IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent
Version 7.4

User's Guide

SC14-7532-00

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Note
Before using this information and the product it supports, read the information in Appendix B, "Notices," on page 137.

This edition applies to version 7 release 4 of the IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent (product number 5724-S44) and to all subsequent releases and modifications until otherwise indicated in new editions.

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About this guide

The *IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus User's Guide* provides information about installing and using the IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent.

Use the configuration chapter in this guide along with the *IBM Tivoli Monitoring Installation and Setup Guide* to install and set up the software.

Use the information in this guide along with the *Tivoli Enterprise Portal User's Guide* to monitor Tivoli Netcool/OMNIbus.

Intended audience for this guide

This guide is for system administrators who install and use the IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent to monitor and manage Tivoli Netcool/OMNIbus resources.

Readers should be familiar with the following topics:

- Tivoli Enterprise Portal interface
- IBM® Tivoli® Monitoring application software
- IBM Tivoli Enterprise Console® (optional)
- Tivoli Netcool/OMNIbus environments

Publications

This section lists publications relevant to the use of the IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent. It also describes how to access Tivoli publications online and how to order Tivoli publications.

Prerequisite publications

To use the information in this guide effectively, you must have some knowledge of IBM Tivoli Monitoring products, which you can obtain from the following books:

- *IBM Tivoli Monitoring Administrator's Guide*
- *IBM Tivoli Monitoring Installation and Setup Guide*
- *IBM Tivoli Monitoring Troubleshooting Guide*
- *Tivoli Enterprise Portal User's Guide*
- *IBM Tivoli Monitoring Readme First*

Related publications

The following documents also provide useful information:

- *IBM Tivoli Enterprise Console Adapters Guide*
- *IBM Tivoli Enterprise Console Event Integration Facility User's Guide*
- *IBM Tivoli Enterprise Console Reference Manual*
- *IBM Tivoli Enterprise Console Rule Developer's Guide*

Accessing terminology online

The IBM Terminology website consolidates the terminology from IBM product libraries in one convenient location. You can access the Terminology website at the following Web address:

http://www.ibm.com/software/globalization/terminology

Accessing Tivoli publications online

For products that have a documentation CD or DVD, the disk contains the product publications. The format of the publications is PDF, HTML, or both. Refer to the `readme` file on the CD or DVD for instructions on how to access the documentation.

Some product CDs or DVDs contain the product publications as well as the installation images for the product. The format of the publications is PDF, HTML, or both. To access the publications using a Web browser, open the `infocenter.html` file. The file is in a publications directory on the product CD or DVD.

IBM posts publications for Tivoli monitoring products, as they become available and whenever they are updated, at the following information centers:

- IBM Tivoli Monitoring and OMEGAMON® XE at http://publib.boulder.ibm.com/infocenter/tivihelp/v15r1/index.jsp
- IBM Tivoli Composite Application Manager at http://publib.boulder.ibm.com/infocenter/tivihelp/v24r1/index.jsp

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

Ordering publications

You can order many publications online at http://www.ibm.com/e-business/linkweb/publications/servlet/pbi.wss.

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, contact your software account representative to order publications. To locate the telephone number of your local representative, perform the following steps:

1. Go to http://www.ibm.com/e-business/linkweb/publications/servlet/pbi.wss.
2. Select your country from the list and click **Go**.
3. Click **About this site** in the main panel to see an information page that includes the telephone number of your local representative.

Accessibility

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

For additional information, see Appendix A, “Accessibility,” on page 135.

Tivoli technical training

For Tivoli technical training information, see the following IBM Tivoli Education website:

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

Conventions used in this guide

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

Typeface conventions

The following typeface conventions are used in the publications:

Bold

- Lowercase commands, mixed-case commands, parameters, and environment variables that are otherwise difficult to distinguish from the surrounding text
- Interface controls such as check boxes, radio buttons, and icons; and labels (examples: **Tip:**; **Operating system considerations:**)

Italic

- Citations (examples: titles of publications, diskettes, and CDs)
- Words and phrases defined in text (example: a nonswitched line is called a *point-to-point line*)
- Emphasis of words and letters (example: The LUN address must start with the letter *L*.)
- Variables and values you must provide (example: where *myname* represents...)

`Monospace`

- File names, directory names, and path names
- Programming keywords, properties, and other elements that are difficult to distinguish from the surrounding text
- Message text and prompts
- Text that you must type
- Values for arguments or command options

Operating system-dependent variables and paths

The direction of the slash for directory paths might vary in the documentation. Regardless of what you see in the documentation, follow these guidelines:

- For UNIX or Linux, use a forward slash (/).
- For Windows, use a backslash (\).

The names of environment variables are not always the same in Windows and UNIX. For example, %TEMP% in Windows is equivalent to $TMPDIR in UNIX or Linux.

For environment variables, follow these guidelines:

- For UNIX or Linux, use **$***variable*.
- For Windows, use **%***variable***%**.

If you are using the bash shell on a Windows system, you can use the UNIX conventions.

Chapter 1. Overview of the IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent

The IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent provides you with the capability to monitor Tivoli Netcool/OMNIbus, and to perform basic actions with Tivoli Netcool/OMNIbus. This chapter provides a description of the features, components, and interface options for the IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent.

IBM Tivoli Monitoring overview

IBM Tivoli Monitoring is the base software for the IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent. IBM Tivoli Monitoring provides a way to monitor the availability and performance of all the systems in your enterprise from one or several designated workstations. It also provides useful historical data that you can use to track trends and to troubleshoot system problems.

You can use IBM Tivoli Monitoring to perform the following tasks:

- Monitor for alerts on the systems that you are managing by using predefined situations or custom situations.
- Establish your own performance thresholds.
- Trace the causes leading to an alert.
- Gather comprehensive data about system conditions.
- Use policies to perform actions, schedule work, and automate manual tasks.

The Tivoli Enterprise Portal is the interface for IBM Tivoli Monitoring products. By providing a consolidated view of your environment, the Tivoli Enterprise Portal permits you to monitor and resolve performance issues throughout the enterprise.

See the IBM Tivoli Monitoring publications listed in “Prerequisite publications” on page vii for complete information about IBM Tivoli Monitoring and the Tivoli Enterprise Portal.

Features of the monitoring agent

The IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent software can identify, notify you of, and correct common problems with the application that it monitors. The software includes the following features:

- Monitoring
- Data gathering
- Operations management

Functions of the monitoring agent

The IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent provides the following functions:

Monitoring of Tivoli Netcool/OMNIbus
Monitor Tivoli Netcool/OMNIbus health and performance, automation triggers, and event activity and distribution.

New in this release

Version 7.4 of the IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent is identical to 7.3.1, in which, the following enhancements were made:

- Additional supported operating systems as listed in "Requirements for the monitoring agent" on page 5
- New attribute groups
  - Event Rate by Node: This attribute group is part of the default historical group, and is eligible for use with Tivoli Data Warehouse.
- New or changed attributes in the following attribute groups
  - Event Distribution by Severity: The Sum Tally attribute has been added.
  - Event Distribution by Class Base: The Sum Tally attribute has been added.
  - Event Distribution by Node: The Sum Tally attribute has been added.

Components of the IBM Tivoli Monitoring environment

After you install and set up the IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent, you have an environment that contains the client, server, and monitoring agent implementation for IBM Tivoli Monitoring. This environment contains the following components:

- Tivoli Enterprise Portal client, which has a Java™-based user interface for viewing and monitoring your enterprise
- Tivoli Enterprise Portal Server that is placed between the client and the Tivoli Enterprise Monitoring Server and enables retrieval, manipulation, and analysis of data from the monitoring agents. The Tivoli Enterprise Portal Server is the central repository for all user data.
- Tivoli Enterprise Monitoring Server that acts as a collection and control point for alerts received from the monitoring agents, and collects their performance and availability data. The Tivoli Enterprise Monitoring Server is also a repository for historical data.
- Tivoli Enterprise Monitoring Agent, IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent (one or more instances of the monitoring agent). The instances communicate with the systems or subsystems that you want to monitor. This monitoring agent collects and distributes data to a Tivoli Enterprise Portal Server.
- IBM Tivoli Enterprise Console, which is an optional component that acts as a central collection point for events from a variety of sources, including events from other Tivoli software applications, Tivoli partner applications, custom applications, network management platforms, and relational database systems. You can view these events through the Tivoli Enterprise Portal (using the event viewer), and you can forward events from IBM Tivoli Monitoring situations to the IBM Tivoli Enterprise Console component.
- IBM Tivoli Netcool/OMNIbus, which can be used as an alternative to the IBM Tivoli Enterprise Console. The Tivoli Netcool/OMNIbus software is a service level management (SLM) system that delivers real-time, centralized monitoring of complex networks and IT domains. The Tivoli Netcool/OMNIbus components work together to collect and manage network event information.
- TivoliCommon Reporting, which is a separately installable feature available to users of Tivoli software that provides a consistent approach to generating and customizing reports. Some individual products provide reports that are designed for use with Tivoli Common Reporting, and have a consistent look and feel.

Agent Management Services

IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent can be managed by IBM Tivoli Monitoring Agent Management Services. These services are available in the following IBM Tivoli Monitoring OS agents: Windows, Linux, and UNIX. The services are designed to keep IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent available, and to provide information about the status of the product to the Tivoli Enterprise Portal. More information about Agent Management Services can be found in the *IBM Tivoli Monitoring Administrator's Guide*, "Agent Management Services" chapter.

User interface options

Installation of the base software and other integrated applications provides the following interfaces that you can use to work with your resources and data:

Tivoli Enterprise Portal browser client interface
The browser client interface is automatically installed with the Tivoli Enterprise Portal Server. To start the Tivoli Enterprise Portal browser client in your Internet browser, enter the URL for a specific Tivoli Enterprise Portal browser client installed on your Web server.

Tivoli Enterprise Portal desktop client interface
The desktop client interface is a Java-based graphical user interface (GUI) on a Windows or Linux workstation.

Manage Tivoli Enterprise Monitoring Services window
The window for the Manage Tivoli Enterprise Monitoring Services utility is used for configuring the agent and starting Tivoli services not designated to start automatically.

IBM Tivoli Enterprise Console
An event management application that integrates system, network, database, and application management to help ensure the optimal availability of an IT service for an organization.

Tivoli Netcool/OMNIbus event list
You can use the event list to monitor and manage alerts. An alert is created when the ObjectServer receives an event, alarm, message, or data item. Each alert is made up of columns (or fields) of information that are held in a row in the ObjectServer alerts.status table. In addition, the Tivoli Netcool/OMNIbus Web GUI is a Web-based application that processes network events from one or more data sources and presents the event data in various graphical formats.

Tivoli Common Reporting
A Web user interface for specifying report parameters and other report properties, generating formatted reports, scheduling reports, and viewing reports. The user interface is based on the Tivoli Integrated Portal.

Chapter 2. Requirements and agent-specific installation and configuration information for the monitoring agent

This chapter contains information about the requirements for the IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent, and agent-specific information related to installation and configuration of the agent.

To install and configure the IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent, use the procedures for installing monitoring agents in the *IBM Tivoli Monitoring Installation and Setup Guide* along with the information in this chapter.

If you are performing a silent installation by using a response file, see the information about performing a silent installation in the *IBM Tivoli Monitoring Installation and Setup Guide*.

Requirements for the monitoring agent

In addition to the requirements described in the *IBM Tivoli Monitoring Installation and Setup Guide*, the IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent has the following requirements:

- The monitoring agent runs on any of these operating systems:
  - AIX® 6.1: iSeries and System p
  - AIX 7.1: iSeries and System p
  - Solaris V10 (SPARC) (64 bit)
  - Solaris Zones
  - HP-UX 11.23 and 11.31 on Itanium2
  - Windows Server 2008 SE (32 bit)
  - Windows Server 2008 EE (64 bit)
  - Red Hat Enterprise and Desktop Linux 5.0 for Intel
  - Red Hat Enterprise Linux 5.0 for AMD64/EM64T
  - Red Hat Enterprise Linux 5.0 for z/Series 31-bit
  - Red Hat Enterprise Linux 5.0 for z/Series 64-bit
  - Red Hat Enterprise and Desktop Linux 6.0 for Intel
  - Red Hat Enterprise Linux 6.0 for AMD64/EM64T
  - Red Hat Enterprise Linux 6.0 for z/Series 31-bit
  - Red Hat Enterprise Linux 6.0 for z/Series 64-bit
  - SUSE Linux Enterprise Server 10 for Intel
  - SUSE Linux Enterprise Server 10 for zSeries® 31-bit
  - SUSE Linux Enterprise Server 10 for zSeries 64-bit
  - SUSE Linux Enterprise Server 11 for Intel
  - SUSE Linux Enterprise Server 11 for zSeries 31-bit
  - SUSE Linux Enterprise Server 11 for zSeries 64-bit

  If running this monitoring agent on a Red Hat Enterprise Linux 5 operating system, SELinux must not be enabled.

Note: For the most current information about the operating systems that are supported, see http://www-306.ibm.com/software/sysmgmt/products/support/Tivoli_Supported_Platforms.html.

- This agent monitors the following versions:
  - Tivoli Netcool/OMNIbus 7.3.1
  - Tivoli Netcool/OMNIbus 7.4
- A single computer that hosts the hub monitoring server, portal server, and a monitoring agent requires approximately 300 MB of space. A computer that hosts only the monitoring agent requires approximately 30 MB of space, including the specific enablement code for the monitoring agent. More space is required for each additional monitoring agent that you deploy on the monitoring computer.
- Linux versions require some compatibility libraries to be installed for the agent to work correctly. The latest versions of libstdc++, libgcc, and compat-libstdc++ are required for the agent to run correctly. Linux RedHat 4 and 5, and SuSE 9 and 10 also require the C++ Runtime 6.0 (libstdc++.so.6).
- The monitoring agent must be connected to the following software:
  - IBM Tivoli Monitoring V6.2

  After you install the prerequisite software, install the following software, which is required for the IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent to operate:
  - IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent
  - IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent for Tivoli Enterprise Monitoring Server support
  - IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent for Tivoli Enterprise Portal Server support
  - IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent for Tivoli Enterprise Portal Desktop Client support
  - IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent for Tivoli Enterprise Portal Browser Client support

Installing language packs

To install a language pack for the agent support files on the Tivoli Enterprise Monitoring Server, the Tivoli Enterprise Monitoring Agent, and the Tivoli Enterprise Portal Server, first make sure that you have installed the product in English. Then perform the following steps depending on which operating system you are using.

Windows systems

1. Double-click `lpinstaller.bat` in the language pack CD to launch the installation program.
2. Select the language of the installer and click **OK**.
3. Click **Next** on the Introduction panel.
4. Click **Add/Update** and click **Next**.
5. Select the folder in which the National Language Support package (`NLSPackage`) files are located.

   Note: Typically the `NLSPackage` files are located in the `nlspackage` folder where the installer executable is located.
6. Select the language support for the agent of your choice and click **Next**.

Note: Hold down the Ctrl key for multiple selections.

7. Select the languages that you want to install and click **Next**.
8. Examine the installation summary page and click **Next** to begin installation.
9. Click **Finish** after installation completes to exit the installer.
10. Restart Tivoli Enterprise Portal Desktop Client, Tivoli Enterprise Portal Server component, and Eclipse Help Server if any of these components are installed.

UNIX or Linux systems

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

   ```
   mkdir dir_name
   ```

2. Mount the language pack CD to the temporary directory you created.
3. Run the following command to launch the installation program:

   ```
   cd dir_name
   lpinstaller.sh -c install_dir
   ```

   Where *install_dir* is where you installed IBM Tivoli Monitoring. Typically it is `/opt/IBM/ITM` for AIX and Linux systems.
4. Select the language of the installer and click **OK**.
5. Click **Next** on the Introduction panel.
6. Click **Add/Update** and click **Next**.
7. Select the folder in which the National Language Support package (`NLSPackage`) files are located.

   Note: Typically, the `NLSPackage` files are located in the `nlspackage` folder where the installer executable is located.
8. Select the language support for the agent of your choice and click **Next**.

   Note: Hold down the Ctrl key for multiple selections.
9. Select the languages that you want to install and click **Next**.
10. Examine the installation summary page and click **Next** to begin installation.
11. Click **Finish** after installation completes to exit the installer.
12. Restart Tivoli Enterprise Portal Desktop Client, Tivoli Enterprise Portal Server, and Eclipse Help Server if any of these components are installed.

Agent-specific installation and configuration

In addition to the installation and configuration information in the *IBM Tivoli Monitoring Installation and Setup Guide*, use the information in this section to install and configure the IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent.

The agent is distributed with Tivoli Netcool/OMNIbus and can be downloaded from the IBM Passport Advantage® Online Web site.

The Tivoli Health Monitoring Agent reads from files created from the Tivoli Netcool/OMNIbus ObjectServer application. No special or additional privileges are required to run this agent.

On a Windows system, use the following steps to install the required ObjectServer configuration changes:

1. Start the ObjectServer.

2. Import the schema and automations to the ObjectServer as follows:

   cd installdir\TMAIM6

   %NCHOME%\bin\redist\isql -U root -S server_name -P < itm_os.sql

   In the above commands, installdir is the installation location of the IBM Tivoli Monitoring health agent, and server_name is the ObjectServer name.

On a UNIX system, use the following steps to install the required ObjectServer configuration changes:

1. Start the ObjectServer.
2. Import the schema and automations to the ObjectServer as follows:

   Change to the installdir/arch/no/bin directory

   $OMNIHOME/bin/nco_sql -user root -S server_name -P < itm_os.sql

   In the above commands, installdir is the installation location of the IBM Tivoli Monitoring health agent, arch is the operating system directory, and server_name is the ObjectServer name.

Configuration values

For both local and remote configuration, provide the configuration values for the agent to operate. When configuring an agent, a panel is displayed so you can enter each value. When there is a default value, this value is pre-entered into the field. If a field represents a password, two entry fields are displayed. You must enter the same value in each field. The values you type are not displayed to help maintain the security of these values.

The configuration for this agent is organized into the following groups:

Paths (paths)

Null Description for section.

The configuration elements defined in this group are always present in the agent's configuration.

This group defines information that applies to the entire agent.

Log Directory (KNO_LOG_DIR)

Directory that contains the Tivoli Netcool/OMNIbus ObjectServer metric log files.

The type is string.

This value is required.

Default value: /opt/netcool/omnibus/log

ObjectServer (objectservername)

Null Description for section.

The configuration elements defined in this group are always present in the agent's configuration.

This group defines information that applies to the entire agent.

ObjectServer Name (KNO_OBJSRV_NAME)

Name of the Tivoli Netcool/OMNIbus ObjectServer.

The type is string.

This value is required.

Default value: NCOMS

Remote installation and configuration

When installing the agent remotely, you must provide the configuration values for the agent to operate. See "Configuration values" on page 8.

See the **tacmd describeSystemType** section in the *IBM Tivoli Monitoring Command Reference* for information about displaying the configuration options that are available to use with the **configureSystem** or **addSystem** commands.

You can install the monitoring agent remotely from the Tivoli Enterprise Portal or from the command line. To install from the portal, see the *IBM Tivoli Monitoring Installation and Setup Guide*.

If using the command line, the following command is an example of remote installation and configuration for Windows operating systems:

```
tacmd addSystem -t NO -n Primary:sample.node.name:NT
-p  paths.KNO_LOG_DIR=/opt/netcool/omnibus/log
 objectservername.KNO_OBJSRV_NAME=NCOMS
INSTANCE="inst1"
```

Chapter 3. Workspaces reference

This chapter contains an overview of workspaces, references for detailed information about workspaces, and descriptions of the predefined workspaces included in this monitoring agent.

About workspaces

A workspace is the working area of the Tivoli Enterprise Portal application window. Use the Navigator tree that is displayed at the left of the workspace, to select the workspace you want to see. As part of the application window, the right side of the status bar shows the Tivoli Enterprise Portal Server name and port number to which the displayed information applies, and the ID of the current user.

