IBM Tivoli Enterprise Console

Installation Guide

Version 3.8
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Preface

The IBM Tivoli Enterprise Console Installation Guide explains how to install and upgrade components of the IBM Tivoli Enterprise Console product using installation mechanisms provided by the Tivoli products.

This guide explains how to manage and install Tivoli product images using one of the following installation mechanisms:

- Tivoli Software Installation Service
- Tivoli desktop
- Command line

This guide provides details for installing all components of the IBM Tivoli Enterprise Console product, including product tags, installation order, and other information pertinent to a successful product installation for your enterprise environment.

For hardware and software requirements, see the IBM Tivoli Enterprise Console Release Notes.

Who Should Read This Book

The target audience for this guide is system administrators responsible for the installation of Tivoli® products, and patches, and system managers and database administrators who use Tivoli products to monitor and manage resource events. Users of this guide should have prior knowledge of the following:

- Your enterprise operating system
- The Tivoli Enterprise Installation Guide
- The Tivoli Management Framework product
- IBM NetView Integrated TCP/IP Services component documentation

This book is also useful for network planners and system managers.

What This Book Contains

This book contains the following:

- Chapter 1, “Introduction” on page 1
- Chapter 2, “Deployment Scenarios” on page 5
- Chapter 3, “Installation Road Map” on page 13
- Chapter 4, “Quick Start for a Simple Environment” on page 21
- Chapter 5, “Installing Components” on page 29
- Chapter 6, “Event Database Configuration” on page 49
- Chapter 7, “Upgrading Components” on page 75
- Chapter 8, “Uninstalling Components” on page 79
- Chapter 9, “Installing Adapters” on page 83
- Chapter 10, “Upgrading Adapters” on page 97
- Chapter 11, “Uninstalling Adapters” on page 101
Publications

This section lists publications in the IBM Tivoli Enterprise Console library and any other related documents. It also describes how to access Tivoli publications online, how to order Tivoli publications, and how to make comments on Tivoli publications.

IBM Tivoli Enterprise Console Library

The following manuals complement the information contained in this manual:

- The IBM Tivoli Enterprise Console Adapters Guide, GC-0668
  Provides information about the currently available adapters.

  Discusses how to develop your own event adapters that are tailored to your network environment and your specific needs. Additionally, the guide describes how to filter events at the source.

- IBM Tivoli Enterprise Console Reference Manual, GC32-0666
  Provides details about command-line commands applicable to using the IBM Tivoli Enterprise Console product, the predefined tasks shipped in the task library, and the environment variables available to tasks that execute with an event.

  Discusses how to develop rules and integrate them for event correlation and automated event management.

  Discusses how to plan for and configure your event database environment and describes components, roles, and other information for using the IBM Tivoli Enterprise Console product.

Prerequisite Publications

To be able to use the information in this guide effectively, you must have some prerequisite knowledge, which you can get from the following books:

- Tivoli Enterprise Installation Guide
- Tivoli Management Framework User's Guide
- Tivoli Management Framework Reference Manual
- Tivoli Management Framework Planning for Deployment Guide
- Tivoli Management Framework Maintenance and Troubleshooting Guide

These manuals contain detailed information about the desktop, managed nodes, administrators, operators, policy regions, profiles, notices, tasks, and scheduling.

Related Publications

The following documents also provide useful information:

- The documentation library for the IBM NetView Integrated TCP/IP Services component.

  Note: In this document, the term NetView component is synonymous with the IBM NetView Integrated TCP/IP Services component.

- IBM Tivoli Enterprise Console Data Warehouse Implementation Guide, Version 3.8

- Tivoli Event Integration Facility User's Guide
The Tivoli Glossary includes definitions for many of the technical terms related to Tivoli software. The Tivoli Glossary is available, in English only, at the following Web site:

http://www.tivoli.com/support/documents/glossary/termsm03.htm

Accessing Publications Online

Publications in the product libraries are included in PDF or HTML formats, or both, on the product CD. To access these publications using a Web browser, open the infocenter.html file, which is located in the appropriate publications directory on the product CD.

When IBM publishes an updated version of one or more online or hardcopy publications, they are posted to the Tivoli Information Center. You can access updated publications in the Tivoli Information Center from the following Customer Support Web site: http://www.tivoli.com/support/documents/

The Tivoli Information Center contains the most recent version of the books in the product library in PDF or HTML formats, or both. Translated documents are also available for some products.

Note: If you print PDF documents on other than letter-sized paper, select the Fit to page check box in the Adobe Acrobat Print dialog (which is available when you click File —> Print) to ensure that the full dimensions of a letter-sized page are printed on the paper that you are using.

Ordering Publications

You can order many Tivoli publications online at the following Web site: http://www.tivoli.com/support/Prodman/html/pub_order.html

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

- In the United States: 800-879-2755
- In Canada: 800-426-4968
- In other countries, for a list of telephone numbers, see the following Web site: http://www.tivoli.com/inside/store/lit_order.html

Providing Feedback about Publications

We are very interested in hearing about your experience with Tivoli products and documentation, and we welcome your suggestions for improvements. If you have comments or suggestions about our products and documentation, send an e-mail to pubs@tivoli.com or complete the customer feedback survey at the following Web site:

http://www.tivoli.com/support/survey/

Accessibility

Accessibility features help a user who has 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 IBM Tivoli Enterprise Console User’s Guide.
Contacting IBM Customer Support for Tivoli Products

If you have a problem with any Tivoli product, you can contact IBM Customer Support for Tivoli products. See the Tivoli Customer Support Handbook at the following Web site: [http://www.tivoli.com/support/handbook/]

The handbook provides information about how to contact Customer Support, depending on the severity of your problem, and the following information:

- Registration and eligibility
- Telephone numbers and e-mail addresses, depending on the country in which you are located
- What information you should gather before contacting Customer Support

Conventions Used in This Book

This book uses several conventions for special terms and actions, operating system-dependent commands and paths, margin graphics, or icons.

Typeface Conventions

The following typeface conventions are used in this book:

**Term**

Lowercase and mixed-case commands, command options, and flags that appear within text appear like this, in bold type.

Graphical user interface elements (except for titles of windows and dialogs) and names of keys also appear like this, in bold type.

*Italic*

Variables, values you must provide, new terms, and words and phrases that are emphasized appear like this, in italic type.

**Monospace**

Commands, command options, and flags that appear on a separate line, code examples, output, and message text appear like this, in monospace type.

Names of files and directories, text strings you must type, when they appear within text, names of Java methods and classes, and HTML and XML tags also appear like this, in monospace type.

Operating System-dependent Variables and Paths

This book uses the UNIX convention for specifying environment variables and for directory notation.

This guide uses the backward slash (\) convention at the end of a line of example text to indicate that the text shown on the following line has wrapped due to the space restrictions of the page. The example should be interpreted as being on one line.

When using the Windows command line, replace $variable with %variable% for environment variables and replace each forward slash (/) with a backslash (\) in directory paths.

**Note:** If you are using the bash shell on a Windows system, you can use the UNIX conventions.
Other Conventions

This book uses several conventions for special terms and actions, operating system-dependent commands and paths, and margin graphics or icons.

To select a pull-down menu, position the cursor over a word in a menu bar and click the left mouse button.

To select a pop-up menu, position the cursor over an icon and click the right mouse button.

Procedures can include a table listing the context and authorization role required to perform the procedure. The Activity cell includes a brief description of the procedure, the Context cell explains where in the Tivoli environment the procedure takes place, and the Required Role cell lists the authorization role required to perform the procedure. The following table is an example.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Context</th>
<th>Required Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Configuring an event console</td>
<td>Event console</td>
<td>user</td>
</tr>
</tbody>
</table>

Command and Task Online Information

Information in HTML format about each IBM Tivoli Enterprise Console command and task, along with other IBM Tivoli Enterprise Console online reference information, is available on the event server host at $BINDIR/..generic_unix/TME/TEC/BOOKS/HTML/reference.html. This information is also available on the product CD at /BOOKS/HTML/reference.html. See the IBM Tivoli Enterprise Console Release Notes for additional information.

Platform-specific Information

For detailed information on the supported platform versions known at the time of publication, see the IBM Tivoli Enterprise Console Release Notes.

IBM Tivoli Enterprise Console Icons

The following icons are used in the IBM Tivoli Enterprise Console product.

Note: Other icons are described in the Tivoli Management Framework User’s Guide.

<table>
<thead>
<tr>
<th>Icon</th>
<th>Represents</th>
</tr>
</thead>
</table>
| ![Event Server](image) | Event Server  
The red arrow indicates the event server is running.  
A hollow arrow indicates the event server is initializing. |
| ![Rule Base](image)     | Rule Base  
The red arrow indicates the rule base is active. |
| ![Profile](image)       | Profile  
A profile is a collection of application-specific data. |
Chapter 1. Introduction

System Requirements
For the most current information about supported platforms and information specific to each platform, see the IBM Tivoli Enterprise Console Release Notes.

IBM Tivoli Enterprise Console Considerations
When planning, installing, or upgrading components of the IBM Tivoli Enterprise Console product, review the following sections.

General Considerations
For the product to work within your Tivoli environment, you must install the following products before installing any IBM Tivoli Enterprise Console component:
• The Tivoli Management Framework software on each machine.
• In a client/server configuration:
  – The RDBMS client software and the RIM host must be on the same managed node.
  – The RDBMS server can be on any machine. It does not need to be a managed node.
• In a server-only RDBMS configuration, the RDBMS server must be installed on a managed node. The RIM host must be on this same managed node.

For additional information about the RIM host, see the Tivoli Enterprise Installation Guide.

IBM Tivoli Enterprise™ software supports the following databases:
• DB2®
• Informix
• Microsoft SQL Server
• Oracle
• Sybase

For information about which releases are supported, refer to the latest Tivoli Management Framework Release Notes.

RIM Host Considerations
The RIM host provides communication between the Tivoli product and the RDBMS. Consider the following when you select a machine to serve as your RIM host:
• The machine must be a managed node.
• In most Tivoli environments using the IBM Tivoli Enterprise Console product, the most efficient place for the RIM host is on the event server.
• If the RIM host runs in an HP-UX or Windows environment, ensure that the tmersrvd user is defined on that machine. See the Tivoli Management Framework Release Notes for information about the tmersrvd user.
• See the Tivoli Management Framework User’s Guide for detailed information about adding and defining the tmersrvd account.

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Note: If you change the RDBMS vendor or move the RIM host to another managed node, you must delete and re-create the RIM object using the `wdel` and `wcrtrim` commands, respectively. If you need to change other attributes associated with the RIM object, you can use the `wsetrim` command or the `wsetrimpw` command to change the password. For additional information about these and other RIM commands, refer to the Tivoli Management Framework Reference Manual.

Event Server Considerations

The Tivoli Enterprise Console event server must be installed on a managed node. Remember that the Tivoli management region server is a managed node. Ensure that you have at least 256 MB of RAM on the machine where the event server is installed. Tivoli recommends 1 GB of RAM for large environments.

For additional configuration information, refer to “IBM Tivoli Enterprise Console Components in Different Tivoli Management Regions” on page 7.

Event Console Considerations

The event console can be installed on a managed node, endpoint, or a non-TME machine. The non-TME version of the event console can be installed on any machine, but does not use the Tivoli Management Framework services. For example, a console in a Tivoli Management Framework environment utilizes the `oserv` service for product installations on managed nodes within the Tivoli management region whereas a non-TME installation (one that does not use Tivoli Management Framework services) is used only on endpoints and machines that are not managed nodes.

Note: Both the Tivoli management environment and non-TME versions of the event console require that you login in the same manner as you would for the Tivoli desktop. For more information about logging in using the Tivoli desktop, see the Tivoli Management Framework User’s Guide.

For configuration information about event consoles in different Tivoli management regions, see “IBM Tivoli Enterprise Console Components in Different Tivoli Management Regions” on page 7.

Adapter Configuration Facility Considerations

The ACF is a profile-based application used to distribute configuration information to selected Tivoli management environment adapters. If you use the ACF, you must install it on the following machines:

- The Tivoli management region server
- All managed nodes that are endpoint gateways

The following adapters can be used only on endpoints in a Tivoli management environment. To install and configure these adapters on endpoints, you must use the ACF.

- OS/2
- Simple Network Management Protocol (SNMP)
- UNIX logfile
- Windows event log
- Windows NT event log

The non-TME version of these adapters do not require Tivoli Management Framework software; therefore, they will run on any supported platform.
For additional information about installing adapters, refer to Chapter 9, “Installing Adapters” on page 83. For additional information about configuring adapters with ACF, refer to the *IBM Tivoli Enterprise Console Adapters Guide*. 
Chapter 2. Deployment Scenarios

You can install the components of the IBM Tivoli Enterprise Console product in many different scenarios. The following sections provide information about potential deployment scenarios. The way that you deploy the product depends on your business needs and on which RDBMS you are using.

Note: Some RDBMS vendors require that you install the RDBMS client locally to connect to the local RDBMS server.

IBM Tivoli Enterprise Console and RDBMS on a Managed Node

In this scenario, the Tivoli management region server is on one managed node and the event server, RIM host, and RDBMS server are on another managed node. The following graphic illustrates this scenario:

The advantages of this scenario are as follows:
- The Tivoli management region machine and the event server machine have more processing power and separate memory.
- It minimizes network congestion, because the RDBMS is local to the event server and the RIM host and event server are local to the Tivoli management region.

The disadvantage of this scenario is that it requires two machines and some debugging scenarios will require comparing two separate oserv logs.
IBM Tivoli Enterprise Console on a Managed Node with Remote RDBMS Server

In this scenario, the event server, the RIM host, and the RDBMS client are on a managed node and the RDBMS server is on a machine not managed by IBM Tivoli Enterprise software. The following graphic illustrates this scenario:

The advantage of this scenario is that it spreads the processing load of the Tivoli management region, event server, and RDBMS across three machines.

The disadvantage of this scenario is that there are network constraints, three machines are required, and some debugging scenarios will require comparing two separate oserv logs.

All on the Tivoli Management Region Server

In this scenario, the event server, the RIM host, and the RDBMS server are on the Tivoli management region server. The following graphic illustrates this scenario:

The advantages of this scenario are as follows:
- Reduces network congestion and communication delays between the processes
- Less expensive, because everything is on one machine
- Easier to debug Tivoli Management Framework-related issues because all information is in one oserv log

The disadvantage of this scenario is that it requires significantly more memory and processor speed for all three servers to reside on one processor and therefore should not be used for systems with high event throughput.
All on the Tivoli Management Region Server except RDBMS Server

In this scenario, the event server, the RIM host, and the RDBMS client are on the Tivoli management region server and the RDBMS server is on a machine not managed by IBM Tivoli Enterprise software. The following graphic illustrates this scenario:

The advantage of this scenario is that it offloads the RDBMS processor load to another machine.

The disadvantages of this scenario are as follows:
- Potential network congestion to the RDBMS server
- More expensive when using a dedicated RDBMS server because it requires a second machine

IBM Tivoli Enterprise Console Components in Different Tivoli Management Regions

In some cases, installing the event server and event console together in a separate Tivoli management region relieves oserv contention. This scenario is for customers already using or planning to use multiple interconnected Tivoli management regions or multiple installations of the IBM Tivoli Enterprise Console product.

Although you have the capability to interconnect Tivoli management regions and share the other resources, Tivoli management regions do not need to be interconnected to share the event console. A Tivoli management environment or non-TME event console should be installed for each node that you want to run an event console.

In this scenario, consider having an operator set up as an administrator on the Tivoli management region that has all of the IBM Tivoli Enterprise Console components installed.

You can create a Tivoli management region containing only the event server, event console, RIM host, and RDBMS server. In another Tivoli management region, you install any remaining IBM Tivoli Enterprise Console components and any IBM Tivoli Enterprise software needed in your Tivoli environment.

**Note:** When you have two Tivoli management regions on the same subnet, you will have the same network congestion as if you used only one Tivoli management region.
The following graphic illustrates this scenario:

For interconnected Tivoli management regions to work with the IBM Tivoli Enterprise Console product, you need to provide a two-way connection between the Tivoli management regions. In the primary Tivoli management region, you need to register the resource for the event server (EventServer) with the name registry. Use the following procedure to create this type of configuration:

1. Install the event server in Tivoli management region B.
2. On the Tivoli management region server of Tivoli management region A, register the IBM Tivoli Enterprise Console resources using the following commands:
   \texttt{wregister -i -r EventServer}
3. Exchange all resources on Tivoli management region A and Tivoli management region B.
4. Install non-TME event consoles as needed on machines in Tivoli management region A to have event consoles that access the event server in Tivoli management region B.

For additional information about the \texttt{wregister} command, refer to the \textit{Tivoli Management Framework Reference Manual}.

After registering the objects in the primary Tivoli management region, you must update the resources either from the Tivoli desktop or with the \texttt{wupdate} command.

\textbf{Note:} For a Tivoli environment that already uses multiple Tivoli management regions, or for a Tivoli environment that uses multiple IBM Tivoli Enterprise Console installations for failovers, this scenario can serve your business needs.
IBM Tivoli Enterprise Console with NetView and RDBMS on a Managed Node

In this scenario, the Tivoli management region server is on one managed node and the event server (connected to the NetView server), RIM host, and RDBMS server are on another managed node. The following graphic illustrates this scenario:

![Diagram of Tivoli Management Region Server, Managed Node, Event Server, NetView, RIM Host, RDBMS Server]

The advantages of this scenario are as follows:
- The Tivoli management region machine and the event server machine, which is attached to the NetView server, have more processing power and separate memory.
- It minimizes network congestion, because the RDBMS is local to the event server and the RIM host and event server are local to the Tivoli management region.

The disadvantage of this scenario is that it requires two machines and some debugging scenarios will require comparing two separate *oserv* logs.

IBM Tivoli Enterprise Console with NetView on a Managed Node with Remote RDBMS Server

In this scenario, the event server, the RIM host, and the RDBMS client are on a managed node and the RDBMS server is on a machine not managed by IBM Tivoli Enterprise software. The event server on the managed node is connected to the IBM Tivoli management region server with NetView. The following graphic
illustrates this scenario:

The advantage of this scenario is that it spreads the processing load of the Tivoli management region, event server, and RDBMS across three machines.

The disadvantage of this scenario is that there are network constraints, three machines are required, and some debugging scenarios will require comparing two separate oserv logs.

**All on the Tivoli Management Region Server with NetView**

In this scenario, the event server, the RIM host, and the RDBMS server are on the Tivoli management region server. The event server is connected to the NetView server. The following graphic illustrates this scenario:

The advantages of this scenario are as follows:
- Reduces network congestion and communication delays between the processes
- Less expensive, because everything is on one machine
- Easier to debug Tivoli Management Framework-related issues because all information is in one oserv log

The disadvantage of this scenario is that it requires significantly more memory and processor speed for all three servers, including the NetView connection, to reside on one processor.
All on the Tivoli Management Region Server with NetView except RDBMS Server

In this scenario, the event server, the RIM host, and the RDBMS client are on the Tivoli management region server and the RDBMS server is on a machine not managed by IBM Tivoli Enterprise software. The event server is connected to a NetView server on a non-TME machine. The following graphic illustrates this scenario:

The advantage of this scenario is that it offloads the RDBMS processor load to another machine.

The disadvantages of this scenario are as follows:

- Potential network congestion to the RDBMS server
- More expensive when using a dedicated RDBMS server because it requires two additional machines, one for the RDBMS server and one for the NetView server.
Chapter 3. Installation Road Map

Use the installation road map to locate the procedures for installing the IBM Tivoli Enterprise Console components specific to your environment.

Before You Begin

The following product CD images and documentation are part of the IBM Tivoli Enterprise Console product package. Before beginning your installation, ensure that you have the following items:

For Tivoli product installations and upgrades:

- Tivoli Management Framework, Version 3.7.1 CD images
- IBM Tivoli Enterprise Console, Version 3.8 CD images
- The IBM Tivoli Enterprise Console documentation library CD image
- IBM Tivoli Enterprise Console Release Notes
- The NetView Integrated TCP/IP Services Component documentation library and the IBM Tivoli NetView release notes.
- IBM Tivoli Enterprise Console Data Warehouse Implementation, Version 3.8 CD images

For NetView Integrated TCP/IP Services component integration (installation optional):

- NetView Integrated TCP/IP Services component CD image
- NetView Integrated TCP/IP Services Component Release Notes

Note: The NetView Integrated TCP/IP Services Component is referred to as the NetView component in this document.

The following table provides the authorization roles required to perform an IBM Tivoli Enterprise Console product installation.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Context</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Installing or upgrading the IBM Tivoli Enterprise Console product.</td>
<td>Tivoli management region</td>
<td>install_product or senior</td>
</tr>
</tbody>
</table>
## Installation and Upgrade Options

The IBM Tivoli Enterprise Console product offers the following installation and upgrade methods. Select the method in the following table that best suits your requirements.

### Table 1. Product installation options

<table>
<thead>
<tr>
<th>Installation Option</th>
<th>Purpose</th>
<th>Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete first-time installation of product</td>
<td>Use this procedure if you want to step through the Tivoli management environment installation process and database configuration from the Tivoli desktop, Tivoli Software Installation Service, or the command line.</td>
<td>1. Follow the procedures outlined in <a href="#">IBM Tivoli Enterprise Console Installation Options for a New Installation</a> on page 15 for a first-time product installation.</td>
</tr>
<tr>
<td>After successfully installing the IBM Tivoli Enterprise Console product, you may optionally install the NetView component.</td>
<td>This is the standard IBM Tivoli Enterprise Console product installation for production environments and allows full control of the components and their environments according to the needs of your operating environment.</td>
<td>2. Follow the procedures in Chapter 6, “Event Database Configuration” on page 49 to configure your event database. Using the event database installation assistant, you can select a simple or advanced configuration of the event database.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. To proceed with the optional integration of the NetView component, go to “NetView Component Installation Options” on page 19.</td>
</tr>
<tr>
<td>Upgrading existing components</td>
<td>Use this procedure if you want to upgrade IBM Tivoli Enterprise Console components from the Tivoli desktop, the Software Installation Service, or the command line.</td>
<td>1. Follow the procedures outlined in <a href="#">IBM Tivoli Enterprise Console Upgrade Options</a> on page 17 for upgrading components.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Follow the procedures in Chapter 6, “Event Database Configuration” on page 49 to configure your event database.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Note:</strong> If you are upgrading from version 3.6.2 and you want to maintain your current event consoles, event groups, and console operators existing consoles, you must also perform the migration step manually using the <code>wmigcon</code> command. Event consoles are automatically migrated in the upgrade process with versions greater than 3.6.2.</td>
</tr>
<tr>
<td>Migrating event consoles, event classes, and operators when upgrading from version 3.6.2.</td>
<td>Use this procedure to perform an automatic migration of consoles, event groups, and operators in an existing IBM Tivoli Enterprise Console installation to the appropriate format.</td>
<td>Follow the procedures for using the <code>wmigcon</code> command in the IBM Tivoli Enterprise Console Reference Manual.</td>
</tr>
</tbody>
</table>
**Table 1. Product installation options (continued)**

<table>
<thead>
<tr>
<th>Installation Option</th>
<th>Purpose</th>
<th>Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Installing components in a non-English environment</td>
<td>Use this procedure if you want to align an IBM Tivoli Enterprise Console product installation for support in a non-English environment.</td>
<td>Follow the procedures outlined in “Language Pack Installation for Non-English Environments” on page 20 for installing components in a non-English environment.</td>
</tr>
<tr>
<td>Integration of the NetView component with the IBM Tivoli Enterprise Console product</td>
<td>Use this procedure if you want to install and integrate the NetView component for use with the IBM Tivoli Enterprise Console, Version 3.8, product.</td>
<td>Follow the procedures outlined in “NetView Component Installation Options” on page 19 for integrating the NetView component with the IBM Tivoli Enterprise Console product.</td>
</tr>
<tr>
<td>IBM Tivoli Enterprise Console quick start</td>
<td>Use this procedure to expedite a default installation and database configuration of IBM Tivoli Enterprise Console, Version 3.8, product. The IBM Tivoli Enterprise Console quick start instructions use a default configuration that allow you to evaluate capabilities and functions of the base product and its integration with the NetView component. The default values assume a basic component deployment and configuration and is not designed for high throughput operational deployment scenarios.</td>
<td>Follow the procedures in Chapter 4, “Quick Start for a Simple Environment” on page 21</td>
</tr>
</tbody>
</table>

**IBM Tivoli Enterprise Console Installation Options for a New Installation**

It is important that you follow the procedures in the installation instructions, including component installation order. Review the and “Component Installation Order” on page 36 before beginning.

