IBM Tivoli Advanced Allocation Management for z/OS
Version 3.3

Monitoring Agent User's Guide

SC23-9819-02

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Note
Before using this information and the product it supports, read the information in Appendix D, "Notices," on page 79.

This edition applies to version 3.3 of IBM Tivoli Advanced Allocation Management for z/OS Monitoring Agent (product number 5697-P35) and to all subsequent releases and modifications until otherwise indicated in new editions.

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Chapter 1. Overview of the IBM Tivoli Advanced Allocation Management for z/OS Agent

The IBM Tivoli Advanced Allocation Management for z/OS Agent provides you with the capability to monitor IBM Tivoli Advanced Allocation Management, and to perform basic actions with IBM Tivoli Advanced Allocation Management. This chapter provides a description of the features, components, and interface options for the IBM Tivoli Advanced Allocation Management for z/OS Agent.

IBM Tivoli Monitoring overview

IBM Tivoli Monitoring is the base software for the IBM Tivoli Advanced Allocation Management for z/OS 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 75 for complete information about IBM Tivoli Monitoring and the Tivoli Enterprise Portal.

Features of the monitoring agent

The IBM Tivoli Advanced Allocation Management for z/OS 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
- Event management
- Operations management

Functions of the monitoring agent

The IBM Tivoli Advanced Allocation Management for z/OS Agent provides the following functions:

IBM® Tivoli® Advanced Allocation Management
Provides monitoring of the Advanced Allocation Management environment

(event activity and event analysis). The information provided includes a subsystem summary, summary by event type, event detail, and SMS information about Advanced Allocation Management events.

New in this release

For version 3.3 of the IBM Tivoli Advanced Allocation Management for z/OS Agent, the following enhancements have been made since version 6.1, including the fix packs:

- Updated version of IBM Tivoli Monitoring as listed in "Requirements for the monitoring agent" on page 5
- New or changed attributes in the following attribute groups:
  - Event Data
  - Performance Object Status
  - Product Action Log
  - Subsystem Query
- ACTIVATE_CURVARD Take Action command

Components of the IBM Tivoli Monitoring environment

After you install and set up the IBM Tivoli Advanced Allocation Management for z/OS Agent, you have an environment that contains the client, server, and monitoring agent implementation for IBM Tivoli Monitoring that contains the following components:

- Tivoli Enterprise Portal client with 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.

IBM Tivoli Enterprise Console is an optional component, which acts as a central collection point for events from a variety of sources, including those 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.

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.

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.

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 already designated to start automatically.

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 Advanced Allocation Management for z/OS Agent, and agent-specific information related to installation and configuration of the agent.

To install and configure the IBM Tivoli Advanced Allocation Management for z/OS 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 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 Advanced Allocation Management for z/OS Agent has the following requirements:

- The monitoring agent runs on any of these operating systems:
  - z/OS®

  If running this monitoring agent on a Windows operating system, the User ID must have Administrator privileges.

  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:
  - IBM Tivoli Advanced Allocation Management 3.3
- 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.
- The monitoring agent must be connected to the following software:
  - IBM Tivoli Monitoring V6.2.3

  After you install the prerequisite software, install the following software, which is required for the IBM Tivoli Advanced Allocation Management for z/OS Agent to operate:
  - IBM Tivoli Advanced Allocation Management for z/OS Agent
  - IBM Tivoli Advanced Allocation Management for z/OS Agent for Tivoli Enterprise Monitoring Server support
  - IBM Tivoli Advanced Allocation Management for z/OS Agent for Tivoli Enterprise Portal Server support
  - IBM Tivoli Advanced Allocation Management for z/OS Agent for Tivoli Enterprise Portal Desktop Client support

– IBM Tivoli Advanced Allocation Management for z/OS Agent for Tivoli Enterprise Portal Browser Client support

Installing language packs

To install a language pack, first make sure that you have already 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: Usually 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 the Tivoli Enterprise Portal Desktop Client, Tivoli Enterprise Portal Server, 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 just 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. Usually 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: Usually, 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 the Tivoli Enterprise Portal Desktop Client, Tivoli Enterprise Portal Server, and Eclipse Help Server if any of these components are installed.

Configuring the monitoring agent after installation

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 Advanced Allocation Management for z/OS Agent.

No special setup is necessary to manage this application.

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.

Remote installation and configuration

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

See the **tacmd describeSystemType** section in the *IBM Tivoli Monitoring Command Reference* for information on 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 configuration for Windows operating systems:

```
tacmd addSystem -t RJ -n Primary:sample.node.name:NT
-p
```

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. At the left of the workspace is a Navigator that you use 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.

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 of the attributes available in the attribute group.

More information about workspaces

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

For a list of the predefined workspaces for this monitoring agent and a description of each workspace, refer to 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 Advanced Allocation Management for z/OS Agent provides the following predefined workspaces, which are organized by Navigator item.

- IBM Tivoli Advanced Allocation Management Navigator item
  - IBM Tivoli Advanced Allocation Management workspace
- Event Data Navigator item
  - Event Analysis workspace
  - Event Data workspace
- Product Action Log Navigator item

  - Filtered Product Action Log workspace
  - Product Action Log workspace
- Subsystem Query Navigator item
  - Subsystem Errors Recovered workspace
  - Subsystem Query workspace
  - Subsystem Statistics 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.

IBM Tivoli Advanced Allocation Management Navigator item

IBM Tivoli Advanced Allocation Management workspace
The IBM Tivoli Advanced Allocation Management for z/OS workspace provides subsystem summaries, summaries by event type, event details, and SMS information about Advanced Allocation Management events.

Event Data Navigator item

Event Analysis workspace
The Event Analysis workspace provides SMS information about Advanced Allocation Management events.

This workspace contains the following views:

Data Class Summary
SMS data class summary.