When you select an item in the Navigator tree, a default workspace is displayed. When you right-click a Navigator item, a menu that includes a Workspace item is displayed. The Workspace item contains a list of workspaces for that Navigator item. Each workspace has at least one view. Some views have links to other workspaces.

The workspaces in the Navigator are shown in a Physical view that shows your enterprise as a physical mapping or a dynamically populated logical view that is agent-specific. You can also create a Logical view. The Physical view is the default view.

This monitoring agent provides predefined workspaces. You cannot modify or delete the predefined workspaces, but you can create new workspaces by editing them and saving the changes with a different name.

A table view within a workspace corresponds to a group of attributes; the columns in the table view show some or all the attributes available in the attribute group.

More information about workspaces

For more information about creating, customizing, and working with workspaces, see the *Tivoli Enterprise Portal User's Guide*.

For a list of the predefined workspaces for this monitoring agent and a description of each workspace, see the Predefined workspaces section in this chapter and the information in that section for each individual workspace.

Some attribute groups for this monitoring agent might not be represented in the predefined workspaces or views for this agent. For a full list of the attribute groups, see the Attributes reference section.

Predefined workspaces

The IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent provides the following predefined workspaces, which are organized by Navigator item.

- Tivoli Netcool/OMNIbus Navigator item
  - Tivoli Netcool/OMNIbus workspace

- Availability Navigator item
  - Availability workspace
- Event distribution and history by severity Navigator item
  - Event distribution and history by severity workspace
- Event distribution by class Navigator item
  - Event distribution by class workspace
- Event distribution by node Navigator item
  - Event distribution by node workspace
- Event Metrics Navigator item
  - Event Metrics workspace
- ObjectServer Metrics Navigator item
  - ObjectServer Metrics workspace

Agent Navigator items

This section contains descriptions of predefined workspaces. The workspaces are organized by the Navigator item to which the workspaces are relevant.

Tivoli Netcool/OMNIbus Navigator item

Tivoli Netcool/OMNIbus workspace
This workspace is not defined.

This workspace contains the following views:

Browser
This does not display any agent information.

Notepad
This does not display any agent information.

Availability Navigator item

Availability workspace
This workspace shows data related to the Tivoli Netcool/OMNIBus ObjectServer processes (nco_objserv and nco_pad).

This workspace contains the following views:

Availibilty workspace
The workspace contains the following views.

OMNIbus Processes Processor Times
This view shows the percentage of processor time used by each of the Tivoli Netcool/OMNIbus ObjectServer processes.

OMNIbus Processes Virtual Sizes
This view shows the memory virtual size, in MB, for each of the Tivoli Netcool/OMNIbus ObjectServer processes.

OMNIbus Processes CPU Times
This view shows the percentages of privileged and user-mode CPU time for each of the Tivoli Netcool/OMNIBus ObjectServer processes.

Event distribution and history by severity Navigator item

Event distribution and history by severity workspace
This workspace shows data related to Event distribution by severity.

This workspace contains the following views:

Event distribution and history by severity workspace
The workspace contains the following views.

OMNIbus Distribution of events by Severity
This view shows the distribution of events in the alerts.status table based on their severity.

Monthly events by severity
This view shows the distribution of events in the alerts.status table based on their severity over the last month. This view can be used only if historical data collection is enabled.

24 Hour events by severity - event storms
This view shows the distribution of events in the alerts.status table based on their severity over the last 24 hours. This view can be used only if historical data collection is enabled.

Event distribution by class Navigator item

Event distribution by class workspace
This workspace shows the Event distribution by Class data.

This workspace contains the following views:

Event distribution by class
The workspace contains the following views.

OMNIbus distribution of events by class
This view shows the distribution of events by class in the ObjectServer.

Critical events by class
This view shows the distribution of critical events by class.

Major events by class
This view shows the distribution of major events by class.

Minor events by class
This view shows the distribution of minor events by class.

Event distribution by node Navigator item

Event distribution by node workspace
This workspace shows the Event distribution by Node data.

This workspace contains the following views:

Event distribution by node
The workspace contains the following views.

OMNIbus distribution of events by node
This view shows the distribution of events by node in the ObjectServer.

Critical events by node
This view shows the distribution of critical events by node.

Major events by node
This view shows the distribution of major events by node.

Minor events by node
This view shows the distribution of minor events by node.

Event Metrics Navigator item

Event Metrics workspace
This workspace is not defined.

This workspace contains the following view:

Browser
This does not display any agent information.

ObjectServer Metrics Navigator item

ObjectServer Metrics workspace
This workspace shows data related to the Tivoli Netcool/OMNIbus ObjectServer.

This workspace contains the following views:

ObjectServer Metrics
The workspace contains the following views.

Automation Period
This view shows the amount of ObjectServer time used by each of the automations during the last reporting period.

Table Size
This view shows the size of individual tables within the ObjectServer.

Client Profile
This view shows the amount of ObjectServer time each connected client has used during the last reporting period.

Store Size
This view shows the amount of space the table_store is consuming. The table_store is where the data contained in the alerts and custom databases is held.

Chapter 4. Attributes reference

This chapter contains an overview of attributes, references for detailed information about attributes, and descriptions of the attributes for each attribute group included in this monitoring agent.

About attributes

Attributes are the application properties that are being measured and reported by the IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent.

Attributes are organized into groups according to their purpose. The attributes in a group can be used in the following two ways:

- Chart or table views

  Attributes are displayed in chart and table views. The chart and table views use queries to specify which attribute values to request from a monitoring agent. You use the Query editor to create a new query, modify an existing query, or apply filters and set styles to define the content and appearance of a view based on an existing query.
- Situations

  You use attributes to create situations that monitor the state of your operating system, database, or application. A situation describes a condition you want to test. When you start a situation, the Tivoli Enterprise Portal compares the values you have assigned to the situation attributes with the values collected by the IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent and registers an *event* if the condition is met. You are alerted to events by indicator icons that are displayed in the Navigator.

More information about attributes

For more information about using attributes and attribute groups, see the *Tivoli Enterprise Portal User's Guide*.

For a list of the attributes groups, a list of the attributes in each attribute group, and descriptions of the attributes for this monitoring agent, see the Attribute groups and attributes section in this chapter.

Attribute groups and attributes for the IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent

This monitoring agent contains the following attribute groups. The table name depends on the maximum table name limits of the target database being used for the Tivoli Data Warehouse. If the maximum name is 30 characters, then any warehouse table name longer than 30 characters is shortened to 30 characters.

- Attribute group name: Accelerated Event Notification
  - Table name: KNONCOECNM
  - Warehouse table name: KNO_ACCELERATED EVENT NOTIFICATION or KNONCOECNM
- Attribute group name: Automation Period
  - Table name: KNONCOECNC

  - Warehouse table name: KNO_AUTOMATION PERIOD or KNONCOECNC
- Attribute group name: Availability
  - Table name: KNOAVAIL
  - Warehouse table name: KNO_AVAILABILITY or KNOAVAIL
- Attribute group name: Client Profile
  - Table name: KNONCOECNI
  - Warehouse table name: KNO_CLIENT PROFILE or KNONCOECNI
- Attribute group name: Dummy
  - Table name: KNODUMMY
  - Warehouse table name: KNO_DUMMY
- Attribute group name: Event Class
  - Table name: KNONCOECBA
  - Warehouse table name: KNO_EVENT CLASS or KNONCOECBA
- Attribute group name: Event Count And Throughput
  - Table name: KNONCOECNA
  - Warehouse table name: KNO_EVENT COUNT AND THROUGHPUT or KNONCOECNA
- Attribute group name: Event Distribution By Class
  - Table name: KNONCOEDCF
  - Warehouse table name: KNO_EVENT DISTRIBUTION BY CLASS or KNONCOEDCF
- Attribute group name: Event Distribution By Class Base
  - Table name: KNONCOEDCB
  - Warehouse table name: KNO_EVENT DISTRIBUTION BY CLASS BASE or KNONCOEDCB
- Attribute group name: Event Distribution By Class Crit
  - Table name: KNONCOEDC1
  - Warehouse table name: KNO_EVENT DISTRIBUTION BY CLASS CRIT or KNONCOEDC1
- Attribute group name: Event Distribution By Class Crit Base
  - Table name: KNONCOEDCC
  - Warehouse table name: KNO_EVENT DISTRIBUTION BY CLASS CRIT BASE or KNONCOEDCC
- Attribute group name: Event Distribution By Class Major
  - Table name: KNONCOEDC2
  - Warehouse table name: KNO_EVENT DISTRIBUTION BY CLASS MAJOR or KNONCOEDC2
- Attribute group name: Event Distribution By Class Major Base
  - Table name: KNONCOEDCM
  - Warehouse table name: KNO_EVENT DISTRIBUTION BY CLASS MAJOR BASE or KNONCOEDCM
- Attribute group name: Event Distribution By Class Minor
  - Table name: KNONCOEDC4
  - Warehouse table name: KNO_EVENT DISTRIBUTION BY CLASS MINOR or KNONCOEDC4
- Attribute group name: Event Distribution By Class Minor Base

  - Table name: KNONCOEDC3
  - Warehouse table name: KNO_EVENT DISTRIBUTION BY CLASS MINOR BASE or KNONCOEDC3
- Attribute group name: Event Distribution By Node
  - Table name: KNONCOEDNB
  - Warehouse table name: KNO_EVENT DISTRIBUTION BY NODE or KNONCOEDNB
- Attribute group name: Event Distribution By Node Crit
  - Table name: KNONCOEDN1
  - Warehouse table name: KNO_EVENT DISTRIBUTION BY NODE CRIT or KNONCOEDN1
- Attribute group name: Event Distribution By Node Major
  - Table name: KNONCOEDN2
  - Warehouse table name: KNO_EVENT DISTRIBUTION BY NODE MAJOR or KNONCOEDN2
- Attribute group name: Event Distribution By Node Minor
  - Table name: KNONCOEDN3
  - Warehouse table name: KNO_EVENT DISTRIBUTION BY NODE MINOR or KNONCOEDN3
- Attribute group name: Event Distribution By Severity
  - Table name: KNONCOEDFL
  - Warehouse table name: KNO_EVENT DISTRIBUTION BY SEVERITY or KNONCOEDFL
- Attribute group name: Event Rate
  - Table name: KNONCOECNK
  - Warehouse table name: KNO_EVENT RATE or KNONCOECNK
- Attribute group name: Event Rate By Node
  - Table name: KNONCOERND
  - Warehouse table name: KNO_EVENT RATE BY NODE or KNONCOERND
- Attribute group name: Performance Object Status
  - Table name: KNOPOBJST
  - Warehouse table name: KNO_PERFORMANCE OBJECT STATUS or KNOPOBJST
- Attribute group name: Store Size
  - Table name: KNONCOECNE
  - Warehouse table name: KNO_STORE SIZE or KNONCOECNE
- Attribute group name: Table Size
  - Table name: KNONCOECNG
  - Warehouse table name: KNO_TABLE SIZE or KNONCOECNG
- Attribute group name: Thread Pool Status
  - Table name: KNOTHPLST
  - Warehouse table name: KNO_THREAD POOL STATUS or KNOTHPLST

The remaining sections of this chapter contain descriptions of these attribute groups, which are listed alphabetically. The following information is provided for each attribute group:

Historical group
Whether the attribute group is a historical type that you can roll off to a data warehouse

Attribute descriptions
Description, type, and Warehouse name for each attribute in the attribute group

Some attributes are designated as key attributes. A key attribute is an attribute that is used in warehouse aggregation to identify rows of data that represent the same object.

Accelerated Event Notification attribute group

Accelerated Event Notification.

Historical group

This attribute group is part of the default historical group, and is eligible for use with Tivoli Data Warehouse.

Attribute descriptions

The following list contains information about each attribute in the Accelerated Event Notification attribute group:

Node attribute - This attribute is a key attribute.

Description
The managed system name of the agent.

Type

String

Warehouse name
NODE

Timestamp attribute

Description
The local time at the agent when the data was collected.

Type

String

Warehouse name
TIMESTAMP

Sample Time attribute - This attribute is a key attribute.

Description
The time when the summary data was calculated.

Type

Timestamp

Warehouse name
SAMPLE_TIME or SAMPLETIME

ObjectServer Name attribute - This attribute is a key attribute.

Description
This is the ObjectServer name.

Type

String

Warehouse name
OBJECTSERVER_NAME or OBSERNAME

Channel Name attribute - This attribute is a key attribute.

Description
The channel name.

Type

String

Warehouse name
CHANNEL_NAME or CHANNAME

Number Messages attribute

Description
The number of times the channel has been used in the last profile period.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
NUMBER_MESSAGES or NUMMSGS

Period Time attribute

Description
The amount of time spent sending messages in the last profile period.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
PERIOD_TIME or PTIME

Total Messages attribute

Description
The total number of messages sent on this channel since system startup.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
TOTAL_MESSAGES or TOTMSGS

Total Time attribute

Description
The total time spent sending messages on this channel since system startup.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
TOTAL_TIME or TOTTIME

Automation Period attribute group

Automation Period.

Historical group

This attribute group is part of the default historical group, and is eligible for use with Tivoli Data Warehouse.

Attribute descriptions

The following list contains information about each attribute in the Automation Period attribute group:

Node attribute - This attribute is a key attribute.

Description
The managed system name of the agent.

Type

String

Warehouse name
NODE

Timestamp attribute

Description
The local time at the agent when the data was collected.

Type

String

Warehouse name
TIMESTAMP

Sample Time attribute - This attribute is a key attribute.

Description
The time in UTC when the sample was obtained. This allows the data to be sorted by time.

Type

Timestamp

Warehouse name
SAMPLE_TIME or SAMPLETIME

ObjectServer Name attribute - This attribute is a key attribute.

Description
This is the ObjectServer name.

Type

String

Warehouse name
OBJECTSERVER_NAME or OBSERNAME

Trigger Name attribute - This attribute is a key attribute.

Description
The number of the automation trigger. All triggers will be the name for the total trigger period.

Type

String

Warehouse name
TRIGGER_NAME or TRIGNAME

Trigger Period attribute

Description
The period time for each trigger.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
TRIGGER_PERIOD or TRIGPERIOD

Total Time attribute

Description
Total time of all trigger periods.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
TOTAL_TIME or TOTTIME

Availability attribute group

The Availability attribute group contains the availability data for all processes and services that make up this application.

Historical group

This attribute group is part of the default historical group, and is eligible for use with Tivoli Data Warehouse.

Attribute descriptions

The following list contains information about each attribute in the Availability attribute group:

Node attribute - This attribute is a key attribute.

Description
The managed system name of the agent.

Type

String

Warehouse name
NODE

Timestamp attribute

Description
The local time at the agent when the data was collected.

Type

String

Warehouse name
TIMESTAMP

Application Component attribute - This attribute is a key attribute.

Description
The descriptive name of a part of the application.

Type

String

Warehouse name
APPLICATION_COMPONENT or COMPONENT

Name attribute

Description
The name of the process, service, or functionality test. This name matches the executable name of the process, the service short name or the name of the process used to test the application.

Type

String with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- N/A (N/A)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
NAME

Status attribute

Description
The status of the application component.

- For processes 'UP', 'DOWN', 'WARNING', or 'PROCESS_DATA_NOT_AVAILABLE': 'PROCESS_DATA_NOT_AVAILABLE' is displayed for a process when the matching process is running but the resource use information cannot be collected for that process.
- For services 'UP', 'DOWN', or 'UNKNOWN': 'UNKNOWN' is displayed when the service is not installed.
- For functionality tests: 'PASSED' or 'FAILED' is displayed.

Type

Integer with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- DOWN (0)
- UP (1)
- WARNING (2)
- UNKNOWN (3)
- PASSED (4)
- FAILED (5)
- PROCESS_DATA_NOT_AVAILABLE (6)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
STATUS

Full Name attribute

Description
The full name of the process including the path.

Type

String with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- N/A (N/A)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
FULL_NAME or FULLNAME

Type attribute

Description
The type of the application component. Components are processes, services, or functionality tests.

Type

Integer with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- PROCESS (0)
- SERVICE (1)
- FUNCTIONALITY_TEST (2)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
TYPE

Virtual Size attribute

Description
The virtual size (in MB) of the process.

Type

Integer (gauge)

Warehouse name
VIRTUAL_SIZE or VIRTSIZE

Page Faults per Sec attribute

Description
The rate of page faults for the process measured in faults per second. This attribute only contains valid data for processes.

Type

Integer (gauge)

Warehouse name
PAGE_FAULTS_PER_SEC or PAGEFAULTS

Working Set Size attribute

Description
The working set size of the process in MB. This attribute only contains valid data for processes.

Type

Integer (gauge)

Warehouse name
WORKING_SET_SIZE or WORKSET

Thread Count attribute

Description
The number of threads currently allocated by this process. This attribute only contains valid data for processes.

Type

Integer (gauge)

Warehouse name
THREAD_COUNT or THREADS

PID attribute

Description
The process ID associated with the process. This attribute only contains valid data for processes.

Type

Integer (32-bit gauge)

Warehouse name
PID

Percent Privileged Time attribute

Description
The percentage of the available CPU time that is being used by this process for privileged operation.

Type

Integer (gauge)

Warehouse name
PERCENT_PRIVILEGED_TIME or PERCPRIV

Percent User Mode Time attribute

Description
The percentage of the available CPU time that is being used by this process for user mode operation.

Type

Integer (gauge)

Warehouse name
PERCENT_USER_MODE_TIME or PERCUSER

Percent Processor Time attribute

Description
The percentage of the elapsed time that this process used the processor to execute instructions.

Type

Integer (gauge)

Warehouse name
PERCENT_PROCESSOR_TIME or PERCPROC

Command Line attribute

Description
The program name and any arguments specified on the command line when the process was started. This has the value N/A if this is a Service, or Functionality test.

Type

String with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- N/A (N/A)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
COMMAND_LINE or CMDLINE

Functionality Test Status attribute

Description
The return code of the functionality test. When the monitored application is running correctly, 'SUCCESS' is displayed. 'NOT_RUNNING' is displayed when it is not running correctly. 'N/A' is displayed when the row does not represent a functionality test.

Type

Integer with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- SUCCESS (0)
- N/A (1)
- GENERAL_ERROR (2)
- WARNING (3)
- NOT_RUNNING (4)
- DEPENDENT_NOT_RUNNING (5)
- ALREADY_RUNNING (6)
- PREREQ_NOT_RUNNING (7)
- TIMED_OUT (8)
- DOESNT_EXIST (9)
- UNKNOWN (10)
- DEPENDENT_STILL_RUNNING (11)
- INSUFFICIENT_USER_AUTHORITY (12)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
FUNCTIONALITY_TEST_STATUS or FUNCSTATUS

Functionality Test Message attribute

Description
The text message that corresponds to the Functionality Test Status. This is only valid for functionality tests.

Type

String with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- N/A (N/A)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
FUNCTIONALITY_TEST_MESSAGE or FUNCMSG

Client Profile attribute group

Client profile.

Historical group

This attribute group is part of the default historical group, and is eligible for use with Tivoli Data Warehouse.

Attribute descriptions

The following list contains information about each attribute in the Client Profile attribute group:

Node attribute - This attribute is a key attribute.

Description
The managed system name of the agent.

Type

String

Warehouse name
NODE

Timestamp attribute

Description
The local time at the agent when the data was collected.

Type

String

Warehouse name
TIMESTAMP

Sample Time attribute - This attribute is a key attribute.

Description
The time in UTC when the sample was obtained. This allows the data to be sorted by time.

Type

Timestamp

Warehouse name
SAMPLE_TIME or SAMPLETIME

ObjectServer Name attribute - This attribute is a key attribute.

Description
This is the ObjectServer name.

Type

String

Warehouse name
OBJECTSERVER_NAME or OBSERNAME

NcoNode attribute - This attribute is a key attribute.

Description
The host or node name.

Type

String

Warehouse name
NCONODE

Time Period attribute

Description
The actual time period for the sample in seconds.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
TIME_PERIOD or TIMEPERIOD

Client Name attribute - This attribute is a key attribute.

Description
The name of the client.

Type

String

Warehouse name
CLIENT_NAME or CLIENTNAME

UserId attribute - This attribute is a key attribute.

Description
The user ID for the client session.