The IBM Tivoli Enterprise Console product offers the following installation methods for a first-time product installation. Select the method in the following table that best suits your requirements.
<table>
<thead>
<tr>
<th>IBM Tivoli Software First-time Installation</th>
<th>Prerequisites</th>
<th>Steps</th>
</tr>
</thead>
</table>
| **IBM Tivoli Enterprise Console, Version 3.8, first-time installation from the Tivoli desktop**  
   **Note:** This installation method assumes that the Tivoli Management Framework product is already installed on your system. | IBM Tivoli Enterprise Console, Version 3.8 CD images  
The deployment strategy for your environment | 1. Back up your object database following the procedures in “Backing Up Object Databases” on page 30  
2. Follow the procedures in “Installation Options Using the Tivoli Desktop” on page 39  
   You will be prompted for specific CD images during the installation process.  
3. Follow the procedures in Chapter 6, “Event Database Configuration” on page 49 to configure your event database.  
4. For your changes to take effect, use the procedures in “Stopping and Starting the Event Server” on page 36 to restart your event server. |
| **IBM Tivoli Enterprise Console, Version 3.8, first-time installation from the command line**  
   **Note:** This installation method assumes that the Tivoli Management Framework product is already installed on your system. | IBM Tivoli Enterprise Console, Version 3.8 CD images  
The deployment strategy for your environment | 1. Back up your object database following the procedures in “Backing Up Object Databases” on page 30  
2. Follow the procedures in “Installation Options Using the Command Line” on page 39  
   You will be prompted for specific CD images during the installation process.  
3. Follow the procedures in Chapter 6, “Event Database Configuration” on page 49 to configure your event database.  
4. For your changes to take effect, use the procedures in “Stopping and Starting the Event Server” on page 36 to restart your event server. |
| **IBM Tivoli Enterprise Console, Version 3.8, first-time installation using the Software Installation Service (SIS)**  
   **Note:** This installation method assumes that the Tivoli Management Framework product is already installed on your system. | IBM Tivoli Enterprise Console, Version 3.8 CD images  
The deployment strategy for your environment | 1. Back up your object database following the procedures in “Backing Up Object Databases” on page 30  
2. Follow the procedures in “Installation Options Using the Tivoli Software Installation Service” on page 40  
   You will be prompted for specific CD images during the installation process.  
3. Follow the procedures in Chapter 6, “Event Database Configuration” on page 49 to configure your event database.  
4. For your changes to take effect, use the procedures in “Stopping and Starting the Event Server” on page 36 to restart your event server. |
IBM Tivoli Enterprise Console Upgrade Options

The IBM Tivoli Enterprise Console product offers the following installation methods for upgrading components. Select the method in the following table that best suits your requirements.

Table 3. Upgrade product installation

<table>
<thead>
<tr>
<th>IBM Tivoli Software to Upgrade</th>
<th>Prerequisites</th>
<th>Steps</th>
</tr>
</thead>
</table>
| Tivoli Enterprise Console, Version 3.7.1, to IBM Tivoli Enterprise Console, Version 3.8 | The Tivoli Management Framework product must be installed on your system. IBM Tivoli Enterprise Console, Version 3.8 CD images | 1. Stop the event server using the procedures outlined in “Stopping and Starting the Event Server” on page 36.  
2. Follow the procedures in Chapter 7, “Upgrading Components” on page 75.  
3. Follow the procedures in Chapter 6, “Event Database Configuration” on page 49 to configure your event database.  
4. For your changes to take effect, use the procedures in “Stopping and Starting the Event Server” on page 36 to restart your event server.  |
2. Follow the procedures in Chapter 7, “Upgrading Components” on page 75.  
3. Follow the procedures in Chapter 6, “Event Database Configuration” on page 49 to configure your event database.  
4. For your changes to take effect, see “Stopping and Starting the Event Server” on page 36.  |
<table>
<thead>
<tr>
<th>IBM Tivoli Software to Upgrade</th>
<th>Prerequisites</th>
<th>Steps</th>
</tr>
</thead>
</table>
2. Install the event console (tec_jconsole) and UI server components (tec_ui_server) as new products, as they did not exist in version 3.6.2. See Chapter 5, “Installing Components” on page 29 for procedures to install a component for the first time. Install the remaining components as upgrades using the procedures in Chapter 7, “Upgrading Components” on page 75.  
3. To maintain your current event consoles, event groups, and console operators when upgrading from version 3.6.2, you must migrate your console information using the wmigcon command. For information about using the wmigcon command, see the IBM Tivoli Enterprise Console Reference Manual.  
4. Upgrade your event database from version 3.6.2 to 3.8 by following the procedures in "Upgrading the Event Database" on page 55.  
5. For your changes to take effect, use the procedures in "Stopping and Starting the Event Server" on page 36 to restart your event server. |
NetView Component Installation Options

The IBM Tivoli Enterprise Console product offers the following installation methods to install the NetView component. Select the method in the following table that best suits your requirements.

Table 4. NetView component installation

<table>
<thead>
<tr>
<th>NetView Component Integration</th>
<th>Prerequisites</th>
<th>Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>NetView component integration, standard methods</td>
<td>Installation of the NetView component is optional.</td>
<td>1. Follow the procedures for integration with the IBM Tivoli Enterprise Console product in the <em>IBM Tivoli NetView for Windows Release Notes</em> or the <em>IBM Tivoli NetView for UNIX Release Notes</em>.</td>
</tr>
<tr>
<td>NetView component integration, standard methods</td>
<td>Installation of the NetView component is optional.</td>
<td>2. Run one of the following scripts, located in the <em>SBINDIR</em> directory, to set up NetView component event groups.</td>
</tr>
<tr>
<td>Installation of the NetView component is optional.</td>
<td>Procedures to manually configure the NetView component integration for UNIX or Windows environment.</td>
<td><strong>wcrtnvgroups</strong></td>
</tr>
<tr>
<td></td>
<td>The IBM Tivoli Enterprise Console event console must be installed before setting up event groups for the NetView component.</td>
<td>For UNIX environments, type the following:</td>
</tr>
<tr>
<td></td>
<td>IBM Tivoli Enterprise Console, Version 3.8 CD images</td>
<td>./<em>wcrtnvgroups</em></td>
</tr>
<tr>
<td></td>
<td>NetView component CD images</td>
<td><strong>wcrtnvgroups.cmd</strong></td>
</tr>
<tr>
<td></td>
<td>For Windows environments, type the following:</td>
<td>For Windows environments, type the following:</td>
</tr>
<tr>
<td></td>
<td>./<em>wcrtnvgroup.cmd</em></td>
<td>For detailed information about the <strong>wcrtnvgroups</strong> command, see the IBM Tivoli Enterprise Console Reference Manual.</td>
</tr>
<tr>
<td>3. Install and configure the NetView server for use with the IBM Tivoli Enterprise Console product using the procedures provided in the <em>Tivoli NetView Release Notes</em>.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

NetView Upgrade Options

The IBM Tivoli Enterprise Console product offers the following upgrade methods for upgrading the NetView component. Select the method in the following table that best suits your requirements.

Table 5. NetView component upgrade

<table>
<thead>
<tr>
<th>NetView Component to Upgrade</th>
<th>Prerequisites</th>
<th>Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any version of the IBM Tivoli NetView product prior to version 7.1.2</td>
<td>Tivoli Management Framework product must be installed on your system</td>
<td>See the <em>NetView Integrated TCP/IP Services component Release Notes</em> for procedures used to upgrade NetView components.</td>
</tr>
<tr>
<td></td>
<td>IBM Tivoli NetView, Version 7.1.2 CD images</td>
<td></td>
</tr>
</tbody>
</table>
Table 5. NetView component upgrade (continued)

<table>
<thead>
<tr>
<th>NetView Component to Upgrade</th>
<th>Prerequisites</th>
<th>Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any version of the IBM Tivoli NetView product prior to version 7.1.3</td>
<td>Tivoli Management Framework product must be installed on your system</td>
<td>See the NetView Integrated TCP/IP Services component Release Notes for procedures used to upgrade NetView components.</td>
</tr>
<tr>
<td>IBM Tivoli NetView, Version 7.1.3 CD images</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Language Pack Installation for Non-English Environments

The IBM Tivoli Enterprise Console product offers the following installation method for installing language packs for non-English environments.

Table 6. Language pack installation for non-English environments

<table>
<thead>
<tr>
<th>IBM Tivoli Software to Install</th>
<th>Prerequisites</th>
<th>Steps</th>
</tr>
</thead>
</table>
Chapter 4. Quick Start for a Simple Environment

This chapter describes how to quickly install and start the IBM Tivoli Enterprise Console product and the NetView component. This quick start documentation helps you install a simple environment for the IBM Tivoli Enterprise Console product. For most production environments, follow the installation instructions in Chapter 5, “Installing Components” on page 29 and Chapter 6, “Event Database Configuration” on page 49.

To simplify the installation process, the quick start instructions assume the following about your environment, with the recognition that the product supports a much more flexible environment:

• This is a first-time installation of the product.
• The environment has one of the following operating systems and related patches:
  – AIX
  – Solaris Operating Environment
  – Windows NT
  – Windows 2000
• SNMP is installed and started on the machine where you want to perform the installation.
• The event database is installed on a DB2 RDBMS, using the simple option of the event database installation assistant.
• The DB2 RDBMS for the event database is already installed using the DB2 Typical installation option. The DB2 server and client must be on the same machine where you install the IBM Tivoli Enterprise Console product. See “Installing and Configuring the RDBMS” on page 30 for more information.

Note: See the IBM Tivoli Enterprise Console Release Notes for a list of supported operating systems, DB2 versions, and required patches.

These instructions describe how to install and start the following:

• Tivoli Management Framework and patches
• The IBM Tivoli Enterprise Console product
• Event database
• Event console
• NetView component
• NetView Web console

The quick start steps install the IBM Tivoli Enterprise Console product, including the NetView component, on the Tivoli management region server. See “All on the Tivoli Management Region Server” on page 6 for an illustration of this type of deployment.

If your environment and requirements do not match these conditions, see Chapter 5, “Installing Components” on page 29 and Chapter 6, “Event Database Configuration” on page 49 for more complex installations.
Before You Begin

During step 3 on page 25, the event database installation assistant stops the DB2 instance that the IBM Tivoli Enterprise Console product is installed on. Because this procedure forces DB2 users who are currently logged on to log off, you should plan ahead before initiating the event database installation assistant, referred to as the assistant in the rest of this chapter.

You need the following items before beginning the installation:

- Installation media and the following sets of release notes:
  - Tivoli Management Framework Release Notes
  - IBM Tivoli Enterprise Console Release Notes
  - IBM Tivoli NetView Release Notes
- **Administrator** or **root** authority for the machine where you want to perform the installation
- License key for Tivoli Management Framework
- DB2 information: administrator user name, password, database ID, path name, host name, node name, and instance name

Quick Start Steps

Perform the following steps to install and start a simple environment:

1. **Install Tivoli Management Framework**
   
   1. Install Tivoli Management Framework, Version 3.7B:
      
      a. UNIX:
         
         1) Create a local temporary directory, for example /tmp_install.
         2) Change to that directory.
         3) Run the WPREINST.SH script from the Tivoli Management Framework, Version 3.7B CD.
         4) Run the command displayed at the end of the preinstallation script output. For example, the following command is used:
            
            >/wserver -c /cdrom/cdrom0
         5) Select **When installing, create “Specified Directories” if missing** and **Arrange for start of the Tivoli daemon at system (re)boot time.**
            Accept the default locations. Click **Set**.
         6) Accept all other default values, except do not enter information for the **Installation Password**.
         7) Click **Install & Close** and **Continue to Install** to complete the installation.

      
      Messages are displayed in the window indicating the status and completion of the installation. Although the Tivoli desktop is automatically launched, wait until the installation completes before using it.

      b. Windows:
         
         1) From Windows Explorer, navigate to the installation directory on the Tivoli Management Framework, Version 3.7B CD.
         2) Double-click the setup.exe file to start the wizard.
         3) Accept all prompts and default values, except do not enter information in the **Installation Password** or **Remote Access Account** dialog boxes.
4) Select the **Typical** setup.

5) Complete the installation by clicking **Next** on the remaining dialog boxes.

2. Install and launch the Tivoli desktop, Version 3.7B:
   a. Source the Tivoli environment:
      1) UNIX:
         a) Run the `/etc/Tivoli/setup_env.sh` script.
         b) Start the bash shell by typing `bash`.
      2) Windows:
         a) From the command line, run the following script:
            ```
            %SystemRoot%\WINNT\system32\drivers\etc\Tivoli\setup_env.cmd
            ```
         b) Start the bash shell by typing `bash`.
   b. Start the Tivoli desktop:
      1) UNIX:
         a) Launch the Tivoli desktop with the `tivoli` command.
         b) The Tivoli desktop is displayed.
      2) Windows:
         a) From Windows Explorer, navigate to the `\PC\DESKTOP\DISK1` directory on the Tivoli Management Framework, Version 3.7B CD.
         b) Double-click the `setup.exe` file to start the wizard.
         c) Accept all prompts to complete the installation.
         d) To launch the Tivoli desktop, select **Start** —> **Programs** —> **Tivoli** —> **Tivoli**.

3. Upgrade from Tivoli Management Framework, Version 3.7B to Version 3.7.1:
   a. From the Tivoli desktop, select **Desktop** —> **Install** —> **Install Patch**.
   b. If the **Select Product to Install** list contains the correct patch, go to step 3f otherwise, continue to step 3c.
   c. Click **Select Media**. The File Browser dialog box is displayed.
   d. Navigate to the directory that contains the installation image. The installation directory contains the product index (.IND) file.
   e. Click **Set Media & Close** to save the new media path and return to the **Install Patch** dialog box.
   f. Select Tivoli Management Framework 3.7.1.
   g. Click **Install & Close** and **Continue to Install**. Messages are displayed in the window indicating the status and completion of the installation.

4. Install patches for Tivoli Management Framework, Version 3.7.1:
   a. Review the **IBM Tivoli Enterprise Console Release Notes** for the list of required patches and download them.
   b. Extract the files to a temporary directory.
   c. From the Tivoli desktop, select **Desktop** —> **Install** —> **Install Patch**. The Install Patch window is displayed.
   d. If the **Select Product to Install** list contains the correct patch, go to step 4h otherwise, continue to step 4c.
   e. Click **Select Media**. The File Browser dialog box is displayed.
   f. Navigate to the directory that contains the installation image. The installation directory contains the product index (.IND) file.
g. Click **Set Media & Close** to save the new media path and return to the
   **Install Patch** dialog box.

h. Select the patch.

i. Click **Install & Close** and **Continue to Install**. Messages are displayed in
   the window indicating the status and completion of the installation.

j. Repeat this procedure for each required patch.

k. Restart the oserv process with the **odadmin reexec** command.

2. **Install the IBM Tivoli Enterprise Console Product**

   1. From the Tivoli desktop, select **Desktop** —> **Install** —> **Install Product**. The
      **Install Product** window is displayed.

   2. If the **Select Product to Install** list contains the IBM Tivoli Enterprise Console
      product, go to step 6; otherwise, continue to step 3.

   3. Click **Select Media**. The **File Browser** dialog box is displayed.

   4. Navigate to the directory that contains the installation image. The installation
      directory contains the product index (.IND) files.

   5. Click **Set Media & Close** to save the new media path and return to the
      **Install Patch** dialog box.

   6. In the **Install Product** window, a list of IBM Tivoli Enterprise Console
      components are listed. The components must be installed individually in the
      following order:
      
      a. Server

      b. User Interface Server

      c. Sample Event Information

      d. Console

      e. Adapter Configuration Facility

      f. Event Integration Facility (EIF)

   7. Select the component.

   For the **Server installation only**: When you select the Server component, the
   **Install Options** dialog box is displayed. Enter your database values for the
   following options:

   **Table 7. Database values for quick start**

<table>
<thead>
<tr>
<th>Database Vendor</th>
<th>DB2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Database Home</td>
<td>Full path to the directory where the RDBMS server or client software is installed.</td>
</tr>
<tr>
<td></td>
<td>UNIX example: /usr/lpp/db2_07_01</td>
</tr>
<tr>
<td></td>
<td>Windows example: C:\progra~1\sqlib</td>
</tr>
<tr>
<td>Database ID</td>
<td>Unique alias name of the event database (use this same name in “4. Create the Event Database” on page 25).</td>
</tr>
<tr>
<td></td>
<td>Example: tecdb</td>
</tr>
<tr>
<td>Database User ID</td>
<td>User name of the DB2 instance owner for the event database.</td>
</tr>
<tr>
<td></td>
<td>UNIX example: db2inst1</td>
</tr>
<tr>
<td></td>
<td>Windows example: db2</td>
</tr>
</tbody>
</table>
Table 7. Database values for quick start (continued)

<table>
<thead>
<tr>
<th>Database Server ID</th>
<th>Name of host where the database is installed (value of the DB2COMM environment variable). Example: oak</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instance Home</td>
<td>Home directory where the instance was created. For UNIX, it is the value of the SINSTHOME environment variable. For Windows, it is usually the same value as the Database Home option. UNIX example: /home/db2inst1 Windows example: C:\progra~1\sqllib</td>
</tr>
</tbody>
</table>

8. Click Install & Close and Continue to Install. Messages are displayed in the window indicating the status and completion of the component installation.

9. Repeat this procedure for each component listed in step 6 on page 24.

3. Set Up Tivoli Roles and Resources in the Tivoli Desktop

1. From the Tivoli desktop, double-click the Administrators icon.
2. Right-click the Root_TMRServerName-region icon and select Edit TMR Roles.
3. Move all roles from Available Roles to Current Roles.
4. Click Change & Close.
5. Right-click the Root_TMRServerName-region icon and select Edit Resource Roles.
6. For each resource, select and move all roles from Available Roles to Current Roles. Each time you move roles, click Change, otherwise your change is not saved. Click Close after you move all the roles for each resource.
7. Right-click the Root_TMRServerName-region icon and select Edit Logins.
8. Type db2UserID@FullyQualifiedHostName and press Enter.

Note: For some environments, you can use the short host name instead of the fully qualified host name. See the other logins listed in the dialog box as a reference for how to specify the DB2 login.

9. Click Change & Close.
10. Close the Administrators window.
11. Right-click the TMRSerName-region icon and select Managed Resources.
12. Select and move all resources from Available Resources to Current Resources.
13. Click Set & Close.
14. Exit the Tivoli desktop.

4. Create the Event Database

1. Login as the user who is both the DB2 instance owner and the RIM user. This user must have access to the event database tables.
2. Source the Tivoli environment as described in step 2a on page 23.
3. Run the assistant:
   a. To start the assistant, run the wdbinstall.sh script located on the installation media.
   b. Select Simple installation.
c. Enter the database information on each dialog box and complete the
installation by clicking Next. For additional information, see the field-level
help available in each of the dialog boxes in the assistant.

4. Change the RIM password with the following command:
   \texttt{wsetrimpw tec tectec db2\_password}

5. Test the RIM connection with the following command:
   \texttt{wrimitest \_l tec}
   If the RIM connection succeeds, the RIM values are displayed. To close the
   connection and continue, type \texttt{x} at the following prompt:
   \texttt{RIM : Enter Option >}

5. Launch and Configure the Event Console to View Events

1. Login as \texttt{Administrator} or \texttt{root}.
2. Source the environment as described in step "4. Create the Event Database" on page 25
3. Launch the Tivoli desktop.
4. Right-click the \texttt{EventServer} icon and select \texttt{Start-up}.
5. From the bash shell, launch the event console with the following command:
   \texttt{UNIX: tec\_console}
   \texttt{Windows: tec\_console.cmd}
6. Dismiss the error regarding not being an operator. The following steps set up
event groups and operators.
7. In the event console, select \texttt{Windows \textasciitilde Configuration}.
8. Select \texttt{Event Groups}, right-click it, and select \texttt{Create Event Group}.
9. Enter a name and description. Click \texttt{OK}.
10. Select \texttt{Consoles}, right-click it, and select \texttt{Create Console}.
11. In the \texttt{Create Console} window, select the \texttt{Event Groups} tab.
12. Click \texttt{Assign Groups}.
13. In the \texttt{Assign Event Groups to Console} window, select the event group you
created in step 9 on page 26 and select all the roles. Click \texttt{OK}.
14. Select the \texttt{Operators} tab.
15. Select the available operator and move it to the current operator. Click \texttt{OK}.
16. Select \texttt{Windows \textasciitilde Summary Chart View}.
17. Click inside the bar graph to launch the Event Viewer.

6. Install the NetView Component

1. Install the NetView server:
   a. UNIX:
      1) Navigate to the \texttt{instalnv} file in the top-level directory of the installation
         media.
      2) Run the following command:
         \texttt{instalnv \_k SERVER \_t TEC\_server\_name \_p 0}
      3) When prompted, type \texttt{y} to continue. Messages are displayed in the
         window indicating the status and completion of the installation.
   b. Windows:
      1) From Windows Explorer, navigate to the installation directory on the
         NetView component CD.
2) Double-click the **nvinstall.exe** file to start the wizard.
3) Accept the prompts and click **Next** to proceed through the wizard.
4) For installation mode, select **Server**.
5) Enter a password for the NetView account.
6) Select the **Discover Local Subnet Only** option.
7) Leave the SNMP community names blank.
8) Select a non-TME adapter.
9) Enter the name of the host where the event server is located.
10) Select the Windows operating system.
11) Enter 5529 for the port.
12) Complete the installation by clicking **Next**.

After completing the installation of the NetView server, events are sent to the IBM Tivoli Enterprise Console product.

2. Install the NetView Web console:
   a. UNIX:
      1) Create a directory (**$YOURDIR**) for the Web console files.
      2) Extract the `/usr/OV/www/wwwroot/download/nvwc_InterpType_jre.tar` file from the NetView server to the **$YOURDIR** directory.
      3) Create an environment variable named **NVWC_HOME** and set it to **$YOURDIR/nvwc**. This variable allows you to launch the NetView Web console from the event console for the IBM Tivoli Enterprise Console product.
   b. Windows:
      1) From Windows Explorer, navigate to the `%SystemRoot%/usr/OV/www/wwwroot/download` directory.
      2) Double-click the **nvwcinstall.exe** file to start the wizard.
      3) Accept the prompts.
      4) Complete the installation by clicking **Next** on the remaining dialog boxes.
      5) Restart any event consoles.

3. Set up NetView Web console operators:
   a. From the command line, stop the NetView Web server with the following command:
      ```
      ovstop webserver
      ```
   b. In the `/usr/OV/www/conf/NetViewRealm.properties` file, remove the number symbol (#) at the beginning of the root user line to uncomment that line.
   c. Restart the NetView Web server with the following command:
      ```
      ovstart webserver
      ```
   d. The login for the NetView Web console is as follows:
      ```
      User nameoot
      Password
      root
      ```

This completes the quick start installation and configuration. You can now use the event console to look at events.
Chapter 5. Installing Components

Before You Begin

To successfully install the Tivoli Enterprise Console product for the first time, you must complete the following tasks:

1. Select the managed node for the RIM host.
2. If you are installing the IBM Tivoli Enterprise Console product in a Tivoli Management Framework environment, verify the appropriate version of the Tivoli Management Framework product.
3. Back up your Tivoli object databases for the affected machines before and after each product installation.
4. Install and configure the RDBMS for the event database, ensuring that the server or a client resides on the RIM host.
5. Select an installation method for installing the IBM Tivoli Enterprise Console components. You can use one, or a combination of available methods.
6. Install the IBM Tivoli Enterprise Console components in the order shown in "Component Installation Order" on page 36.

If you are using the IBM Tivoli Enterprise Console product without NetView integration, your product installation is complete after this step. For NetView integration, proceed with steps 7 and 8.

7. For NetView integration, run the wcrtnvgroups after script, as shown on page 29 in "NetView Component Installation Options" on page 19.
8. Follow the procedures outlined in the release notes for the NetView component to execute the IBM Tivoli Enterprise Console event console and the NetView component web console integration step on each of your event console hosts.

The following table provides the authorization roles required to perform an IBM Tivoli Enterprise Console product installation.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Context</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Installing Tivoli products</td>
<td>Tivoli management region</td>
<td>install_product or senior</td>
</tr>
</tbody>
</table>

Choosing the RIM Host

The RIM host communicates with the RDBMS database in a common, database-independent manner. Consider the following when you determine which machine is to be your RIM host:

- The RIM host must be a managed node.
- The RIM host must have the RDBMS client or server software installed.
- When the RIM host is an HP-UX or Windows machine, the tmersrvd user account must be defined on that machine. For additional information about the tmersrvd account, refer to the Tivoli Management Framework Release Notes.
- If you change your RIM host, you must delete the RIM object and create a new one using the wdel and wcrttrim commands, respectively. For detailed information about creating the RIM object, see the Tivoli Enterprise Installation Guide.
Choosing the RDBMS Server

The RDBMS server is the machine on which you install the RDBMS server software and the machine hosting the event repository schema. Consider the following when you determine which machine is to be your RDBMS server:

- This machine must have a TCP/IP connection to the RIM host.
- This machine does not need to be a managed node in the Tivoli management region, but it must be on the same subnet as the Tivoli management region.
- This machine must have enough available disk space to support the amount of information that you plan to store in the event repository. Disk space requirements are included in the IBM Tivoli Enterprise Console Release Notes.

Backing Up Object Databases

Before installing, upgrading, or uninstalling any IBM Tivoli Enterprise Console components, you should back up the Tivoli object databases for all affected machines in your Tivoli management region. This backup enables you to return to a known working state. Having a backup is useful if you encounter problems while installing the IBM Tivoli Enterprise Console product.

From the Tivoli desktop, select Desktop → Backup to perform a backup of the object database for the Tivoli management region server and managed nodes. You can also use the wbkupdb command. For additional information about using the wbkupdb command, see the Tivoli Management Framework Reference Manual.

