A software program or computer that requests services from a server. See also host, server.

cluster

1. In WebSphere MQ, a group of two or more queue managers on one or more computers, providing automatic interconnection, and allowing queues to be advertised among them for load balancing and redundancy.
2. In Microsoft Cluster Server, a group of computers, connected together and configured in such a way that, if one fails, MSCS performs a failover, transferring the state data of applications from the failing computer to another computer in the cluster and reinitiating their operation there.

cluster queue manager
A queue manager that is a member of a cluster. A queue manager can be a member of more than one cluster.

component
A software item that is part of a software product, and might be separately identified, but is not individually licensed.

condition

1. An expression that consists of an agent attribute, an operator such as great than or equal to, and a value. It can be read as, "If - system condition - compared to - value - is true. See also situation.
2. A test of a situation or state that must be in place for a specific action to occur.

configuration
The manner in which the hardware and software of a system, subsystem, or network are organized and interconnected.

D

data set
The major unit of data storage and retrieval, consisting of a collection of data in one of several prescribed arrangements and described by control information to which the system has access.

dead-letter queue (DLQ)
A queue to which a queue manager or application sends messages that cannot be delivered to their correct destination.

deployment
The process of installing and configuring a software application and all its components.

DLQ See dead-letter queue.

dynamic queue
A local queue created when a program opens a model queue object.

E

enterprise
The composite of all operational entities, functions, and resources that form the total business concern and that require an information system.

event An occurrence of significance to a task or system. Events can include completion or failure of an operation, a user action, or the change in state of a process. See also alert, situation.

execution group
A named process or set of processes within a broker in which message flows are executed. The broker is guaranteed to enforce some degree of isolation between message flows in distinct execution groups by ensuring that they execute in separate address spaces, or as unique processes. See also broker, message flow.

F

full repository
A complete set of information about every queue manager in a cluster. This set of information is called the repository or sometimes the full repository and is usually held by two of the queue managers in the cluster. See also partial repository.

function
Any instruction or set of related instructions that performs a specific operation.

H

host A computer that is connected to a network and that provides an access point to that network. The host can be a client, a server, or both a client and server simultaneously. See also client, server.

hot standby
A redundant server that, if the primary server or hub server fails, assumes the responsibilities of the failed server.

I

integration
The software development activity in which separate software components are combined into an executable whole.

L

launch-in-context
An operation in which a user starts a secondary application from a primary application to perform a specific task. Using the parameters, navigation instructions, and user credentials that are supplied by the primary application, the secondary application opens to the specific place in which to complete the task.

M

managed object
A resource that is subject to management as viewed from a systems management perspective. Examples of such resources are a connection, a scalable system, or a line.

managed system
A system that is being controlled by a given system management application.

manager
An entity that monitors or controls one or more managed objects by (a) receiving notifications regarding the objects and (b) requesting management operations to modify or query the objects.

message flow
A sequence of processing steps that execute in the broker when an input message is received. Message flows are defined in the workbench by including a number of message flow nodes, each of which represents a set of actions that define a processing step. The connections in the flow determine which processing steps are carried out, in which order, and under which conditions. See also broker, execution group, subflow.

middleware
Software that acts as an intermediate layer between applications or between client and server. It is used most often to support complex, distributed applications in heterogeneous environments.

module
A program unit that is discrete and identifiable with respect to compiling, combining with other units, and loading.

monitoring agent
See agent.

multi-instance queue manager
A queue manager that is configured to share the use of queue manager data with other queue manager instances. One instance of a running multi-instance queue manager is active, other instances are on standby ready to take over from the active instance. See also queue manager.

O

offering

1. A logical unit of software packaging and sharing that has a managed development and maintenance life cycle and customer visible attributes (offering features, product IDs, licenses, maintenance contracts, and so forth). An offering is a serviceable software asset that is orderable by an IBM customer. It can be a collection of common components, assemblies, and other offerings.
2. The element or integrated set of elements (hardware, software, services) designed to satisfy the wants and needs of current and/or prospective customers. A solution is the application of the offering in a specific customer environment. See also solution.

P

partial repository
A partial set of information about queue managers in a cluster. A partial repository is maintained by all cluster queue managers that do not host a full repository. See also full repository.

performance management

1. The discipline that encompasses capacity planning, collecting performance data, and tuning resources.
2. The management processes and systems needed to effectively deliver business services.