Type

DisplayNumeric

Warehouse name
USERID

Client Period attribute

Description
The amount of time consumed by the client in the last period.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
CLIENT_PERIOD or CLPERIOD

Granularity attribute

Description
The system throughput count.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
GRANULARITY or GRANULAR

Client Limit attribute

Description
The total number of allowed active clients by system.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
CLIENT_LIMIT or CLLIMIT

Number Active Clients attribute

Description
The total number of active clients in the time period.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
NUMBER_ACTIVE_CLIENTS or ACTCLIENT

Total Time attribute

Description
The total time of all client periods.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
TOTAL_TIME or TOTALTIME

Display Name attribute

Description
NCO node name and Client name combination.

Type

String

Warehouse name
DISPLAY_NAME or DISPNAME

ConnectionsRemaining attribute

Description
Number of client connections remaining for use.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
CONNECTIONSREMAINING or CONNR

PercentGranularityTime attribute

Description
The total time for client versus system throughput count.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
PERCENTGRANULARITYTIME or PGRANT

PercentGranularityClient attribute

Description
The client time versus system throughput count.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
PERCENTGRANULARITYCLIENT or PGRANC

Dummy attribute group

If the warehouse default setting is enabled, data for this attribute group is stored in Tivoli Data Warehouse.

Historical group

This attribute group is part of the default historical group, and is not eligible for use with Tivoli Data Warehouse.

Attribute descriptions

The following list contains information about each attribute in the Dummy attribute group:

Node attribute - This attribute is a key attribute.

Description
The managed system name of the agent.

Type

String

Warehouse name
NODE

Timestamp attribute

Description
The local time at the agent when the data was collected.

Type

String

Warehouse name
TIMESTAMP

Event Class attribute group

Event class.

Historical group

This attribute group is part of the default historical group, and is not eligible for use with Tivoli Data Warehouse.

Attribute descriptions

The following list contains information about each attribute in the Event Class attribute group:

Node attribute - This attribute is a key attribute.

Description
The managed system name of the agent.

Type

String

Warehouse name
NODE

Timestamp attribute

Description
The local time at the agent when the data was collected.

Type

String

Warehouse name
TIMESTAMP

Class Code attribute - This attribute is a key attribute.

Description
The numeric value for the event class.

Type

DisplayNumeric

Warehouse name
CLASS_CODE or CLASSCODE

Class Name attribute - This attribute is a key attribute.

Description
The string representation of the class value. This allows text to be displayed in charts and tables.

Type

String

Warehouse name
CLASS_NAME or CLASSNAME

Event Count And Throughput attribute group

Event Count and Throughput.

Historical group

This attribute group is part of the default historical group, and is eligible for use with Tivoli Data Warehouse.

Attribute descriptions

The following list contains information about each attribute in the Event Count And Throughput attribute group:

Node attribute - This attribute is a key attribute.

Description
The managed system name of the agent.

Type

String

Warehouse name
NODE

Timestamp attribute

Description
The local time at the agent when the data was collected.

Type

String

Warehouse name
TIMESTAMP

Sample Time attribute - This attribute is a key attribute.

Description
The time in UTC when the sample was obtained. This allows the data to be sorted by time.

Type

Timestamp

Warehouse name
SAMPLE_TIME or SAMPLETIME

ObjectServer Name attribute - This attribute is a key attribute.

Description
This is the ObjectServer name.

Type

String

Warehouse name
OBJECTSERVER_NAME or OBSERNAME

Alert Count attribute

Description
The number of rows that are present in the alerts.status table.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
ALERT_COUNT or ALERTCNT

Details Count attribute

Description
The number of rows that are present in the alerts.details table.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
DETAILS_COUNT or DETAILSCNT

Journals Count attribute

Description
The number of rows that are present in the alerts.journals table.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
JOURNALS_COUNT or JOURNALCNT

Total New Alerts attribute

Description
The total number of alerts that have been inserted into the alerts.status table since the statistics were last reset.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
TOTAL_NEW_ALERTS or TOTNALERTS

Total Updated Alerts attribute

Description
The total number of alerts that have been updated in the alerts.status table since the statistics were last reset.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
TOTAL_UPDATED_ALERTS or TOTUALERTS

Total New Details attribute

Description
The total number of details that have been inserted into the alerts.details table since the statistics were last reset.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
TOTAL_NEW_DETAILS or TOTNDETAIL

Total New Journals attribute

Description
The total number of journal entries that have been inserted into the alerts.journals table since the statistics were last reset.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
TOTAL_NEW_JOURNALS or TOTNJOURNL

Event Distribution By Class attribute group

Event distribution by event class, including the string representation of the class value.

Historical group

This attribute group is part of the default historical group, and is eligible for use with Tivoli Data Warehouse.

Attribute descriptions

The following list contains information about each attribute in the Event Distribution By Class attribute group:

Node attribute - This attribute is a key attribute.

Description
The managed system name of the agent.

Type

String

Warehouse name
NODE

Timestamp attribute

Description
The local time at the agent when the data was collected.

Type

String

Warehouse name
TIMESTAMP

Class Code attribute - This attribute is a key attribute.

Description
The numeric value for the event class.

Type

DisplayNumeric

Warehouse name
CLASS_CODE or CLASSCODE

Class Name attribute - This attribute is a key attribute.

Description
The string representation of the class value. This allows text to be displayed in charts and tables.

Type

String

Warehouse name
CLASS_NAME or CLASSNAME

Sample Time attribute - This attribute is a key attribute.

Description
The time when the summary data was calculated.

Type

Timestamp

Warehouse name
SAMPLE_TIME or SAMPLTIME

ObjectServer Name attribute - This attribute is a key attribute.

Description
This is the ObjectServer name.

Type

String

Warehouse name
OBJECTSERVER_NAME or OBSERNAME

ClassCode attribute - This attribute is a key attribute.

Description
The numeric value of the event class.

Type

DisplayNumeric

Warehouse name
CLASSCODE or CLASS

Critical attribute

Description
Total number of critical events for the event class.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
CRITICAL

Major attribute

Description
Total number of major events for the event class.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
MAJOR

Minor attribute

Description
Total number of minor events for the event class.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
MINOR

Warning attribute

Description
Total number of warning events for the event class.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
WARNING

Indeterminate attribute

Description
Total number of indeterminate events for the event class.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
INDETERMINATE or UNKNOWN

Clear attribute

Description
Total number of clear events for the event class.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
CLEAR

Custom attribute

Description
Total number of events with a custom severity for event class.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
CUSTOM

Total Events attribute

Description
Total number of events for the event class.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
TOTAL_EVENTS or TOTEVENTS

Sum Tally attribute

Description
Total number of inserts of events for the node.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
SUM_TALLY or SUMTALLY

Event Distribution By Class Base attribute group

Event distribution by severity and event class.

Historical group

This attribute group is part of the default historical group, and is not eligible for use with Tivoli Data Warehouse.

Attribute descriptions

The following list contains information about each attribute in the Event Distribution By Class Base attribute group:

Node attribute - This attribute is a key attribute.

Description
The managed system name of the agent.

Type

String

Warehouse name
NODE

Timestamp attribute

Description
The local time at the agent when the data was collected.

Type

String

Warehouse name
TIMESTAMP

Sample Time attribute - This attribute is a key attribute.

Description
The time when the summary data was calculated.

Type

Timestamp

Warehouse name
SAMPLE_TIME or SAMPLTIME

ObjectServer Name attribute - This attribute is a key attribute.

Description
This is the ObjectServer name.

Type

String

Warehouse name
OBJECTSERVER_NAME or OBSERNAME

ClassCode attribute - This attribute is a key attribute.

Description
The numeric value of the event class.

Type

DisplayNumeric

Warehouse name
CLASSCODE or CLASS

Critical attribute

Description
Total number of critical events for the event class.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
CRITICAL

Major attribute

Description
Total number of major events for the event class.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
MAJOR

Minor attribute

Description
Total number of minor events for the event class.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
MINOR

Warning attribute

Description
Total number of warning events for the event class.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
WARNING

Indeterminate attribute

Description
Total number of indeterminate events for the event class.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
INDETERMINATE or UNKNOWN

Clear attribute

Description
Total number of clear events for the event class.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
CLEAR

Custom attribute

Description
Total number of events with a custom severity for event class.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
CUSTOM

Total Events attribute

Description
Total number of events for the event class.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
TOTAL_EVENTS or TOTEVENTS

Sum Tally attribute

Description
Total number of inserts of events for the node.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
SUM_TALLY or SUMTALLY

Event Distribution By Class Crit attribute group

Event distribution by event class, including the string representation of the class value, for critical events.

Historical group

This attribute group is not part of the default historical group, and is not eligible for use with Tivoli Data Warehouse.

Attribute descriptions

The following list contains information about each attribute in the Event Distribution By Class Crit attribute group:

Node attribute - This attribute is a key attribute.

Description
The managed system name of the agent.

Type

String

Warehouse name
NODE

Timestamp attribute

Description
The local time at the agent when the data was collected.

Type

String

Warehouse name
TIMESTAMP

Class Code attribute - This attribute is a key attribute.

Description
The numeric value for the event class.

Type

DisplayNumeric

Warehouse name
CLASS_CODE or CLASSCODE

Class Name attribute - This attribute is a key attribute.

Description
The string representation of the class value. This allows text to be displayed in charts and tables.

Type

String

Warehouse name
CLASS_NAME or CLASSNAME

Sample Time attribute - This attribute is a key attribute.

Description
The time when the summary data was calculated.

Type

Timestamp

Warehouse name
SAMPLE_TIME or SAMPLTIME

ObjectServer Name attribute - This attribute is a key attribute.

Description
This is the ObjectServer name.

Type

String

Warehouse name
OBJECTSERVER_NAME or OBSERNAME

ClassCode attribute - This attribute is a key attribute.

Description
The numeric value of the event class.

Type

DisplayNumeric

Warehouse name
CLASSCODE or CLASS

Critical attribute

Description
Total number of critical events for the event class.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
CRITICAL

Total Events attribute

Description
Total number of events for the event class.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
TOTAL_EVENTS or TOTEVENTS

Event Distribution By Class Crit Base attribute group

Event distribution, critical events by class.

Historical group

This attribute group is part of the default historical group, and is not eligible for use with Tivoli Data Warehouse.

Attribute descriptions

The following list contains information about each attribute in the Event Distribution By Class Crit Base attribute group:

Node attribute - This attribute is a key attribute.

Description
The managed system name of the agent.

Type

String

Warehouse name
NODE

Timestamp attribute

Description
The local time at the agent when the data was collected.

Type

String

Warehouse name
TIMESTAMP

Sample Time attribute - This attribute is a key attribute.

Description
The time when the summary data was calculated.

Type

Timestamp

Warehouse name
SAMPLE_TIME or SAMPLTIME

ObjectServer Name attribute - This attribute is a key attribute.

Description
This is the ObjectServer name.

Type

String

Warehouse name
OBJECTSERVER_NAME or OBSERNAME

ClassCode attribute - This attribute is a key attribute.

Description
The numeric value of the event class.

Type

DisplayNumeric

Warehouse name
CLASSCODE or CLASS

Critical attribute

Description
Total number of critical events for the event class.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
CRITICAL

Total Events attribute

Description
Total number of events for the event class.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
TOTAL_EVENTS or TOTEVENTS

Event Distribution By Class Major attribute group

Event distribution by event class, including the string representation of the class value, for major events.

Historical group

This attribute group is not part of the default historical group, and is not eligible for use with Tivoli Data Warehouse.

Attribute descriptions

The following list contains information about each attribute in the Event Distribution By Class Major attribute group:

Node attribute - This attribute is a key attribute.

Description
The managed system name of the agent.

Type

String

Warehouse name
NODE

Timestamp attribute

Description
The local time at the agent when the data was collected.

Type

String

Warehouse name
TIMESTAMP

Class Code attribute - This attribute is a key attribute.

Description
The numeric value for the event class.

Type

DisplayNumeric

Warehouse name
CLASS_CODE or CLASSCODE

Class Name attribute - This attribute is a key attribute.

Description
The string representation of the class value. This allows text to be displayed in charts and tables.

Type

String

Warehouse name
CLASS_NAME or CLASSNAME

Sample Time attribute - This attribute is a key attribute.

Description
The time when the summary data was calculated.

Type

Timestamp

Warehouse name
SAMPLE_TIME or SAMPLTIME

ObjectServer Name attribute - This attribute is a key attribute.

Description
This is the ObjectServer name.

Type

String

Warehouse name
OBJECTSERVER_NAME or OBSERNAME

ClassCode attribute - This attribute is a key attribute.

Description
The numeric value of the event class.

Type

DisplayNumeric

Warehouse name
CLASSCODE or CLASS

Major attribute

Description
Total number of major events for the event class.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
MAJOR

Total Events attribute

Description
Total number of events for the event class.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
TOTAL_EVENTS or TOTEVENTS

Event Distribution By Class Major Base attribute group

Event distribution, major events by class.

Historical group

This attribute group is part of the default historical group, and is not eligible for use with Tivoli Data Warehouse.

Attribute descriptions

The following list contains information about each attribute in the Event Distribution By Class Major Base attribute group:

Node attribute - This attribute is a key attribute.

Description
The managed system name of the agent.

Type

String

Warehouse name
NODE

Timestamp attribute

Description
The local time at the agent when the data was collected.

Type

String

Warehouse name
TIMESTAMP

Sample Time attribute - This attribute is a key attribute.

Description
The time when the summary data was calculated.

Type

Timestamp

Warehouse name
SAMPLE_TIME or SAMPLTIME

ObjectServer Name attribute - This attribute is a key attribute.

Description
This is the ObjectServer name.

Type

String

Warehouse name
OBJECTSERVER_NAME or OBSERNAME

ClassCode attribute - This attribute is a key attribute.

Description
The numeric value of the event class.

Type

DisplayNumeric

Warehouse name
CLASSCODE or CLASS

Major attribute

Description
Total number of major events for the event class.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
MAJOR

Total Events attribute

Description
Total number of events for the event class.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
TOTAL_EVENTS or TOTEVENTS

Event Distribution By Class Minor attribute group

Event distribution by event class, including the string representation of the class value, for minor events.

Historical group

This attribute group is not part of the default historical group, and is not eligible for use with Tivoli Data Warehouse.

Attribute descriptions

The following list contains information about each attribute in the Event Distribution By Class Minor attribute group:

Node attribute - This attribute is a key attribute.

Description
The managed system name of the agent.

Type

String

Warehouse name
NODE

Timestamp attribute

Description
The local time at the agent when the data was collected.

Type

String

Warehouse name
TIMESTAMP

Class Code attribute - This attribute is a key attribute.

Description
The numeric value for the event class.

Type

DisplayNumeric

Warehouse name
CLASS_CODE or CLASSCODE

Class Name attribute - This attribute is a key attribute.

Description
The string representation of the class value. This allows text to be displayed in charts and tables.

Type

String

Warehouse name
CLASS_NAME or CLASSNAME

Sample Time attribute - This attribute is a key attribute.

Description
The time when the summary data was calculated.

Type

Timestamp

Warehouse name
SAMPLE_TIME or SAMPLTIME

ObjectServer Name attribute - This attribute is a key attribute.

Description
This is the ObjectServer name.

Type

String

Warehouse name
OBJECTSERVER_NAME or OBSERNAME

ClassCode attribute - This attribute is a key attribute.

Description
The numeric value of the event class.

Type

DisplayNumeric

Warehouse name
CLASSCODE or CLASS

Minor attribute

Description
Total number of minor events for the event class.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
MINOR

Total Events attribute

Description
Total number of events for the event class.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
TOTAL_EVENTS or TOTEVENTS

Event Distribution By Class Minor Base attribute group

Event distribution, minor events by class.

Historical group

This attribute group is part of the default historical group, and is not eligible for use with Tivoli Data Warehouse.

Attribute descriptions

The following list contains information about each attribute in the Event Distribution By Class Minor Base attribute group:

Node attribute - This attribute is a key attribute.

Description
The managed system name of the agent.

Type

String

Warehouse name
NODE

Timestamp attribute

Description
The local time at the agent when the data was collected.

Type

String

Warehouse name
TIMESTAMP

Sample Time attribute - This attribute is a key attribute.

Description
The time when the summary data was calculated.

Type

Timestamp

Warehouse name
SAMPLE_TIME or SAMPLTIME

ObjectServer Name attribute - This attribute is a key attribute.

Description
This is the ObjectServer name.

Type

String

Warehouse name
OBJECTSERVER_NAME or OBSERNAME

ClassCode attribute - This attribute is a key attribute.

Description
The numeric value of the event class.

Type

DisplayNumeric

Warehouse name
CLASSCODE or CLASS

Minor attribute

Description
Total number of minor events for the event class.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
MINOR

Total Events attribute

Description
Total number of events for the event class.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
TOTAL_EVENTS or TOTEVENTS

Event Distribution By Node attribute group

Event Distribution by node.

Historical group

This attribute group is part of the default historical group, and is eligible for use with Tivoli Data Warehouse.

Attribute descriptions

The following list contains information about each attribute in the Event Distribution By Node attribute group:

Node attribute - This attribute is a key attribute.

Description
The managed system name of the agent.

Type

String

Warehouse name
NODE

Timestamp attribute

Description
The local time at the agent when the data was collected.

Type

String

Warehouse name
TIMESTAMP

Sample Time attribute - This attribute is a key attribute.

Description
The time when the summary data was calculated.

Type

Timestamp

Warehouse name
SAMPLE_TIME or SAMPLTIME

ObjectServer Name attribute - This attribute is a key attribute.

Description
This is the ObjectServer name.

Type

String

Warehouse name
OBJECTSERVER_NAME or OBSERNAME

NcoNode attribute - This attribute is a key attribute.

Description
The host or node name.

Type

String

Warehouse name
NCONODE

Critical attribute

Description
Total number of critical events for the event class.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
CRITICAL

Major attribute

Description
Total number of major events for the event class.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
MAJOR

Minor attribute

Description
Total number of minor events for the event class.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
MINOR

Warning attribute

Description
Total number of warning events for the event class.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
WARNING

Indeterminate attribute

Description
Total number of indeterminate events for the event class.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
INDETERMINATE or UNKNOWN

Clear attribute

Description
Total number of clear events for the event class.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
CLEAR

Custom attribute

Description
Total number of events with a custom severity for event class.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
CUSTOM

Total Events attribute

Description
Total number of events for the node.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
TOTAL_EVENTS or TOTEVENTS

Sum Tally attribute

Description
Total number of inserts of events for the node.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
SUM_TALLY or SUMTALLY

Event Distribution By Node Crit attribute group

Event Distribution by node, for critical events.

Historical group

This attribute group is not part of the default historical group, and is not eligible for use with Tivoli Data Warehouse.

Attribute descriptions

The following list contains information about each attribute in the Event Distribution By Node Crit attribute group:

Node attribute - This attribute is a key attribute.

Description
The managed system name of the agent.

Type

String

Warehouse name
NODE

Timestamp attribute

Description
The local time at the agent when the data was collected.

Type

String

Warehouse name
TIMESTAMP

Sample Time attribute - This attribute is a key attribute.

Description
The time when the summary data was calculated.

Type

Timestamp

Warehouse name
SAMPLE_TIME or SAMPLTIME

ObjectServer Name attribute - This attribute is a key attribute.

Description
This is the ObjectServer name.

Type

String

Warehouse name
OBJECTSERVER_NAME or OBSERNAME

NcoNode attribute - This attribute is a key attribute.

Description
The host or node name.

Type

String

Warehouse name
NCONODE

Critical attribute

Description
Total number of critical events for the event node.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
CRITICAL

Total Events attribute

Description
Total number of events for the node.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
TOTAL_EVENTS or TOTEVENTS

Event Distribution By Node Major attribute group

Event Distribution by node, for major events.

Historical group

This attribute group is not part of the default historical group, and is not eligible for use with Tivoli Data Warehouse.

Attribute descriptions

The following list contains information about each attribute in the Event Distribution By Node Major attribute group:

Node attribute - This attribute is a key attribute.

Description
The managed system name of the agent.

Type

String

Warehouse name
NODE

Timestamp attribute

Description
The local time at the agent when the data was collected.