Installing and Configuring the RDBMS

Before installing the IBM Tivoli Enterprise Console product, you must install and configure an RDBMS. During the installation of the event server, you are asked to provide RDBMS information. This information is used to create the RIM object, which enables the product to communicate with the RDBMS.

The following sections include information about installing and configuring the supported RDBMS databases (DB2, Informix, Microsoft SQL Server, Oracle, and Sybase).

Note: It is important to read the Tivoli Management Framework Release Notes and any Tivoli Management Framework patch README files for information about the RIM requirements for your RDBMS. Information contained in the README files may contain RIM changes that supersede the Tivoli Management Framework User’s Guide and the Tivoli Management Framework Release Notes.

Back up your database server before initiating any of the changes described in the following sections. For additional information about backing up your database server, see “Backing Up Object Databases”

RIM Considerations

The RIM host is placed on the IBM Tivoli Enterprise Console server by default. The password for the RIM object created by IBM Tivoli Enterprise Console scripts is set to the default tectec. If needed, perform the following steps to change the RIM host after the IBM Tivoli Enterprise Console server installation:

1. From the command line, enter the following:
   wdel @RIM:tec
2. Run the `wcrtrim` command and specify the new RIM host with the `–h` option and all other options needed to configure the RIM object for the database to which you are connecting.

Notes:

a. When specifying the `wcrtrim –H` option on Windows, the forward slash (/) character for a directory separator character, as in UNIX syntax, can be used.

b. You can change the RIM password using the `wsetrimpw` command. For more information about using the `wcrtrim` and `wsetrimpw` commands, see the *Tivoli Management Framework Reference Manual*.

c. To avoid connection problems, do not use the machine name as the database name in a DB2 environment for Windows.

d. For DB2, RIM requires that the database user and database instance names are the same.

**Installing and Configuring DB2**

From a DB2 perspective, the RIM host is a database client. Therefore, the RIM host must have access to a DB2 server. Either a DB2 server or a DB2 client must be installed on the RIM host.

The following information provides an overview of the steps required to configure DB2 for use with the RIM host. The installation process and considerations for DB2 are independent of this documentation. Therefore, you should follow the installation and configuration information provided in your IBM DB2 documentation. When installing the event server component from the [Install Options](#) dialog, enter the following database values:

**Table 8. DB2 values**

<table>
<thead>
<tr>
<th>Database Vendor</th>
<th>DB2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Database Home</td>
<td>Full path to the directory where the RDBMS server or client software is installed. Equates to the value in the <code>$DBDIR</code> environment variable.</td>
</tr>
<tr>
<td>Database ID</td>
<td>The DB2 database alias name that event database will use.</td>
</tr>
<tr>
<td>Database User ID</td>
<td>For UNIX, the DB2 instance owner. The DB2 instance owner name and the user name should be the same, and equate to, the value in the <code>$DB2INSTANCE</code> environment variable.</td>
</tr>
<tr>
<td>Database Server ID</td>
<td>The value in the DB2COMM environment variable. Generally, this is <code>tcpip</code>.</td>
</tr>
<tr>
<td>Instance Home (required for DB2 only)</td>
<td>Home directory where the instance was created. For UNIX, it is the value of the <code>$INSTHOME</code> environment variable. For Windows, it is usually the same value as the Database Home option. The active instance. For RIM, this should also be the login name of the instance owner. The default on UNIX is <code>db2inst1</code> and, for Windows, the default is <code>DB2</code>.</td>
</tr>
</tbody>
</table>

**Note:** When you install DB2, your environment variables are created in the `.profile` file of the instance owner:

For UNIX, these variables can be set by running the `.db2profile` script (bash, Bourne, or Korn shell) or the `.db2cshrc` script (C shell).
**DB2 Considerations**

You must name the DB2 user the same as the DB2 instance name. For DB2, the DB2 user name must be eight characters or less.

The password for your DB2 user and your IBM Tivoli Enterprise RIM object must match. If you create the RIM object using the `wcrtrim` command, the password can be specified from the command line. If the RIM object was created during installation of the event server, the password is set to `tectec` by default. Reset this password to the DB2 user’s password using the `wsettrimpw` command as follows:

```
wsettrimpw tec tectec DB2_user_password
```

**Note:** On Windows, the DB2 user has the authority to perform database commands. The DB2 command line processor (CLP) must be used when running the SQL scripts located in the `$BINDIR/TME/TEC/sql` directory.

For UNIX, use the `su` command to switch to the DB2 instance owner.

**Configuring the DB2 Server for Remote Client Access**

If the RIM host is the same machine as your DB2 server, no additional configuration is required. If you want remote DB2 clients to access your DB2 server, perform the following procedure:

1. Add the `DB2COMM` environment variable with the value `tcpip`.
2. Configure the DB2 server to accept TCP/IP clients. Edit the `/etc/services` file and add an entry for the connection port. The connection port name must be the same as the instance name. For example, add the following lines to the `services` file:

   ```
   TEC 3700/tcp #DB2 connection service port
   ```

3. From the command line, enter the following:

   ```
   db2 update database manager configuration using svcename TEC
   ```

   This command updates the service name with the connection port name (TEC), which is also the instance name in this example.

**Configuring the DB2 Client**

To configure the DB2 client, perform the following procedure:

1. Configure the client to use TCP/IP to connect to the server. Edit the `/etc/services` file and add the entry for the connection port. The connection port name must be the same as the instance name. For example, add the following line to the `services` file:

   ```
   TEC 3700/tcp #DB2 connection service port
   ```

2. Add the `DB2COMM` environment variable with the value `tcpip`.
3. Catalog the server node and perform the following steps to upgrade the remote database:

   a. Start the DB2 interactive structured query language (SQL) utility by entering the following:

      ```
      db2
      ```

   b. Catalog the server node:

      ```
      catalog tcpip node db2node remote hostname \server service_name
      ```

      where:
db2node
   Specifies the name of the machine where the DB2 client is installed.
   This name must be unique in your node directory list.

hostname
   Specifies the name of the machine where the DB2 server is installed.

service_name
   Specifies the connection port name as defined in the services file.

Installing and Configuring Informix

Before you begin creating an Informix event repository, review the following prerequisites:

- The Informix Client must be installed on the RIM host and the .odbc.ini file must be installed in the directory where the Informix software is installed ($INFORMIXDIR).
- It is recommended that you use unbuffered logging with all Informix databases. The IBM Tivoli Enterprise Console database for Informix is created with unbuffered logging. Do not use American National Standards Institute (ANSI) mode logging, because it can cause problems with database locks that can result in hanging Tivoli application programs.

Note: Testing has shown that Informix databases can have concurrency problems in high transaction or high volume Tivoli environments. Under these types of conditions, tune your Informix server carefully to ensure you do not have locking problems that result in data loss. In certain conditions, enabling row-level locking may resolve locking problems with the IBM Tivoli Enterprise Console product. Consult your Informix database administrator to determine the best lock mode for your environment.

When installing the event server component from the Install Options dialog, enter the following database values:

<table>
<thead>
<tr>
<th>Database Vendor</th>
<th>Informix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Database Home</td>
<td>Full path to the directory where the Informix CLI is installed. Equates to the value in the $INFORMIXDIR environment variable.</td>
</tr>
<tr>
<td>Database ID</td>
<td>The name of the data source defined by the line database=name in the .odbc.ini file.</td>
</tr>
<tr>
<td>Database User ID</td>
<td>Must be informix or an ID that exists as a valid login on the Informix database server.</td>
</tr>
<tr>
<td>Database Server ID</td>
<td>The name of the Informix server defined in the $INFORMIXDIR/etc/sqlhosts file. Equates to the value in the $INFORMIXSERVER environment variable.</td>
</tr>
<tr>
<td>Instance Name</td>
<td>Not required, DB2 only.</td>
</tr>
</tbody>
</table>

For additional installation information specific to Informix, see your Informix documentation.
Installing and Configuring Microsoft SQL Server

Install the Microsoft SQL Server on the RDBMS server. For installation details, refer to your Microsoft SQL Server documentation.

**Note:** The Install Options dialog box displayed during Microsoft SQL Server installation includes a Sort Order option. To use Microsoft SQL Server for your event repository, you must select the Dictionary order, case-sensitive option at installation.

Select a Windows managed node to be the RIM host. The MS SQL Server client or the MS SQL Server must be installed on the RIM host machine.

When installing the event server component from the Install Options dialog, enter the following database values:

*Table 10. MS SQL Server values*

<table>
<thead>
<tr>
<th>Database Vendor</th>
<th>MS SQL Server</th>
</tr>
</thead>
<tbody>
<tr>
<td>Database Home</td>
<td>The directory where the MS SQL Server is installed.</td>
</tr>
<tr>
<td>Database User ID</td>
<td>The name of the database that the application will use.</td>
</tr>
<tr>
<td>Database Server ID</td>
<td>The name of the host running MS SQL Server.</td>
</tr>
<tr>
<td>Instance Name</td>
<td>Not required, DB2 only.</td>
</tr>
</tbody>
</table>

For additional installation information specific to MS SQL Server, see your MS SQL Server documentation.

Installing and Configuring Oracle

Install the Oracle RDBMS and SQL*Plus on the RDBMS server. For installation details, refer to your Oracle documentation.

Select a managed node to be the RIM host.

Complete the following steps to configure the RIM host as an Oracle client using SQL*Plus. Refer to your Oracle documentation if you want to use Oracle names.

1. Install the Oracle client software, which includes SQL*Plus, on the RIM host.
2. If the Oracle server is on a separate machine than the client, copy the tnsnames.ora file from the %ORACLE_HOME%\network\admin directory on the RDBMS server to the %ORACLE_HOME%\network\admin directory on the RIM host where ORACLE_HOME is the environment variable equating to the path to the directory where your Oracle server or client installation resides.
3. Verify that the tnsnames.ora file is properly updated to reflect your configuration. In other words, check that the host name of the server, the Oracle instance ID, the port SQL*Plus is connected to, and the communication protocol are accurate.

When installing the event server component from the Install Options dialog, enter the following database values:

*Table 11. Oracle values*

| Database Vendor | Oracle |
Table 11. Oracle values (continued)

<table>
<thead>
<tr>
<th>Database Home</th>
<th>Equates to the value in the $ORACLE_HOME environment variable.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Database ID</td>
<td>The name of the database that the application will use.</td>
</tr>
<tr>
<td>Database User ID</td>
<td>The RDBMS user that will own the application database. The default is tec.</td>
</tr>
<tr>
<td>Database Server ID</td>
<td>The name of the Oracle listener service in the tnsnames.ora file. Equates to the value in the $TWO_TASK environment variable for a client or $ORACLE_SID on the database server or client.</td>
</tr>
<tr>
<td>Instance Name</td>
<td>Not required, DB2 only.</td>
</tr>
</tbody>
</table>

For additional installation information specific to Oracle, see your Oracle documentation.

Installing and Configuring Sybase

Install the Sybase RDBMS. For installation details, refer to your Sybase documentation for instructions.

Select a managed node to be the RIM host and the complete the following steps to configure the RIM host as a client of the RDBMS server:

1. Install the Sybase client software, which includes isql, on the RIM host.
2. If your RIM host is a Windows machine, perform the following:
   a. Ensure that the PATH variable includes the directory where the Sybase DLL files are installed.
   b. Ensure that the SQL.INI file is in the %SYBASE%\INI directory on the RIM host where SYBASE is the environment variable equating to the path to the directory where your Sybase installation resides.

   If your RIM host is a UNIX machine, copy the interfaces file from the RDBMS server to the directory on the RIM host where the Sybase client software is installed.

   Note: If the RDBMS server runs on a machine with a Solaris Operating Environment, and your RIM host is not a Solaris machine, or vice versa, do not copy the interfaces file to your RIM host. The interfaces file for Solaris Operating Environments is not compatible with other operating systems. You must create a new interfaces file that is compatible. Consult your database administrator for assistance.

When installing the event server component from the Install Options dialog, enter the following database values:

Table 12. Sybase values

<table>
<thead>
<tr>
<th>Database Vendor</th>
<th>Sybase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Database Home</td>
<td>The directory that contains the interfaces file. Equates to the $SYBASE environment variable.</td>
</tr>
<tr>
<td>Database ID</td>
<td>The name of the database that the application will use.</td>
</tr>
<tr>
<td>Database User ID</td>
<td>The RDBMS user that will own the application database. The default is tec.</td>
</tr>
</tbody>
</table>
Table 12. Sybase values (continued)

<table>
<thead>
<tr>
<th>Database Server ID</th>
<th>The name of the Sybase server. Equates to the value in the $DSQUERY environment variable. It is also the server name specified in the SQL.INI file on Windows or in the UNIX interfaces file.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instance Name</td>
<td>Not required, DB2 only.</td>
</tr>
</tbody>
</table>

For additional installation information specific to Sybase, see your Sybase documentation.

Selecting an Installation Method

You can use one of the procedures provided in the following sections to install the components of the IBM Tivoli Enterprise Console product:

- “Installation Options Using the Tivoli Desktop” on page 39
- “Installation Options Using the Command Line” on page 39
- “Installation Options Using the Tivoli Software Installation Service” on page 40

An overview of each installation option is provided in the following sections. For detailed information about each option, see the Tivoli Enterprise Installation Guide.

Stopping and Starting the Event Server

Installation of some IBM Tivoli Enterprise Console components requires that you stop and restart the event server.

To stop the event server, right-click the Event Server icon on the Tivoli desktop and select Shut Down from pop-up menu.

To start the event server, right-click the Event Server icon on the Tivoli desktop and select Start-up from pop-up menu.

You can also stop and restart the event server manually using the wstopesvr and wstartesvr commands. For more about using either of these commands, see the IBM Tivoli Enterprise Console Reference Manual.

Component Installation Order

To successfully install the IBM Tivoli Enterprise Console product, you must install each component in the order recommended.

The following table shows the recommended component installation order, the registered product tag for the component, and the index file name for the component.
<table>
<thead>
<tr>
<th>IBM Tivoli Enterprise Console Component Installation Order</th>
<th>Registered Product Tag for Installing from the Command Line</th>
<th>Index File Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Event server</td>
<td>TEC_SERVER</td>
<td>TEC_SERVER.IND</td>
</tr>
<tr>
<td>Installing from the Tivoli desktop, select <strong>Tivoli Enterprise Console Server 3.8</strong> from the scrolling list. See “Installing the Event Server” on page 41 for additional information.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 UI server</td>
<td>TEC_UI_SERVER</td>
<td>TEC_UI_SERVER.IND</td>
</tr>
<tr>
<td>Installing from the Tivoli desktop, select <strong>Tivoli Enterprise Console User Interface Server 3.8</strong> from the scrolling list. See “Installing the User Interface Server” on page 43 for additional information.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Sample event information</td>
<td>TEC_EVTHELP</td>
<td>TEC_EVTHELP.IND</td>
</tr>
<tr>
<td>Installing from the Tivoli desktop, select <strong>Tivoli Enterprise Console Sample Event Information 3.8</strong> from the scrolling list. See “Installing the Sample Event Information” on page 43 for additional information.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IBM Tivoli Enterprise Console Component Installation Order</td>
<td>Registered Product Tag for Installing from the Command Line</td>
<td>Index File Name</td>
</tr>
<tr>
<td>--------------------------------------------------------</td>
<td>------------------------------------------------------------</td>
<td>----------------</td>
</tr>
<tr>
<td>4 Event console</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Installing from the Tivoli desktop, select <strong>Tivoli Enterprise Console Console 3.8</strong> from the scrolling list.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>See &quot;Installing the Event Console&quot; on page 44 for additional information.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>To install the non-TME version of the event console, follow the procedures in one of the following sections:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• &quot;Installing the Event Console in a Windows Non-TME Environment&quot; on page 44</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• &quot;Installing the Event Console in a UNIX Non-TME Environment&quot; on page 45</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 ACF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Installing from the Tivoli desktop, select <strong>Tivoli Enterprise Console Adapter Configuration Facility 3.8</strong> from the scrolling list.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>See &quot;Installing the Adapter Configuration Facility&quot; on page 45 for additional information.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 Adapters</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Installing from the Tivoli desktop, select <strong>Tivoli Enterprise Console HP OpenView Adapter 3.8</strong> from the scrolling list.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>To install additional adapters, see <strong>Chapter 9, Installing Adapters</strong> on page 83.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 EIF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Installing from the Tivoli desktop, select <strong>Tivoli Enterprise Console EIF 3.8</strong> from the scrolling list.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Installation of the EIF component is optional, see the <strong>Tivoli Event Integration Facility User’s Guide</strong> for additional installation information.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Registered Product Tag
To install IBM Tivoli Enterprise Console components from the command line, you will need the registered product tag for each component you install. The registered product tag is the name assigned to the product contained in an installation image and is the first value on each line of the product index file.

Index (.IND) File Name
An ASCII file containing the component-specific instructions for each installation image. Index files specify the registered product tag for a product component, dependency statements, and the information required to install that component on each of its supported operating systems. For information about how to read index files, see the Tivoli Enterprise Installation Guide.

Installation Options Using the Tivoli Desktop
You can install IBM Tivoli Enterprise Console components from the Tivoli desktop provided with the Tivoli Management Framework product services. See the Tivoli Enterprise Installation Guide for details about installing Tivoli products from the Tivoli desktop.

The following table provides variable data you will need when installing IBM Tivoli Enterprise Console products using the dialogs provided with the Tivoli desktop.

<table>
<thead>
<tr>
<th>Tivoli Desktop GUI Label</th>
<th>IBM Tivoli Enterprise Console Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set Media</td>
<td>set the media type for your source files</td>
</tr>
<tr>
<td>Database Vendor</td>
<td>your_database_type</td>
</tr>
<tr>
<td>Product Install Window shows a list of actions the system will perform</td>
<td>Select the component to install and click OK.</td>
</tr>
</tbody>
</table>

Installation Options Using the Command Line
You can also install IBM Tivoli Enterprise Console components from the command line using the `winstall` command. See the Tivoli Enterprise Installation Guide for details and options used when installing Tivoli products from the command line.

The following table provides variable data you will need to use when installing IBM Tivoli Enterprise Console products from the command line.

<table>
<thead>
<tr>
<th>winstall Command Options Options</th>
<th>IBM Tivoli Enterprise Console Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>--c source_dir</td>
<td>registered_product_tag</td>
</tr>
<tr>
<td>See &quot;Component Installation Order&quot; on page 36 for a list of registered product tags for the IBM Tivoli Enterprise Console components.</td>
<td></td>
</tr>
<tr>
<td>--i product</td>
<td>index_file_name.IND</td>
</tr>
<tr>
<td>See &quot;Component Installation Order&quot; on page 36 for a list of index file names for the IBM Tivoli Enterprise Console components.</td>
<td></td>
</tr>
<tr>
<td>--n</td>
<td>not used</td>
</tr>
</tbody>
</table>
The table below lists the available wininstall command options and their corresponding IBM Tivoli Enterprise Console variables:

<table>
<thead>
<tr>
<th>wininstall Command Options</th>
<th>IBM Tivoli Enterprise Console Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>--server server</td>
<td>not used</td>
</tr>
<tr>
<td>--y</td>
<td>not used</td>
</tr>
<tr>
<td>install_variables</td>
<td>See the IBM Tivoli Enterprise Console User’s Guide or “Installing and Configuring the RDBMS” on page 30 for information specific to your database vendor’s installation variables.</td>
</tr>
<tr>
<td>managed_node</td>
<td>managed_node</td>
</tr>
<tr>
<td>-c source_dir</td>
<td>the complete path to the directory containing the installation image</td>
</tr>
<tr>
<td>BIN=binaries_dir</td>
<td>not used in Versions 3.7 and later</td>
</tr>
<tr>
<td>LIB=libraries_dir</td>
<td>not used in Versions 3.7 and later</td>
</tr>
<tr>
<td>DB=client_database</td>
<td>Used to override the default installation path for the product client database, if desired. The default installation path for the client database is /var/spool/Tivoli.</td>
</tr>
<tr>
<td>MAN=manpage</td>
<td>Not supported for the IBM Tivoli Enterprise Console product. See the Tivoli Management Framework User’s Guide for information about man pages.</td>
</tr>
<tr>
<td>CAT=message_catalog</td>
<td>Used to override the default installation path for the product message catalogs, if desired. The message catalogs are located at /usr/local/Tivoli/msg_cat.</td>
</tr>
<tr>
<td>host_name</td>
<td>machine_name</td>
</tr>
</tbody>
</table>

See the Tivoli Management Framework Reference Manual for details about the wininstall command and its options.

### Installation Options Using the Tivoli Software Installation Service

You can install IBM Tivoli Enterprise Console components using the Tivoli Software Installation Service provided by the Tivoli Management Framework product services. By using the Software Installation Service to install components, you can install all required components in less time than using either the Tivoli desktop or installing from the command line.

Before installing IBM Tivoli Enterprise Console components, the Software Installation Service product performs prerequisite checking to ensure that the component can successfully be installed. The Software Installation Service product can therefore reduce the number of installation failures.

### Before You Begin

Before you can install components using the Software Installation Service, you must import the desired installation images from the product CD-ROM images into the Install Repository. When using the Software Installation Service product, you should import only the images associated with platform type used within your Tivoli environment. By importing only the needed platform types, the time required to import the images is reduced and disk space is saved. You can import images into the Install Repository by using the wimport command or the Tivoli Software Installation Service console.
See the *Tivoli Enterprise Installation Guide* for procedures used to import images to the Install Repository of the Software Installation Service. For detailed information about using the wimport command, see the *Tivoli Management Framework Reference Manual*.

### Installing Components Using the Software Installation Service

To import images into the Install Repository from the Software Installation Service console, you must start the Software Installation Service console from the Tivoli desktop.

The following table provides variable data you will need to use when installing IBM Tivoli Enterprise Console products using the dialogs provided with the Tivoli Software Installation Service.

<table>
<thead>
<tr>
<th>Software Installation Service GUI Label</th>
<th>IBM Tivoli Enterprise Console Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select Product</td>
<td>Import CD Images</td>
</tr>
<tr>
<td>Locate CD images</td>
<td>Use the file browser to navigate to the directory containing the index files for the desired components. Index files have an .IND extension. A table containing the index file name for each IBM Tivoli Enterprise Console can be found in “Component Installation Order” on page 36.</td>
</tr>
<tr>
<td>Install Repository - Import Product</td>
<td>Select the desired components from the Available Products list.</td>
</tr>
<tr>
<td>Select interps</td>
<td>Deselect the platform types that you do not need.</td>
</tr>
<tr>
<td>Install Repository - Select Product</td>
<td>Select the newly imported IBM Tivoli Enterprise console components to be installed.</td>
</tr>
<tr>
<td>Product attribute dialog</td>
<td>Provide the database vendor variables as indicated for your database environment.</td>
</tr>
<tr>
<td>Select Machine</td>
<td>Select the appropriate machine in the Machine Name column.</td>
</tr>
</tbody>
</table>

See the *Tivoli Enterprise Installation Guide* for procedures used to install Tivoli products using the Tivoli Software Installation Service.

### General Considerations Installing Components

The following sections contain a summary of information specific to each product component. You can use any of the installation methods above to install the components and refer to this section for general information.

### Installing the Event Server

You can follow the standard Tivoli Management Framework installation procedures to install the event server from the Tivoli desktop using the database vendor options in the previous sections. You can also install the event server from the command line using the winstall command. To install the event server from the command line, you will need the following database vendor information:
The following command example installs the event server for use with a DB2 RDBMS.

```
wininstall -c /cdmount/NEW -i SERVER RDBMS_Vendor=2 \\
RDBMS_DB_Home=$DB2DIR RDBMS_DB_Name=tec \\
RDBMS_DB_User=DB2 RDBMS_DB_Param_one=$DB2COMM \\
RDBMS_DB_Param_two=$DB2INSTHOME TECserver
```

where:

- `-c /cdmount/NEW`
  Specifies the path to the CD image.

- `-i SERVER`
  Specifies the product index file for the event server.

**RDBMS_Vendor=[0 | 1 | 2 | 3 | 4]**
Specifies the vendor name of the RDBMS product to manage the Tivoli Enterprise Console events.

where:

- 0 Oracle
- 1 Sybase
- 2 DB2
- 3 MS SQL
- 4 INFORMIX

This argument is the equivalent of the Database Vendor text box on the Install Options dialog box when installing from the Tivoli desktop.

**RDBMS_DB_Home=$path**
Specifies the full path to the installation directory name of the RDBMS client software to be used for the for the event repository.

This argument is the equivalent of the Database Home text box on the Install Options dialog box.

**RDBMS_DB_Name=tec**
Specifies a unique database name for the event repository.

This argument is the equivalent of the Database ID text box on the Install Options dialog box.

**RDBMS_DB_User=DB2**
Specifies the user name for the DB2 instance owner.

This argument is the equivalent of the Database User ID text box on the Install Options dialog box.

**RDBMS_DB_Param_one=$DB2COMM**
Specifies the value of the DB2COMM environment variable.

This argument is the equivalent of the Database Server ID text box on the Install Options dialog box and must be set.