PID See product identifier.

platform
The combination of an operating system and hardware that makes up the operating environment in which a program runs.

policy A set of considerations that influence the behavior of a managed resource or a user.

product ID
See product identifier.

product identifier (PID, product ID)
A unique value that identifies an IBM software product. Every mainframe and distributed IBM software product has a PID.

Q

query In a Tivoli environment, a combination of statements that are used to search the configuration repository for systems that meet certain criteria. The query object is created within a query library.

queue An object that holds messages for message-queueing applications. A queue is owned and maintained by a queue manager.

queue manager
A component of a message queuing system that provides queuing services to applications. See also channel, multi-instance queue manager.

queue-sharing group
In WebSphere MQ for z/OS, a group of queue managers in the same sysplex that can access a single set of object definitions stored in the shared repository, and a single set of shared queues stored in the coupling facility.

R

registry
A repository that contains access and configuration information for users, systems, and software.

S

sampled event
An event that happens when a situation becomes true. Situations sample data at regular intervals. When the situation is true, it opens an event, which is closed automatically when the situation returns to false.

segment
A set of customers/buyers within a market who have common wants, needs, characteristics and buying behavior. These wants and needs are sufficiently homogeneous that a consistent set of strategies, marketing campaigns and sales tactics can be directed toward them.

server A software program or a computer that

provides services to other software programs or other computers. See also client, host.

service request
A request from a user for help, information, advice, or access to an IT service.

severity level
A classification for an event that indicates its degree of severity. The predefined severity levels, in order of descending severity, are: fatal, critical, warning, minor, harmless, and unknown.

situation
A set of conditions that, when met, creates an event. See also attribute group, condition, event.

snapshot
A capture of data at a point time for performance analysis.

solution
A combination of products that addresses a particular customer problem or project.

started task
In MVS, a process that begins at system start and runs unattended. Started tasks are generally used for critical applications. The UNIX equivalent of a started task is a daemon.

state An indication associated with an icon, color, and severity level assigned to a situation at a point in time. A situation can reflect one of the following states: critical, warning, or informational.

status The true or false condition of a situation.

subflow
A sequence of processing steps, implemented using message flow nodes, that is designed to be embedded in a message flow or in another subflow. A subflow must include at least one Input or Output node. A subflow can be executed by a broker only as part of the message flow in which it is embedded, and therefore it cannot be deployed. See also message flow.

subnet
See subnetwork.

subnetwork (subnet)
A network that is divided into smaller independent subgroups, which still are interconnected.

subscription
In a Tivoli environment, the process of identifying the subscribers that the profiles are distributed to.

summarization
The process of aggregating events and then submitting the set of events with a much smaller number of summary events.

system
A computer and its associated devices and programs.

T

TCP/IP
See Transmission Control Protocol/Internet Protocol.

threshold
A customizable value for defining the acceptable tolerance limits (maximum, minimum, or reference limit) for an application resource or system resource. When the measured value of the resource is greater than the maximum value, less than the minimum value, or equal to the reference value, an exception or event is raised.

transaction
A unit of processing consisting of one or more application programs, affecting one or more objects, that is initiated by a single request.

Transmission Control Protocol/Internet Protocol (TCP/IP)
An industry-standard, nonproprietary set of communication protocols that provides reliable end-to-end connections between applications over interconnected networks of different types.

transmission queue
A local queue on which prepared messages destined for a remote queue manager are temporarily stored.

U

upgrade
To install a new version or release of a product to replace an earlier version or release of the same product.

user profile
A description of a user that includes such information as user ID, user name, password, access authority, and other attributes that are obtained when the user logs on.

V

view A window pane, or frame, in a workspace. It may contain data from an agent in a chart or table, or it may contain a terminal session or notepad, for example. A view can be split into two separate, autonomous views. See also attribute group.

W

workspace

1. A window comprised of one or more views.
2. In Tivoli management applications, the working area of the user interface, excluding the Navigator pane, that displays one or more views pertaining to a particular activity. Predefined workspaces are provided with each Tivoli application, and systems administrators can create customized workspaces.

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Printed in USA

SC14-7522-01