Type

String

Warehouse name
TIMESTAMP

Sample Time attribute - This attribute is a key attribute.

Description
The time when the summary data was calculated.

Type

Timestamp

Warehouse name
SAMPLE_TIME or SAMPLTIME

ObjectServer Name attribute - This attribute is a key attribute.

Description
This is the ObjectServer name.

Type

String

Warehouse name
OBJECTSERVER_NAME or OBSERNAME

NcoNode attribute - This attribute is a key attribute.

Description
The host or node name.

Type

String

Warehouse name
NCONODE

Major attribute

Description
Total number of major events for the event node.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
MAJOR

Total Events attribute

Description
Total number of events for the node.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
TOTAL_EVENTS or TOTEVENTS

Event Distribution By Node Minor attribute group

Event Distribution by node, for minor events.

Historical group

This attribute group is not part of the default historical group, and is not eligible for use with Tivoli Data Warehouse.

Attribute descriptions

The following list contains information about each attribute in the Event Distribution By Node Minor attribute group:

Node attribute - This attribute is a key attribute.

Description
The managed system name of the agent.

Type

String

Warehouse name
NODE

Timestamp attribute

Description
The local time at the agent when the data was collected.

Type

String

Warehouse name
TIMESTAMP

Sample Time attribute - This attribute is a key attribute.

Description
The time when the summary data was calculated.

Type

Timestamp

Warehouse name
SAMPLE_TIME or SAMPLTIME

ObjectServer Name attribute - This attribute is a key attribute.

Description
This is the ObjectServer name.

Type

String

Warehouse name
OBJECTSERVER_NAME or OBSERNAME

NcoNode attribute - This attribute is a key attribute.

Description
The host or node name.

Type

String

Warehouse name
NCONODE

Minor attribute

Description
Total number of minor events for the event node.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
MINOR

Total Events attribute

Description
Total number of events for the node.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
TOTAL_EVENTS or TOTEVENTS

Event Distribution By Severity attribute group

Event distribution by Class, Severity and NcoNode, including the string representation of the severity value.

Historical group

This attribute group is part of the default historical group, and is eligible for use with Tivoli Data Warehouse.

Attribute descriptions

The following list contains information about each attribute in the Event Distribution By Severity attribute group:

Node attribute - This attribute is a key attribute.

Description
The managed system name of the agent.

Type

String

Warehouse name
NODE

Timestamp attribute

Description
The local time at the agent when the data was collected.

Type

String

Warehouse name
TIMESTAMP

Sample Time attribute - This attribute is a key attribute.

Description
The time when the summary data was calculated

Type

Timestamp

Warehouse name
SAMPLE_TIME or SAMPLETIME

ObjectServer Name attribute - This attribute is a key attribute.

Description
This is the Tivoli Netcool/OMNIbus ObjectServer name.

Type

String

Warehouse name
OBJECTSERVER_NAME or OBSERNAME

Critical attribute

Description
Total number of critical events for the event class.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
CRITICAL

Major attribute

Description
Total number of major events for the event class.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
MAJOR

Minor attribute

Description
Total number of minor events for the event class.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
MINOR

Warning attribute

Description
Total number of warning events for the event class.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
WARNING

Indeterminate attribute

Description
Total number of indeterminate events for the event class.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
INDETERMINATE or UNKNOWN

Clear attribute

Description
Total number of clear events for the event class.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
CLEAR

Custom attribute

Description
Total number of events with a custom severity for event class.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
CUSTOM

Total Events attribute

Description
Total number of events for the class, severity, and node

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
TOTAL_EVENTS or TOTEVENTS

Sum Tally attribute

Description
Total number of inserts of events for the node.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
SUM_TALLY or SUMTALLY

Event Rate attribute group

Event Rate.

Historical group

This attribute group is part of the default historical group, and is eligible for use with Tivoli Data Warehouse.

Attribute descriptions

The following list contains information about each attribute in the Event Rate attribute group:

Node attribute - This attribute is a key attribute.

Description
The managed system name of the agent.

Type

String

Warehouse name
NODE

Timestamp attribute

Description
The local time at the agent when the data was collected.

Type

String

Warehouse name
TIMESTAMP

Sample Time attribute - This attribute is a key attribute.

Description
The time when the summary data was calculated

Type

Timestamp

Warehouse name
SAMPLE_TIME or SAMPLETIME

ObjectServer Name attribute - This attribute is a key attribute.

Description
This is the ObjectServer name.

Type

String

Warehouse name
OBJECTSERVER_NAME or OBSERNAME

Client ID attribute - This attribute is a key attribute.

Description
The name or ID of the client.

Type

String

Warehouse name
CLIENT_ID or CLIENTID

New Alert Count attribute

Description
The number of inserts made by the client to the alerts.status table.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
NEW_ALERT_COUNT or NALERTCNT

Dedup Alert Count attribute

Description
The number of reinserts made by the client to the alerts.status table.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
DEDUP_ALERT_COUNT or DALERTCNT

Updated Alert Count attribute

Description
The number of updates made by the client to the alerts.status table.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
UPDATED_ALERT_COUNT or UALERTCNT

Details Count attribute

Description
The number of inserts made by the client to the alerts.details table.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
DETAILS_COUNT or DETAILSCNT

Journals Count attribute

Description
The number of inserts made by the client to the alerts.journal table.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
JOURNALS_COUNT or JOURNALCNT

Event Rate By Node attribute group

Event Rate by node.

Historical group

This attribute group is part of the default historical group, and is eligible for use with Tivoli Data Warehouse.

Attribute descriptions

The following list contains information about each attribute in the Event Rate By Node attribute group:

Node attribute - This attribute is a key attribute.

Description
The managed system name of the agent.

Type

String

Warehouse name
NODE

Timestamp attribute

Description
The local time at the agent when the data was collected.

Type

String

Warehouse name
TIMESTAMP

Sample Time attribute - This attribute is a key attribute.

Description
The time when the summary data was calculated.

Type

Timestamp

Warehouse name
SAMPLE_TIME or SAMPLTIME

ObjectServer Name attribute - This attribute is a key attribute.

Description
This is the ObjectServer name.

Type

String

Warehouse name
OBJECTSERVER_NAME or OBSERNAME

NcoNode attribute - This attribute is a key attribute.

Description
The host or node name.

Type

String

Warehouse name
NCONODE

EventCount attribute

Description
Total number of events received for this Node in the last period.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
EVENTCOUNT or EVTCNT

Performance Object Status attribute group

The Performance Object Status attribute group contains information that reflects the status of other attribute groups so you can see the status of all of the performance objects that make up this application all at once. Each of these other performance attribute groups is represented by a row in this table (or other type of view). The status for an attribute group reflects the result of the last attempt to collect data for that attribute group, which allows you to see whether the agent is performing correctly. Unlike other attribute groups, the Performance Object Status attribute group does not reflect the state of the monitored application. This attribute group is most often used to determine why data is not available for one of the performance attribute groups.

Historical group

This attribute group is part of the default historical group, and is eligible for use with Tivoli Data Warehouse.

Attribute descriptions

The following list contains information about each attribute in the Performance Object Status attribute group:

Node attribute - This attribute is a key attribute.

Description
The managed system name of the agent.

Type

String

Warehouse name
NODE

Timestamp attribute

Description
The local time at the agent when the data was collected.

Type

String

Warehouse name
TIMESTAMP

Query Name attribute - This attribute is a key attribute.

Description
The name of the attribute group.

Type

String

Warehouse name
QUERY_NAME or ATTRGRP

Object Name attribute

Description
The name of the performance object.

Type

String

Warehouse name
OBJECT_NAME or OBJNAME

Object Type attribute

Description
The type of the performance object.

Type

Integer with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- WMI (0)
- PERFMON (1)
- WMI_ASSOCIATION_GROUP (2)
- JMX (3)
- SNMP (4)
- SHELL_COMMAND (5)
- JOINED_GROUPS (6)
- CIMOM (7)
- CUSTOM (8)
- ROLLUP_DATA (9)
- WMI_REMOTE_DATA (10)
- LOG_FILE (11)
- JDBC (12)
- CONFIG_DISCOVERY (13)
- NT_EVENT_LOG (14)
- FILTER (15)
- SNMP_EVENT (16)
- PING (17)
- DIRECTOR_DATA (18)
- DIRECTOR_EVENT (19)
- SSH_REMOTE_SHELL_COMMAND (20)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
OBJECT_TYPE or OBJTYPE

Object Status attribute

Description
The status of the performance object.

Type

Integer with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- ACTIVE (0)
- INACTIVE (1)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
OBJECT_STATUS or OBJSTTS

Error Code attribute

Description
The error code associated with the query

Type

Integer with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- NO_ERROR (0)
- GENERAL_ERROR (1)
- OBJECT_NOT_FOUND (2)
- COUNTER_NOT_FOUND (3)
- NAMESPACE_ERROR (4)
- OBJECT_CURRENTLY_UNAVAILABLE (5)
- COM_LIBRARY_INIT_FAILURE (6)
- SECURITY_INIT_FAILURE (7)
- PROXY_SECURITY_FAILURE (9)
- NO_INSTANCES_RETURNED (10)
- ASSOCIATOR_QUERY_FAILED (11)
- REFERENCE_QUERY_FAILED (12)
- NO_RESPONSE_RECEIVED (13)
- CANNOT_FIND_JOINED_QUERY (14)
- CANNOT_FIND_JOIN_ATTRIBUTE_IN_QUERY_1_RESULTS (15)
- CANNOT_FIND_JOIN_ATTRIBUTE_IN_QUERY_2_RESULTS (16)
- QUERY_1_NOT_A_SINGLETON (17)
- QUERY_2_NOT_A_SINGLETON (18)
- NO_INSTANCES_RETURNED_IN_QUERY_1 (19)

- NO_INSTANCES_RETURNED_IN_QUERY_2 (20)
- CANNOT_FIND_ROLLUP_QUERY (21)
- CANNOT_FIND_ROLLUP_ATTRIBUTE (22)
- FILE_OFFLINE (23)
- NO_HOSTNAME (24)
- MISSING_LIBRARY (25)
- ATTRIBUTE_COUNT_MISMATCH (26)
- ATTRIBUTE_NAME_MISMATCH (27)
- COMMON_DATA_PROVIDER_NOT_STARTED (28)
- CALLBACK_REGISTRATION_ERROR (29)
- MDL_LOAD_ERROR (30)
- AUTHENTICATION_FAILED (31)
- CANNOT_RESOLVE_HOST_NAME (32)
- SUBNODE_UNAVAILABLE (33)
- SUBNODE_NOT_FOUND_IN_CONFIG (34)
- ATTRIBUTE_ERROR (35)
- CLASSPATH_ERROR (36)
- CONNECTION_FAILURE (37)
- FILTER_SYNTAX_ERROR (38)
- FILE_NAME_MISSING (39)
- SQL_QUERY_ERROR (40)
- SQL_FILTER_QUERY_ERROR (41)
- SQL_DB_QUERY_ERROR (42)
- SQL_DB_FILTER_QUERY_ERROR (43)
- PORT_OPEN_FAILED (44)
- ACCESS_DENIED (45)
- TIMEOUT (46)
- NOT_IMPLEMENTED (47)
- REQUESTED_A_BAD_VALUE (48)
- RESPONSE_TOO_BIG (49)
- GENERAL_RESPONSE_ERROR (50)
- SCRIPT_NONZERO_RETURN (51)
- SCRIPT_NOT_FOUND (52)
- SCRIPT_LAUNCH_ERROR (53)
- CONF_FILE_DOES_NOT_EXIST (54)
- CONF_FILE_ACCESS_DENIED (55)
- INVALID_CONF_FILE (56)
- EIF_INITIALIZATION_FAILED (57)
- CANNOT_OPEN_FORMAT_FILE (58)
- FORMAT_FILE_SYNTAX_ERROR (59)
- REMOTE_HOST_UNAVAILABLE (60)
- EVENT_LOG_DOES_NOT_EXIST (61)
- PING_FILE_DOES_NOT_EXIST (62)
- NO_PING_DEVICE_FILES (63)
- PING_DEVICE_LIST_FILE_MISSING (64)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
ERROR_CODE or ERRCODE

Last Collection Start attribute

Description
The most recent time a data collection of this group started

Type

Timestamp with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- NOT COLLECTED (0691231190000000)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
LAST_COLLECTION_START or COLSTRT

Last Collection Finished attribute

Description
The most recent time a data collection of this group finished

Type

Timestamp with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- NOT COLLECTED (0691231190000000)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
LAST_COLLECTION_FINISHED or COLFINI

Last Collection Duration attribute

Description
The duration of the most recently completed data collection of this group in seconds

Type

Real number (32-bit counter) with 2 decimal places of precision

Warehouse name
LAST_COLLECTION_DURATION or COLDURA

Average Collection Duration attribute

Description
The average duration of all data collections of this group in seconds

Type

Real number (32-bit counter) with 2 decimal places of precision with enumerated values. The strings are displayed in the Tivoli

Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- NO DATA (-100)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
AVERAGE_COLLECTION_DURATION or COLAVGD

Refresh Interval attribute

Description
The interval at which this group is refreshed in seconds

Type

Integer (32-bit counter)

Warehouse name
REFRESH_INTERVAL or REFRINT

Number of Collections attribute

Description
The number of times this group has been collected since agent start

Type

Integer (32-bit counter)

Warehouse name
NUMBER_OF_COLLECTIONS or NUMCOLL

Cache Hits attribute

Description
The number of times an external data request for this group was satisfied from the cache

Type

Integer (32-bit counter)

Warehouse name
CACHE_HITS or CACHEHT

Cache Misses attribute

Description
The number of times an external data request for this group was not available in the cache

Type

Integer (32-bit counter)

Warehouse name
CACHE_MISSES or CACHEMS

Cache Hit Percent attribute

Description
The percentage of external data requests for this group that were satisfied from the cache

Type

Real number (32-bit counter) with 2 decimal places of precision

Warehouse name
CACHE_HIT_PERCENT or CACHPCT

Intervals Skipped attribute

Description
The number of times a background data collection for this group was skipped because the previous collection was still running when the next one was due to start

Type

Integer (32-bit counter)

Warehouse name
INTERVALS_SKIPPED or INTSKIP

Store Size attribute group

Store Size.

Historical group

This attribute group is part of the default historical group, and is eligible for use with Tivoli Data Warehouse.

Attribute descriptions

The following list contains information about each attribute in the Store Size attribute group:

Node attribute - This attribute is a key attribute.

Description
The managed system name of the agent.

Type

String

Warehouse name
NODE

Timestamp attribute

Description
The local time at the agent when the data was collected.

Type

String

Warehouse name
TIMESTAMP

Sample Time attribute - This attribute is a key attribute.

Description
The time in UTC when the sample was obtained. This allows the data to be sorted by time.

Type

Timestamp

Warehouse name
SAMPLE_TIME or SAMPLETIME

ObjectServer Name attribute - This attribute is a key attribute.

Description
This is the ObjectServer name.

Type

String

Warehouse name
OBJECTSERVER_NAME or OBSERNAME

Store Name attribute - This attribute is a key attribute.

Description
The name of the memory store.

Type

String

Warehouse name
STORE_NAME or STORENAME

Used Bytes attribute

Description
The used bytes of the memory store.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
USED_BYTES or USEDBYTES

Soft Limit attribute

Description
The soft limit of the memory store.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
SOFT_LIMIT or SOFTLIMIT

Hard Limit attribute

Description
The hard limit of the memory store.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
HARD_LIMIT or HARDLIMIT

PercentUsedSoft attribute

Description
The percent used of the memory store soft limit.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
PERCENTUSEDSOFT or PUSOFT

PercentUsedHard attribute

Description
The percent used of the memory store hard limit.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
PERCENTUSEDHARD or PUHARD

Table Size attribute group

Table Size.

Historical group

This attribute group is part of the default historical group, and is eligible for use with Tivoli Data Warehouse.

Attribute descriptions

The following list contains information about each attribute in the Table Size attribute group:

Node attribute - This attribute is a key attribute.

Description
The managed system name of the agent.

Type

String

Warehouse name
NODE

Timestamp attribute

Description
The local time at the agent when the data was collected.

Type

String

Warehouse name
TIMESTAMP

Sample Time attribute - This attribute is a key attribute.

Description
The time in UTC when the sample was obtained. This allows the data to be sorted by time.

Type

Timestamp

Warehouse name
SAMPLE_TIME or SAMPLETIME

ObjectServer Name attribute - This attribute is a key attribute.

Description
This is the ObjectServer name.

Type

String

Warehouse name
OBJECTSERVER_NAME or OBSERNAME

Database Name attribute - This attribute is a key attribute.

Description
The name of the database.

Type

String

Warehouse name
DATABASE_NAME or DBNAME

Table Name attribute - This attribute is a key attribute.

Description
The name of the table.

Type

String

Warehouse name
TABLE_NAME or TABLENAME

Used Bytes attribute

Description
The soft limit of the memory store.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- Value_Exceeds_Maximum (2147483647)
- Value_Exceeds_Minimum (-2147483648)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
USED_BYTES or USEDBYTES

Display Name attribute

Description
Database name and table name combination.

Type

String

Warehouse name
DISPLAY_NAME or DISPNAME

Thread Pool Status attribute group

The Thread Pool Status attribute group contains information that reflects the status of the internal thread pool used to collect data asynchronously.

Historical group

This attribute group is part of the default historical group, and is eligible for use with Tivoli Data Warehouse.

Attribute descriptions

The following list contains information about each attribute in the Thread Pool Status attribute group:

Node attribute - This attribute is a key attribute.

Description
The managed system name of the agent.

Type

String

Warehouse name
NODE

Timestamp attribute

Description
The local time at the agent when the data was collected.

Type

String

Warehouse name
TIMESTAMP

Thread Pool Size attribute

Description
The number of threads currently existing in the thread pool.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- NO DATA (-1)
- NO DATA (-100)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
THREAD_POOL_SIZE or THPSIZE

Thread Pool Max Size attribute

Description
The maximum number of threads allowed to exist in the thread pool.

Type

Integer (32-bit numeric property) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- NO DATA (-1)
- NO DATA (-100)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
THREAD_POOL_MAX_SIZE or TPMAXSZ

Thread Pool Active Threads attribute

Description
The number of threads in the thread pool currently active doing work.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- NO DATA (-1)
- NO DATA (-100)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
THREAD_POOL_ACTIVE_THREADS or TPACTTH

Thread Pool Avg Active Threads attribute

Description
The average number of threads in the thread pool simultaneously active doing work.

Type

Real number (32-bit gauge) with 2 decimal places of precision with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- NO DATA (-1)
- NO DATA (-100)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
THREAD_POOL_AVG_ACTIVE_THREADS or TPAVGAT

Thread Pool Min Active Threads attribute

Description
The smallest number of threads in the thread pool that have simultaneously been active doing work.

Type

Integer (32-bit counter) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- NO DATA (-1)
- NO DATA (-100)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
THREAD_POOL_MIN_ACTIVE_THREADS or TPMINAT

Thread Pool Max Active Threads attribute

Description
The peak number of threads in the thread pool that have simultaneously been active doing work.

Type

Integer (32-bit counter) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- NO DATA (-1)
- NO DATA (-100)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
THREAD_POOL_MAX_ACTIVE_THREADS or TPMAXAT

Thread Pool Queue Length attribute

Description
The number of jobs currently waiting in the thread pool queue.

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- NO DATA (-1)
- NO DATA (-100)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
THREAD_POOL_QUEUE_LENGTH or TPQLGTH

Thread Pool Avg Queue Length attribute

Description
The average length of the thread pool queue during this run.

Type

Real number (32-bit gauge) with 2 decimal places of precision with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- NO DATA (-1)
- NO DATA (-100)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
THREAD_POOL_AVG_QUEUE_LENGTH or TPAVGQL

Thread Pool Min Queue Length attribute

Description
The minimum length the thread pool queue has reached.

Type

Integer (32-bit counter) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- NO DATA (-1)
- NO DATA (-100)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

THREAD_POOL_MIN_QUEUE_LENGTH or TPMINQL

Thread Pool Max Queue Length attribute

Description

The peak length the thread pool queue has reached.