**RDBMS_DB_Param_two=$DB2INSTHOME**
Specifies the full path to the home directory of the DB2 instance owner.

This argument is the equivalent of the Instance Name text box on the Install Options dialog box and must be set for DB2.
TECserver
Indicates that the event server will be installed on this managed node. This machine will be the RIM host by default. For more information about the default RIM host, see “RIM Considerations” on page 30.

For installing the event server against the other databases, the command is similar. The only difference is that you do not need to specify the RDBMS_DB_Param_two argument.

For additional information about the winstall command, see the Tivoli Management Framework Reference Manual.

Installing the User Interface Server
You can follow any of the standard Tivoli Management Framework installation procedures to install the UI server. Use the following example to install the UI server from the command line using the winstall command.

winstall -c /cdmount/NEW -i UI_SRVR acadia

where:
-c /cdmount/NEW
Specifies the path to the CD image.
-i UI_SRVR
Specifies the product index file for the UI server.
acadia Indicates that the UI server will be installed on this managed node.

Installing the Sample Event Information
After installing the event server and UI server, install the sample event information on the Tivoli management region server. The sample event information can be used as a template to develop an online guide for describing and troubleshooting events. After the sample event information is installed, an administrator can modify the event information templates to provide guidance to operators with regard to various event types.

The sample event information must be installed on the Tivoli management region server to use the Tivoli-supplied spider Web server. The installation process configures your spider server to handle requests for event information. As part of the installation process, a Perl script, a Perl library, and several HTML files are installed. The Perl script tec_help.pl and the library cgi-lib.pl will be installed in the $BINDIR/TAS/HTTPd/cgi-bin directory. The event information HTML files are installed in the $BINDIR/..generic/HTTPd/Tec directory. Translated event information is installed in the locale-specific $BINDIR/..generic/HTTPd/Tec/your_locale directory.

To install the sample event help files on a Web server that is not the Tivoli management region server, perform the following steps:
1. Install the sample event help files on a managed node.
2. Copy the tec_help.pl and cgi-lib.pl files to your cgi-bin directory.
3. Copy the HTML files to a specified directory configured to access the Web server.
4. You can then optionally use the Perl script `tec_help.pl` for an example to process event attribute information. Administrators can use this script as-is or modify it to implement the event information strategy that best complements their company’s availability strategy.

Note: For the event console to operate properly, the Tivoli management region server name must be the fully-qualified domain name for that server. For each machine that the event console is installed on, ensure that the domain name service (DNS) is properly configured in your environment to resolve the domain name for the Tivoli management region server. If you are unsure about your configuration, contact your database system administrator.

## Installing the Event Console

After installing the event server, UI server, and sample event information, install the event console. You can follow the standard Tivoli Management Framework installation procedures to install the event console. Use the following example to install the event console from the command line using the `winstall` command.

```shell
winstall -c /cdmount/NEW -i JCONSOLE acadia
```

where:

- `-c /cdmount/NEW` specifies the path to the CD image.
- `-i JCONSOLE` specifies the product index file for the event console.
- `acadia` indicates that the event console will be installed on this managed node.

### Installing the Event Console in a Windows Non-TME Environment

To install the event console in a Windows non-TME environment, complete the following procedure:

1. From Windows Explorer, navigate to the event console installation directory on the IBM Tivoli Enterprise Console product CD.
2. Double-click the `NON_TME/W32-IX86/InstallCONSOLE/setup.exe` file. The InstallShield wizard starts and then the Welcome dialog box is displayed.
3. Click Next. The Feature Selection dialog box is displayed.
4. Click Next to install the IBM Tivoli Enterprise Console Application and Java Runtime Environment.

   The IBM Tivoli Enterprise Console Application and Java Runtime Environment (JRE) features are already selected. If you choose not to install the JRE, deselect the feature. Later, you will be prompted to specify a path to your Java Virtual Machine (JVM).

   Note: Tivoli recommends that you install the JRE, as other JVMs may not be compatible with the event console. For additional information about compatibility and appropriate JRE versions, see the IBM Tivoli Enterprise Console Release Notes.

   After you click Next, the Destination Folder dialog box is displayed.
5. Click Next to install the event console in the default directory path that is displayed in the text box.

   To change the directory path where the event console is installed, type the new directory path in the text box. You can also click Change, which displays the
Select Directory dialog box. From here, you can navigate to the directory path where you want the event console installed. Click OK or Cancel to return to the Destination Folder dialog box. Click Next.

The Ready to Install dialog box or the JVM Path dialog box is displayed.

6. If you selected to install the JRE in step 5 on page 44, go to step 8.

If you chose not to install the JRE, the JVM Path dialog box is displayed.

Type the directory path of your JVM in the text box on the JVM Path dialog box. You can also click Browse and navigate to the directory path from the Directory Chooser dialog box. Click Next. The Ready to Install dialog box is displayed.

7. If the install information in the text box is correct, click Install Now. If the install information is not correct, you can click Back to return to any dialog box and change your install options.

After clicking Install Now, the InstallShield wizard starts the installation. You can stop the installation at any time by clicking Cancel.

When the InstallShield wizard completes the installation, the Installation Summary dialog box is displayed.

8. Click Exit to close the dialog box and end the InstallShield wizard session.

Installing the Event Console in a UNIX Non-TME Environment

To install the event console in a UNIX non-TME environment, create a directory, change to the new directory, and untar the non-TME UNIX installation file from the IBM Tivoli Enterprise Console product CD, using the following command:

tar -xvof /NON_TME/PLATFORM/CONSOLE.TAR

where:

platform
The host’s operating system platform, specified in uppercase letters. The following are valid values for a UNIX non-TME environment:

- AIX4-R1
- HPUX11
- LINUX-IX86
- SOLARIS2

Installing the Adapter Configuration Facility

After installing the event server, UI server, sample event information, and event consoles, install the ACF.

Notes:

1. The ACF must first be installed on the TMR server and any managed nodes that are Tivoli Management Framework gateways from which adapters will be distributed.

2. You must have the install_client Tivoli authorization role in order to install the ACF component.

The ACF installation includes the ACF component and the ability to install TME endpoint logfile-type adapters, the TME endpoint SNMP adapter, and the ability to distribute TME managed node adapters.

Install the ACF on the TMR server and all endpoint gateways. If you plan on using ACF to distribute files to the separately installed TME managed node adapters, you also need to install the ACF on any managed nodes where adapters reside.
After installing the event server, UI server, sample event information, and the event server, install the ACF. You can follow the standard Tivoli Management Framework installation procedures to install the ACF. Use the following example to install the ACF from the command line using the `winstall` command.

You can use the `winstall` command to install the ACF from the command line. For example, to install the ACF, you could use the following command:

```
winstall -c /cdmount/NEW -i ACF abroc
```

where:

- `-c /cdmount/NEW` Specifies the path to the CD image.
- `-i ACF` Specifies the product index file for the ACF.
- `abroc` Indicates that the ACF will be installed on this managed node.

### Installing Adapters

See Chapter 9, “Installing Adapters” on page 83 for information about installing managed node or endpoint adapters.

### Installing the Event Integration Facility

For information about installing the EIF, see the Tivoli Event Integration Facility User’s Guide.

### Working With the RIM Object

When a Tivoli Management Framework product uses a RIM object, you can perform several actions with the RIM object. These actions are as follows:

- Obtain information about the RIM object
- Modify the RIM object
- Delete the RIM object
- Test RIM connectivity

### Obtaining Information About RIM Objects

To list all RIM objects in your Tivoli environment, enter the following command on the command line:

```
wlookup -ar RIM
```

To display configuration information for a specific RIM object, enter the following command on the command line:

```
wgetrim RIM_object_name
```

### Modifying RIM Objects

You can use the `wsettrim` command to modify attributes for a RIM object. With this command, you cannot change the following:

- The database vendor associated with the RIM object
- The machine hosting the RIM object
- The RIM password
To change the database vendor or the machine hosting the RIM object, you need to delete and re-create the RIM object using the `wdel` command and the `wcrtrim` command, respectively. To change the RIM password, you need to use the `wsetrimpw` command.

For details about the `wsetrim`, `wdel`, `wcrtrim`, and `wsetrimpw` commands, refer to the *Tivoli Management Framework Reference Manual*.

### Deleting RIM Objects

When you need to delete a RIM object, use the `wdel` command. The basic syntax for this command is as follows:

```
wdel @RIM:RIM_object_name
```

For details about using the `wdel` command, refer to the *Tivoli Management Framework Reference Manual*.

### Testing RIM Connectivity

The RIM object relies on the underlying database client to connect to the database server. The database client must be able to connect to the database server for the RIM object to communicate properly.

After the event repository is created for your database, perform the following procedure to verify RIM connectivity:

1. Test connectivity with the database server using the native database client. When you test client connectivity, you should use the same name and password that the RIM object will use. For information about obtaining the RIM configuration information, refer to “Obtaining Information About RIM Objects” on page 46.

   The following table summarizes the native database clients for each supported database.

   **Table 14. Supported native database clients**

<table>
<thead>
<tr>
<th>Database</th>
<th>Database Interactive SQL Access</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2</td>
<td>db2</td>
</tr>
<tr>
<td>Informix</td>
<td>dbaccess</td>
</tr>
<tr>
<td>Microsoft SQL Server</td>
<td>isql</td>
</tr>
<tr>
<td>Oracle</td>
<td>sqlplus</td>
</tr>
<tr>
<td>Sybase</td>
<td>sql</td>
</tr>
</tbody>
</table>

2. Test connectivity through the RIM object using the following `wrimtest` command:

   `wrimtest -l RIM_object_name`

3. If you see a Session opened Enter option message, you have successfully connected to the database server. Enter `x` to select the exit option and exit.

For additional information about the `wrimtest` command, refer to the *IBM Tivoli Enterprise Console Reference Manual*. (RIM tracing will not be helpful for connection problems because a connection to the database server must exist for RIM to show tracing.)
Chapter 6. Event Database Configuration

This chapter discusses installing and configuring the event database using the simple or advanced installation method. The advanced method allows you to assign values for configuration parameters that are set by the event database installation assistant (referred to as the assistant in the remainder of this document), whereas the simple method installs the event database with basic parameters selected by the assistant. For both the simple and the advanced installation method, the assistant prompts you for information specific to the installation of your database environment. The simple method completes the installation using the basic database criteria you supply and then uses default configuration values for the supported platform to complete the installation process. The advanced method allows you to continue with the installation, selecting options to configure your database for optimal performance. The assistant creates the event database, table spaces, tables, and indexes and, in the advanced mode, offers configuration parameters to optimize run-time performance.

This chapter details the following:

- “Before You Begin” on page 51
- “Sample Worksheets for Event Database Installation” on page 51
- “Starting the Assistant” on page 52
- “Installing the Event Database Using the Simple or Advanced Method” on page 54
- “Generating and Executing Scripts” on page 56
- “Using the No Change Option When Generating Scripts” on page 58
- “Configuration Options for Improving Performance” on page 58
- “General Event Database Considerations” on page 70
- “Enabling Language Support” on page 73
- “Where To Go From Here” on page 74

Before You Begin

Use the following questions to determine the size and location of the database:

- How much memory is available to the event database server?
- How many I/O devices are available to the event database server?
- How large do you need to configure the event database, temporary work area, and transaction logs?

For additional information to consider before running the assistant, see the sample worksheets provided in “Sample Worksheets for Event Database Installation” on page 51.

Note: It is recommended to contact your database administrator before making changes to your database environment.

General Prerequisites

For all databases, the following prerequisites must be met before you begin using the assistant:

- You have backed up your database server using standard database procedures.
• You are performing your installation on a system that meets the hardware and software requirements, such as using a supported RDBMS on a supported platform, as shown in the IBM Tivoli Enterprise Console Release Notes.

• You have the appropriate version of the Tivoli Management Framework product, and any associated patches, installed. For the most current information, see the Tivoli Management Framework Release Notes.

• You have installed the IBM Tivoli Enterprise Console product using the procedures outlined in Chapter 5, “Installing Components” or upgraded your current version using the procedures outlined in Chapter 7, “Upgrading Components.”

DB2 and Informix Prerequisites
For a DB2 or Informix database, the following prerequisites must be met before using the assistant:

• Your environment must be sourced as shown in “Sourcing the Tivoli Environment and Starting the Assistant” on page 52.

• Before running the assistant, you must be logged in with the same user ID that was previously defined in the RIM object. This can be accomplished by sourcing your Tivoli environment while logged on as the RIM user.

• You must source your database environment to use any of the following options offered by the assistant:
  – The simple database installation option in the assistant
  – The Generate and Execute Scripts option offered with the advanced database installation option.
  – The Execute Scripts Only option offered with the advanced database installation option.

• In order to read the default values from the RIM object, the user ID must have Tivoli management environment access. The RIM settings are used to generate default values in the assistant panels.

Oracle Prerequisites
For an Oracle database, the following prerequisites must be met before using the assistant:

• Because it utilizes an existing instance to run, an Oracle instance must be created before running the assistant.

  You must create the required Oracle database instance using the UTF-8 character set in order to support multiple languages. For more information about UTF-8 support, see “Enabling Language Support for Oracle” on page 74.

• If you install the event database from an Oracle client, the client must be configured to communicate with the existing Oracle instance. For more information about configuring the Oracle client and the database instance, see the Oracle 9i Net Service Reference Guide.

• Before running the assistant, you must source your database environment in order to use the Generate and Execute Scripts option offered with the advanced database installation option. Your environment does not need to be sourced to run the Generate Only option. Sourcing your environment ensures that the database SQL command line interface (CLI) can be accessed to run SQL scripts.

MS SQL Server and Sybase Prerequisites
Before running the assistant with an MS SQL Server or Sybase database, you must source your database environment in order to use the Generate and Execute Scripts option offered with the advanced database installation option. Your environment
does not need to be sourced to run the Generate Only option. Sourcing your environment ensures that the database SQL command line interface (CLI) can be accessed to run SQL scripts.

Sample Worksheets for Event Database Installation

Use the sample worksheets in this section to plan your event database installation. You will need this information for both simple and advanced installations. For an advanced installation, you will be offered additional database configuration options specific to your environment, such as selecting table space size and memory allocations. The worksheets also ensure that you have the information you will need before starting the assistant. Ensure that you have access to the IBM Tivoli Enterprise Console Installation Guide, and the IBM Tivoli Enterprise Console Release Notes.

Table 15. Worksheet for DB2

<table>
<thead>
<tr>
<th>DB2 Sample Worksheet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Directory for generated scripts</td>
</tr>
<tr>
<td>RDBMS user ID</td>
</tr>
<tr>
<td>Event database name</td>
</tr>
<tr>
<td>Is RIM host database client or server?</td>
</tr>
<tr>
<td>Disk space to allocate</td>
</tr>
<tr>
<td>Memory to allocate for buffer pools</td>
</tr>
<tr>
<td>Directory names containing table spaces, transaction logs, and temporary space</td>
</tr>
</tbody>
</table>

Table 16. Worksheet for Informix

<table>
<thead>
<tr>
<th>Informix Sample Worksheet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Directory for generated scripts</td>
</tr>
<tr>
<td>RDBMS user ID</td>
</tr>
<tr>
<td>Event database name</td>
</tr>
<tr>
<td>Is RIM host database client or server?</td>
</tr>
<tr>
<td>Informix server name</td>
</tr>
<tr>
<td>Directory names containing dbspaces, physical logs, and temporary space</td>
</tr>
</tbody>
</table>

Table 17. Worksheet for MS SQL Server

<table>
<thead>
<tr>
<th>MS SQL Server Sample Worksheet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Directory for generated scripts</td>
</tr>
<tr>
<td>RDBMS user ID</td>
</tr>
<tr>
<td>Event database name</td>
</tr>
<tr>
<td>Is RIM host database client or server?</td>
</tr>
<tr>
<td>System administrator (SA) password</td>
</tr>
<tr>
<td>Directory names containing data files and transaction logs</td>
</tr>
</tbody>
</table>
Table 18. Worksheet for Oracle

<table>
<thead>
<tr>
<th>Oracle Sample Worksheet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Directory for generated scripts</td>
</tr>
<tr>
<td>RDBMS user ID</td>
</tr>
<tr>
<td>Database session identifier (SID)</td>
</tr>
<tr>
<td>Is RIM host database client or server?</td>
</tr>
<tr>
<td>Oracle home directory</td>
</tr>
<tr>
<td>Oracle SYS password</td>
</tr>
<tr>
<td>Directory names containing table spaces</td>
</tr>
</tbody>
</table>

Table 19. Worksheet for Sybase

<table>
<thead>
<tr>
<th>Sybase Sample Worksheet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Directory for generated scripts</td>
</tr>
<tr>
<td>RDBMS user ID</td>
</tr>
<tr>
<td>Event database name</td>
</tr>
<tr>
<td>Is RIM host database client or server?</td>
</tr>
<tr>
<td>System administrator (SA) password</td>
</tr>
<tr>
<td>Directory names containing data files and transaction logs</td>
</tr>
<tr>
<td>Device IDs in use</td>
</tr>
<tr>
<td>Actual number of the first device for the IBM Tivoli Enterprise Console event database</td>
</tr>
<tr>
<td>Amount of memory to allocate for the event database</td>
</tr>
</tbody>
</table>

For additional information about the RIM host and RDBMS settings for the RIM host, see “Choosing the RIM Host” on page 29.

Starting the Assistant

The assistant is started with the `wdbinstall.sh` script, located on the event database installation assistant CD-ROM in the `DBASSISTANT/sql` directory. The scripts generated by the assistant can create, upgrade, or remove the event database.

Note: The `wdbinstall.sh` script can only be run from the event database installation assistant CD-ROM or a directory where the installation images reside.

For more information about the `wdbinstall.sh` script and available options, see the `IBM Tivoli Enterprise Console Reference Manual`.

Sourcing the Tivoli Environment and Starting the Assistant

You can use the procedures in this section to source your Tivoli environment and start the assistant. The assistant must be started from a bash shell on the RIM host. For additional information about sourcing your Tivoli environment, see the `Tivoli Enterprise Installation Guide`.
Sourcing the Tivoli Environment for Bash Shell Execution on UNIX
Use the following steps to source your Tivoli environment and start a bash shell for UNIX:

For UNIX
1. Run the /etc/Tivoli/setup_env.sh script.
2. Start the bash shell by typing bash.

Sourcing the Tivoli Environment for Bash Shell Execution on Windows
Use the following steps to source your Tivoli environment and start a bash shell for UNIX:
1. Run the following script from the command line:
   %SystemRoot%/system32/drivers/etc/Tivoli/setup_env.cmd
2. Start the bash shell by typing bash.

Starting the Assistant
Use the following steps to start the assistant from the command line in a bash shell on UNIX or Windows:

1. From the command line in the bash shell, change directories to the installation image location or to the directory where the installation CD-ROM is mounted.
   Type the following
   ./wdbinstall.sh
2. Select Simple or Advanced installation.
3. Enter the required database information in each dialog box and complete the installation by clicking Next in each dialog box.
4. When the installation is complete, click Finish.

Note: The assistant must be run from a bash shell on the machine where the RIM host resides. Scripts generated by the assistant must also be generated to a directory on the same machine with the RIM host, database client, or event server.

Error Logs: The assistant generates SQL scripts and shell scripts required to create the event database. A log file is automatically created in the same directory you designated for the generated scripts. If you want to save your log files to another location, you can define an alternate directory in the assistant. If the generated event database scripts are executed from the assistant, the log file also contains the output from running the scripts. You can examine the log file to view results.

The log file is named DbInstalltimestamp.log, as shown in the following example. The timestamp variable is replaced by the current system time when the log is generated.
DbInstall2002-07-12-57_03PM.log

You can also check for replies from the event database server to each configuration statement in the SQL scripts, as well as any error messages. For example, a file called DbInstall2002-07-12-57_03PM.err is also created that may contain error installation information.

Note: No error logs are generated if the wdbdconfig.sh script is used to perform an install, upgrade, or remove function.
Installing the Event Database Using the Simple or Advanced Method

The following sections will guide you through the database installation using the advanced method. Selecting the advanced installation gives you more configuration options to optimize database performance, such as maximizing memory usage and managing the physical layout of data on the disk. If your environment does not meet the criteria for the event database simple installation method, you must use the advanced method. For additional information about configuration options, you can also use the field-level help available in each of the panels in the installation assistant.

Installing the Event Database

Choose to install the event database when creating it for the first time, or after it has been completely removed. With the exception of Oracle, installing the event database for the first time, or installing the event database after removal, requires that the database server be stopped and restarted to use the new configuration settings.

The Informix install procedure must be performed on the Informix server. You can use the assistant to install if the RIM host and the Informix server reside on the same machine. If they do not, you must install the event database using the `wdbinstall.sh` script.

Installing Only the Event Database Objects

Choose to install only the event database objects when you want to install only the event database tables, indexes, views; and, for Sybase and MS SQL Server 7, triggers. This is only done after you have removed the event database objects and the event database itself still exists.

Note: Do not choose to only install event database objects in an Oracle environment.

You can choose to install only the event database objects if you have removed only the database objects. You can select this option in the assistant without the usual requirement of stopping and restarting the database server instance or database server. Choose this option if you want to start with new database objects and have the event database remain in place.

Running the `wdbconfig.sh` Script

The `wdbconfig.sh` script is generated by the assistant and runs the SQL scripts generated by the assistant and determines the database type from the SQL scripts located in the generated script directory. The `wdbconfig.sh` script must only be run from the directory where the scripts were generated.

See the IBM Tivoli Enterprise Console Reference Manual for more information about the `wdbconfig.sh` script.

Running the `wdbconfig.sh` Script in a DB2 or Informix Environment

For DB2 and Informix, you must be logged in as the same user as the RIM user ID specified for the event database RIM object. This user should have database administrator (DBA) access with authority to create, modify, and delete database objects. The user must also have a login ID as a Tivoli management environment administrator.
Ensure the following prerequisites are met before running the `wbdbconfig.sh` script in an Informix environment:

- You have generated the event database installation scripts, as outlined in "Generate Scripts Only" on page 57 and copied them to your Informix server.
- You execute the script directly on the Informix server instead of the RIM host.
- You are able to run scripts in a non-TME environment.

For Informix only, if the Informix database server is installed on a non-TME machine, the `wbdbconfig.sh` script can be run on that machine.

**Upgrading the Event Database**

You can use the assistant to upgrade the event database from a version 3.6.2 or 3.7.1 configuration to a version 3.8 configuration. The upgrade scripts generated by running the assistant will upgrade your event data.

**Note:** You must backup your event database prior to performing an upgrade.

When an upgrade is performed, the data device previously used by the IBM Tivoli Enterprise Console product remains in place. This is because most databases require a database system area and the prior database area already resides on this device and cannot be moved. Also, other IBM Tivoli Enterprise Console product-related application tables or indexes may reside on this device and are not removed. If you want to completely remove your event database devices, you must completely remove the IBM Tivoli Enterprise Console event database and the devices created for the database. You must then install the version 3.8 database schema as a new database installation.

**Upgrade Considerations**

Consider the following items before upgrading your event database:

- With the exception of Oracle, upgrading the event database requires that all users are logged off because the event database server process will be stopped. The server must be restarted for changes to take effect.
  
  For Oracle, you are not required to stop and restart the event server; however, you must ensure that any users that may be accessing the database being upgraded are logged off.

  For all event database upgrades, it is recommended that you specify the upgraded database size to be at least as large as the current event database size. You can use the `wttbsdbspace` command to see the current database size. For more information about using the `wttbsdbspace` command, see the IBM Tivoli Enterprise Console Reference Manual.

- It is recommended to increase your database transaction logs before upgrading to enable the insertion of the IBM Tivoli Enterprise Console records from the original tables into the new tables. You can alternately export the data from the original tables and the import the data to the new tables.

- Back up your original tables or, for recovery purposes, export your data to save the events from the original tables.

- If other Tivoli applications previously used database objects from the original database schema, you may need to reinstall the database objects, such as triggers or views, because they may no longer exist after the upgrade.

- When using a DB2 client connection, see "DB2 Considerations" on page 70 before running the assistant.
Upgrading the Event Server with a New Event Database

Installation
During the event database configuration, you can select this option if you want to upgrade all of the components and perform a new installation of the event database but do not want to save your event data.

Uninstalling the Event Database
To remove the event database, you must choose to remove the event database. This will completely remove the event database and all IBM Tivoli Enterprise Console event database objects. Completely removing the event database will not undo the configuration settings that have been changed at the database server or instance level, such as database server configuration options.

Note: With the exception of Oracle and MS SQL Server, removing the event database requires that the database server be stopped and restarted to reset device configuration settings.

Uninstalling Only the Event Database Objects
The event database objects include tables, indexes, and views. For Sybase and MS SQL Server, the event database objects also include MS SQL Server 7 and Sybase, Version 7, triggers.

Note: Removing the event database objects will delete all events in the database.

Choose to remove only the event database objects when you want to remove only the event database tables, indexes and views and, for Sybase and MS SQL Server 7, triggers. After removing the event database objects, you can choose to reinstall the database objects at a later time if you want to start with empty database tables.

Note: Because the event database already exists before the event table spaces are added, you cannot choose to remove only event database objects with an Oracle database.

Uninstalling the Event Database in an Informix Environment
The Informix uninstall procedure must be performed on the Informix server. You can use the assistant to uninstall if the RIM host and the Informix server reside on the same machine. If they do not, you must uninstall the event database using the \texttt{wdbinstall.sh} script.

Use the following steps to uninstall the event database using the \texttt{wdbinstall.sh} script:
1. Run the assistant on the RIM host using the Generate Only option.
2. Copy the generated scripts to the Informix server.
3. Execute the \texttt{wdbinstall.sh} script in the generated scripts directory on the Informix server.

For more information about the \texttt{wdbinstall.sh} script, see the \textit{IBM Tivoli Enterprise Console Reference Manual}.

Generating and Executing Scripts
The scripts generated by the assistant must be run by starting the assistant or by running the \texttt{wbdbconfig.sh} script from the command line. With the exception of Informix, the recommended method of executing the generated script is by using the assistant. When running the \texttt{wbdbconfig.sh} script from the command line, you
must run it from the same directory as the generated scripts. The directory must have write permission because the generated scripts create temporary files in this directory.

When running the assistant, you can select one of the following options:

- “Generate Scripts Only” on page 57
- “Generate and Execute Scripts”
- “Execute Scripts Only” on page 58

**Generate Scripts Only**

The Generate Scripts Only option is only available if you selected the advanced event database installation method. The generated scripts must be written to a directory on the RIM host or copied to the same directory on the RIM host machine.

You can also choose this option if you will later run the scripts from the command line using the `wdbconfig.sh` script.

If your database administrator plans to make additional modifications to the SQL scripts before they are run, choose to only generate the scripts.

You can execute the scripts from a client or server on all databases other than Informix. You must therefore configure and execute the `wdbconfig.sh` script on the same machine as the event database server. For Informix, select to generate scripts only if the database server is on a different machine than the RIM host. The directory must exist on the Informix database server and have write permission because the generated scripts create temporary files in this directory. You can alternatively choose to store the files in a different directory on the RIM host or Informix database server. You can then edit the generated scripts and change the `SCRIPTDIR` variable to the directory on the RIM host or Informix database server machine that the scripts will be run from.

To run the generated scripts on a machine other than the RIM host, copy all of the files from the directory where the scripts were generated to the directory on the machine where the scripts will be run. You can choose a different directory if you change the `SCRIPTDIR` variable in each script that begins with the name `dbConfigure`. Run the `wdbconfig.sh` script with parameters that enable you to install, upgrade, or remove.

**Note:** If your Informix database server is installed on a different machine from the RIM host, you must run the scripts from the command line using the `wdbconfig.sh` script.

See “Running the wdbconfig.sh Script” on page 54 and the IBM Tivoli Enterprise Console Reference Manual for more information about the `wdbconfig.sh` script.

**Generate and Execute Scripts**

Choose this option to generate and run the scripts immediately after specifying options in the assistant. If you selected the simple database configuration method, this option is chosen automatically.
Execute Scripts Only

Choose this option if you previously generated the scripts from the assistant and are now ready to run them. You can select this option when using either the simple or the advanced database installation method.

Using the No Change Option When Generating Scripts

A No Change button that allows you to generate the scripts without changing the previously selected parameters is available on some panels in the assistant.

Notes:

1. You should only select this configuration change one time. If you perform a new installation or an upgrade for a second time selecting the No Change option, run-time errors will occur and may affect your event database.
   
   For example, in a first-time installation of a Sybase event database, you can choose to change the TEMPDB configuration settings. Since this is a one-time configuration change, the next time a complete reinstallation of the event database is performed, the assistant should be used to generate the scripts a second time. For the second generation of the scripts, select the No Change option on the TEMPDB settings panel in the assistant.

2. Do not select the No Change option for DB2.

Configuration Options for Improving Performance

The following sections describe configuration options that can be changed for your database environment that may further improve performance. If you have shared multiprocessor (SMP) environment, consult your database manuals for configuration options that will enhance the database server performance when running multiple processors.

The assistant will set the initial values and you can edit each option by following the procedures outlined in your database vendor documentation.

For each event database type, when an upgrade is performed, the prior data device used by the IBM Tivoli Enterprise Console product remains in place. This is because most databases require a database system area and this already resides on this device and cannot be moved. Also, other application data may reside on this device and are not removed. After changing configuration options, you should check triggers or views associated with the application tables to ensure that they are intact. The event database tables are renamed in this process, which may cause triggers or views that are based on these names to be dropped by the database server. If you do not want to leave the original devices in place, you can select to remove and reinstall the event database.

DB2 Configuration Options

For recommended DB2 configuration options, see the panel-level help in the assistant dialogs.

Informix Configuration Options

The following table lists additional options to improve event database performance. If you choose to make the changes in the onconfig configuration file, the Informix universal server will need to be restarted. You can edit the onconfig file while the Informix server is online or offline and the new values will be in place when restarted. The event database scripts will stop and restart the Informix server.
database server to make the binary large object (BLOB) space available when you install or upgrade your event database. You can choose to run the SQL scripts after any devices are prepared and the `onconfig` file has been updated with the new parameters. Then when the SQL scripts are run, the Informix database server will be stopped and restarted and the new configuration parameters will be put into effect.

**Note:** When editing the `onconfig` file, parameter names are in uppercase and, if the parameter value is a string, the value is case-sensitive. You must also use white space to separate the parameter name from the parameter value and the optional comment following the value.

### Table 20. Informix configuration options

<table>
<thead>
<tr>
<th>Configuration Option</th>
<th>Description</th>
</tr>
</thead>
</table>
| **SHMADD** | Specifies the size of the memory segment to be dynamically added to the virtual portion of the shared memory of the Informix universal server.  
Recommended settings:  
| **Physical memory** | **SHMADD value** |
| < 256MB | 8192 KB |
| > 256MB and < 512MB | 16384 KB |
| > 512MB | 32768 KB |
| `onconfig` file setting recommendation: SHMADD 32768 |
| **SHMTOTAL** | Specifies the maximum shared memory size for the Informix database server. A value of zero (0) allows the shared memory to continue to take segments from the operating system as needed. The value should be set to 0 unless you need to restrict the access of the event database server to all the memory because of other applications running on the same machine.  
`onconfig` file setting recommendation: SHMTOTAL 0 |
| **SHMVIRTSIZE** | Specifies the initial size of the virtual part of the Informix database server shared memory. The virtual memory can have memory segments added dynamically but if the size is not the size needed for daily operating requirements, processes may take longer while waiting on memory segments to be added. Use the larger of 8000KB or the number of all network connection types specified in the Informix `sqlhosts` file multiplied by 350.  
`onconfig` file setting recommendation: SHMVIRTSIZE 8000 |
| **RESIDENT** | Specifies that the resident part of the shared memory of Informix cannot be swapped by the operating system if the operating supports forced residency of memory segments. By not allowing the resident portion to be swapped out, the data contained in the event database will remain in memory instead of swapped out to disk and performance will benefit. If the operating system does not have the forced residency option, the Informix Universal server will issue an error message and then ignore the parameter. The RESIDENT value should be set to 1.  
`onconfig` file setting recommendation: RESIDENT 1 |
<table>
<thead>
<tr>
<th>Configuration Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DBSPACETEMP</td>
<td>Specifies a list of dbspace names used for the temporary work area for the event database server. If you entered one or more dbspaces for the DBSPACETEMP panel in the assistant, then this list of dbspaces must be entered in the onconfig file for this parameter. The list should be entered as a string of values less than 255 characters, with the dbspaces separated by a colon or comma with no white space. <strong>onconfig</strong> file setting recommendation: DBSPACETEMP temp_dbspacel,temp_dbspace2,temp_dbspace3</td>
</tr>
<tr>
<td>MAX_PDQPRIORITY</td>
<td>Specifies the percent of database resources a process performing parallel database queries is allowed to take from the percent it requested to use. The database resources used in parallel are memory, disk I/O, and scan threads that scan tables for rows requested. <strong>onconfig</strong> file setting recommendation: MAX_PDQPRIORITY 50</td>
</tr>
<tr>
<td>DS_MAX_QUERIES</td>
<td>Specifies the number of decision support type queries that can run simultaneously. Decision support queries are large, complex queries that scan the event database tables and require a large amount of database resources. <strong>onconfig</strong> file setting recommendation: DS_MAX_QUERIES 10</td>
</tr>
<tr>
<td>DS_MAX_SCANS</td>
<td>Specifies the limit to the number of parallel database query scan threads a decision support query can run concurrently. Decision support queries are large, complex queries that scan event database tables and require a large amount of database resources. <strong>onconfig</strong> file setting recommendation: DS_MAX_SCANS 20</td>
</tr>
<tr>
<td>DS_TOTAL_MEMORY</td>
<td>Specifies the total percent of the Informix universal server memory that should be used for parallel database queries. Set this value between 50% and 80% for applications that have a large number of decision support type queries. <strong>onconfig</strong> file setting recommendation: DS_TOTAL_MEMORY 50</td>
</tr>
<tr>
<td>OPTCOMPIND</td>
<td>Helps the Informix database optimizer choose the best data access method. <strong>onconfig</strong> file setting recommendation: OPTCOMPIND 1</td>
</tr>
<tr>
<td>LOGFILES</td>
<td>Specifies the number of logical logs. <strong>onconfig</strong> file setting recommendation: LOGFILES 5</td>
</tr>
<tr>
<td>LOGSIZE</td>
<td>Specifies the logical log size. <strong>onconfig</strong> file setting recommendation: LOGSIZE 10000</td>
</tr>
<tr>
<td>LOGSMAX</td>
<td>Specifies the maximum number of transaction logs. <strong>onconfig</strong> file setting recommendation: LOGSMAX 7</td>
</tr>
</tbody>
</table>

See also "Informix Logical Logs on page 62"
<table>
<thead>
<tr>
<th>Configuration Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYSDBS</td>
<td>The name of the physical log dbspace. onconfig file setting recommendation: PHYSDBS phys_log_dbspace</td>
</tr>
<tr>
<td>PHYSFILE</td>
<td>Specifies the location of the physical log. To minimize contention to the root dbspace, move the physical logs out of the root dbspace, where they are created by default. Due to the value of the critical data that it contains, create the physical log on its own I/O device and mirror it. Change these configuration variables to their new settings and then change the Informix universal server to quiescent mode with the Informix onmode –ky command and then run the onparams command to set up the new physical log. onconfig file setting recommendation: PHYSDBS phys_log_dbspace</td>
</tr>
<tr>
<td>LOCKS</td>
<td>Sets the number of locks available on the event database server for all users. Each lock takes up 44 bytes of resident memory. onconfig file setting recommendation: LOCKS 10000</td>
</tr>
<tr>
<td>DEADLOCK_TIMEOUT</td>
<td>Specifies the number of seconds a thread will wait to acquire a lock. This parameter is used by distributed queries accessing a remote server. onconfig file setting recommendation: DEADLOCK_TIMEOUT 60</td>
</tr>
<tr>
<td>BUFFERS</td>
<td>Specifies the amount of physical memory allocated to the buffers. Calculate all other shared memory parameters after deciding the space required for the buffers parameter. If after setting the values for the other shared memory parameters there is memory left to be allocated, assign more memory to the buffers using a maximum of 25%. You can find how many buffers to allocate by taking 25% of the physical memory available and dividing the number by the Informix page size setting for the operating system. You can also run the oncheck –pr command to acquire the number of buffers to set. onconfig file setting recommendation: BUFFERS 200</td>
</tr>
<tr>
<td>LOGBUFF</td>
<td>Defines the size of the logical-log buffers in shared memory. onconfig file setting recommendation: LOGBUFF 64</td>
</tr>
<tr>
<td>PHYSBUFF</td>
<td>Defines the size of the two physical log buffers in shared-memory. Choose a size that is evenly divisible by the page size. You can run the oncheck –pr command to get the page size. onconfig file setting recommendation: PHYSBUFF 16</td>
</tr>
<tr>
<td>CKPTINTVL</td>
<td>Defines the frequency, in number of seconds, at which the event database server checks to see if a checkpoint should be taken. onconfig file setting recommendation: CKPTINTVL 120</td>
</tr>
<tr>
<td>Configuration Option</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>CLEANERS</td>
<td>Specifies the number of page cleaners to allocate. You should use one page cleaner per disk drive allocated to the event database server. Cleaners write changed pages to disk. Additional cleaners has no effect on shared memory settings.</td>
</tr>
<tr>
<td>LRU</td>
<td>Defines the number of least-recently-used (LRU) queues in shared memory the buffer pool used to track the oldest pages. They can then be replaced, leaving pages that were more recently used in memory. Set this value to 4 for a uniprocessor machine. A formula is provided in your Informix database documentation for calculating values for multiprocessor machines. Monitor the LRU queues with the onstat –R command and make adjustments as needed.</td>
</tr>
<tr>
<td>LRU_MAX_DIRTY</td>
<td>Specifies that, when an LRU queue has the specified percentage of its page buffers modified, the cleaners should write the changes to disk to ensure that the queue does not fill up.</td>
</tr>
<tr>
<td>NOAGE</td>
<td>Informational parameter preventing an operating system from lowering the run-time priority of a processes as it runs for longer periods of time. You can check to see if your operating system lowers the priority of processes as they accumulate processing time and set this parameter to one if it does.</td>
</tr>
<tr>
<td>RA_PAGES</td>
<td>Defines the number of disk pages to attempt to read ahead during sequential scans of either data or index tables. This feature can greatly speed up database processing by already having the required data in memory before it is needed by the application.</td>
</tr>
<tr>
<td>RA_THRESHOLD</td>
<td>Defines the number of disk pages remaining unprocessed in memory before the event database server is signaled to read more pages into memory.</td>
</tr>
<tr>
<td>SINGLE_CPU_VP</td>
<td>Defines the number of CPU virtual processors the event database server is running on. Set the value to 1 if the event database server will run on one CPU virtual processor, as different code paths will be followed with this setting that avoid the changes that are set when running on a multiprocessor machine.</td>
</tr>
</tbody>
</table>

**Informix Logical Logs**

There are three configuration parameters that you can set in the onconfig configuration file for Informix logical logs. Evaluate the number and size of your logical log configuration parameters to ensure they are adequate for the peak processing periods experienced by your event database server.
The following three configuration parameters are available in the `onconfig` configuration file for Informix logical logs:

**Table 21. Informix logical log configuration parameters**

<table>
<thead>
<tr>
<th>Configuration Parameter</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOGFILES</td>
<td>Specifies the total number of logical logs.</td>
</tr>
<tr>
<td>LOGSIZE</td>
<td>Specifies the size of the logical logs.</td>
</tr>
<tr>
<td>LOGSMAX</td>
<td>Specifies the maximum number of logical logs.</td>
</tr>
</tbody>
</table>

For more information about Informix logical log configuration parameters, see “Informix Configuration Options” on page 58.

The size and number of the logical logs should be large enough to ensure sufficient logical log space. If the size of the logical logs is set too small, user activity is blocked until space is available. Update the configuration file with new values for the configuration parameters as needed. You must have a minimum number of three logical logs with a minimum size of 200KB.

Logical logs are initialized in the root dbspace by default. To minimize contention, move the logical logs and physical log out of the root dbspace to their own separate dbspaces on separate I/O devices. You can create two dbspaces on separate I/O devices for the logical logs and split them between the two dbspaces. For optimal performance, the new dbspaces should not contain other data.

To create new logical logs on separate dbspaces, create your dbspace after initializing the device, or cooked file, as outlined in the Informix Universal Server Administration Guide. Raw devices are faster than cooked files because the operating system’s I/O subsystem does not interact with the I/O to the raw device.

**Note:** A cooked file refers to a specific type of UNIX file. Although Informix manages the contents of cooked files, the UNIX operating system manages all I/O to cooked files. Unlike raw disk space, the logically contiguous blocks of a cooked file may not be physically contiguous.

See the Informix Administration Guide for information about how to move the logical logs out of the root dbspace and create them in the new dbspaces.

**MS SQL Server Configuration Options**

This section describes MS SQL Server database and server configuration options that can be set in the assistant or manually changed by a database administrator. Only a database administrator should change these settings as MS SQL Server frequently monitors the state of memory allocations and other configuration settings and then dynamically reconfigures them.

Refer to your MS SQL Server database manuals for information about configuration options that best fit your environment.

The following parameters can be activated for the event database:

**Table 22. MS SQL Server database parameters**

<table>
<thead>
<tr>
<th>Configuration Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANSI null default</td>
<td>Default parameter, set to on for the event database.</td>
</tr>
<tr>
<td>trunc. log on chkpt</td>
<td>Parameter set to on for the event database</td>
</tr>
</tbody>
</table>
The default device is changed to the device that is specified in the panels of the assistant as **rest_data**.

Triggers are created to support MS SQL Server versions that do not have **ON DELETE CASCADE** functionality.

The following event database server configuration options can be modified:

<table>
<thead>
<tr>
<th>Table 23. MS SQL Server database server configuration options</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Configuration Option</strong></td>
</tr>
<tr>
<td>Minimum memory per query</td>
</tr>
<tr>
<td>Maximum async IO</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

**Oracle Configuration Options**

To minimize disk contention when using an Oracle database, you can physically separate disk space for the following:

- Database system table space
- Temporary table space
- Rollback segments
- Application data
- Application indexes

Oracle’s System Global Area (SGA) is the memory area allocated at startup by Oracle that contains memory structures to store data and control information. The SGA should always be in non-paged, non-swapped memory.

The following table defines the Oracle memory structure types:

<table>
<thead>
<tr>
<th>Table 24. Oracle memory structure types</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type</strong></td>
</tr>
<tr>
<td>Shared Pool</td>
</tr>
<tr>
<td>Database Buffer Cache</td>
</tr>
<tr>
<td>Redo Log Buffer</td>
</tr>
</tbody>
</table>

The values defined for the following parameters have the largest impact on the SGA size:

- LARGE_POOL_SIZE
- SHARED_POOL_SIZE
- DB_CACHE_SIZE
- LOG_BUFFER

For additional detailed information about Oracle database performance, see the Oracle Database Performance Guide and Reference.
Tuning Oracle Rollback Segments
Rollback segments store the changes made by transactions and should be properly allocated for optimal database performance. The size and number of the rollback segments are application dependant and a size can be determined by monitoring the log writer (LGWR) trace file and the database’s ALERT file to see if the LGWR process frequently waits to write to the redo log. The size multiplied by the number of redo logs must be large enough to hold the maximum number of changes that will be recorded for the largest transaction’s changes before they are committed.

Note: When tuning Oracle rollback segments, the database must be in manual undo management mode. You cannot tune the rollback segments if the database is in automatic mode because Oracle handles the operation of the rollback segments internally.

There is always one rollback segment called SYSTEM in the SYSTEM table space. At least one extra rollback segment is needed if multiple table spaces are defined. Defining multiple rollback segments improves event database performance by distributing rollback segment usage and contention across multiple rollback segments.

In general, rollback segments should be sized according to the size of transactions made by the application. Short transactions tend to have better performance with many smaller rollback segments while longer transactions tend to have improved performance with larger rollback segments. For improved rollback I/O performance, each rollback segment for an instance should have 10 to 20 equally-sized extents. Create a table space to contain all rollback segments except the two SYSTEM rollback segments. The benefits of this design are that the rollback segments are not stored with other types of data and data access contention is eliminated. Also, the table space may be kept online at all times to ensure that rollback segments will not fragment the data table spaces by frequently allocating and deallocating extents.

Oracle Redo Log Buffer and Files Tuning
The Oracle redo log buffer and the online redo log files contain the history of committed changes made to the event database. Their purpose is to protect the event database in the event of an instance failure. The Oracle redo log buffer is a buffer in the SGA and is written to in a circular fashion. The records are then written to the redo log files on disk, also written to in circular fashion. They should be multiplexed, meaning each should have a backup copy to ensure backups of each log. The multiplexed redo log files are called redo log file groups. The log and its backup copy are members of the log file group and should be placed on distinct I/O devices to avoid a single point of failure for the Oracle database. At least two redo logs or log groups are required to be defined and they should be placed on the fastest, least busy, I/O devices.

Oracle Configuration Options
The following table defines some Oracle configuration options that can enhance run-time performance:

Follow the procedure outlined in your Oracle database vendor documentation to implement these and other beneficial configuration options.
<table>
<thead>
<tr>
<th>Configuration Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB_BLOCK_BUFFERS</td>
<td>This parameter defines the number of buffers in the System Global Area (SGA) buffer cache. The buffer cache holds copies of data blocks read from disk. Setting this value affects the performance of the buffer cache. Defining this setting correctly promotes the chances of getting requested data from memory instead of disk, greatly improving run-time performance. You should estimate the number of data blocks the IBM Tivoli Enterprise Console application accesses most often for the tables, indexes, and rollback segments and provide a estimation of the minimum number of buffers that should be defined to the buffer cache. Usually 1000 to 2000 is a good minimum value for the number of buffers to define. The buffer cache should equal the memory left after tuning the SQL and PL/SQL areas and the shared pool.</td>
</tr>
<tr>
<td>DB_BLOCK_MULTIBLOCK_READ_COUNT</td>
<td>This parameter specifies the maximum number of blocks read during a sequential table scan for one I/O operation. It can help to minimize the number of I/O’s required during table scans.</td>
</tr>
<tr>
<td>DB_CACHE_SIZE</td>
<td>This parameter specifies the size of the default buffer pool for buffers using the block size specified by the parameter <code>DB_BLOCK_SIZE</code>.</td>
</tr>
<tr>
<td>LARGE_POOL_SIZE</td>
<td>Allocate a large pool so Oracle has a separate pool to request large memory allocations and lessen the impact on the SGA as a whole. You should also set the LARGE_POOL_MIN_ALLOC parameter.</td>
</tr>
<tr>
<td>PARALLEL AUTOMATIC_TUNING</td>
<td>Setting this parameter allows Oracle to automatically determine the required default parameters for parallel execution. Since parallel execution uses only the large pool, if the large_pool_size is unset it will determine a default size for it. To enable this parameter you must also define the target tables as PARALLEL.</td>
</tr>
<tr>
<td>Configuration Option</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>SHARED_POOL_SIZE</strong></td>
<td>The shared pool resides in the Oracle Instance SGA and contains the Shared SQL areas and the Data Dictionary. The Shared SQL area contains the information required to run single SQL statements. The Data Dictionary contains the Oracle server’s user names, privileges and roles, the names and definitions of database objects, integrity constraints, database object space allocations, auditing information, stored procedures, and triggers.</td>
</tr>
<tr>
<td><strong>SORT_AREA_SIZE</strong></td>
<td>When large sorting functions occur regularly, this parameter should be increased from its default value. Setting this value appropriately can increase the number of sorting procedures that can be carried out completely in memory and can speed up those sorting that cannot be carried out completely in memory.</td>
</tr>
<tr>
<td><strong>SORT_DIRECT_WRITES</strong></td>
<td>Set this value to AUTO. When it is set to auto and the sort_area_size is more than 10 times the buffer size this parameter can cause the buffer cache to be bypassed and potentially improve sorts by a factor of 3.</td>
</tr>
<tr>
<td><strong>SORT_AREA_RETAINED_SIZE</strong></td>
<td>A large sort_area_size value should be offset with a minimal sort_area_retained_size value to allow the sort memory to be released before a user’s session ends. If memory is not released until you disconnects from Oracle, a large sort work area could cause problems instead of performance gains.</td>
</tr>
<tr>
<td><strong>LOG_BUFFER</strong></td>
<td>An application that generates many logs commonly has a size of between 3 and 5 MB for the log buffer size. Check the redo buffer allocation retries statistic in the V$SYSSTAT view to see if this value is high. A high value indicates that the log buffer size should be increased. Ensure the logs are on high performance I/O devices with low I/O contention rates</td>
</tr>
<tr>
<td><strong>DB_WRITER_PROCESSES</strong></td>
<td>This parameter specifies the startup number of database writer processes for an instance. It is helpful to set this value higher for applications, such as the IBM Tivoli Enterprise Console product, that require frequent and heavy updates to the database</td>
</tr>
</tbody>
</table>
Table 25. Oracle configuration options  (continued)

<table>
<thead>
<tr>
<th>Configuration Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALWAYS_ANTI_JOIN</td>
<td>Set this parameter to the value HASH to enable the NOT IN operator to be evaluated in parallel using a parallel hash anti-join. Otherwise, it uses a sequential correlated subquery.</td>
</tr>
<tr>
<td>LOCK_SGA</td>
<td>This parameter will lock the SGA memory allocation into physical memory when set to true. This avoids the event database server memory buffers from being swapped in and out to disk. The parameter is ignored if the operating system platform this is set on does not support it. You can also choose to lock only certain SGA areas into physical memory with the LOCK_SGA AREAS configuration option.</td>
</tr>
<tr>
<td>OPTIMIZER_MODE</td>
<td>This parameter sets the access method used for the instance when retrieving rows from event database tables. When set to choose, the optimizer will choose the best method between a rule-based approach and a cost-based approach. The cost-based approach involves analyzing the statistics, if they are updated. Since the event database may have the wdbmaint.sh stats and wdbmaint.sh reorg run on a regular basis, the choose mode should be beneficial for the IBM Tivoli Enterprise Console application.</td>
</tr>
<tr>
<td>OPTIMIZER_INDEX_COST_ADJ</td>
<td>This parameter allows you to add a weighting factor to cost-based approach when indexes are being evaluated versus table scans. Using this parameter for the IBM Tivoli Enterprise Console application would be beneficial to give advantage to the indexes weightings instead of using table scans.</td>
</tr>
</tbody>
</table>

**Sybase Configuration Options**

Sybase offers many configuration options to tune the performance of the event database.