Type

Integer (32-bit counter) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- NO DATA (-1)
- NO DATA (-100)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

THREAD_POOL_MAX_QUEUE_LENGTH or TPMAXQL

Thread Pool Avg Job Wait attribute

Description

The average time a job spends waiting on the thread pool queue in seconds.

Type

Real number (32-bit gauge) with 2 decimal places of precision with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- NO DATA (-1)
- NO DATA (-100)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

THREAD_POOL_AVG_JOB_WAIT or TPAVJBW

Thread Pool Total Jobs attribute

Description

The number of jobs completed by all threads in the pool since agent start.

Type

Integer (32-bit counter) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values shown in parentheses. The following values are defined:

- NO DATA (-1)
- NO DATA (-100)

Any other values will display the actual value returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
THREAD_POOL_TOTAL_JOBS or TPTJOBS

Disk capacity planning for historical data

Disk capacity planning for a monitoring agent is a prediction of the amount of disk space to be consumed for each attribute group with historical data that is being collected. Required disk storage is an important factor when you are defining data collection rules and your strategy for historical data collection.

The table in this chapter provides the following information required to calculate disk space for this monitoring agent:

- *Table* is the table name as it is displayed in the warehouse database, if the attribute group is configured to be written to the warehouse. The table name listed here corresponds to the table name in "Attribute groups and attributes for the IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent" on page 15
- *Attribute group* is the name of the attribute group used to create the table in the warehouse database if it is short enough to fit in the table naming constraints of the database being used for the warehouse. The attribute group name listed here corresponds to the Warehouse table name in "Attribute groups and attributes for the IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent" on page 15.
- *Bytes per instance (agent)* is an estimate of the record length for each row or instance written to the agent disk for historical data collection. This estimate can be used for agent disk space planning purposes.
- *Database bytes per instance (warehouse)* is an estimate of the record length for detailed records written to the warehouse database, if the attribute group is configured to be written to the warehouse. Detailed records are records that have been uploaded from the agent for long-term historical data collection. This estimate can be used for warehouse disk space planning purposes.
- *Aggregate bytes per instance (warehouse)* is an estimate of the record length for aggregate records written to the warehouse database, if the attribute group is configured to be written to the warehouse. Aggregate records are created by the Summarization agent for attribute groups that have been configured for summarization. This estimate can be used for warehouse disk space planning purposes.

In addition to the information in the tables, you must know the number of instances of data that you plan to collect. An attribute group can have single or multiple instances of data depending on the application environment that is being monitored. For example, if your attribute group is monitoring each processor in your computer and you have a dual processor computer, the number of instances is two.

The following table contains capacity planning information for the data logged by IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus.

Table 1. Capacity planning for historical data logged by the IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent

Table	Attribute group	Bytes per instance (agent)	Database bytes per instance (warehouse)	Aggregate bytes per instance (warehouse)
KNONCOECNM	KNO_ACCELERATED_EVENT_NOTIFICATION	212	215	408
KNONCOECNC	KNO_AUTOMATION_PERIOD	180	181	296
KNOAVAIL	KNO_AVAILABILITY	3272	3296	3606
KNONCOECNI	KNO_CLIENT_PROFILE	380	391	779
KNODUMMY	KNO_DUMMY	76	72	109
KNONCOECBA	KNO_EVENT_CLASS	337	335	372
KNONCOECNA	KNO_EVENT_COUNT_AND_THROUGHPUT	160	165	475
KNONCOEDCF	KNO_EVENT_DISTRIBUTION_BY_CLASS	435	445	833
KNONCOEDCB	KNO_EVENT_DISTRIBUTION_BY_CLASS_BASE	174	182	570
KNONCOEDC1	KNO_EVENT_DISTRIBUTION_BY_CLASS_CRIT	407	410	525
KNONCOEDCC	KNO_EVENT_DISTRIBUTION_BY_CLASS_CRIT_\ BASE	146	147	262
KNONCOEDC2	KNO_EVENT_DISTRIBUTION_BY_CLASS_MAJOR	407	410	525
KNONCOEDCM	KNO_EVENT_DISTRIBUTION_BY_CLASS_MAJOR_\ BASE	146	147	262
KNONCOEDC4	KNO_EVENT_DISTRIBUTION_BY_CLASS_MINOR	407	410	525
KNONCOEDC3	KNO_EVENT_DISTRIBUTION_BY_CLASS_MINOR_\ BASE	146	147	262
KNONCOEDNB	KNO_EVENT_DISTRIBUTION_BY_NODE	232	240	628
KNONCOEDN1	KNO_EVENT_DISTRIBUTION_BY_NODE_CRIT	204	205	320
KNONCOEDN2	KNO_EVENT_DISTRIBUTION_BY_NODE_MAJOR	204	205	320
KNONCOEDN3	KNO_EVENT_DISTRIBUTION_BY_NODE_MINOR	204	205	320
KNONCOEDFL	KNO_EVENT_DISTRIBUTION_BY_SEVERITY	168	175	563
KNONCOECNK	KNO_EVENT_RATE	407	411	643
KNONCOERND	KNO_EVENT_RATE_BY_NODE	200	200	276
KNOPOBJST	KNO_PERFORMANCE_OBJECT_STATUS	352	399	664
KNONCOECNE	KNO_STORE_SIZE	192	196	428
KNONCOECNG	KNO_TABLE_SIZE	296	298	374
KNOTHPLST	KNO_THREAD_POOL_STATUS	124	168	550

For more information about historical data collection, see the *IBM Tivoli Monitoring Administrator's Guide*.

Chapter 5. Situations reference

This chapter contains an overview of situations, references for detailed information about situations, and descriptions of the predefined situations included in this monitoring agent.

About situations

A *situation* is a logical expression involving one or more system conditions. Situations are used to monitor the condition of systems in your network. You can manage situations from Tivoli Enterprise Portal by using the Situation Editor.

The monitoring agents that you use to monitor your system environment include a set of predefined situations that you can use as-is. You can also create new situations to meet your requirements. Predefined situations contain attributes that check for system conditions common to many enterprises.

Using predefined situations can improve the speed with which you can begin using the IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent. You can change the conditions or values being monitored by a predefined situation to the conditions or values best suited to your enterprise.

You can display predefined situations and create your own situations using the Situation Editor. The left frame of the Situation editor initially lists the situations associated with the Navigator item that you selected. When you click a situation name or create a situation, the right frame opens with the following tabs:

Formula
Formula describing condition being tested.

Distribution
List of managed systems (operating systems, subsystems, or applications) to which the situation can be distributed. All the IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent managed systems are assigned by default.

Expert advice
Comments and instructions to be read in the event workspace.

Action
Command to be sent to the system.

Until Options to close the event after a period of time, or when another situation becomes true.

More information about situations

The *Tivoli Enterprise Portal User's Guide* contains more information about predefined and custom situations and how to use them to respond to alerts.

For a list of the predefined situations for this monitoring agent and a description of each situation, see the Predefined situations section in this chapter and the information in that section for each individual situation.

Predefined situations

This monitoring agent contains the following predefined situations, which are organized by Navigator item.

- Tivoli Netcool/OMNIbus
  - Not applicable
- Availability
  - KNO_ObjServer_Proc_Down
  - KNO_NCO_ProAgent_Down
  - KNO_ProcAgent_Proc_Down_Unix
  - KNO_ObjServ_Proc_CPU_High
  - KNO_ProcAgent_Proc_CPU_High
  - KNO_ProcAgent_CPU_High_Unix
  - KNO_ObjServ_Proc_CPU_Crit
  - KNO_ProcAgent_Proc_CPU_Crit
  - KNO_ProcAgent_CPU_Crit_Unix
- Event distribution and history by severity
  - Not applicable
- Event distribution by class
  - Not applicable
- Event distribution by node
  - Not applicable
- Event Metrics
  - KNO_Tput_Evt_Status
  - KNO_Tput_Evt_Details
  - KNO_Event_Inserts_Status
  - KNO_Event_Dups_Status
  - KNO_Event_Updates_Status
  - KNO_Event_Inserts_Details
  - KNO_Event_Inserts_Journals
- ObjectServer Metrics
  - KNO_Auto_Trigger
  - KNO_Auto_Total_Trigger
  - KNO_Store_Soft_Limit
  - KNO_Store_Hard_Limit
  - KNO_Table_50
  - KNO_Table_100
  - KNO_Client_Num_Clients
  - KNO_Client_Total_Time
  - KNO_Client_Individual_Time

The remaining sections of this chapter contain descriptions of each of these situations. The situations are organized by Navigator item. The following information is provided about each situation:

Description
Information about the conditions that the situation tests.

Formula
Syntax that contains one or more logical expressions describing the conditions for the situation to monitor.

Distribution
Whether the situation is automatically distributed to instances of the agent or is available for manual distribution.

Run at startup
Whether the situation starts monitoring when the agent starts.

Sampling interval
Number of seconds that elapses between one sample of data that the monitoring agent collects for the server and the next sample.

Situation persistence
Whether the conditions specified in the situation evaluate to "true" for the defined number of occurrences in a row before the situation is raised. The default of one means no persistence-checking takes place.

Severity
Severity of the predefined events: Warning, Informational, or Critical.

Clearing conditions
Controls when a true situation closes: after a period of time, when another situation is true, or whichever occurs first if both are selected.

Tivoli Netcool/OMNIbus Navigator item

No predefined situations are included for this Navigator item.

Availability Navigator item

KNO_ObjServer_Proc_Down situation

Description
Indicates that the ObjectServer process is down.

The situation is evaluated for each distinct value of the COMPONENT attribute.

Formula
```
*IF *SCAN KNO_AVAILABILITY.Name *EQ 'nco_objserv' *AND *VALUE
KNO_AVAILABILITY.Status *EQ DOWN
```

See “Attribute groups and attributes for the IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent” on page 15 for descriptions of the attributes in this formula.

Distribution
This situation is available for distribution.

Run at startup
No

Sampling interval
1 minute

Situation persistence
The number of times the conditions of the situation must occur for the situation to be true is 1.

Severity
Critical

Clearing conditions
The situation clears when the condition becomes false.

KNO_NCO_ProAgent_Down situation

Description
Indicates the Tivoli Netcool/OMNIbus process agent is down.

The situation is evaluated for each distinct value of the COMPONENT attribute.

Formula
```
*IF *SCAN KNO_AVAILABILITY.Name *EQ 'nco_pad' *AND *VALUE
KNO_AVAILABILITY.Status *EQ DOWN
```

See "Attribute groups and attributes for the IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent" on page 15 for descriptions of the attributes in this formula.

Distribution
This situation is available for distribution.

Run at startup
No

Sampling interval
1 minute

Situation persistence
The number of times the conditions of the situation must occur for the situation to be true is 1.

Severity
Critical

Clearing conditions
The situation clears when the condition becomes false.

KNO_ProcAgent_Proc_Down_Unix situation

Description
Indicates the Tivoli Netcool/OMNIbus process agent is down.

The situation is evaluated for each distinct value of the COMPONENT attribute.

Formula
```
*IF *SCAN KNO_AVAILABILITY.Name *EQ 'nco_pad' *AND *VALUE
KNO_AVAILABILITY.Status *EQ DOWN
```

See "Attribute groups and attributes for the IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent" on page 15 for descriptions of the attributes in this formula.

Distribution
This situation is available for distribution.

Run at startup
No

Sampling interval
1 minute

Situation persistence
The number of times the conditions of the situation must occur for the situation to be true is 1.

Severity
Critical

Clearing conditions
The situation clears when the condition becomes false.

KNO_ObjServ_Proc_CPU_High situation

Description
Indicates the CPU usage of the ObjectServer process is high.

The situation is evaluated for each distinct value of the COMPONENT attribute.

Formula
```
*IF ( ( *SCAN KNO_AVAILABILITY.Name *EQ 'nco_objserv' ) *AND ( *VALUE
KNO_AVAILABILITY.Status *EQ UP ) *AND ( *VALUE
KNO_AVAILABILITY.Percent_Processor_Time *LT 80 ) *AND             ( *VALUE
KNO_AVAILABILITY.Percent_Processor_Time *GE 20 ) )
```

See "Attribute groups and attributes for the IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent" on page 15 for descriptions of the attributes in this formula.

Distribution
This situation is automatically distributed to instances of this agent.

Run at startup
Yes

Sampling interval
1 minute

Situation persistence
The number of times the conditions of the situation must occur for the situation to be true is 1.

Severity
Warning

Clearing conditions
The situation clears when the condition becomes false.

KNO_ProcAgent_Proc_CPU_High situation

Description
Indicates CPU usage of the process agent is high.

The situation is evaluated for each distinct value of the COMPONENT attribute.

Formula
```
*IF ( ( *SCAN KNO_AVAILABILITY.Name *EQ 'nco_pad' ) *AND ( *VALUE
KNO_AVAILABILITY.Status *EQ UP ) *AND ( *VALUE
KNO_AVAILABILITY.Percent_Processor_Time *LT 80 ) *AND ( *VALUE
KNO_AVAILABILITY.Percent_Processor_Time *GE 20 ) )
```

See "Attribute groups and attributes for the IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent" on page 15 for descriptions of the attributes in this formula.

Distribution
This situation is automatically distributed to instances of this agent.

Run at startup
Yes

Sampling interval
1 minute

Situation persistence
The number of times the conditions of the situation must occur for the situation to be true is 1.

Severity
Warning

Clearing conditions
The situation clears when the condition becomes false.

KNO_ProcAgent_CPU_High_Unix situation

Description
Indicates CPU usage of the process agent is high.

The situation is evaluated for each distinct value of the COMPONENT attribute.

Formula
```
*IF ( ( *SCAN KNO_AVAILABILITY.Name *EQ 'nco_pad' ) *AND ( *VALUE
KNO_AVAILABILITY.Status *EQ UP ) *AND ( *VALUE
KNO_AVAILABILITY.Percent_Processor_Time *LT 80 ) *AND ( *VALUE
KNO_AVAILABILITY.Percent_Processor_Time *GE 20 ) )
```

See "Attribute groups and attributes for the IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent" on page 15 for descriptions of the attributes in this formula.

Distribution
This situation is automatically distributed to instances of this agent.

Run at startup
Yes

Sampling interval
1 minute

Situation persistence
The number of times the conditions of the situation must occur for the situation to be true is 1.

Severity
Warning

Clearing conditions
The situation clears when the condition becomes false.

KNO_ObjServ_Proc_CPU_Crit situation

Description
Indicates CPU usage of the ObjectServer process is critical.

The situation is evaluated for each distinct value of the COMPONENT attribute.

Formula
```
*IF ( ( *SCAN KNO_AVAILABILITY.Name *EQ 'nco_objserv' ) *AND ( *VALUE
KNO_AVAILABILITY.Status *EQ UP ) *AND ( *VALUE
KNO_AVAILABILITY.Percent_Processor_Time *GE 80 ) )
```

See "Attribute groups and attributes for the IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent" on page 15 for descriptions of the attributes in this formula.

Distribution
This situation is automatically distributed to instances of this agent.

Run at startup
Yes

Sampling interval
1 minute

Situation persistence
The number of times the conditions of the situation must occur for the situation to be true is 1.

Severity
Critical

Clearing conditions
The situation clears when the condition becomes false.

KNO_ProcAgent_Proc_CPU_Crit situation

Description
CPU usage of the Netcool/OMNIbus process agent is critical.

The situation is evaluated for each distinct value of the COMPONENT attribute.

Formula
```
*IF ( ( *SCAN KNO_AVAILABILITY.Name *EQ 'nco_pad' ) *AND ( *VALUE
KNO_AVAILABILITY.Status *EQ UP ) *AND ( *VALUE
KNO_AVAILABILITY.Percent_Processor_Time *GE 80 ) )
```

See "Attribute groups and attributes for the IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent" on page 15 for descriptions of the attributes in this formula.

Distribution
This situation is automatically distributed to instances of this agent.

Run at startup
Yes

Sampling interval
1 minute

Situation persistence
The number of times the conditions of the situation must occur for the situation to be true is 1.

Severity
Critical

Clearing conditions
The situation clears when the condition becomes false.

KNO_ProcAgent_CPU_Crit_Unix situation

Description
CPU usage of the Netcool/OMNIbus process agent is critical.

The situation is evaluated for each distinct value of the COMPONENT attribute.

Formula
```
*IF ( ( *SCAN KNO_AVAILABILITY.Name *EQ 'nco_pad' ) *AND ( *VALUE
KNO_AVAILABILITY.Status *EQ UP ) *AND ( *VALUE
KNO_AVAILABILITY.Percent_Processor_Time *GE 80 ) )
```

See "Attribute groups and attributes for the IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent" on page 15 for descriptions of the attributes in this formula.

Distribution
This situation is automatically distributed to instances of this agent.

Run at startup
Yes

Sampling interval
1 minute

Situation persistence
The number of times the conditions of the situation must occur for the situation to be true is 1.

Severity
Critical

Clearing conditions
The situation clears when the condition becomes false.

Event distribution and history by severity Navigator item

No predefined situations are included for this Navigator item.

Event distribution by class Navigator item

No predefined situations are included for this Navigator item.

Event distribution by node Navigator item

No predefined situations are included for this Navigator item.

Event Metrics Navigator item

KNO_Tput_Evt_Status situation

Description
Number of outstanding events in alert.status table is too many.

The situation is evaluated for each distinct value of the OBSERNAME attribute.

Formula
```
*IF *VALUE KNO_EVENT_COUNT_AND_THROUGHPUT.Alert_Count *GT 40000
```

See "Attribute groups and attributes for the IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent" on page 15 for descriptions of the attributes in this formula.

Distribution
This situation is automatically distributed to instances of this agent.

Run at startup
Yes

Sampling interval
1 minute

Situation persistence
The number of times the conditions of the situation must occur for the situation to be true is 1.

Severity
Warning

Clearing conditions
The situation clears when the condition becomes false.

KNO_Tput_Evt_Details situation

Description
Number outstanding events in alerts.details table is too many.

The situation is evaluated for each distinct value of the OBSERNAME attribute.

Formula
```
*IF *VALUE KNO_EVENT_COUNT_AND_THROUGHPUT.Details_Count *GT 10000
```

See "Attribute groups and attributes for the IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent" on page 15 for descriptions of the attributes in this formula.

Distribution
This situation is automatically distributed to instances of this agent.

Run at startup
Yes

Sampling interval
1 minute

Situation persistence
The number of times the conditions of the situation must occur for the situation to be true is 1.

Severity
Warning

Clearing conditions
The situation clears when the condition becomes false.

KNO_Event_Inserts_Status situation

Description
Inserts to alerts.status by a client are greater than 500.

The situation is evaluated for each distinct value of the CLIENTID attribute.

Formula
```
*IF *VALUE KNO_EVENT_RATE.New_Alert_Count *GT 500
```

See "Attribute groups and attributes for the IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent" on page 15 for descriptions of the attributes in this formula.

Distribution
This situation is automatically distributed to instances of this agent.

Run at startup
Yes

Sampling interval
1 minute

Situation persistence
The number of times the conditions of the situation must occur for the situation to be true is 1.

Severity
Warning

Clearing conditions
The situation clears when the condition becomes false.

KNO_Event_Dups_Status situation

Description
Reinserts to alerts.status by a client are greater than 500.

The situation is evaluated for each distinct value of the CLIENTID attribute.

Formula
```
*IF *VALUE KNO_EVENT_RATE.Dedup_Alert_Count *GT 500
```

See "Attribute groups and attributes for the IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent" on page 15 for descriptions of the attributes in this formula.

Distribution
This situation is automatically distributed to instances of this agent.

Run at startup
Yes

Sampling interval
1 minute

Situation persistence
The number of times the conditions of the situation must occur for the situation to be true is 1.

Severity
Warning

Clearing conditions
The situation clears when the condition becomes false.

KNO_Event_Updates_Status situation

Description
Updates to alerts.status by a client are greater than 500.

The situation is evaluated for each distinct value of the CLIENTID attribute.