The following table lists configuration options that are automatically configured for the event database by the SQL scripts:
<table>
<thead>
<tr>
<th>Configuration Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>total memory</td>
<td>Total memory is configured from user input values and defines the total memory, in 2K units, allocated from the operating system available memory to the event database server. Higher values allow more event database server allocations to internal buffers and caches, therefore reducing the number of I/Os to disk and can improve performance. <strong>Note:</strong> The event database server must be able to acquire the full amount of total memory defined at startup or it may not start. If the server will not start, set the value in the configuration file for the server to a lower value and restart the server.</td>
</tr>
<tr>
<td>number of index trips</td>
<td>The number of index trips is set to 1 in SQL scripts. This parameter defines the number of times a changed index page is skipped when considering which pages to swap, and in what order.</td>
</tr>
<tr>
<td>procedure cache percent</td>
<td>Procedure cache percent is set to 25%. This number specifies the percent of memory allocated to the procedure cache. This percent is derived from the memory remaining after the Adaptive Server takes the memory needed for locks, user connections, and the server code itself. The remaining memory is then used by the data cache. The procedure cache is used when running stored procedures and compiling queries.</td>
</tr>
<tr>
<td>cis cursor rows</td>
<td>CIS cursor rows is set to 100. This is the number of rows retrieved with open cursor and cursor fetch operations.</td>
</tr>
<tr>
<td>number of devices</td>
<td>Number of devices is set to 25. This sets the number of devices that can be defined with <code>disk init</code>. The initial settings for the device numbers are 0-9. The event database configures up to 11 additional devices so that a new value of 25 is set. Change this value higher if a setting of 25 will not allow 11 new devices to be added.</td>
</tr>
<tr>
<td>number of large I/O buffers</td>
<td>Number of large I/O devices is set to 12. This sets the number of 16K buffers available for large I/O utilities such as load database, create database, and alter database.</td>
</tr>
<tr>
<td>number of locks</td>
<td>Number of locks is set to 10000. This sets the number of locks available on the event database server for all users.</td>
</tr>
<tr>
<td>deadlock checking period</td>
<td>Deadlock checking period is set to 2 seconds, or 2000 milliseconds. Setting a higher value frees CPU cycles for applications that do not often deadlock.</td>
</tr>
<tr>
<td>lock hash table size</td>
<td>Lock hash table size is set to 4096 bytes. This number defines the number of bytes in the lock hash table that are allocated to hold the number of locks currently in use.</td>
</tr>
<tr>
<td>lock schema</td>
<td>Lock schema is set to data rows. This setting defines the default locking schema and changes it to row-level locking.</td>
</tr>
<tr>
<td>row lock promotion HWM</td>
<td>Row lock promotion HWM is set to 8000. This number defines the top threshold of locks that can be acquired during a single scan of a table or index before the server escalates from row-level locking to table-level locking schema.</td>
</tr>
<tr>
<td>max SQL text monitored</td>
<td>Max SQL text monitored is set to 1024 bytes. This value defines the amount of memory per user connection set aside to save shared SQL text.</td>
</tr>
</tbody>
</table>
The following parameters are activated for the event database only:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>select into/bulkcopy/pllsort</td>
<td>The select into/bulkcopy/pllsort parameter is set to ON for the event database and the TEMPDB database.</td>
</tr>
<tr>
<td>trunc. log on chkpt</td>
<td>The trunc. log on chkpt parameter is set to ON for the event database.</td>
</tr>
<tr>
<td>allow nulls by default</td>
<td>The allow nulls by default parameter is set to ON for the event database.</td>
</tr>
</tbody>
</table>

**General Event Database Considerations**

The following items should be considered for all database types before beginning your event database configuration:

- For databases other than Oracle, installing, upgrading, or removing the event database requires that the event database server be stopped and restarted before your new configuration settings take effect. Ensure that there are no users with active sessions on the same event database server that the event database is to be installed on. The scripts shut down the event database server as needed to run the event database configuration scripts. When the database client is installed on the RIM host instead of the database server, you may be prompted to stop or restart the event database server and then click **Next** to continue.

- The `wuninst` command uses the `tec-remove.sh` script, located in the `$BINDIR/TME/TEC` directory. Before running this command, you should stop the event server and any active event consoles and then run the assistant or the `wdbinstall.sh` script to completely remove the event database from your event database server.

- It is recommended to check with your database administrator and database vendor documentation if your database environment uses mirrored database devices. You may have the ability to edit the database schema scripts to add the mirroring capability to the product schema for your site.

- When defining device sizes and directory paths in the assistant panels, ensure that the device size specified is available in the directory path or raw partition specified for that device and that the permissions are set to allow the directory to be written to by the database server.

**DB2 Considerations**

When the DB2 client is installed on the RIM host, the node to be used by the DB2 client to attach or connect to the DB2 server must previously be cataloged and ready for use.

**DB2 Considerations for New Installations and Upgrades**

If you are using a DB2 client connection, you must ensure that there are no active connections to the IBM Tivoli Enterprise Console database instance before running the scripts generated by the assistant. You must also catalog the DB2 server in order to upgrade. For additional DB2 information about cataloging the DB2 node, see the **catalog tcpip node** command in the *DB2 Universal Database Command Reference*.

You can use the following command from the DB2 database server to force active connections off before running the generated scripts:

dbs2stop force
Cataloging the DB2 Node for a New Installation
Use the following DB2 command to catalog the DB2 node:

\texttt{db2 catalog tcpip node node\_name remote server\_name server instance\_port\_#}

--OR--

\texttt{service\_name}

Cataloging the DB2 Node for an Upgrade
When the DB2 client is installed on the RIM host, the node must be cataloged and the event database must be cataloged.

Use the following DB2 command to catalog the DB2 database:

\texttt{db2 catalog database tec\_database\_name as tec\_database\_alias\_name at node node\_name}

Informix Considerations
Because Informix logical dbspace names are created at the database server level, the names must be unique for a database created on the Informix server. If more than one event server is installed on the Informix server, you must assign unique logical dbspace names for each database.

If you select to move the DBSPACETEMP work area from the rootdbs device to a new dbspace or new dbspaces instead of selecting the \textbf{No Change} button on the DBSPACETEMP panel in the assistant, the DBSPACETEMP dbspaces are not removed when the IBM Tivoli Enterprise Console product is removed. This is a recommended permanent change to the DBSPACETEMP dbspaces for your event database server configuration. If you are not specifying new dbspaces when reinstalling the event database, select the \textbf{No Change} button on the DBSPACETEMP panel.

\textbf{Note:} For Informix, the scripts generated by the assistant must be run from the Informix database server.

When specifying new dbspaces for DBSPACETEMP from the assistant panels, ensure that you also update your Informix \texttt{onconfig} file with the new dbspace names for the DBSPACETEMP configuration option.

For Informix, when an event database is upgraded to the version 3.8 schema and then removed with the version 3.8 SQL scripts, the version 3.8 schema will not be aware of the previously defined dbspaces. The dbspaces defined for the original event database (any that existed prior to the version 3.8 upgrade) must be manually removed.

MS SQL Server Considerations
The assistant prompts you for the event database server name and the service name. The service name is \texttt{mssqlserver} for MS SQL Server 7 and MS SQL Server 2000 with the default server instance. The server name can be found in the SQL Server Enterprise Manager.

The service name has the following format for an MS SQL Server 2000 named instance:

\texttt{mssql$instancename}
For additional MS SQL Server considerations, see “Sybase and MS SQL Server Considerations”.

**TEMPDB Settings**
The original TEMPDB file is deleted when you select the option to alter the TEMPDB settings. When a database client is installed on the RIM host, a message appears indicating that the TEMPDB file should be deleted on the machine where the event server is installed. Deleting the TEMPDB file on this machine ensures that all TEMPDB space resides on its own device and does not share the master device.

The assistant and the `wdbinstall.sh` script only stop and restart, or prompt you to stop and restart the event database server if the TEMPDB settings are altered. The event database server does not need to be stopped and restarted during the event database installation or upgrade process if you select the No Change option for the TEMPDB settings.

**Oracle Considerations**
Because the Oracle database is often installed using the Oracle installation to create the event database, you must use unique names for all table spaces within the database. If more than one event server is installed on the Oracle server, you must assign unique table space names for each database.

The Install Database Objects and Remove Database Objects options are not available for Oracle in the assistant. Unlike other platforms, the Oracle database installation uses an existing database instance for event data and does not change settings in the existing instance. Options for other databases are available because they create new databases for the event data.

Installing or removing the Oracle database will not cause the Oracle instance to be stopped and restarted, as with other databases.

**Sybase and MS SQL Server Considerations**
You can choose to change the TEMPDB settings one time, which will move the TEMPDB database from its default location on the master device to the device and size specified in the assistant panels. If this action has already been initiated in your environment by your database administrator or by running the assistant scripts, click the No Change button on the corresponding panel to ensure the changes are not attempted again and fail. If the TEMPDB settings are run more than one time, you will receive error messages.

When your event database is newly-created or upgraded to version 3.8, the device labeled rest_data is chosen to be the default device. When the event database is removed, the default device is set to Master for Sybase.

If the TEMPDB database is moved to a new device instead of selecting the No Change button, it is not changed when the event database is removed. Once stopped, Sybase or MS SQL Server servers will not be able to start again if the TEMPDB database is removed.

For MS SQL Server and Sybase, if the client is installed on the RIM host, you will need to be able to stop and start the event database server when prompted to do so by the running the assistant or the `wdbinstall.sh` script before continuing with the next step.
For MS SQL Server and Sybase, the user login must be unique for each database installed on the event database server.

**Sybase Considerations**

Because Sybase logical device names are created at the database server level, the device names must be unique for databases created on the Sybase server. If more than one event server is installed on the Sybase server, unique logical device names must be given for each logical device name created for each database.

For Sybase, when an event database is upgraded to the version 3.8 schema and then removed with the version 3.8 SQL scripts, the version 3.8 schema will not be aware of the previously defined devices. The devices defined for the original event database (any that existed prior to the version 3.8 upgrade) must be manually removed.

**Enabling Language Support**

The IBM Tivoli Enterprise Console product supports the processing of event data that originates from a wide variety of code sets. This is achieved by converting all event data to the UTF-8 code set when the event is created. After the conversion, the event data remains in UTF-8 format throughout the remaining processes, with the exception of storage of the data in the database. The data is stored in RDBMS format. The code set is most commonly the native code set of the operating system that the RDBMS is running on.

Enabling language support is different for each database. The assistant does not directly create databases that support UTF-8, but generates scripts that manipulate the table spaces that will support UTF-8 encoding. See the appropriate sections below for considerations when enabling language support for your database type.

**Enabling Language Support for DB2**

For DB2 support of UTF-8 encoding, a set of parameters is required when the database is created. The **USING CODESET UTF-8 TERRITORY** parameter is added to create commands in order for DB2 to support event data received from heterogeneous code sets.

Select the appropriate two-letter territory identifier in the pull-down menu by interacting with the assistant. The event database created from the assistant will support the UTF-8 data selected.

For more information about enabling language support for DB2, see the *IBM DB2 Universal Database Administration Guide: Planning*.

**Enabling language Support for MS SQL Server, Sybase, and Informix**

If event data has been generated from a variety of code sets, it may not be possible to correctly store data that originated from one code set in a database that supports a different code set. For this reason, the event-related tables in the event database support UTF-8 by default where possible. Since database systems have varying support for internationalized data, support for this option varies among vendors. See your database vendor’s documentation for procedures specific to your database.
Note: MS SQL Server, Sybase, and Informix are not affected by this configuration change because they do not support storing data in UTF-8 format. Oracle and DB2 are affected, as they both support storing UTF-8 data.

Enabling Language Support for Oracle
Oracle has provisions for defining code set storage when the database is created using the NATIONAL CHARACTER SET parameter. The parameter must be set to UTF-8 when creating the database to support processing of event data in a heterogeneous code set environment.

Note: The assistant does not directly create databases for Oracle, but generates scripts that manipulate table spaces. The responsibility for creating the database that supports UTF-8 encoding lies with the database administrator that created the event database.

Where To Go From Here
After successfully installing the event database, you can begin to customize your environment. You can return to Chapter 3, “Installation Road Map” on page 13 or see the online help provided with the event console. You can also use the IBM Tivoli Enterprise Console User’s Guide for additional task-related information. For NetView tasks, see the NetView ITS Release Notes.
Chapter 7. Upgrading Components

When you upgrade components of the Tivoli Enterprise Console product from a previous release, you install the upgrade image for that component. You can upgrade these components using either the Software Installation Service, the Tivoli desktop, or the command line.

Note: Before upgrading to version 3.7.1 or version 3.8 of the IBM Tivoli Enterprise Console product, you must first install the Tivoli Enterprise Console product, Version 3.6.2 or greater.

Before performing any of the following procedures, read the *IBM Tivoli Enterprise Console Release Notes* for additional upgrade information.

Before You Begin

If you are upgrading a specific component of the IBM Tivoli Enterprise Console product directly after installing, you must perform the following tasks:

1. Back up the affected object databases. Before upgrading the IBM Tivoli Enterprise Console product, Tivoli also recommends that you back up the object databases for all affected machines in your Tivoli management region. This backup enables you to return to a known working state. Having a backup is useful if you encounter problems while installing the IBM Tivoli Enterprise Console product.

2. Ensure that you are running the appropriate version of the Tivoli Management Framework product on all hosts that you will be upgrading. See “Verifying the Appropriate Version of Tivoli Management Framework” on page 76 for more information.

3. Ensure that all IBM Tivoli Enterprise Console product considerations are fulfilled.

4. Stop the Tivoli Enterprise Console event server, all event consoles, and all adapters. The UI server will shut down automatically after stopping the event server. If any IBM Tivoli Enterprise Console processes are still running, terminate them manually.

You can stop the event server using the procedure in “Stopping and Starting the Event Server” on page 36.

The following table provides the authorization roles required to perform an IBM Tivoli Enterprise Console product upgrade.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Context</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upgrading Tivoli products</td>
<td>Tivoli management region</td>
<td>install_product or senior</td>
</tr>
</tbody>
</table>

Backing Up Object Databases

Before installing, upgrading, or uninstalling any IBM Tivoli Enterprise Console components, you should back up the Tivoli object databases for all affected machines in your Tivoli management region. This backup enables you to return to
a known working state. Having a back up is useful if you encounter problems while installing the IBM Tivoli Enterprise Console product.

From the Tivoli desktop, select Desktop —> Backup to perform a backup of the object database for the Tivoli management region server and managed nodes. You can also use the wbkupdb command. For additional information about the wbkupdb command, refer to the Tivoli Management Framework Reference Manual.

**Verifying the Appropriate Version of Tivoli Management Framework**

When you are upgrading to IBM Tivoli Enterprise Console, Version 3.8, ensure that you check the IBM Tivoli Enterprise Console Release Notes for compatibility and interoperability issues related to the appropriate Tivoli Management Framework product version.

**General Upgrade Considerations**

Upgrading to IBM Tivoli Enterprise Console, Version 3.8 is done on a per-Tivoli management region basis. You must perform the upgrade from the Tivoli management region server in each Tivoli management region you want to upgrade.

**NetView Upgrade Considerations**

To activate the upgraded default rule base for NetView events, you must run the following two commands. If you do not run these commands, NetView events will not appear on the event console. The upgraded rule base introduces the new NetView event classes in the netview.baroc file.

```
wrb –comprules Default
wrb –loadrb Default
```

For more information about using the wrb command, see the IBM Tivoli Enterprise Console Reference Manual.

**Upgrade Images**

Each release of the IBM Tivoli Enterprise Console product CD contains the upgrade images for that product. The images are listed in the PATCHES.LST file.

**Version 3.8 Upgrade Images**

The upgrade images for Tivoli Enterprise Console, Version 3.8, are located in the /UPGRADE subdirectory. The upgrade images for this release are as follows:

**IBM Tivoli Enterprise Console Server 3.8 Upgrade**

Shut down the event server, the UI server, and all event consoles before installing.

Do not install the event server as an upgrade unless you are using version 3.6.2 or greater of the IBM Tivoli Enterprise Console product.

**IBM Tivoli Enterprise Console Console 3.8 Upgrade**

Shut down the event server, the UI server, and all event consoles before installing. Because the event console was a new component in Version 3.7, install it as an upgrade only on machines where Version 3.7 or greater of the product is currently installed.

**IBM Tivoli Enterprise Console User Interface (UI) Server 3.8 Upgrade**

Shut down the event server, the UI server, and all event consoles before installing.
installing. Install the UI server as an upgrade only on machines where Version 3.7 or greater of this product is currently installed. The UI server was a new component with version 3.7 and must be installed as such if you are at version 3.6.2 or less.

IBM Tivoli Enterprise Console Sample Event Information 3.8 Upgrade
Shut down the event server, the UI server, and all event consoles before installing. Install the Sample Event Information as an upgrade only on machines where Version 3.7 or greater of this product is currently installed. The sample event information was a new component with version 3.7 and must be installed as such if you are at version 3.6.2 or less.

IBM Tivoli Enterprise Console Adapter Configuration Facility (ACF) 3.8 Upgrade
Install only on machines where Version 3.6.2 or greater of this product is currently installed.

IBM Tivoli Enterprise Console Event Integration Facility (EIF) 3.8 Upgrade
Install only on machines where Version 3.6.2 or greater of this product is currently installed.

Note: Only the event server and ACF components are required to use the Tivoli Event Integration Facility product.

Adapters with Upgrade Images
IBM Tivoli Enterprise Console HP OpenView Adapter 3.8 Upgrade
IBM Tivoli Enterprise Console SunNet Manager Adapter 3.8 Upgrade

Upgrading from the Tivoli Desktop
You can upgrade any Tivoli product or IBM Tivoli Enterprise Console component from the Tivoli Management Framework desktop using the Install Patch dialog. See the Tivoli Enterprise Installation Guide for procedures used to upgrade IBM Tivoli Enterprise Console components from the Tivoli desktop.

The following table provides variable data you will need when upgrading IBM Tivoli Enterprise Console products using the dialogs provided with Install Patch option on the Tivoli Management Framework desktop.

<table>
<thead>
<tr>
<th>Tivoli Desktop GUI Label</th>
<th>IBM Tivoli Enterprise Console Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set Media</td>
<td>set the media type for your source files</td>
</tr>
<tr>
<td>Database Vendor</td>
<td>your_database_type</td>
</tr>
<tr>
<td>Product Install Window shows a list of</td>
<td>Select the component and version to upgrade to and click OK</td>
</tr>
<tr>
<td>actions the system will perform.</td>
<td></td>
</tr>
</tbody>
</table>

Upgrading from the Command Line
You can also upgrade any Tivoli product or IBM Tivoli Enterprise Console component from the command line using the wpatch command. The Tivoli Enterprise Installation Guide outlines standard procedures for using the wpatch command and describes options available for the command.

The following table provides variable data you will need to use when upgrading IBM Tivoli Enterprise Console products from the command line.
### wpatch Command Options

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>-c source_dir</code></td>
<td><code>registered_product_tag</code>&lt;br&gt;See “Component Installation Order” on page 36 for a list of registered product tags for the IBM Tivoli Enterprise Console product.</td>
</tr>
<tr>
<td><code>-i patch</code></td>
<td><code>registered_product_tag</code>&lt;br&gt;See “Component Installation Order” on page 36 for a list of registered product tags for the IBM Tivoli Enterprise Console product.</td>
</tr>
<tr>
<td><code>-n</code></td>
<td>not used</td>
</tr>
<tr>
<td><code>-y</code></td>
<td>not used</td>
</tr>
<tr>
<td><code>install_variables</code></td>
<td>See the IBM Tivoli Enterprise Console User’s Guide or “Installing and Configuring the RDBMS” on page 30 for information specific to your database vendor’s installation variables.</td>
</tr>
<tr>
<td><code>managed_node</code></td>
<td><code>managed_node</code></td>
</tr>
</tbody>
</table>

### Upgrading Using the Software Installation Service

You can upgrade any Tivoli product or IBM Tivoli Enterprise Console component using the Tivoli Software Installation Service. Use the installation procedures for new components in “Installing Components Using the Software Installation Service” on page 41 as the Software Installation Service does not differentiate between installation and upgrade images. See the Tivoli Enterprise Installation Guide for procedures used to install the Software Installation Service client before you begin. You need to first import the upgrade images into the Install Repository and select which machines will be upgraded with which components.
Chapter 8. Uninstalling Components

To uninstall the Tivoli Enterprise Console product from a specific machine or from an entire Tivoli management region, use the **wuninst** command. You cannot uninstall IBM Tivoli Enterprise Console components from the Tivoli desktop or by using the Software Installation Service.

Before uninstalling the product, it is recommended that you back up the object databases for all affected machines in your Tivoli management region. This backup enables you to return to a known working state.

**Note:** To preserve binaries removed during the uninstall process, a full file system back up should be performed.

From the Tivoli desktop, select **Desktop —> Backup** to perform a backup of the object database for the Tivoli management region server and managed nodes. You can also use the **wbkupdb** command. For additional information about the **wbkupdb** command, refer to the **Tivoli Management Framework Reference Manual**.

**Note:** The **wuninst** command uses the **tec-remove.sh** script, located in the **$BINDIR/TME/TEC** directory. Before running this command, you should stop the event server and any active event consoles and then run the event database installation assistant or the **wdbconfig.sh** script to completely remove the event database from your event database server.

The following table provides the authorization role required to uninstall the IBM Tivoli Enterprise Console product.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Context</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uninstall Tivoli products</td>
<td>Tivoli management region</td>
<td>super</td>
</tr>
</tbody>
</table>

To view the **wuninst** usage statement used for a specific IBM Tivoli Enterprise Console component, enter the following command:

```
wuninst tag
```

where:

```
tag
```

is the registered product tag for that component.

See the table in “Component Installation Order” on page 36 for registered product tags about variables representing IBM Tivoli Enterprise Console component tags.

**Note:** Although you can install selected adapters through the Tivoli installation mechanisms, you cannot uninstall them using the **wuninst** command.

### Order for Uninstalling Components

1. All adapters
2. All ACFs
3. All event consoles
4. Sample event information

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Uninstalling from the Command Line Examples

You can uninstall any Tivoli product or IBM Tivoli Enterprise Console component from the command line using the `wuninst` command. Because every IBM Tivoli Enterprise Console installation is unique, the following sections provide examples for uninstalling each component that you can modify to fit your environment. For detailed information about using the `wuninst` command to uninstall Tivoli products and components, see the *Tivoli Enterprise Installation Guide*.

The following table provides the variable data you will need to use when uninstalling IBM Tivoli Enterprise Console products from the command line.

<table>
<thead>
<tr>
<th>wuninst Command Options</th>
<th>IBM Tivoli Enterprise Console Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>tag</code></td>
<td>Specify the registered product tag for the component to remove.</td>
</tr>
<tr>
<td><code>node_name</code></td>
<td>Specify the node from which to remove the component. If the managed node is the same as the Tivoli management region server, the component is removed from the entire Tivoli management region.</td>
</tr>
<tr>
<td><code>–rmfiles</code></td>
<td>Indicates all product files to be removed from the named managed node. If this option is not used, the <code>wuninst</code> command will remove only the database entries for the node named in <code>node_name</code>. If <code>–rmfiles</code> is used on the Tivoli management region server, all entries for each managed node in the Tivoli management region are removed. Files specified are removed even if they are shared.</td>
</tr>
<tr>
<td><code>–list</code></td>
<td>List the installed application tags or the node on which a product is installed.</td>
</tr>
<tr>
<td><code>options</code></td>
<td>Indicates additional options that may be required by a specific component. You can view options required to uninstall a particular component by typing <code>wuninst tag</code> from the command line.</td>
</tr>
</tbody>
</table>

See the *Tivoli Management Framework Reference Manual* for additional details about the `wuninst` command.

Uninstalling the Adapter Configuration Facility

To uninstall the ACF from managed node `cavaj` in your Tivoli management region, enter the following command:

```
wuninst ACF cavaj –rmfiles
```

where:

- **ACF** Specifies the registered product tag for the ACF.
- **cavaj** Specifies the host name of the managed node. If you want to remove this component from all machines in the Tivoli management region, specify the host name of the Tivoli management region server instead.
rmfiles
   Specifies that all databases objects and all associated files are removed.
   When -rmfiles is specified, the associated files are removed, even if they
   are shared files.

Note: In order to properly uninstall the ACF, the ACF must be installed first on
the Tivoli management region server prior to installation on managed nodes.
For more information about installing the ACF, see Chapter 11, “Uninstalling
Adapters” on page 101.

Uninstalling the Event Console
To uninstall the event console from all machines in the Tivoli management region,
enter the following command:
wuninst TEC_JCONSOLE TMRserver –rmfiles

where:

TEC_JCONSOLE
   Specifies the registered product tag for the event console.

TMRserver
   Specifies the host name of the Tivoli management region server. Although
   this machine might not have the event console installed, specifying the
   Tivoli management region server removes the event console from each
   machine in the Tivoli management region where the event console is
   installed.