Formula
```
*IF *VALUE KNO_EVENT_RATE.Updated_Alert_Count *GT 500
```

See "Attribute groups and attributes for the IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent" on page 15 for descriptions of the attributes in this formula.

Distribution
This situation is automatically distributed to instances of this agent.

Run at startup
Yes

Sampling interval
1 minute

Situation persistence
The number of times the conditions of the situation must occur for the situation to be true is 1.

Severity
Warning

Clearing conditions
The situation clears when the condition becomes false.

KNO_Event_Inserts_Details situation

Description
Inserts to alerts.details by a client are greater than 500.

The situation is evaluated for each distinct value of the CLIENTID attribute.

Formula
```
*IF *VALUE KNO_EVENT_RATE.Details_Count *GT 500
```

See "Attribute groups and attributes for the IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent" on page 15 for descriptions of the attributes in this formula.

Distribution
This situation is automatically distributed to instances of this agent.

Run at startup
Yes

Sampling interval
1 minute

Situation persistence
The number of times the conditions of the situation must occur for the situation to be true is 1.

Severity
Warning

Clearing conditions
The situation clears when the condition becomes false.

KNO_Event_Inserts_Journals situation

Description
Inserts to alerts.journals by a client are greater than 500.

The situation is evaluated for each distinct value of the CLIENTID attribute.

Formula
```
*IF *VALUE KNO_EVENT_RATE.Journals_Count *GT 500
```

See "Attribute groups and attributes for the IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent" on page 15 for descriptions of the attributes in this formula.

Distribution
This situation is automatically distributed to instances of this agent.

Run at startup
Yes

Sampling interval
1 minute

Situation persistence
The number of times the conditions of the situation must occur for the situation to be true is 1.

Severity
Warning

Clearing conditions
The situation clears when the condition becomes false.

ObjectServer Metrics Navigator item

KNO_Auto_Trigger situation

Description
A trigger is using more than 3 seconds in any period.

The situation is evaluated for each distinct value of the TRIGNAME attribute.

Formula
```
*IF *VALUE KNO_AUTOMATION_PERIOD.Trigger_Period *GT 3
```

See "Attribute groups and attributes for the IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent" on page 15 for descriptions of the attributes in this formula.

Distribution
This situation is automatically distributed to instances of this agent.

Run at startup
Yes

Sampling interval
1 minute

Situation persistence
The number of times the conditions of the situation must occur for the situation to be true is 1.

Severity
Warning

Clearing conditions
The situation clears when the condition becomes false.

KNO_Auto_Total_Trigger situation

Description
The total trigger time exceeds 20 seconds in any period.

The situation is evaluated for each distinct value of the TRIGNAME attribute.

Formula
```
*IF *VALUE KNO_AUTOMATION_PERIOD.Total_Time *GT 20
```

See "Attribute groups and attributes for the IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent" on page 15 for descriptions of the attributes in this formula.

Distribution
This situation is automatically distributed to instances of this agent.

Run at startup
Yes

Sampling interval
1 minute

Situation persistence
The number of times the conditions of the situation must occur for the situation to be true is 1.

Severity
Warning

Clearing conditions
The situation clears when the condition becomes false.

KNO_Store_Soft_Limit situation

Description
Table store size is greater than the system-defined soft limit.

The situation is evaluated for each distinct value of the STORENAME attribute.

Formula

```
*IF *VALUE KNO_STORE_SIZE.PercentUsedSoft *GE 80
*AND *VALUE KNO_STORE_SIZE.PercentUsedHard *LT 80
```

See “Attribute groups and attributes for the IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent” on page 15 for descriptions of the attributes in this formula.

Distribution

This situation is automatically distributed to instances of this agent.

Run at startup

Yes

Sampling interval

1 minute

Situation persistence

The number of times the conditions of the situation must occur for the situation to be true is 1.

Severity

Warning

Clearing conditions

The situation clears when the condition becomes false.

KNO_Store_Hard_Limit situation

Description

Table store size has reached the system-defined hard limit.

The situation is evaluated for each distinct value of the STORENAME attribute.

Formula

```
*IF *VALUE KNO_STORE_SIZE.PercentUsedHard *GE 80
```

See “Attribute groups and attributes for the IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent” on page 15 for descriptions of the attributes in this formula.

Distribution

This situation is automatically distributed to instances of this agent.

Run at startup

Yes

Sampling interval

1 minute

Situation persistence

The number of times the conditions of the situation must occur for the situation to be true is 1.

Severity

Critical

Clearing conditions
The situation clears when the condition becomes false.

KNO_Table_50 situation

Description
Indicates that the table size has gone over 50MB.

The situation is evaluated for each distinct value of the DISPNAME attribute.

Formula
```
*IF *VALUE KNO_TABLE_SIZE.Used_Bytes *GT 52428800
*AND *VALUE KNO_TABLE_SIZE.Used_Bytes *LE 104857600
```

See "Attribute groups and attributes for the IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent" on page 15 for descriptions of the attributes in this formula.

Distribution
This situation is automatically distributed to instances of this agent.

Run at startup
Yes

Sampling interval
1 minute

Situation persistence
The number of times the conditions of the situation must occur for the situation to be true is 1.

Severity
Warning

Clearing conditions
The situation clears when the condition becomes false.

KNO_Table_100 situation

Description
Indicates that the table size has gone over 100MB.

The situation is evaluated for each distinct value of the DISPNAME attribute.

Formula
```
*IF *VALUE KNO_TABLE_SIZE.Used_Bytes *GT 104857600
```

See "Attribute groups and attributes for the IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent" on page 15 for descriptions of the attributes in this formula.

Distribution
This situation is automatically distributed to instances of this agent.

Run at startup
Yes

Sampling interval
1 minute

Situation persistence
The number of times the conditions of the situation must occur for the situation to be true is 1.

Severity
Critical

Clearing conditions
The situation clears when the condition becomes false.

KNO_Client_Num_Clients situation

Description
Number of active clients has reached the system-defined limit.

The situation is evaluated for each distinct value of the DISPNAME attribute.

Formula
```
*IF *VALUE KNO_CLIENT_PROFILE.ConnectionsRemaining *LE 10
```

See "Attribute groups and attributes for the IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent" on page 15 for descriptions of the attributes in this formula.

Distribution
This situation is automatically distributed to instances of this agent.

Run at startup
Yes

Sampling interval
1 minute

Situation persistence
The number of times the conditions of the situation must occur for the situation to be true is 1.

Severity
Warning

Clearing conditions
The situation clears when the condition becomes false.

KNO_Client_Total_Time situation

Description
Total of client times is over 50% of system-defined granularity.

The situation is evaluated for each distinct value of the DISPNAME attribute.

Formula
```
*IF *VALUE KNO_CLIENT_PROFILE.PercentGranularityTime *GE 50
```

See "Attribute groups and attributes for the IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent" on page 15 for descriptions of the attributes in this formula.

Distribution
This situation is automatically distributed to instances of this agent.

Run at startup
Yes

Sampling interval
1 minute

Situation persistence
The number of times the conditions of the situation must occur for the situation to be true is 1.

Severity
Warning

Clearing conditions
The situation clears when the condition becomes false.

KNO_Client_Individual_Time situation

Description
A client time has gone over 10% of system-defined granularity.

The situation is evaluated for each distinct value of the DISPNAME attribute.

Formula
```
*IF *VALUE KNO_CLIENT_PROFILE.PercentGranularityClient *GE 10
```

See "Attribute groups and attributes for the IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent" on page 15 for descriptions of the attributes in this formula.

Distribution
This situation is automatically distributed to instances of this agent.

Run at startup
Yes

Sampling interval
1 minute

Situation persistence
The number of times the conditions of the situation must occur for the situation to be true is 1.

Severity
Warning

Clearing conditions
The situation clears when the condition becomes false.

Chapter 6. Take Action commands reference

This chapter contains an overview of Take Action commands, references for detailed information about Take Action commands, and descriptions of the Take Action commands included in this monitoring agent, if any.

About Take Action commands

Take Action commands can be run from the portal client or included in a situation or a policy.

When included in a situation, the command runs when the situation becomes true. A Take Action command in a situation is also referred to as *reflex automation*. When you enable a Take Action command in a situation, you automate a response to system conditions. For example, you can use a Take Action command to send a command to restart a process on the managed system or to send a text message to a cell phone.

Advanced automation uses policies to perform actions, schedule work, and automate manual tasks. A policy comprises a series of automated steps called activities that are connected to create a workflow. After an activity is completed, the Tivoli Enterprise Portal receives return code feedback, and advanced automation logic responds with subsequent activities prescribed by the feedback.

A basic Take Action command shows the return code of the operation in a message box that is displayed after the action completes or in a log file. After you close this window, no further information is available for this action.

More information about Take Action commands

For more information about working with Take Action commands, see the *Tivoli Enterprise Portal User's Guide*.

For a list of the Take Action commands for this monitoring agent and a description of each command, see the Predefined Take Action commands section in this chapter and the information in that section for each individual command.

Predefined Take Action commands

This monitoring agent contains the following Take Action commands:

- collect log files

The remaining sections of this chapter contain descriptions of these Take Action commands, which are listed alphabetically. The following information is provided about each Take Action command:

Description
Which actions the command performs on the system to which it is sent, and the permissions required for the Take Action command to function

Return codes
Information that the Take Action command returns

collect log files action

Description

Collects Tivoli Netcool/OMNIbus log files and copies them to the IBM Tivoli Monitoring agent directory

System command

To include the Take Action command in a situation or workflow policy, use the following syntax for the system command:

```
COLLECT_LOG_FILES \
```

You can use attribute substitution to supply the Take Action command arguments from the situation, for example:

```
COLLECT_LOG_FILES \
```

You can also use attribute substitution in a workflow policy though the format is slightly different:

```
COLLECT_LOG_FILES \
```

Chapter 7. Policies reference

This chapter contains an overview of policies, references for detailed information about policies, and descriptions of the predefined policies included in this monitoring agent, if any.

About policies

Policies are an advanced automation technique for implementing more complex workflow strategies than you can create through simple automation.

A *policy* is a set of automated system processes that can perform actions, schedule work for users, or automate manual tasks. You use the Workflow Editor to design policies. You control the order in which the policy executes a series of automated steps, which are also called activities. Policies are connected to create a workflow. After an activity is completed, Tivoli Enterprise Portal receives return code feedback and advanced automation logic responds with subsequent activities prescribed by the feedback.

More information about policies

This monitoring agent does not provide predefined policies. For more information about working with policies, see the *Tivoli Enterprise Portal User's Guide*.

For information about using the Workflow Editor, see the *IBM Tivoli Monitoring Administrator's Guide* or the Tivoli Enterprise Portal online help.

Predefined policies

The IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent does not provide predefined policies.

Chapter 8. Troubleshooting

This chapter provides agent-specific troubleshooting information. See the *IBM Tivoli Monitoring Troubleshooting Guide* for general troubleshooting information. Also see "Support information" on page 134 for other problem-solving options.

Note: You can resolve some problems by ensuring that your system matches the system requirements listed in Chapter 2, "Requirements and agent-specific installation and configuration information for the monitoring agent," on page 5.

Gathering product information for IBM Software Support

Before contacting IBM Software Support about a problem you are experiencing with this product, gather the information in Table 2 that relates to the problem.

Table 2. Information to gather before contacting IBM Software Support

Information type	Description
Log files	Collect trace log files from failing systems. Most logs are located in a `logs` subdirectory on the host computer. See "Trace logging" on page 114 for lists of all trace log files and their locations. See the *Tivoli Enterprise Portal User's Guide* for general information about the IBM Tivoli Monitoring environment.
Tivoli Netcool/OMNIbus information	Version number and patch level
Operating system	Operating system version number and patch level
Messages	Messages and other information displayed on the screen
Version numbers for IBM Tivoli Monitoring	Version number of the following members of the monitoring environment: • IBM Tivoli Monitoring. Also provide the patch level, if available. • IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent
Screen captures	Screen captures of incorrect output, if any.
(*UNIX only*) Core dump files	If the system stops on UNIX systems, collect the core dump file from the *install_dir*/bin directory, where *install_dir* is the directory where you installed the monitoring agent.

You can use the pdcollect tool to collect the most commonly used information from a system. This tool gathers log files, configuration information, version information, and other data. See the "pdcollect tool" section in the "Tools" chapter of the *IBM Tivoli Monitoring Troubleshooting Guide* for more information about using this tool.

See http://www.ibm.com/software/support/probsub.html for information about working with IBM Software Support.

Built-in troubleshooting features

The primary troubleshooting feature in the IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent is logging. *Logging* refers to the text messages and trace data generated by the IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent. Messages and trace data are sent to a file.

Trace data captures transient information about the current operating environment when a component or application fails to operate as designed. IBM Software Support personnel use the captured trace information to determine the source of an error or unexpected condition. See "Trace logging" for more information.

Problem classification

The following types of problems might occur with the IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent:

- Installation and configuration
- General usage and operation
- Display of monitoring data
- Take Action commands

This chapter provides symptom descriptions and detailed workarounds for these problems, and describes the logging capabilities of the monitoring agent. See the *IBM Tivoli Monitoring Troubleshooting Guide* for general troubleshooting information.

Trace logging

Trace logs capture information about the operating environment when component software fails to operate as intended. The principal log type is the RAS (Reliability, Availability, and Serviceability) trace log. These logs are in the English language only. The RAS trace log mechanism is available for all components of IBM Tivoli Monitoring. Most logs are located in a `logs` subdirectory on the host computer. See the following sections to learn how to configure and use trace logging:

- "Principal trace log files" on page 116
- "Examples: using trace logs" on page 118
- "Setting RAS trace parameters" on page 119

Note: The documentation refers to the RAS facility in IBM Tivoli Monitoring as "RAS1".

IBM Software Support uses the information captured by trace logging to trace a problem to its source or to determine why an error occurred. All components in the IBM Tivoli Monitoring environment have a default tracing level. The tracing level can be changed on a per-component level to adjust the type of trace information collected, the degree of trace detail, the number of trace logs to be kept, and the amount of disk space used for tracing.

Overview of log file management

Table 3 on page 116 provides the names, locations, and descriptions of RAS1 log files. The log file names adhere to the following naming convention:

Windows systems

hostname_productcode_program_HEXtimestamp-nn.log

Linux and UNIX systems

hostname_productcode_HEXtimestamp-nn.log

where:

- *hostname* is the host name of the computer where the monitoring component is running.

- *productcode* is the two-character product code. For IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus, the product code is no.
- *program* is the name of the program being run.
- *HEXtimestamp* is a hexadecimal time stamp representing the time at which the program started.
- *nn* is a rolling log suffix.

Examples of trace logging

For example, if a IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus is running on the Windows system "server01", the RAS log file for that agent might be named as follows:

```
server01_no_knoagent_437fc59-01.log
```

As the program runs, the first log (*nn*=01) is preserved because it contains program startup information. The remaining logs "roll." In other words, when the set of numbered logs reach a maximum size, the remaining logs are overwritten in sequence.

Each time a program is started, a new timestamp is assigned to maintain a short program history. For example, if the IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus is started twice, it might have log files as follows:

```
server01_no_knoagent_437fc59-01.log
server01_no_knoagent_437fc59-02.log
server01_no_knoagent_437fc59-03.log
server01_no_knoagent_537fc59-01.log
server01_no_knoagent_537fc59-02.log
server01_no_knoagent_537fc59-03.log
```

- knoagent.exe
  - Windows

    *hostname*_gb_*instance name*_knoagent_*timestamp-nn*.log

    For example:

    AMSC282_gb_amsc282c_knoagent_45267ef7-01.log
  - UNIX or Linux

    *hostname*_gb_*instance_name*_knoagent_*timestamp-nn*.log

    For example:

    amsaix20_gb_aix20_knoagent_45267ef7-01.log
- knoclient.exe
  - Windows

    *hostname*_gb_*instance_name*_KNOCLIENT_*instance_name_timestamp-nn*.log

    For example:

    AMSC282_gb_amsc282c_KNOCLIENT_amsc282c_45267ef7-01.log
  - UNIX or Linux

    *hostname*_gb_*instance_name*_knoclient_*timestamp-nn*.log

    For example:

    amsaix20_gb_aix20_knoclient_45267ef7-01.log
- knoiwevent.exe
  - Windows

    *hostname*_gb_*instance_name*_knoiwevent_*timestamp-nn*.log

    For example:

    AMSC282_gb_server1amsc282_knoiwevent_4526ad8f-01.log

– UNIX or Linux

*hostname*_gb_*instance_name*_knoiwevent_*timestamp-nn*.log

For example:

amsaix20_gb_aix20_knoiwevent_aix20_45267ef7-01.log

- knostart.sh

  UNIX or Linux only

  knostart_*instance_name*.log

  For example:

  knostart_pa2kk.log

Other logs, such as logs for Take Action command logs, have a similar syntax as in the following Windows example:

host_productcode_*takeactioncommand*.log

Only 1 log file is produced per Take Action command.

Note: When you communicate with IBM Software Support, you must capture and send the RAS1 log that matches any problem occurrence that you report.

Principal trace log files

Table 3 contains locations, file names, and descriptions of trace logs that can help determine the source of problems with agents.

Table 3. Trace log files for troubleshooting agents

System where log is located	File name and path	Description
On the Tivoli Enterprise Monitoring Server	• **Windows:** The file in the *install_dir*\InstallITM path • **UNIX:** The candle_installation.log file in the *install_dir*/logs path	Provides details about products that are installed. **Note:** Trace logging is enabled by default. A configuration step is not required to enable this tracing.
On the Tivoli Enterprise Monitoring Server	The Warehouse_Configuration.log file is in the following location on Windows systems: *install_dir*\InstallITM	Provides details about the configuration of data warehousing for historical reporting.
On the Tivoli Enterprise Monitoring Server	The name of the RAS log file is as follows: • **Windows:** *install_dir*\logs\ *hostname*_ms_*timestamp-nn*.log • **UNIX:** *install_dir*/logs/ *hostname*_ms_*timestamp-nn*.log **Note:** File names for RAS1 logs include a hexadecimal time stamp. Also on UNIX systems, a log with a decimal time stamp is provided: *hostname_productcode_timestamp*.log and *hostname_productcode_ timestamp*.pid*nnnnn* in the *install_dir*/logs path, where *nnnnn* is the process ID number.	Traces activity on the monitoring server.

Table 3. Trace log files for troubleshooting agents (continued)

System where log is located	File name and path	Description
On the Tivoli Enterprise Portal Server	The name of the RAS log file is as follows: • **Windows:** *install_dir*\logs\ *hostname*_cq_HEXtimestamp-nn.log • **UNIX:** *install_dir*/logs/ *hostname*_cq_HEXtimestamp-nn.log **Note:** File names for RAS1 logs include a hexadecimal time stamp. Also on UNIX systems, a log with a decimal time stamp is provided: *hostname_productcode_timestamp*.log and *hostname_productcode_ timestamp*.pid*nnnnn* in the *install_dir*/logs path, where *nnnnn* is the process ID number.	Traces activity on the portal server.
On the Tivoli Enterprise Portal Server	The teps_odbc.log file is located in the following path: • **Windows**: *install_dir*\InstallITM • **UNIX**: *install_dir*/logs	When you enable historical reporting, this log file traces the status of the warehouse proxy agent.
On the computer that hosts the monitoring agent	The RAS1 log files are as follows: • **Windows:** *hostname*_no_knoagent _HEXtimestamp-nn.log in the *install_dir*\tmaitm6\logs directory • **UNIX:** *hostname*_no_HEXtimestamp-nn.log in the *install_dir*/logs directory These logs are in the following directories: • **Windows:** *install_dir*\tmaitm6\logs • **UNIX:** *install_dir*/logs • **Linux:** install_dir/logs On Linux systems, the following additional logs are provided: – *hostname*_no_timestamp.log – *hostname*_no_ timestamp.pidnnnnn in the *install_dir*/logs path, where *nnnnn* is the process ID number	Traces activity of the monitoring agent.
On the computer that hosts the monitoring agent	The agent operations log files are as follows: *instance_hostname*_NO.LG0 is the current log created when the agent was started. *instance_hostname*_NO.LG1 is the backup of the previous log. These logs are in the following directory depending on the operating system that you are using: • **Windows:** *install_dir*\tmaitm6\logs • **Linux:** *install_dir*/logs • **UNIX:** *install_dir*/logs	Shows whether the agent was able to connect to the monitoring server. Shows which situations are started and stopped, and shows other events while the agent is running. A new version of this file is generated every time the agent is restarted. IBM Tivoli Monitoring generates one backup copy of the *.LG0 file with the tag .LG1. View .LG1 to learn the following details regarding the *previous* monitoring session: • Status of connectivity with the monitoring server. • Situations that were running. • The success or failure status of Take Action commands.