–rmfiles
   Specifies that all database objects and all associated files are to be removed.
   These files are removed even when they are shared files.

Uninstalling the Sample Event Information
To uninstall the sample event information from managed node gateaux, enter the
following command:
wuninst tec_EVTHelp gateaux –rmfiles

where:

TEC_EVTHelp
   Specifies the registered product tag for the sample event information.
gateaux
   Specifies the host name of the managed node containing the sample event
   information.

–rmfiles
   Specifies that all database objects and all associated files are to be removed.
   These files are removed even when they are shared files.

Uninstalling the User Interface Server
To uninstall the UI server from managed node gateaux, enter the following
command:
wuninst TEC_UI_SRVR gateaux –rmfiles

where:

TEC_UI_SRVR
   Specifies the registered product tag for the UI server.
gateux  Specifies the host name of the managed node containing the UI server.

–rmfiles  Specifies that all database objects and all associated files are to be removed. These files are removed even when they are shared files.

**Uninstalling the Event Server**

To uninstall the event server from managed node gateaux, enter the following command:

`wuninst TEC_SERVER gateaux –rmfiles`

where:

**TEC_SERVER**  Specifies the registered product tag for the event server.

**gateux**  Specifies the host name of the managed node containing the event server. Because there is only one event server in a Tivoli management region, you can specify the host name of the Tivoli management region server.

**–rmfiles**  Specifies that all database objects and all associated files are to be removed. These files are removed even when they are shared files.
Chapter 9. Installing Adapters

After installing the event server, UI server, sample event information, event consoles, and the ACF, install selected adapters. For more information about managed node adapters, endpoint adapters, and non-TME adapters, see the IBM Tivoli Enterprise Console Adapters Guide. For information about uninstalling endpoint adapters, see Chapter 11, “Uninstalling Adapters on page 101.”

Supported Adapters

For updated information about adapters supported for the IBM Tivoli Enterprise Console product, see the IBM Tivoli Enterprise Console Release Notes.

For more information about configuring adapters, see the IBM Tivoli Enterprise Console Adapters Guide.

The procedures in this chapter describe how to install an adapter. You can install most adapters using either the Tivoli desktop or the command line. The TME endpoint adapters (OS/2, SNMP, UNIX logfile, Windows, and Windows NT) must be installed using the ACF.

Notes:
1. The NetView for OS/390 adapters are delivered with Tivoli NetView for OS/390 as part of the Event/Automation Service. For information about installing these adapters, see “Event/Automation Service” in the Tivoli NetView for OS/390 Installation and Administration Guide.
2. HP-UX 11 is the same as HP-UX 10 for all IBM Tivoli Enterprise Console purposes. They use the same executable files for all programs. They also use the same adapter files, so the logfile_hpx10 profile type should be used for HP 11 systems. This is similar to the way that the aix4-r1 platform type includes with 4.2 and 4.3 versions of AIX.
3. The TME OS/2, Windows, Windows NT, and UNIX logfile adapters and SNMP adapter can be installed only on an endpoint. To install one of these adapters on a managed node that does not have an endpoint installed, you must use the non-TME version, or make the managed node an endpoint also.
4. NetWare can only be installed as a non-TME adapter.
5. On the Windows 2000 platform, the logfile adapter is referred to as the Windows event log adapter.
6. On the Windows NT platforms, the logfile adapter is referred to as the NT event log adapter.

After installing and configuring adapters, you must perform event server and event group tasks so that the event server can receive events from the adapters. The event server tasks include defining event sources and groups. See the IBM Tivoli Enterprise Console User’s Guide for information about setting up event sources and event groups for the event server.

This chapter details the installation instructions for the adapters listed in the following table.
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<thead>
<tr>
<th>Adapter</th>
<th>Environment</th>
<th>Install From</th>
<th>For More Information</th>
</tr>
</thead>
<tbody>
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<td>AS/400 alert and message</td>
<td>Non-TME</td>
<td>Command line</td>
<td>&quot;Installing AS/400 Adapters” on page 92</td>
</tr>
<tr>
<td>OpenView</td>
<td>TME</td>
<td>Tivoli desktop or command line</td>
<td>&quot;Installing an Adapter on a Managed Node in a TME Environment” on page 85</td>
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<tr>
<td></td>
<td>Non-TME</td>
<td>Command line</td>
<td>&quot;Installing an Adapter in a Non-TME Management Environment” on page 89</td>
</tr>
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<td>OS/2</td>
<td>TME</td>
<td>Tivoli desktop</td>
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</tr>
<tr>
<td></td>
<td>Non-TME</td>
<td>Command line</td>
<td>&quot;Installing an Adapter in a Non-TME Management Environment” on page 89</td>
</tr>
<tr>
<td>SNMP</td>
<td>TME</td>
<td>Tivoli desktop</td>
<td>&quot;Installing an Adapter on an Endpoint in a TME Environment” on page 88</td>
</tr>
<tr>
<td></td>
<td>Non-TME</td>
<td>Command line</td>
<td>&quot;Installing an Adapter in a Non-TME Management Environment” on page 89</td>
</tr>
<tr>
<td>SNM</td>
<td>TME</td>
<td>Tivoli desktop or command line</td>
<td>&quot;Installing an Adapter on a Managed Node in a TME Environment” on page 85</td>
</tr>
<tr>
<td></td>
<td>Non-TME</td>
<td>Command line</td>
<td>&quot;Installing an Adapter in a Non-TME Management Environment” on page 89</td>
</tr>
<tr>
<td>UNIX logfile</td>
<td>TME</td>
<td>Tivoli desktop</td>
<td>&quot;Installing an Adapter on an Endpoint in a TME Environment” on page 88</td>
</tr>
<tr>
<td></td>
<td>Non-TME</td>
<td>Command line</td>
<td>&quot;Installing an Adapter in a Non-TME Management Environment” on page 89</td>
</tr>
<tr>
<td>Windows, Windows NT</td>
<td>TME</td>
<td>Tivoli desktop</td>
<td>&quot;Installing an Adapter on an Endpoint in a TME Environment” on page 88</td>
</tr>
<tr>
<td></td>
<td>Non-TME</td>
<td>Command line</td>
<td>&quot;Installing an Adapter in a Non-TME Management Environment” on page 89</td>
</tr>
</tbody>
</table>

**Disk Space Requirements**

See the *IBM Tivoli Enterprise Console Release Notes* for disk space requirements for adapters shipped with the IBM Tivoli Enterprise Console product.

**Hardware Requirements**

The adapter should be installed on the host that contains the system resource or application to monitor. It might be necessary to install more than one adapter on a host.

**Software Requirements**

This section describes software requirements for the supported platforms on which you can install adapters.

**UNIX and Windows Software Requirements**

To install a TME adapter on a managed node using the Tivoli desktop, version 3.6.3 or greater of the Tivoli Management Framework product must be installed on the host on which you want to install the adapter.
To install a TME endpoint adapter on an endpoint, you must use the ACF component via the desktop.

**AS/400 Software Requirements**

The following AS/400 table contains the updated AS/400 program temporary fixes (PTFs). Tivoli supports any IBM-supported versions of OS/400; see http://www.ibm.com for information on currently supported OS/400 versions.

<table>
<thead>
<tr>
<th>OS/400 Version</th>
<th>Minimum PTFs Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>V4R3M0</td>
<td>5769SS1 SF49876, 5769SS1 SF49877</td>
</tr>
</tbody>
</table>

**Note:** You can install PTFs that supersede the minimum PTFs listed. For information on AS/400 PTFs, visit the following Web site: [http://as400service.rochester.ibm.com](http://as400service.rochester.ibm.com).

**OS/2 Software Requirements**

To install an OS/2 adapter on a host, it must be running OS/2 Version Warp 4.0 or 4.5. The TME endpoint version of the OS/2 adapter must be installed with the ACF.

---

**Installing an Adapter on a Managed Node in a TME Environment**

Consider the following before installing an adapter on a managed node in a TME environment:

- Ensure that you only distribute endpoint profiles to the endpoint label for endpoint adapters.
- Although the AS/400 adapters can be installed in a TME environment, they have a separate installation procedure. See "Installing AS/400 Adapters" on page 92 for installation information.
- For a TME adapter to successfully send events to the event server from a managed node, the adapter requires an administrator login ID with a resource role of `user` for the `EventServer` resource.

**Installing an Adapter on a Managed Node In a TME Environment from the Tivoli Desktop**

Use the following steps for installing an adapter on a managed node in a TME environment from the Tivoli desktop.

1. Open the Tivoli desktop dialog:
2. From the **Desktop** menu, select **Install —> Install Product** to display the **Install Product** dialog.
   a. Click **Select Media** to display the **File Browser** dialog.
   b. In the **Hosts** list, double-click on the name of the host that contains the CD-ROM drive from which you are installing the adapter.
   c. Enter the path to the device that contains the TME adapter in the **Path Name** field.
   d. Click **Set Media & Close**. The **Install Product** dialog opens again. This is the same window shown in step 2 on page 85.

   The available adapters and other products are displayed in the **Select Product to Install** scrolling list.
3. In the **Select Product to Install** scrolling list, select the adapter you want to install.

4. All the managed nodes in the local Tivoli management region are displayed in the **Available Clients** scrolling list. Select the host on which you want to install the adapter, and click the left arrow to move your selection to the **Clients to Install On** scrolling list. The adapter you selected in the previous step will be installed on the host or hosts displayed in the **Clients to Install On** scrolling list.

5. Click **Install & Close**. The **Product Install** dialog displays. This dialog shows the list of operations that will take place when installing the software and warns you of any problems you may want to correct before you install the adapter.

6. Click **Continue Install** to install the adapter. The status of the adapter installation is displayed in the **Product Install** dialog as the installation progresses.

7. When the adapter installation is complete, click **Close** to close the **Product Install** dialog.

**Note:** The installation process automatically registers the HP OpenView (HPOV) adapter with the HPOV local registration file. As a result, the HPOV adapter starts when all of the other HPOV daemons are started.

8. Make sure that the configuration file for the adapter is properly configured for your operational environment. The configuration options are described in the *IBM Tivoli Enterprise Console Adapters Guide*.

9. The adapter requires the **user** authorization roles to be able to send events to the event server. The user ID that the adapter runs under must be mapped to a Tivoli administrator that has been assigned the required roles. This mapping must be done for the user ID on each managed node and can be defined in one of the following ways:
   - Define an administrator for each managed node’s or endpoint’s **root** user (or equivalent)
     
     Administrator 1
     root@node1
     Administrator 2
     root@node2
     Administrator 3
     root@node3
   - Create one administrator with a list of logins, one for each managed node’s or endpoint’s **root** user (or equivalent)
     
     Administrator 1
     root@node1
     root@node2
     root@node3
   - Create one administrator with a single **root** user (or equivalent) without any managed node or endpoint specified
     
     Administrator 1
     root

See the *Tivoli Framework User’s Guide* for information on how to set authorization roles.

<table>
<thead>
<tr>
<th>Platform</th>
<th>Equivalent Root User ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNIX</td>
<td>root</td>
</tr>
<tr>
<td>Windows, Windows NT</td>
<td>SYSTEM</td>
</tr>
</tbody>
</table>
Command Line

You can use the `winstall` command to install the adapter on a managed node in a TME environment from the command line.

**HPOV Adapter:**

```
winstall -c cdrom_path/NEW -i cdrom_path/NEW/FILENAME.\IND [attribute=path] ...
```

where:

- `-c cdrom_path`
  
  Specifies the complete path to the CD-ROM image.

- `-i cdrom_path/NEW/FILENAME.IND`
  
  Specifies the path to the product installation index file.

  `FILENAME`

  The adapter file name (for example, SNM, HPOV).

- `attribute=path`

  Specifies path overrides of default install directories. The following are valid arguments:

  - `ALIDB=server_database_dir`
    
    Overrides the default installation path (`/var/spool/Tivoli`) for the Tivoli Management Framework server database.

  - `BIN=binaries_directory`
    
    Overrides the default installation path for the adapter binaries.

  - `CAT=message_catalog_directory`
    
    Overrides the default installation path for the adapter message catalogs.

  - `DB=client_database_dir`
    
    Overrides the default installation path (`/var/spool/Tivoli`) for the product’s client database.

  - `LIB=libraries_dir`
    
    Overrides the default installation path (`/usr/local/Tivoli/lib`) for the product’s libraries.

  - `MAN=man_page_dir`
    
    Overrides the default installation path (`/usr/local/Tivoli/man`) for the product’s man pages.

- `attribute=value`

  Configures start-up options. The following are valid arguments:

  - `AutoStart=0`
    
    Does not start the adapter when the event server is started.

  - `AutoStart=1`
    
    Starts the adapter when the event server is started. This is the default value.

See the *Tivoli Management Framework Reference Manual* for more information about the `winstall` command.
Installing an Adapter on an Endpoint in a TME Environment

The TME endpoint adapters (OS/2, SNMP, UNIX logfile, Windows, and Windows NT) are packaged with the ACF. You must use the ACF to install these adapters on endpoints. The TME endpoint adapters are installed by creating an adapter configuration profile (ACP) that adds entries for the adapters you want to install, and distributing the ACP to a list of endpoint subscribers, similar in process to any profile distribution using the Tivoli desktop.

Note: Ensure that, for the endpoint adapters, you only distribute their profiles to the endpoint label.

The ACF must be installed on the same managed node as the endpoint gateway so that adapters and adapter-related files can be distributed to the endpoints. Therefore, it is important to install the ACF on every managed node that is configured as an endpoint gateway throughout a Tivoli management region. See Chapter 5, “Installing Components” on page 29 for information about installing the ACF. The steps in this section assume you have the ACF installed on the managed node(s) providing the endpoint gateway service for the endpoint(s) where you want to install an adapter.

The IBM Tivoli Enterprise Console User’s Guide contains step-by-step procedures for using the ACF to perform the various adapter installation and configuration tasks. The following steps describe the tasks in general and in the order that you need to perform them to install a TME endpoint adapter.

1. An ACP must be a managed resource type. Set ACP as a managed resource in the Set Managed Resources window for the policy region where you will be installing the adapters.

2. Create a profile manager, specifying the Dataless Endpoint Mode option, as shown in the following figure.

![Create Profile Manager](image_url)
3. Within the profile manager:
   a. Create a profile.
   b. In addition to naming the profile, specify ACP as the profile type. (In the remaining steps, a profile will be referred to as an ACP.)
   c. In the ACP, add an entry for each adapter to install on the endpoint(s).

   Note: Some logfile adapters are platform-specific (for example, tecad_logfile_hpux10 and tecad_logfile_solaris2). If your endpoints are running on multiple platforms (for example, some running on HP-UX 10 and some running in a Solaris Operating Environment) and you want to monitor their system logfiles, you must create an ACP for each platform and distribute them to the appropriate endpoints. The following figure shows a window that lists tecad_logfile (the generic logfile adapter for adding custom ACP entries) and platform-specific logfile adapters.

4. After selecting the adapter to install from the Add Adapter Configuration window, you are placed in edit mode so that you can change default settings for the adapter if you want. If you are going to install an additional adapter using this ACP, add another entry for the additional adapter and repeat this step.

5. Create endpoint subscribers for the ACP.

6. Distribute the ACP to the subscribing endpoints. The adapter(s) defined in the ACP will be installed and started on the subscribing endpoints.

---

Installing an Adapter in a Non-TME Management Environment

The following sections describe how to install an adapter in a non-TME environment using the command line. For CD-ROM installation, make sure that the CD-ROM has been mounted on the /cdrom (or applicable) directory or drive. The OS/2 adapter is also provided on diskettes, in addition to CD-ROM.

Note: BAROC files and rule bases are installed as part of the event server installation procedure. They are not covered in these sections.

Installing a Non-TME Adapter on UNIX

To install an adapter on UNIX in a non-TME environment, use the following steps:
1. Create an installation directory (for example, /usr/tecad).
Note: If you have previously installed other adapters, you should install all adapters in the same directory. The following example uses /usr/tecad as the installation directory.

2. Change directories to the installation directory you created and make that directory the default directory.

3. Untar the non-TME adapter from the CD-ROM using the following command:
   ```
   tar -xvf /NON_TME/PLATFORM/FILENAME.TAR
   ```
   where:
   
   **PLATFORM**
   The host's operating system platform specified in uppercase letters.
   Some valid values are:
   AIX4_R1 HPUX11 LINUX-IX86 SOLARIS2
   
   **FILENAME**
   The adapter's file name, which can be one of the following values:
   
<table>
<thead>
<tr>
<th>Adapter</th>
<th>FILENAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>HPOV</td>
<td>HPOV</td>
</tr>
<tr>
<td>SNMP</td>
<td>SNMP</td>
</tr>
<tr>
<td>UNIX logfile</td>
<td>LOGFILE</td>
</tr>
</tbody>
</table>

   Note: If you install more than one adapter on the same endpoint, ensure that the LCF_WORK_DIR and the LCF_LIB_DIR keywords in the init.tecad_logfile script are set to the appropriate path names.

   For more information about the init.tecad_logfile script, see the IBM Tivoli Enterprise Console Adapters Guide.

4. Ensure that you are logged in as the root user and use the following steps to configure the adapter so that it starts along with the host. This command runs the installation script for an adapter.

   a. Change directories to /usr/tecad/bin and set the $TECADHOME environment variable to /usr/tecad/bin.

      Note: If you specify an alternate location to install the binaries, you must manually set the $TECADHOME variable as shown in step 4a and manually copy the binary files into the same directory you specified in the Install Directory field during the installation process.

   b. Run the following command:
      ```
      tecad_filename.cfg
      ```
      where:

      **filename** can have the following values:

      | Adapter  | filename |
      |----------|----------|
      | HPOV     | hpov     |
      | SNMP     | snmp     |
      | UNIX logfile | logfile |
c. Answer the questions asked by the script. This command also automatically
starts the adapter on the host.

Note: The installation script registers the HPOV adapter with HPOV local
registration file. The HPOV adapter automatically starts when the
other HPOV daemons are started.

5. Ensure that the configuration file for your adapter is properly configured for
your operational environment. The configuration options are described in the
IBM Tivoli Enterprise Console Adapters Guide.

Note: If you install several adapters on the same endpoint, ensure that the
LCF_WORK_DIR and LCF_LIB_DIR keywords are set to the appropriate
path names.

Installing a Non-TME Adapter on Windows or Windows NT

To install an adapter on Windows or Windows NT in a non-TME environment, use
the following steps:

1. Run the following command:
   /NON_TME/W32_IX86/install_dir/setup.exe

   where:

   **install_dir** is the installation directory, and can be one of the following values:

<table>
<thead>
<tr>
<th>Adapter</th>
<th><strong>install_dir</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>HPOV</td>
<td>InstallHPOV</td>
</tr>
<tr>
<td>SNMP</td>
<td>InstallSNMP</td>
</tr>
<tr>
<td>Windows</td>
<td>InstallWin</td>
</tr>
<tr>
<td>Windows NT</td>
<td>InstallNT</td>
</tr>
</tbody>
</table>

Note: You can use InstallShield’s silent install feature to install the adapter in
the background without user input. To do so, edit the
installNT/SETUP.ISS (Windows NT) or installWin/SETUP.ISS
(Windows) response file, for example, which provides installation
information that the installer would normally query a user for during
the install.

First, edit the following lines in the SETUP.ISS file as necessary:

<table>
<thead>
<tr>
<th>Default Setting</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>[AskDestPath-0] szPath=C:\TECNT (Windows NT) or [AskDestPath-0] szPath=C:\TECWIN (Windows 2000)</td>
<td>TECNT or TECWIN to the destination directory, if necessary</td>
</tr>
<tr>
<td>[AskText-0] szText=localhost</td>
<td>localhost to the name of the host where events are to be delivered</td>
</tr>
<tr>
<td>[AskText-1] szText=0</td>
<td>0 to the port number where the server has been configured to listen for events</td>
</tr>
</tbody>
</table>
Then run `setup /s` from the InstallNT (Windows NT) or InstallWin (Windows) directory to silently install the adapter. For more information on InstallShield and the SETUP.ISS file, go to http://www.installshield.com.

2. Make sure that the configuration file for your adapter is properly configured for your operational environment. The configuration options are described in the IBM Tivoli Enterprise Console Adapters Guide.

**Note:** The non-TME adapters dynamically resolve the protocol address for the event server if the protocol address changed after the adapter started. In this instance, you are not required to restart the adapter.

### Installing a Non-TME Adapter on OS/2

To install an adapter on OS/2 in a non-TME environment, use the following steps:

1. Create an installation directory (for example, `c:\tecad`). If you have previously installed other adapters, you should install all adapters in the same directory. This example procedure uses `c:\tecad` as the installation directory.
2. Change directories to the installation directory.
3. Run the following command from an OS/2 window:
   ```
   drive:\NON_TME\install.exe
   ```
4. In the Instructions window, select **Continue**.
5. In the Install window, select **OK**.
6. In the Installed-directories window, enter a different installation directory for the adapter-related files if the default is not satisfactory. If the specified directory does not exist, it is created.
7. Select **Install**.
8. In the Tivoli TEC Install Options window, enter information for the following fields:
   - **TEC Server Name**
     The name of the event server.
   - **TEC Server Port**
     The port number for the event server.
   - **Options**
     Optional command-line parameters for the `tecadini.sh` program; for example, you could specify various debugging parameters.
9. Select **OK**.
   The adapter is installed and automatically started. You do not need to reboot the machine to start it. The `CONFIG.SYS` file is modified to automatically start the adapter whenever the machine is rebooted.
10. Make sure that the configuration file for your adapter is properly configured for your operational environment. The configuration options are described in the IBM Tivoli Enterprise Console Adapters Guide.

**Note:** The non-TME adapters dynamically resolve the protocol address for the event server if the protocol address changed after the adapter started. In this instance, you are not required to restart the adapter.

### Installing AS/400 Adapters

You can install the AS/400 adapters from the Tivoli Desktop or from the IBM Tivoli Enterprise Console CD-ROM.
Installing from CD-ROM

The AS/400 adapters are shipped on the IBM Tivoli Enterprise Console CD-ROM in the form of AS/400 save files (*SAVF). To install these files on an AS/400, use the following steps:

1. Create save files on the AS/400 with the following commands:
   CRTSAVF FILE(QUSRSYS/ATMETEC)
   CRTSAVF FILE(QUSRSYS/filename)

   where: filename is one of the following:

<table>
<thead>
<tr>
<th>Adapter</th>
<th>filename</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alert</td>
<td>ATMETEC2</td>
</tr>
<tr>
<td>Message</td>
<td>ATMETEC1</td>
</tr>
</tbody>
</table>

2. FTP the ATMETEC and filename files in the /NON_TME/AS400 directory on the CD-ROM to the QUSRSYS library on the AS/400, using the following commands:
   ftp AS400.my.domain
   bin
   put /NON_TME/AS400/ATMETEC QUSRSYS/ATMETEC
   put /NON_TME/AS400/filename QUSRSYS/filename
   quit

   where: filename is one of the following:

<table>
<thead>
<tr>
<th>Adapter</th>
<th>filename</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alert</td>
<td>ATMETEC2</td>
</tr>
<tr>
<td>Message</td>
<td>ATMETEC1</td>
</tr>
</tbody>
</table>

3. On the AS/400 system, install the adapter using the following AS/400 commands:
   RSTLICPGM LICPGM(1TMETEC) DEV(*SAVF) \\
   OPTION(*BASE) SAVF(QUSRSYS/ATMETEC)
   RSTLICPGM LICPGM(1TMETEC) DEV(*SAVF) \\
   OPTION(x) SAVF(QUSRSYS/filename)

   where:

   x and filename are one of the following:

<table>
<thead>
<tr>
<th>Adapter</th>
<th>x</th>
<th>filename</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alert</td>
<td>2</td>
<td>ATMETEC2</td>
</tr>
<tr>
<td>Message</td>
<td>1</td>
<td>ATMETEC1</td>
</tr>
</tbody>
</table>

Installing from CD-ROM on an AS/400

If the AS/400 is running OS/400 V3R6M0, the AS/400 adapters can be installed directly onto the AS/400 by loading the IBM Tivoli Enterprise Console CD-ROM onto the AS/400 CD-ROM drive and issuing the following commands:

RSTLICPGM LICPGM(1TMETEC) DEV(optical device) OPTION(*BASE)
RSTLICPGM LICPGM(1TMETEC) DEV(optical device) OPTION(x)
Installing with English as a Secondary Language

If your AS/400 has a primary language other than English (2924), and you have the English secondary language installed on your system, you can install the AS/400 adapters.

To install the AS/400 adapter into the English secondary language library, use the following commands:

\[
\begin{align*}
\text{RSTLICPGM LICPGM(ITMETEC) DEV(device) OPTION(*BASE) LNG(2924)} \\
\text{RSTLICPGM LICPGM(ITMETEC) DEV(device) OPTION(x) LNG(2924)}
\end{align*}
\]

where:

\[ x \text{ is one of the following:} \]

\[
\begin{array}{|c|c|}
\hline
\text{Adapter} & x \\
\hline
\text{Alert} & 2 \\
\text{Message} & 1 \\
\hline
\end{array}
\]

**Note:** The secondary language library **QTECA02924** is automatically added to your library list so that you can access the AS/400 adapter commands.