Table 3. Trace log files for troubleshooting agents (continued)

System where log is located	File name and path	Description
On the computer that hosts the monitoring agent	The Take Action command log files are as follows: • *host*_no_*instance_takeactioncommand*.log The logs are in the following directories: • **Windows:** *install_dir*\tmaitm6\logs • **UNIX:** *install_dir*/logs • **Linux:** *install_dir*/logs	Traces activity each time a Take Action command runs. For example, when a hypothetical **start_command** Take Action command runs, IBM Tivoli Monitoring generates a start_command.log file.

Definitions of variables:

timestamp is time stamp whose format includes year (y), month (m), day (d), hour (h), and minute (m), as follows: **yyyymmdd hhmm**

HEXtimestamp is a hexadecimal representation of the time at which the process was started.

install_dir represents the directory path where you installed the IBM Tivoli Monitoring component. *install_dir* can represent a path on the computer that hosts the monitoring system, the monitoring agent, or the portal.

instance refers to the name of the database instance that you are monitoring.

hostname refers to the name of the computer on which the IBM Tivoli Monitoring component runs.

nn represents the circular sequence in which logs are rotated. Ranges from 1-5, by default. But the first is always retained, because it includes configuration parameters.

productcode specifies the product code, for example, um for Universal Agent or nt for Windows.

See the *IBM Tivoli Monitoring Installation and Setup Guide* for more information about the complete set of trace logs that are maintained on the monitoring server.

Examples: using trace logs

Typically, IBM Software Support applies specialized knowledge to analyze trace logs to determine the source of problems. You can open trace logs in a text editor to learn some basic facts about your IBM Tivoli Monitoring environment. The following examples are from the Tivoli Enterprise Monitoring Server log.

Example one

This excerpt shows the typical log for a failed connection between a monitoring agent and a monitoring server with the host name **server1a**:

```
(Thursday, August 11, 2005, 08:21:30-{94C}kdcl0cl.c,105,"KDCL0_ClientLookup") status=1c020006,
 "location server unavailable", ncs/KDC1_STC_SERVER_UNAVAILABLE
(Thursday, August 11, 2005, 08:21:35-{94C}kraarreg.cpp,1157,"LookupProxy") Unable to connect to
 broker at ip.pipe:: status=0, "success", ncs/KDC1_STC_OK
(Thursday, August 11, 2005, 08:21:35-{94C}kraarreg.cpp,1402,"FindProxyUsingLocalLookup") Unable
 to find running CMS on CT_CMSLIST <IP.PIPE:#server1a>
```

Example two

The following excerpts from the trace log *for the monitoring server* show the status of an agent, identified here as "Remote node." The name of the computer where the agent is running is **SERVER5B**:

```
(42C039F9.0000-6A4:kpxreqhb.cpp,649,"HeartbeatInserter") Remote node SERVER5B:NO is ON-LINE.
. . .
(42C3079B.0000-6A4:kpxreqhb.cpp,644,"HeartbeatInserter") Remote node SERVER5B:NO is OFF-LINE.
```

Key points regarding the preceding excerpt:

- The monitoring server appends the **NO** product code to the server name to form a unique name (SERVER5B:NO) for this instance of the IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent. By using this unique name, you can distinguish multiple monitoring products that might be running on **SERVER5B**.

- The log shows when the agent started (ON-LINE) and later stopped (OFF-LINE) in the environment.
- For the sake of brevity, an ellipsis (...) represents the series of trace log entries that were generated while the agent was running.
- Between the ON-LINE and OFF-LINE log entries, the agent was communicating with the monitoring server.
- The ON-LINE and OFF-LINE log entries are always available in the trace log. All trace levels that are described in "Setting RAS trace parameters" provide these entries.

On Windows systems, you can use the following alternate method to view trace logs:

1. In the Windows **Start** menu, choose **Program Files > IBM Tivoli Monitoring > Manage Tivoli Enterprise Monitoring Services**. The Manage Tivoli Enterprise Monitoring Services window is displayed.
2. Right-click a component and select **Advanced > View Trace Log** in the menu. For example, if you want to view the trace log of the Tivoli Netcool/OMNIbus agent, right-click the name of that agent in the window. You can also use the viewer to access remote logs.

   Note: The viewer converts time stamps in the logs to a format that is easier to read.

Setting RAS trace parameters

Objective

Pinpoint a problem by setting detailed tracing of individual components of the monitoring agent and modules.

Background Information

The IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent uses RAS1 tracing and generates the logs described in Table 3 on page 116. The default RAS1 trace level is ERROR.

Before you begin

See "Overview of log file management" on page 114 to ensure that you understand log rolling and can reference the correct log files when you manage log file generation.

After you finish

Monitor the size of the `logs` directory. Default behavior can generate a total of 45 MB to 60 MB for each agent that is running on a computer. For example, each database instance that you monitor can generate 45 MB to 60 MB of log data. See the "Procedure" section to learn how to adjust file size and numbers of log files to prevent logging activity from occupying too much disk space.

Regularly prune log files other than the RAS1 log files in the logs directory. Unlike the RAS1 log files that are pruned automatically, other log types can grow indefinitely, for example, the logs in Table 3 on page 116 that include a process ID number (PID).

Use collector trace logs as an additional source of troubleshooting information.

Note: The **KDC_DEBUG** setting and the Maximum error tracing setting can generate a large amount of trace logging. Use these settings only

temporarily while you are troubleshooting problems. Otherwise, the logs can occupy excessive amounts of hard disk space.

Procedure

On Windows systems, you can use the graphical user interface to set trace options:

1. Open the Manage Tivoli Enterprise Monitoring Services window.
2. Right-click the icon of the monitoring agent with logging you want to modify.
3. Select **Advanced** > **Edit Trace Parms**. The Tivoli Enterprise Monitoring Server Trace Parameters window is displayed.
4. Select a new trace setting in the pull-down menu in the **Enter RAS1 Filters** field or type a valid string.

   The selections are as follows:

   - General error tracing. `KBB_RAS1=ERROR`
   - Intensive error tracing. `KBB_RAS1=ERROR (UNIT:kqz ALL)`
   - Maximum error tracing. `KBB_RAS1=ERROR (UNIT:kqz ALL) (UNIT:kra ALL)`

     Note: As this example shows, you can set multiple RAS tracing options in a single statement.
5. Modify the value for 'Maximum Log Size Per File (MB)" to change the log file size (changes LIMIT value).
6. Modify the value for 'Maximum Number of Log Files Per Session" to change the number of log files per startup of a program (changes COUNT value).
7. Modify the value for 'Maximum Number of Log Files Total" to change the number of log files for all startups of a program (changes MAXFILES value).
8. (*Optional*) Click Y (Yes) in the **KDC_DEBUG Setting** menu to log information that can help you diagnose communications and connectivity problems between the monitoring agent and the monitoring server.

   Note: The **KDC_DEBUG** setting and the Maximum error tracing setting can generate a large amount of trace logging. Use these settings only temporarily, while you are troubleshooting problems. Otherwise, the logs can occupy excessive amounts of hard disk space.
9. Click **OK**. You see a message reporting a restart of the monitoring agent so that your changes take effect.

You can also manually edit the RAS1 trace logging parameters using this method:

1. Open the trace options file:

   Windows: *install_dir*\tmaitm6\KNOENV

   UNIX: *install_dir*/config/no.ini
2. Edit the line that begins with KBB_RAS1= to set trace logging preferences. For example, if you want detailed trace logging, set the Maximum Tracing option:`KBB_RAS1=ERROR (UNIT:kqz ALL) (UNIT:kra ALL)`
3. Edit the line that begins with **KBB_RAS1_LOG=** to manage the generation of log files:
   - MAXFILES: the total number of files that are to be kept for all startups of a given program. When this value is exceeded, the oldest log files are discarded. Default value is 9.
   - LIMIT: the maximum size, in megabytes (MB) of a RAS1 log file. Default value is 5.
   - IBM Software Support might guide you to modify the following parameters:

- COUNT: the number of log files to keep in the rolling cycle of one program startup. Default is 3.
- PRESERVE: the number of files that are not to be reused in the rolling cycle of one program startup. Default value is 1.

Notes®: The **KBB_RAS1_LOG** parameter also provides for the specification of the log file directory, log file name, and the inventory control file directory and name. Do not modify these values or log information can be lost.

4. Restart the monitoring agent so that your changes take effect.

Dynamically modify trace settings for an IBM Tivoli Monitoring component

You can access the Tivoli Enterprise Monitoring Server, Tivoli Enterprise Portal Server, almost all the agents, and other IBM Tivoli Monitoring components from this utility.

This method of modifying trace settings on an IBM Tivoli Monitoring component is the most efficient method since it allows you to do so without restarting the component. Settings take effect immediately. Modifications made this way are not persistent.

Note: When the component is restarted the trace settings are read again from the .env file. Dynamically modifying these settings does not change the settings in the .env files. In order to modify these trace settings permanently, modify them in the .env files.

How to turn on tracing:

In order to use this utility, you need to know a local log-on credential for the machine.

This method uses the IBM Tivoli Monitoring Service Console. The Service Console is accessed using a web browser. Access the utility by using the following link:

`http://hostname:1920`

where *hostname* is the hostname or IP address of the system where the IBM Tivoli Monitoring component is running. The utility then appears with information about the components that are currently running on this machine.

For example, the component Tivoli Enterprise Portal Server shows as cnp, the Monitoring Agent for Windows OS shows as nt, and the Tivoli Enterprise Monitoring Server shows as ms.

Select the link below the component for which you want to modify the trace settings. In the previous view, if you want to modify tracing for the Tivoli Enterprise Monitoring Server, you select the "IBM Tivoli Monitoring Service Console" link under the Service Point: system. balayne_ms.

When you select one of the links, you are prompted for a user ID and password to access the system. This ID is any valid user that has access to the system.

Typing **?** displays a list of the supported commands.

The command for modifying the trace settings is **ras1**.

If you type ras1 in the field at the bottom of the screen, you see the help for this command.

The **set** option (ras1 set) turns on the tracing, but does not affect existing tracing.

An example would be **ras1 set (UNIT:xxx ALL) (UNIT:yyy Detail)**. This command enables full tracing for the *xxx* class of the component and low-level detailed tracing on the *yyy* class of the component.

The **ras1 list** command lists what tracing is set as default. It is best to do an initial list in order to track what changes you have made to the tracing settings.

The following list describes the options of tracing available:

ALL - Provides all trace levels. Shown as ALL when using the **ras1 list** command.

Flow - Provides control flow data describing function entry and exit. Shown as Fl when using the **ras1 list** command.

ERROR - Logs internal error conditions. Shown as ER when using the **ras1 list** command. The output also shows as EVERYE+EVERYU+ER.

Other settings that provide component-specific information are:

Detail - Shown as Det when using the **ras1 list** command.

INPUT - Shown as IN when using the **ras1 list** command.

Metrics - Shown as ME when using the **ras1 list** command.

OUTPUT - Shown as OUT when using the **ras1 list** command.

State - Shown as ST when using the **ras1 list** command.

Setting trace to ALL includes every trace point defined for the component. This setting might result in a large amount of trace. If you have been given a more specific setting, use it. ALL can sometimes be necessary when isolating a problem. It is the equivalent of setting "Error Detail Flow State Input Output Metrics".

The **ras1 units** command is used to determine the list of UNITs and COMPs available in an IBM Tivoli Monitoring component. The first column is the list of available UNIT values, the last column lists the corresponding COMP values.

Turning on (COMP:KDH ALL) turns on ALL level tracing for all the files where KDH is listed in the right column (highlighted below).

The following is a subset of the results for the Monitoring for Windows agent:

```
kbbcre1.c, 400, May 29 2007, 12:54:43, 1.1, *
kbbcrn1.c, 400, May 29 2007, 12:54:42, 1.1, *
kdhb1de.c, 400, May 29 2007, 12:59:34, 1.1, KDH
kdh0med.c, 400, May 29 2007, 12:59:24, 1.1, KDH
kdhsrej.c, 400, May 29 2007, 13:00:06, 1.5, KDH
kdhb1fh.c, 400, May 29 2007, 12:59:33, 1.1, KDH
kdhb1oe.c, 400, May 29 2007, 12:59:38, 1.2, KDH
kdhs1ns.c, 400, May 29 2007, 13:00:08, 1.3, KDH
```

```
kbbacdl.c, 400, May 29 2007, 12:54:27, 1.2, ACF1
kbbaclc.c, 400, May 29 2007, 12:54:27, 1.4, ACF1
kbbac1i.c, 400, May 29 2007, 12:54:28, 1.11, ACF1
kdhsfcn.c, 400, May 29 2007, 13:00:11, 1.1, KDH
kdhserq.c, 400, May 29 2007, 12:59:53, 1.1, KDH
kdhb1pr.c, 400, May 29 2007, 12:59:39, 1.1, KDH
kdhsgnh.c, 400, May 29 2007, 12:59:49, 1.1, KDH
kdh0uts.c, 400, May 29 2007, 12:59:23, 1.1, KDH
kdhsrsp.c, 400, May 29 2007, 13:00:13, 1.2, KDH
kdhs1rp.c, 400, May 29 2007, 13:00:12, 1.1, KDH
kdhscsv.c, 400, May 29 2007, 12:59:58, 1.9, KDH
kdebbac.c, 400, May 29 2007, 12:56:50, 1.10, KDE
```

The UNIT value matches any unit that starts with the specified value. For example, (UNIT:kra FLOW) prints the FLOW traces for all files which match kra*.

How to turn tracing back off:

The option for turning the tracing off is **ANY**. For example, you would use the following command to turn off tracing for the kbbcrcd class of the Windows OS agent:

```
ras1 set (UNIT:kbbcrcd ANY)
```

Problems and workarounds

The following sections provide symptoms and workarounds for problems that might occur with the IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent:

- "Installation and configuration troubleshooting" on page 123
- "Remote deployment troubleshooting" on page 126
- "Agent troubleshooting" on page 127
- "Workspace troubleshooting" on page 128
- "Situation troubleshooting" on page 131

Note: You can resolve some problems by ensuring that your system matches the system requirements listed in Chapter 2, "Requirements and agent-specific installation and configuration information for the monitoring agent," on page 5.

This Troubleshooting chapter provides agent-specific troubleshooting information. See the *IBM Tivoli Monitoring Troubleshooting Guide* for general troubleshooting information.

Installation and configuration troubleshooting

This section provides tables that show solutions for installation, configuration, and uninstallation problems.

Table 4. Problems and solutions for installation and configuration

Problem	Solution
(*UNIX only*) During a command-line installation, you choose to install a component that is currently installed, and you see the following warning: `WARNING - you are about to install the SAME version of "component_name"` where *component_name* is the name of the component that you are attempting to install. **Note:** This problem affects UNIX command-line installations. If you monitor only Windows environments, you see this problem if you choose to install a product component (for example, a monitoring server) on a UNIX system.	You must exit and restart the installation process. You cannot return to the list where you selected components to install. When you run the installer again, do not attempt to install any component that is currently installed.
A problem can arise when you install and configure a new monitoring agent on a computer where other agents are running as described in this example: • Agents are running on a computer and communicating with a Tivoli Enterprise Monitoring Server, called **TEMS1**. • You install a new agent on the same computer and you want this agent to communicate with a different monitoring server, called **TEMS2**. • When you configure the new agent to communicate with **TEMS2**, all the existing agents are reconfigured to communicate with **TEMS2**.	You must reconfigure the previously existing agents to restore their communication connection with **TEMS1**. For example, you can right-click the row for a specific agent in the Manage Tivoli Enterprise Monitoring Services, and select **Reconfigure**. See the *IBM Tivoli Monitoring Installation and Setup Guide* for more information about reconfiguration.
Diagnosing problems with product browse settings (Windows systems only).	When you have problems with browse settings, perform the following steps: 1. Click **Start > Programs > IBM Tivoli Monitoring > Manage Tivoli Enterprise Monitoring Services**. The Manage Tivoli Enterprise Monitoring Services window is displayed. 2. Right-click the Windows agent and select **Browse Settings**. A text window is displayed. 3. Click **Save As** and save the information in the text file. If requested, you can forward this file to IBM Software Support for analysis.
A message similar to "Unable to find running CMS on CT_CMSLIST" in the log file is displayed.	If a message similar to "Unable to find running CMS on CT_CMSLIST" is displayed in the log file, the agent cannot connect to the monitoring server. Confirm the following points: • Do multiple network interface cards (NICs) exist on the system? • If multiple NICs exist on the system, find out which one is configured for the monitoring server. Ensure that you specify the correct host name and port settings for communication in the IBM Tivoli Monitoring environment.

Table 4. Problems and solutions for installation and configuration (continued)

Problem	Solution
The system is experiencing high CPU usage.	**Agent process:** View the memory usage of the KNOCMA process. If CPU usage seems to be excessive, recycle the monitoring agent. **Network Cards:** The network card configurations can decrease the performance of a system. Each of the stream of packets that a network card receives (assuming that it is a broadcast or destined for the under-performing system) must generate a CPU interrupt and transfer the data through the I/O bus. If the network card in question is a bus-mastering card, work can be offloaded and a data transfer between memory and the network card can continue without using CPU processing power. Bus-mastering cards are 32-bit and are based on PCI or EISA bus architectures.
When new V6.1 or V6.2 agent support files are added to IBM Tivoli Monitoring V6.2.1 on Windows 2008, the portal server configuration portion of the installation hangs.	See "When new agent support files are added to V6.2.1, the portal server configuration portion of the installation hangs" in the "Installation and configuration troubleshooting" chapter of the *IBM Tivoli Monitoring Troubleshooting Guide*.

Table 5. General problems and solutions for uninstallation

Problem	Solution
On Windows, uninstallation of IBM Tivoli Monitoring fails to uninstall the entire environment.	Be sure that you follow the general uninstallation process described in the *IBM Tivoli Monitoring Installation and Setup Guide*: 1. Remove Tivoli Enterprise Monitoring Server Application support by completing the following steps: a. Use Manage Tivoli Enterprise Monitoring Services. b. Select **Tivoli Enterprise Monitoring Server**. c. Right-click and select **Advanced**. d. Select **Remove TEMS application support**. e. Select the agent to remove its application support. 2. Uninstall monitoring agents first, as in the following examples: • Uninstall a single monitoring agent for a specific database. -OR- • Uninstall all instances of a monitoring product, such as IBM Tivoli Monitoring for Databases. 3. Uninstall IBM Tivoli Monitoring.
The way to remove inactive managed systems (systems whose status is OFFLINE) from the Navigator tree in the portal is not obvious.	Use the following steps to remove, but not uninstall, an offline managed system from the Navigator tree: 1. Click the Enterprise icon in the Navigator tree. 2. Right-click, and then click **Workspace** > **Managed System Status**. 3. Right-click the offline managed system, and select **Clear offline entry**. If you also want to uninstall the monitoring agent, use the procedure described in the *IBM Tivoli Monitoring Installation and Setup Guide*.

Table 5. General problems and solutions for uninstallation (continued)

Problem	Solution
IBM Tivoli Monitoring might not be able to generate a unique name for monitoring components because of the truncation of names that the product automatically generates.	If the agent supports multi-instances, IBM Tivoli Monitoring automatically creates a name for each monitoring component by concatenating the subsystem name, host name, and product code separated by colons (*subsystem_name*:*hostname*:KNO). **Note:** When you monitor a multinode system, such as a database, IBM Tivoli Monitoring adds a subsystem name to the concatenated name, typically a database instance name. The length of the name that IBM Tivoli Monitoring generates is limited to 32 characters. Truncation can result in multiple components having the same 32-character name. If this problem happens, shorten the *hostname* portion of the name as follows: 1. Open the configuration file for the monitoring agent, which is located in the following path: • **On Windows:** *install_dir*\tmaitm6\K*product_code*CMA.INI. For example, the product code for the Monitoring Agent for Windows OS is NT. The file name is KNTCMA.INI. • **On UNIX and Linux:** itm_home/config/*product_code*.ini and *product_code*.config. For example, the file names for the Monitoring Agent for UNIX OS is ux.ini and ux.config. 2. Find the line that begins with **CTIRA_HOSTNAME=**. 3. Type a new name for host name that is a unique, shorter name for the host computer. The final concatenated name including the subsystem name, new host name, and KNO, cannot be longer than 32 characters. **Note:** You must ensure that the resulting name is unique with respect to any existing monitoring component that was previously registered with the Tivoli Enterprise Monitoring Server. 4. Save the file. 5. Restart the agent.

Remote deployment troubleshooting

Table 6 lists problems that might occur with remote deployment. This section provides information about troubleshooting remote deployment of the monitoring agent. See the *IBM Tivoli Monitoring Troubleshooting Guide* for general troubleshooting information.

This section describes problems and solutions for remote deployment and removal of agent software using Agent Remote Deploy process.

Table 6. Remote deployment problems and solutions

Problem	Solution
While you are using the remote deployment feature to install the IBM Tivoli Monitoring for Tivoli Netcool/OMNIbus Agent, an empty command window is displayed on the target computer. This problem occurs when the target of remote deployment is a Windows computer. (See the *IBM Tivoli Monitoring Installation and Setup Guide* for more information about the remote deployment feature.)	Do not close or modify this window. It is part of the installation process and is dismissed automatically.

Table 6. Remote deployment problems and solutions (continued)

Problem	Solution
The removal of a monitoring agent fails when you use the remote removal process in the Tivoli Enterprise Portal desktop or browser.	This problem might occur when you attempt the remote removal process immediately after you have restarted the Tivoli Enterprise Monitoring Server. You must allow time for the monitoring agent to refresh its connection with the Tivoli Enterprise Monitoring Server before you begin the remote removal process.

Agent troubleshooting

This section lists problems that might occur with agents.

This chapter provides agent-specific troubleshooting information. See the *IBM Tivoli Monitoring Troubleshooting Guide* for general troubleshooting information.

Table 7. Agent problems and solutions

Problem	Solution
Log data accumulates too rapidly.	Check the RAS trace option settings, which are described in "Setting RAS trace parameters" on page 119. The trace options settings that you can set on the `KBB_RAS1=` and `KDC_DEBUG=` lines potentially generate large amounts of data.
If you want to receive multiple trace logs for separate invocations of the same Take Action command, leaving this setting on permanently fills the available disk space.	Do not leave this setting on permanently. By doing so, you create a new log file for each invocation of the Take Action command and *all* of them are left on the agent system.

Table 7. Agent problems and solutions (continued)

Problem	Solution
A configured and running instance of the monitoring agent is not displayed in the Tivoli Enterprise Portal, but other instances of the monitoring agent on the same system do appear in the portal.	Tivoli Monitoring products use Remote Procedure Call (RPC) to define and control product behavior. RPC is the mechanism that allows a client process to make a subroutine call (such as GetTimeOfDay or ShutdownServer) to a server process somewhere in the network. Tivoli processes can be configured to use TCP/UDP, TCP/IP, SNA, and SSL as the protocol (or delivery mechanism) for RPCs that you want. "IP.PIPE" is the name given to Tivoli TCP/IP protocol for RPCs. The RPCs are socket-based operations that use TCP/IP ports to form socket addresses. IP.PIPE implements virtual sockets and multiplexes all virtual socket traffic across a single physical TCP/IP port (visible from the netstat command). A Tivoli process derives the physical port for IP.PIPE communications based on the configured, well-known port for the hub Tivoli Enterprise Monitoring Server. (This well-known port or BASE_PORT is configured by using the 'PORT:' keyword on the KDC_FAMILIES / KDE_TRANSPORT environment variable and defaults to '1918'.) The physical port allocation method is defined as (BASE_PORT + 4096*N), where N=0 for a Tivoli Enterprise Monitoring Server process and N={1, 2, ..., 15} for a non-Tivoli Enterprise Monitoring Server. Two architectural limits result as a consequence of the physical port allocation method: • No more than one Tivoli Enterprise Monitoring Server reporting to a specific Tivoli Enterprise Monitoring Server hub can be active on a system image. • No more than 15 IP.PIPE processes can be active on a single system image. A single system image can support any number of Tivoli Enterprise Monitoring Server processes (address spaces) if each Tivoli Enterprise Monitoring Server on that image reports to a different hub. By definition, there is one Tivoli Enterprise Monitoring Server hub per monitoring Enterprise, so this architecture limit has been simplified to one Tivoli Enterprise Monitoring Server per system image. No more than 15 IP.PIPE processes or address spaces can be active on a single system image. With the first limit expressed above, this second limitation refers specifically to Tivoli Enterprise Monitoring Agent processes: no more than 15 agents per system image. This limitation can be circumvented (at current maintenance levels, IBM Tivoli Monitoring V6.1, Fix Pack 4 and later) if the Tivoli Enterprise Monitoring Agent process is configured to use the EPHEMERAL IP.PIPE process. (This process is IP.PIPE configured with the 'EPHEMERAL:Y' keyword in the KDC_FAMILIES / KDE_TRANSPORT environment variable). There is no limitation to the number of ephemeral IP.PIPE connections per system image. If ephemeral endpoints are used, the Warehouse Proxy Agent is accessible from the Tivoli Enterprise Monitoring Server associated with the agents using ephemeral connections either by running the Warehouse Proxy Agent on the same computer or by using the Firewall Gateway feature. (The Firewall Gateway feature relays the Warehouse Proxy Agent connection from the Tivoli Enterprise Monitoring Server computer to the Warehouse Proxy Agent computer if the Warehouse Proxy Agent cannot coexist on the same computer.)

Workspace troubleshooting

Table 8 on page 129 shows problems that might occur with workspaces. This chapter provides agent-specific troubleshooting information. See the *IBM Tivoli Monitoring Troubleshooting Guide* for general troubleshooting information.

Table 8. Workspace problems and solutions

Problem	Solution
The process application components are available, but the Availability status shows PROCESS_DATA_NOT_ AVAILABLE.	This problem occurs because the **PerfProc** performance object is disabled. When this condition exists, IBM Tivoli Monitoring cannot collect performance data for this process. Perform the following steps to confirm that this problem exists and resolve it: 1. Choose **Run** in the Windows **Start** menu. 2. Type perfmon.exe in the **Open** field of the Run window. The Performance window is displayed. 3. Click the plus sign (+) in the toolbar located above the right pane. The Add Counters window is displayed. 4. Look for **Process** in the **Performance object** pull-down menu. 5. Perform one of the following actions: • If you see **Process** in the pull-down menu, the **PerfProc** performance object is enabled and the problem is coming from a different source. You might need to contact IBM Software Support. • If you do not see **Process** in the pull-down menu, use the Microsoft utility from the following website to enable the **PerfProc** performance object: http://blogs.technet.com/mscom/archive/2008/12/18/the-mystery-of-the-missing-process-performance-counter-in-perfmon.aspx The **Process** performance object becomes visible in the **Performance object** pull-down menu of the Add Counters windows, and IBM Tivoli Monitoring is able to detect Availability data. 6. Restart the monitoring agent.
The process application components are available, but the Availability status shows PROCESS_DATA_NOT_ AVAILABLE.	This problem occurs because the **PerfProc** performance object is disabled. When this condition exists, IBM Tivoli Monitoring cannot collect performance data for this process. Complete the following steps to confirm that this problem exists and resolve it: 1. Choose **Run** in the Windows **Start** menu. 2. Type *perfmon.exe* in the **Open** field of the Run window. The Performance window is displayed. 3. Click the plus sign (+) in the toolbar located above the right pane. The Add Counters window is displayed. 4. Look for **Process** in the **Performance object** pull-down menu. 5. Perform one of the following actions: • If you see **Process** in the pull-down menu, the **PerfProc** performance object is enabled and the problem is coming from a different source. You might need to contact IBM Software Support. • If you do not see **Process** in the pull-down menu, use the Microsoft utility from the following website to enable the **PerfProc** performance object: http://blogs.technet.com/mscom/archive/2008/12/18/the-mystery-of-the-missing-process-performance-counter-in-perfmon.aspx The **Process** performance object becomes visible in the **Performance object** pull-down menu of the Add Counters windows, and IBM Tivoli Monitoring is able to detect Availability data. 6. Restart the monitoring agent.

Table 8. Workspace problems and solutions (continued)

Problem	Solution
The name of the attribute does not display in a bar chart or graph view.	When a chart or graph view that includes the attribute is scaled to a small size, a blank space is displayed instead of a truncated name. To see the name of the attribute, expand the view of the chart until there is sufficient space to display all characters of the attribute name.
At the bottom of each view, you see the following Historical workspace KFWITM220E error: `Request failed during execution.`	Ensure that you configure all groups that supply data to the view. In the Historical Configuration view, ensure that data collection is started for all groups that supply data to the view.
You start collection of historical data but the data cannot be seen.	Managing options for historical data collection: • Basic historical data collection populates the Warehouse with raw data. This type of data collection is turned off by default. See the *IBM Tivoli Monitoring Administrator's Guide* for information about managing this feature including how to set the interval at which data is collected. By setting a more frequent interval for data collection you reduce the load on the system incurred every time data is uploaded. • You use the Summarization and Pruning monitoring agent to collect specific amounts and types of historical data. Historical data is not displayed until the Summarization and Pruning monitoring agent begins collecting the data. By default, this agent begins collection at 2 AM daily. At that point, data is visible in the workspace view. See the *IBM Tivoli Monitoring Administrator's Guide* to learn how to modify the default collection settings.
Historical data collection is unavailable because of incorrect queries in the Tivoli Enterprise Portal.	The column, Sort By, Group By, and First/Last functions are not compatible with the historical data collection feature. Use of these advanced functions makes a query ineligible for historical data collection. Even if data collection has been started, you cannot use the time span feature if the query for the chart or table includes column functions or advanced query options (Sort By, Group By, First / Last). To ensure support of historical data collection, do not use the Sort By, Group By, or First/Last functions in your queries. See the *IBM Tivoli Monitoring Administrator's Guide* or the Tivoli Enterprise Portal online help for information about the Historical Data Collection function.
When you use a long process name in the situation, the process name is truncated.	Truncation of process or service names for situations in the Availability table in the portal display is the expected behavior. 100 bytes is the maximum name length.
Regular (non-historical) monitoring data fails to be displayed.	Check the formation of the queries you use to gather data. For example, look for invalid SQL statements.
No row of data for 64-bit applications is displayed in the workspaces when the monitoring agent is running on a 64-bit operating system.	The Tivoli Enterprise Portal shows data only for 32-bit applications. There is no solution for this problem at this time.
Navigator items and workspace titles are labeled with internal names such as `Kxx:KXX0000` or `Kxx:KXX0000` rather than the correct names (such as Disk), where XX and xx represent the two-character agent code.	Ensure that application support has been added on the monitoring server, portal server, and portal client. For more information and instruction on installing application support, see "Installing and enabling application support" in the *IBM Tivoli Monitoring Installation and Setup Guide*.

Situation troubleshooting

This section provides information about both general situation problems and problems with the configuration of situations. See the *IBM Tivoli Monitoring Troubleshooting Guide* for more information about troubleshooting for situations.

General situation problems

Table 9 lists general problems that might occur with situations.

Table 9. General situation problems and solutions

Problem	Solution
Monitoring activity requires too much disk space.	Check the RAS trace logging settings that are described in "Setting RAS trace parameters" on page 119. For example, trace logs grow rapidly when you apply the **ALL** logging option.
Monitoring activity requires too many system resources.	"Disk capacity planning for historical data" on page 88 describes the performance impact of specific attribute groups. If possible, decrease your use of the attribute groups that require greater system resources.
A formula that uses mathematical operators appears to be incorrect. For example, if you were monitoring a Linux system, the formula that calculates when **Free Memory** falls under 10 percent of **Total Memory** does not work: `LT #'Linux_VM_Stats.Total_Memory' / 10`	This formula is incorrect because situation predicates support only logical operators. Your formulas cannot have mathematical operators. **Note:** The Situation Editor provides alternatives to math operators. Regarding the example, you can select the **% Memory Free** attribute and avoid the need for math operators.
You want to change the appearance of situations when they are displayed in the navigation tree.	1. Right-click an item in the navigation tree. 2. Select **Situations** in the menu. The Situation Editor window is displayed. 3. Select the situation that you want to modify. 4. Use the **State** pull-down menu in the lower right of the window to set the status and appearance of the Situation when it triggers. **Note:** The **State** setting is not related to severity settings in IBM Tivoli Enterprise Console.
When a situation is triggered in the Event Log attribute group, it remains in the Situation Event Console as long as the event ID entry is present in the Event Log workspace. When this event ID entry is removed from the Event Log workspace on the Tivoli Enterprise Portal, the situation is also cleared even if the actual problem that caused the event is not resolved, and the event ID entry is also present in the Windows Event Viewer.	A timeout occurs on the cache of events for the NT Event Log group. Increase the cache time of Event Log collection to meet your requirements by adding the following variable and timeout value to the `KXXENV` file for the agent: CDP_NT_EVENT_LOG_CACHE_TIMEOUT=3600 This variable determines how long events from the NT Event Log are kept.

Problems with configuration of situations

Table 10 on page 132 lists problems that might occur with configuring situations.

This section provides information for troubleshooting for agents. Be sure to consult the *IBM Tivoli Monitoring Troubleshooting Guide* for more general troubleshooting information.

Table 10. Problems with configuring situations that you solve in the Situation Editor

Problem	Solution
Note: To get started with the solutions in this section, perform these steps: 1. Launch the Tivoli Enterprise Portal. 2. Click **Edit > Situation Editor**. 3. In the navigation tree, choose the agent whose situation you want to modify. 4. Choose the situation in the list. The Situation Editor view is displayed.	
The situation for a specific agent is not visible in the Tivoli Enterprise Portal.	Open the Situation Editor. Access the All managed servers view. If the situation is absent, confirm that the monitoring server has been seeded for the agent. If not, seed the server, as described in the *IBM Tivoli Monitoring Installation and Setup Guide.*
The monitoring interval is too long.	Access the Situation Editor view for the situation that you want to modify. Check the **Sampling interval** area in the **Formula** tab. Adjust the time interval as needed.
The situation did not activate at startup.	Manually recycle the situation as follows: 1. Right-click the situation and choose **Stop Situation**. 2. Right-click the situation and choose **Start Situation**. **Note:** You can permanently avoid this problem by placing a check mark in the **Run at Startup** option of the Situation Editor view for a specific situation.
The situation is not displayed.	Click the **Action** tab and check whether the situation has an automated corrective action. This action can occur directly or through a policy. The situation might be resolving so quickly that you do not see the event or the update in the graphical user interface.
An Alert event has not occurred even though the predicate has been properly specified.	Check the logs, reports, and workspaces.
A situation fires on an unexpected managed object.	Confirm that you have distributed and started the situation on the correct managed system.
The product did not distribute the situation to a managed system.	Click the **Distribution** tab and check the distribution settings for the situation.

Table 10. Problems with configuring situations that you solve in the Situation Editor (continued)

Problem	Solution
The situation does not fire.	This problem can be caused when incorrect predicates are present in the formula that defines the situation. For example, the managed object shows a state that normally triggers a monitoring event, but the situation is not true because the wrong attribute is specified in the formula. In the **Formula** tab, analyze predicates as follows: 1. Click the *fx* icon in the upper-right corner of the Formula area. The Show formula window is displayed. a. Confirm the following details in the **Formula** area at the top of the window: • The attributes that you intend to monitor are specified in the formula. • The situations that you intend to monitor are specified in the formula. • The logical operators in the formula match your monitoring goal. • The numeric values in the formula match your monitoring goal. b. (*Optional*) Select the **Show detailed formula** check box in the lower left of the window to see the original names of attributes in the application or operating system that you are monitoring. c. Click **OK** to dismiss the Show formula window. 2. (*Optional*) In the Formula area of the **Formula** tab, temporarily assign numeric values that immediately trigger a monitoring event. The triggering of the event confirms that other predicates in the formula are valid. **Note:** After you complete this test, you must restore the numeric values to valid levels so that you do not generate excessive monitoring data based on your temporary settings. See the *IBM Tivoli Monitoring Troubleshooting Guide* for additional information about situations that do not fire.

Table 11. Problems with configuration of situations that you solve in the Workspace area

Problem	Solution
Situation events are not displayed in the Events Console view of the workspace.	Associate the situation with a Navigator item. **Note:** The situation does not need to be displayed in the workspace. It is sufficient that the situation is associated with any Navigator item.
You do not have access to a situation.	**Note:** You must have administrator privileges to perform these steps. 1. Select **Edit** > **Administer Users** to access the Administer Users window. 2. In the **Users** area, select the user whose privileges you want to modify. 3. In the **Permissions** tab, **Applications** tab, and **Navigator Views** tab, select the permissions or privileges that correspond to the user role. 4. Click **OK**.
A managed system seems to be offline.	1. Select Physical View and highlight the Enterprise Level of the navigator tree. 2. Select **View** > **Workspace** > **Managed System Status** to see a list of managed systems and their status. 3. If a system is offline, check network connectivity and the status of the specific system or application.

Take Action commands troubleshooting

Table 12 on page 134 lists general problems that might occur with Take Action commands. When each Take Action command runs it generates the log file listed in Table 3 on page 116. This chapter provides agent-specific troubleshooting information.

See the *IBM Tivoli Monitoring Troubleshooting Guide* for general troubleshooting information.

Table 12. Take Action commands problems and solutions

Problem	Solution
Take Action commands often require several minutes to complete.	Allow several minutes. If you do not see a message advising you of completion, try to run the command manually.
Situations fail to trigger Take Action commands.	Attempt to manually run the Take Action command in the Tivoli Enterprise Portal. If the Take Action command works, look for configuration problems in the situation. See "Situation troubleshooting" on page 131. If the Take Action command fails, see *IBM Tivoli Monitoring Troubleshooting Guide* for general information about troubleshooting Take Action commands.

Support information

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

Online

The following sites contain troubleshooting information:

- Go to the IBM Software Support site at http://www.ibm.com/software/support/probsub.html and follow the instructions.
- Go to the IBM Tivoli Distributed Monitoring and Application Management Wiki at http://www.ibm.com/developerworks/wikis/display/tivolimonitoring/Home. Feel free to contribute to this wiki.

IBM Support Assistant

The IBM Support Assistant (ISA) is a free local software serviceability workbench that helps you resolve questions and problems with IBM software products. The ISA provides quick access to support-related information and serviceability tools for problem determination. To install the ISA software, go to http://www.ibm.com/software/support/isa.

Appendix A. Accessibility

Accessibility features help users with physical disabilities, such as restricted mobility or limited vision, to use software products successfully. The major accessibility features in this product enable users to do the following:

- Use assistive technologies, such as screen-reader software and digital speech synthesizer, to hear what is displayed on the screen. Consult the product documentation of the assistive technology for details on using those technologies with this product.
- Operate specific or equivalent features using only the keyboard.
- Magnify what is displayed on the screen.

In addition, the product documentation was modified to include the following features to aid accessibility:

- All documentation is available in both HTML and convertible PDF formats to give the maximum opportunity for users to apply screen-reader software.
- All images in the documentation are provided with alternative text so that users with vision impairments can understand the contents of the images.

Navigating the interface using the keyboard

Standard shortcut and accelerator keys are used by the product and are documented by the operating system. See the documentation provided by your operating system for more information.

Magnifying what is displayed on the screen

You can enlarge information in the product windows using facilities provided by the operating systems on which the product is run. For example, in a Microsoft Windows environment, you can lower the resolution of the screen to enlarge the font sizes of the text on the screen. See the documentation provided by your operating system for more information.

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