Installing the NetWare Logfile Adapter

Use the following steps to install the NetWare logfile adapter (non-TME adapter) from a Windows NetWare client.

1. Log in to the NetWare server on which the adapter will be installed from a Windows client system. To perform the installation, you must have write access to the root of the server’s SYS volume. Typically, the installation should be carried out by User Administration. The installation must be done from the Windows NT, Windows 95, or Windows 98 system from which you logged into the NetWare system.

2. Insert the installation CD-ROM into the CD-ROM drive and run the following command from a Windows NT, Windows 95, or Windows 98 system:

\[
\text{drive:NON_TME\NW4\InstallNW4\setup.exe}
\]

You can also run this command by double-clicking on the *setup.exe* program in the **\NON-TME\NW4\InstallNW4** directory.

3. At the **Welcome** window, select **Next**.

4. Enter the host name of the NetWare server on which to install the adapter.

5. Select **Next**.
6. A dialog box presents the option of automatically editing the AUTOEXEC.NCF file to start the adapter each time the NetWare server boots. Select either Yes or No. If you select Yes, enter the directory in which the AUTOEXEC.NCF file resides at the next window.

   The setup program installs the necessary components.

7. Enter the TCP/IP host name and port number of the IBM Tivoli Enterprise Console for the server to which the adapter is to send events. The port number is needed only if the IBM Tivoli Enterprise Console server is running on Windows NT.

8. Select OK.

9. When the installation process is complete, select OK.
Chapter 10. Upgrading Adapters

When you upgrade a previous release of the adapter component of the IBM Tivoli Enterprise Console product, you install the upgrade image for the adapter component. You can upgrade the adapter component using either the Software Installation Service, the Tivoli desktop, or the command line.

Note: Before performing any of the following procedures, read the latest release of the IBM Tivoli Enterprise Console Release Notes for upgrade information.

The following table provides the authorization roles required to perform an upgrade on the adapter component of the IBM Tivoli Enterprise Console product.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Context</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upgrading Adapters</td>
<td>Tivoli management region</td>
<td>install_product or senior</td>
</tr>
</tbody>
</table>

Preparing to Upgrade

After installing the IBM Tivoli Enterprise Console product, but before upgrading, you must perform the following:

1. Back up the affected object databases. Before upgrading the IBM Tivoli Enterprise Console product, Tivoli also recommends that you back up the object databases for all affected machines in your Tivoli management region. This backup enables you to return to a known working state. Having a backup is useful if you encounter problems while installing the IBM Tivoli Enterprise Console product.

2. Ensure that you are running the appropriate version of the Tivoli Management Framework product on all hosts for which you are upgrading adapters. See “Verifying the Appropriate Version of Tivoli Management Framework for Adapter Upgrades” on page 98 for more information.

3. Ensure that all IBM Tivoli Enterprise Console product considerations are fulfilled.

Backing Up Object Databases

Before installing, upgrading, or uninstalling any IBM Tivoli Enterprise Console components, you should back up the Tivoli object databases for all affected machines in your Tivoli management region. This backup enables you to return to a known working state. Having a backup is useful if you encounter problems while installing the IBM Tivoli Enterprise Console product.

From the Tivoli desktop, select Desktop -> Backup to perform a backup of the object database for the Tivoli management region server and managed nodes. You can also use the wbkupdb command. For additional information about the wbkupdb command, refer to the Tivoli Management Framework Reference Manual.
Verifying the Appropriate Version of Tivoli Management Framework for Adapter Upgrades

When you are upgrading to IBM Tivoli Enterprise Console, Version 3.8, ensure that you check the IBM Tivoli Enterprise Console Release Notes for compatibility and interoperability issues related to the appropriate Tivoli Management Framework product version.

General Upgrade Considerations for Adapters

When you are upgrading the IBM Tivoli Enterprise Console product, remember to do the following:

v Stop the Tivoli Enterprise Console event server, the UI server, all IBM Tivoli Enterprise Console event consoles, and all adapters. If any IBM Tivoli Enterprise Console processes (indicated by tec_*) are still running, terminate them manually.

v Upgrading to IBM Tivoli Enterprise Console, Version 3.8 is done on a per-Tivoli management region basis. You will must perform the upgrade from the Tivoli management region server in each Tivoli management region you want to upgrade.

Adapter Upgrade Images

Each release of the IBM Tivoli Enterprise Console product CD contains the upgrade images for that product. The images are listed in the PATCHES.LST file.

The following section describes IBM Tivoli Enterprise Console adapters with available upgrade images.

Version 3.8 Adapter Upgrade Images

The upgrade images for the IBM Tivoli Enterprise Console, Version 3.8, product are located in the PATCHES.LST file of the /UPGRADE subdirectory. The following upgrade images for adapters in this release are available in the /UPGRADE directory.

Adapters with Upgrade Images
IBM Tivoli Enterprise Console HP OpenView Adapter Upgrade to 3.8
IBM Tivoli Enterprise Console SunNet Manager Adapter Upgrade to 3.8

Upgrading Adapters from the Tivoli Desktop

You can upgrade the adapter component of the IBM Tivoli Enterprise Console product from the Tivoli Management Framework desktop. See the Tivoli Enterprise Installation Guide for procedures to upgrade IBM Tivoli Enterprise Console components from the Tivoli Management Framework desktop. The Tivoli Enterprise Installation Guide also outlines standard procedures to use when upgrading Tivoli products from the Tivoli desktop.

The following table provides variable data you will need to use when upgrading the adapter component of the IBM Tivoli Enterprise Console product using the dialogs provided with the Tivoli Management Framework desktop.

<table>
<thead>
<tr>
<th>Tivoli Desktop GUI Label</th>
<th>IBM Tivoli Enterprise Console Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set Media</td>
<td>set the media type for your source files</td>
</tr>
</tbody>
</table>
Upgrading Adapters from the Command Line

You can also upgrade the adapter component of the IBM Tivoli Enterprise Console product from the command line using the `wpatch` command.

The following table provides variable data you will need to use when upgrading the adapter component of the IBM Tivoli Enterprise Console product from the command line.

<table>
<thead>
<tr>
<th>wpatch Command Options</th>
<th>IBM Tivoli Enterprise Console Adapter Component Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>-c source_dir</code></td>
<td><code>registered_product_tag</code></td>
</tr>
<tr>
<td></td>
<td>See &quot;Component Installation Order&quot; on page 36 for a list of registered product tags for IBM Tivoli Enterprise Console adapter components.</td>
</tr>
<tr>
<td><code>-i patch</code></td>
<td>The <code>registered_product_tag</code> for that component.</td>
</tr>
<tr>
<td></td>
<td>See &quot;Component Installation Order&quot; on page 36 for a list of registered product tags for the IBM Tivoli Enterprise Console adapter components.</td>
</tr>
<tr>
<td><code>-n</code></td>
<td>not used</td>
</tr>
<tr>
<td><code>-y</code></td>
<td>not used</td>
</tr>
<tr>
<td><code>install_variables</code></td>
<td>See the IBM Tivoli Enterprise Console User's Guide or &quot;Installing and Configuring the RDBMS&quot; on page 30 for information specific to your database vendor's installation variables.</td>
</tr>
<tr>
<td><code>managed_node</code></td>
<td>The <code>managed_node</code> on which to install.</td>
</tr>
</tbody>
</table>

See the Tivoli Management Framework Reference Manual for details about the `wpatch` command and its options.

Upgrading Adapters Using the Software Installation Service

You can upgrade any Tivoli product or IBM Tivoli Enterprise Console adapter component using the Tivoli Software Installation Service. Use the installation procedures for new components in ‘Installing Components Using the Software Installation Service’ on page 41 as the Software Installation Service does not differentiate between installation and upgrade images. See the Tivoli Enterprise Installation Guide for procedures used to install the Software Installation Service client before you begin. You need to first import the upgrade images into the Install Repository and select which machines will be upgraded with which components.
Chapter 11. Uninstalling Adapters

Although you can install selected adapters through the standard Tivoli installation mechanisms, such as the Tivoli desktop, command line, and the Software Installation Service, you must uninstall them using different methods.

**Uninstalling Endpoint Adapters**

Endpoint adapters are uninstalled by deleting their entries in the Adapter Configuration Profile (ACP) profile and then distributing that profile to the appropriate targets.

**Uninstalling Managed Node Adapters**

Managed node adapters are uninstalled using Tivoli-supplied uninstall scripts. To use these scripts, see the section in this chapter specific to your managed node adapter type.

---

**Uninstalling an Adapter in a TME Environment**

The following sections describe how to uninstall a TME adapter from a managed node and from an endpoint.

**Uninstalling an Adapter in a TME Environment on a Managed Node**

TME adapters have an uninstall script that you can run from the command line on the machine where the adapter is installed.

Use the following steps to delete the ACP entry and remove the adapter:

1. Delete the ACP entry for the adapter.
2. Distribute the ACP entry to the managed node where the adapter is running.
3. From the managed node, run the adapter’s `remove` script, as listed in the table below, to uninstall the adapter.

<table>
<thead>
<tr>
<th>Adapter</th>
<th>Script</th>
</tr>
</thead>
<tbody>
<tr>
<td>Logfile (generic)</td>
<td><code>$BINDIR/TME/TEC/adapters/bin/tecad-remove-logfile.sh</code></td>
</tr>
<tr>
<td>OpenView</td>
<td><code>$BINDIR/TME/TEC/adapters/bin/tecad-remove-hpov.sh</code></td>
</tr>
<tr>
<td>SPECTRUM</td>
<td><code>$BINDIR/TME/TEC/adapters/bin/tecad-sem-remove.sh</code></td>
</tr>
</tbody>
</table>

**Uninstalling an Adapter in a TME Environment on an Endpoint**

You must use the ACF to uninstall a TME adapter on an endpoint. If you remove an endpoint manually, subsequent distributions of the ACP may not reinstall the adapter. The *IBM Tivoli Enterprise Console User’s Guide* contains step-by-step procedures for using the ACF. The following steps describe the uninstall tasks in general and in the order that you need to perform them to uninstall a TME endpoint adapter.

1. From the ACP that was used to install the adapter (or an exact copy), delete the entry for the adapter you want to uninstall from the endpoint.
2. Distribute the ACP to the endpoint. For more information about distributing the ACP to an endpoint, see the *IBM Tivoli Enterprise Console User’s Guide*. 

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Uninstalling an Adapter in a Non-TME Environment

The following sections describe how to uninstall a non-TME adapter on UNIX, Windows NT, Windows, and OS/2 systems.

Uninstalling a Non-TME Adapter on UNIX

The non-TME adapters listed in the following table have an uninstall script you can run from the command line on the machine where the adapter is installed.

For other non-TME adapters on UNIX that do not currently have an uninstall script, after stopping the adapter you can delete the files that were restored from the tar file during the installation process.

<table>
<thead>
<tr>
<th>Adapter</th>
<th>Script</th>
</tr>
</thead>
<tbody>
<tr>
<td>Logfile (generic)</td>
<td><code>install_path/bin/tecad-remove-logfile.sh</code></td>
</tr>
<tr>
<td>OpenView</td>
<td><code>install_path/bin/tecad-remove-hpov.sh</code></td>
</tr>
</tbody>
</table>

Uninstalling a Non-TME Adapter on Windows or Windows NT

To uninstall an adapter on Windows or Windows NT, run the Uninstall Shield program from the Tivoli program group.

Uninstalling a Non-TME Adapter on OS/2

To uninstall an adapter on OS/2, use the following steps:

1. If the machine has not been rebooted since the adapter has been installed, go to the `install_dir\os2-ix86\bin` directory; otherwise, the uninstall procedure can be run from any directory.
2. From an OS/2 window, run the following command:
   
   tec_uninstall

3. From the Installation and Maintenance window, select the adapter from the list of installed products.
4. From the Action menu, select Delete.
5. From the Delete confirmation window, select Delete.
6. From the Installation and Maintenance window, select OK.
7. From the File menu in the Installation and Maintenance window, select Exit.

Most of the adapter-related files are now deleted. Some will be deleted upon reboot of the machine. There may still be some that were not deleted upon reboot of the machine. This is due to file operations performed when installing the adapter from CD-ROM or diskette to the OS/2 system. Check for the following files on the OS/2 system and manually delete them if necessary to complete the uninstall procedure:

- `install_directory\os2-ix86\etc\tecados2.baroc`
- `install_directory\os2-ix86\etc\tecados2.conf`
- `install_directory\os2-ix86\bin\gen_message.exe`
- `install_directory\os2-ix86\bin\tec_uninstall.cmd`
Uninstalling AS/400 Adapters

Perform the following steps to uninstall an AS/400 adapter:

1. On the AS/400 system, remove the adapter using the AS/400 command:

   DTLICPGM LICPGM(ITMTEC) OPTION(x)

   where: x is one of the following:

<table>
<thead>
<tr>
<th>Adapter</th>
<th>x</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alert</td>
<td>2</td>
</tr>
<tr>
<td>Message</td>
<td>1</td>
</tr>
</tbody>
</table>

   The AS/400 adapter is deleted. If no other adapters are installed on the AS/400, you can also use the following command:

   DTLICPGM LICPGM(ITMTEC) OPTION(*ALL) RLS(*ALL)

   Note: You may have to pull the QTECA02924 library from your library list before the delete command deletes the base product.

2. Configuration files were copied into QUSR SYS during the installation of the adapter. If you no longer need them, you need to manually delete them by using the following commands:

   Alert adapter:
   
   DLT FILE(QUSR SY S/CFG_ALERT)

   Message adapter:
   
   DLT FILE(QUSR SY S/CFG_MSG)

3. Configuration files were copied into the IFS directory /QIBM/UserData/Tivoli/TEC/directory_name. Remove the directory directory_name and all of its subdirectories.

   directory_name can be one of the following:

<table>
<thead>
<tr>
<th>Adapter</th>
<th>directory_name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alert</td>
<td>ALERT</td>
</tr>
<tr>
<td>Message</td>
<td>MSGQ</td>
</tr>
<tr>
<td>Alert and Message</td>
<td>tis</td>
</tr>
</tbody>
</table>

4. If there are no other adapters installed on the system, then delete the directory /QIBM/UserData/Tivoli/TEC and all of its subdirectories.

Uninstalling the NetWare Logfile Adapter

To uninstall the NetWare logfile adapter, complete the following steps:

1. Log in to the NetWare server from the same client you used for the installation.

2. From the Add/Remove Programs window in the Control Panel, select the Tivoli Logfile Adapter for NetWare option and click the Add/Remove button.

3. If you selected the automatic startup option for the adapter, remove the one-line entry that starts the adapter from the AUTOEXEC.NCF file.
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<table>
<thead>
<tr>
<th>Term</th>
<th>Domain</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIX</td>
<td>OS/390</td>
</tr>
<tr>
<td>IBM</td>
<td>Tivoli</td>
</tr>
<tr>
<td>IBM Logo</td>
<td>Tivoli Logo</td>
</tr>
<tr>
<td>OpenEdition</td>
<td>Tivoli Enterprise</td>
</tr>
</tbody>
</table>

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- The ANSI/EIA Standard--440-A, *Fiber Optic Terminology*. Copies may be purchased from the Electronic Industries Association, 2001 Pennsylvania Avenue, N.W., Washington, DC 20006. Definitions are identified by the symbol (E) after the definition.
- The *Information Technology Vocabulary* developed by Subcommittee 1, Joint Technical Committee 1, of the International Organization for Standardization and the International Electrotechnical Commission (ISO/IEC JTC1/SC1). Definitions of published parts of this vocabulary are identified by the symbol (I) after the definition; definitions taken from draft international standards, committee drafts, and working papers being developed by ISO/IEC JTC1/SC1 are identified by the symbol (T) after the definition, indicating that final agreement has not yet been reached among the participating National Bodies of SC1.
- Internet Request for Comments: 1208, *Glossary of Networking Terms*.
- Internet Request for Comments: 1392, *Internet Users’ Glossary*.

The following cross-references are used in this glossary:

**Contrast with:**
This refers the reader to a term that has an opposed or substantively different meaning.

**See:**
This refers the reader to (a) a related term, (b) a term that is the expanded form of an abbreviation or acronym, or (c) a synonym or more preferred term.

**Obsolete term for:**
This indicates that the term should not be used and refers the reader to the preferred term.

**A**

**ACF.** See [Adapter Configuration Facility](#).

**ACP.** See [adapter configuration profile](#).

**adapter.** (1) A part that electrically or physically connects a device to a computer or to another device. (2) Software that enables different software components or products to interact with one another. (3) See [event adapter](#).

**Adapter Configuration Facility (ACF).** In the IBM Tivoli Enterprise Console, a graphical user interface that enables a Tivoli administrator to easily configure and customize event adapters.

**adapter configuration profile (ACP).** In a Tivoli environment, an IBM Tivoli Enterprise Console profile that contains information for one or more event adapters.

**administrator.** See [Tivoli administrator](#).

**attribute.** A characteristic that identifies and describes a managed object. The characteristic can be determined, and possibly changed, through operations on the managed object.

**authorization role.** In a Tivoli environment, a role assigned to Tivoli administrators to enable them to perform their assigned systems management tasks. A role may be granted over the entire Tivoli management region or over a specific set of resources, such as those contained in a policy region. Examples of authorization roles include: super, senior, admin, and user.

**C**

**class.** (1) In object-oriented design or programming, a model or template that can be instantiated to create objects with a common definition and therefore, common properties, operations, and behavior. An object
is an instance of a class. (2) In the AIX operating system, pertaining to the I/O characteristics of a device. System devices are classified as block or character devices.

**CLI.** See command line interface

**command line interface (CLI).** A type of computer interface in which the input command is a string of text characters. Contrast with graphical user interface

**console event.** In a Tivoli environment, an event sent to the IBM Tivoli Enterprise Console.

**database.** (1) A collection of data with a given structure for accepting, storing, and providing, on demand, data for multiple users. (T) (2) A collection of interrelated data organized according to a database schema to serve one or more applications. (T) (3) A collection of data fundamental to a system. (A) (4) A collection of data fundamental to an enterprise. (A)

**desktop.** A graphical user interface (GUI) that enables a user to interact with and perform operations on a computer system.

**event class.** In the IBM Tivoli Enterprise Console, a classification for an event that indicates the type of information that the event adapter will send to the event server.

**event console.** In the IBM Tivoli Enterprise Console, a graphical user interface (GUI) that enables system operators to view and respond to dispatched events from the event server. The Tivoli Event Integration Facility does not directly use or affect event consoles.

**event filter.** In a Tivoli environment, software that determines which events are forwarded to a specified destination. Filtering events helps to reduce network traffic. Tivoli administrators configure the event filters.

**event group.** In the IBM Tivoli Enterprise Console, a set of events that meet certain criteria. Each event group is represented by an icon on the event console. Tivoli operators can monitor event groups that are relevant to their specific areas of responsibility.

**event group filter.** See event filter.

**event server.** In the IBM Tivoli Enterprise Console, a central server that processes events. The event server creates an entry for each incoming event and evaluates the event against a rule base to determine whether it can respond to or modify the event automatically. The event server also updates the event consoles with the current event information. If the primary event server is not available, events can be sent to a secondary event server.

**graphical user interface (GUI).** A type of computer interface consisting of a visual metaphor of a real-world scene, often of a desktop. Within that scene are icons, representing actual objects, that the user can access and manipulate with a pointing device. Contrast with command line interface.

**GUI.** See graphical user interface

**host.** (1) A computer that is connected to a network (such as the Internet or an SNA network) and provides an access point to that network. Also, depending on the environment, the host may provide centralized control of the network. The host can be a client, a server, or both a client and a server simultaneously. (2) In a Tivoli environment, a computer that serves as a managed node for a profile distribution. (3) See host processor.

**host processor.** (1) A processor that controls all or part of a user application network. (T) (2) In a network, the processing unit in which the data communication access method resides.
I

IT. Information technology.

M

managed node. (1) In Internet communications, a workstation, server, or router that contains a network management agent. In the Internet Protocol (IP), the managed node usually contains a Simple Network Management Protocol (SNMP) agent. (2) In a Tivoli environment, any managed resource on which the Tivoli Management Framework is installed.

managed resource. In a Tivoli environment, any hardware or software entity (machine, service, system, or facility) that is represented by a database object and an icon on the Tivoli desktop. Managed resources must be a supported resource type in a policy region and are subject to a set of rules. Managed resources include, but are not limited to, managed nodes, task libraries, monitors, profiles, and bulletin boards.

P

policy. In a Tivoli environment, a set of rules that are applied to managed resources. A specific rule in a policy is referred to as a “policy method.”

policy region. In a Tivoli environment, a group of managed resources that share one or more common policies. Tivoli administrators use policy regions to model the management and organizational structure of a network computing environment. The administrators can group similar resources, define access to and control the resources, and associate rules for governing the resources. The policy region contains resource types and the list of resources to be managed. A policy region is represented on the Tivoli desktop by an icon that resembles a capitol building (dome icon). When a Tivoli management region (TMR) is created, a policy region with the same name is also created. In this case, the Tivoli management region has only one policy region. However, in most cases, a Tivoli administrator creates other policy regions and subregions to represent the organization of the Tivoli management region. A Tivoli management region addresses the physical connectivity of resources whereas a policy region addresses the logical organization of resources.

profile. In a Tivoli environment, a container for application-specific information about a particular type of resource. A Tivoli application specifies the template for its profiles; the template includes information about the resources that can be managed by that Tivoli application.

A profile is created in the context of a profile manager; the profile manager links a profile to the Tivoli resource (for example, a managed node) that uses the information contained in the profile. A profile does not have any direct subscribers.

R

RDBMS. See relational database management system.

relational database. A database in which the data are organized and accessed according to relations. (T)

relational database management system (RDBMS). A collection of hardware and software that organizes and provides access to a relational database.

resource. (1) Any facility of a computing system or operating system required by a job or task, and including main storage, input/output devices, the processing unit, data sets, and control or processing programs. (2) In Tivoli NetView for OS/390, any hardware or software that provides function to the network. (3) See managed resource.

rule. In the IBM Tivoli Enterprise Console, one or more logical statements that enable the event server to recognize relationships among events (event correlation) and to execute automated responses accordingly. See also rule base and rule set.

rule base. In the IBM Tivoli Enterprise Console, one or more rule sets and the event class definitions for which the rules are written. The IBM Tivoli Enterprise Console uses the rule base in managing events. An organization can create many rule bases, with each rule base fulfilling a different set of needs for network computing management.

rule set. In the IBM Tivoli Enterprise Console, a file that contains one or more rules. See also rule base.

S

script. (1) A computer program that is interpreted. (2) See shell script.

severity level. In the IBM Tivoli Enterprise Console, a classification for an event that indicates its degree of severity. Severity levels can be modified by a user or an IBM Tivoli Enterprise Console rule. The predefined severity levels, in order of descending severity, include: fatal, critical, warning, minor, harmless, and unknown.

shell script. In the UNIX operating system, a series of commands, combined in a file, that carry out a particular function when the file is run or when the file is specified as a value to the SH command.

Simple Network Management Protocol (SNMP). In the Internet suite of protocols, a network management protocol that is used to monitor routers and attached networks. SNMP is an application layer protocol.
Information on devices managed is defined and stored in the application’s Management Information Base (MIB).

**slot.** In the IBM Tivoli Enterprise Console, obsolete term for attribute.

**source.** In the IBM Tivoli Enterprise Console, a resource, such as a host, that is being monitored by an event adapter.

**T**

**task.** (1) In a multiprogramming or multiprocessing environment, one or more sequences of instructions treated by a control program as an element of work to be accomplished by a computer. (2) In a Tivoli environment, the definition of an action that must be routinely performed on various managed nodes throughout the network. A task defines the executables to be run when the task is executed, the authorization role required to execute the task, and the user or group name under which the task will execute.

**Tivoli administrator.** In a Tivoli environment, a system administrator who has been authorized to perform systems management tasks and manage policy regions in one or more networks. Each Tivoli administrator is represented by an icon on the Tivoli desktop.

**Tivoli Event Integration Facility.** A Tivoli toolkit that provides a simple application programming interface (API) to enable customers and Tivoli Partners to develop new event adapters that can forward events to the IBM Tivoli Enterprise Console. A customer can also translate events from third-party or in-house applications.

**Tivoli Management Framework.** The base software that is required to run the applications in the Tivoli product suite. This software infrastructure enables the integration of systems management applications from Tivoli Systems Inc. and the Tivoli Partners. The Tivoli Management Framework includes the following:

- Object request broker (oserv)
- Distributed object database
- Basic administration functions
- Basic application services
- Basic desktop services such as the graphical user interface

In a Tivoli environment, the Tivoli Management Framework is installed on every client and server; however, the Tivoli management region server is the only server that holds the full object database.

**Tivoli management region (TMR).** In a Tivoli environment, a Tivoli server and the set of clients that it serves. An organization can have more than one Tivoli management region. A Tivoli management region addresses the physical connectivity of resources whereas a policy region addresses the logical organization of resources.

**trouble ticket.** In Tivoli NetView, a record of a problem that has occurred. The trouble ticket becomes the formal vehicle to trace a problem from its occurrence to its resolution.
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