Storage Class Summary
SMS storage class summary.

Mgmt Class Summary
SMS management class summary.

Storage Group Summary
SMS storage group summary.

Data Set Name Summary
Data set name summary.

ITAAM Event Detail
Detailed information per event.

Event Data workspace
The Event Activity workspace provides a subsystem summary, summary by event type, and event detail.

This workspace contains the following views:

Subsystem Summary
Events summarized by subsystem.

ITAAM Summary by Event Type
Events summarized by event type.

ITAAM Event Detail
Detailed information per event.

Product Action Log Navigator item

Filtered Product Action Log workspace
The Filtered Product Action Log provides information on actions that have occurred

This workspace contains the following views:

Filtered Product Action Log
Filtered Product Action Log details.

Events with Non-Zero Return Code
Events with Non-Zero Return Code.

Product Action Log workspace
The Product Action Log provides information on actions that have occurred.

This workspace contains the following views:

Product Action Log
Product Action Log details.

Events with Non-Zero Return Code
Events with Non-Zero Return Code.

Subsystem Query Navigator item

Subsystem Errors Recovered workspace
The Subsystem Query workspace provides information about errors recovered on a specific subsystem.

This workspace contains the following view:

Subsystem Errors Recovered
Information on errors recovered for a subsystem.

Subsystem Query workspace
The Subsystem Query workspace provides basic information about specific subsystems.

This workspace contains the following view:

Subsystem Query Details
Query details on subsystems.

Subsystem Statistics workspace
The Subsystem Query workspace provides statistical information about specific subsystems.

This workspace contains the following view:

Subsystem Statistics
Statistical information for a subsystem.

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 being measured and reported by the IBM Tivoli Advanced Allocation Management for z/OS 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 Advanced Allocation Management for z/OS 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 *IBM Tivoli Monitoring 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 Advanced Allocation Management for z/OS 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 Tivoli Data Warehouse. If the maximum name is 30 characters, then any warehouse table name longer than 30 characters is shortened to the table name.

- Attribute group name: Event Data
  - Table name: KRJACTREC
  - Warehouse table name: KRJ_EVENT_DATA or KRJACTREC
- Attribute group name: Performance Object Status
  - Table name: KRJPOBJST

  - Warehouse table name: KRJ_PERFORMANCE_OBJECT_STATUS or KRJPOBJST
- Attribute group name: Product Action Log
  - Table name: KRJZZAOPAL
  - Warehouse table name: KRJ_PRODUCT_ACTION_LOG or KRJZZAOPAL
- Attribute group name: Subsystem Query
  - Table name: KRJAOSUBQU
  - Warehouse table name: KRJ_SUBSYSTEM_QUERY or KRJAOSUBQU

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 and 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.

Event Data attribute group

This attribute group provides Event Data.

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 Data 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 Timestamp

Warehouse name
TIMESTAMP

Record Time attribute

Description
Record time on host machine.

Type Timestamp

Warehouse name
GLORECTME

SMF ID attribute

Description
SMF system ID.

Type String

Warehouse name
GLORECSID

Record Subtype attribute

Description
Activity of the record subtype.

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:

- N/A (0)
- Subsystem Activity (1)
- Processing Activity (2)

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

Warehouse name
GLORECSTP1 or G

Subsystem attribute

Description
The active Advanced Allocation Management subsystem.

Type String

Warehouse name
GLORECSSN

Started Task attribute

Description
The name of the Advanced Allocation Management started task that is associated with the Subsystem ID.

Type String

Warehouse name
GLORECSTC

Active Options Member attribute

Description
Contains the Advanced Allocation Management subsystem options.

Type String

Warehouse name
GLORECSOM

Control Dataset attribute

Description
The name of the control data set that contains user-defined processing definitions.

Type String

Warehouse name
GLORECSCD

Subsystem Enabled attribute

Description
The current status of the subsystem.

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 (0)
- Yes (1)

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

Warehouse name
GLORECSF1

Product Intercepts Enabled attribute

Description
Indicates if intercepts are enabled on the subsystem.

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 (0)
- Yes (1)

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

Warehouse name
GLORECSF2

Job attribute

Description
Job, started task, TSO user or APPC transaction name.

Type String

Warehouse name
GLORECJBN

Step attribute

Description
Step name.

Type String

Warehouse name
GLORECSTN

Procedure Step attribute

Description
Procedure step name.

Type String

Warehouse name
GLORECPST

Job Step Program attribute

Description
Job step program.

Type String

Warehouse name
GLORECPGM

Dataset attribute

Description
Dataset name.

Type String

Warehouse name
GLORECDSN

DD attribute

Description
DD name.

Type String

Warehouse name
GLORECDDN

Unit of Work Type attribute

Description
Unit of work type.

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:

- N/A (0)
- Job (1)
- Started Task (2)
- TSO User (3)
- APPC Transaction (4)

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

Warehouse name
GLORECAST1

Dataset Organization attribute

Description
Dataset organization.

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:

- N/A (0)
- Physical Sequential (1)
- Partitioned (2)
- Direct Access (3)
- VSAM (4)
- Non-VSAM (5)
- Innovation_Access_Method_(IAM) (6)

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

Warehouse name
GLORECDSG1

VSAM Data Set Type attribute

Description
Type of VSAM data set.

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:

- N/A (0)
- Key-sequenced (1)
- Entry-sequenced (2)
- Relative-record (3)
- Linear (4)

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

Warehouse name
GLORECDS2

SMS Managed attribute

Description
Indicates whether or not the data set is SMS managed.

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 (0)
- YES (1)

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

Warehouse name
GLORECDSM

Temporary Dataset attribute

Description
Temporary dataset.

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 (0)

- YES (1)

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

Warehouse name
GLORECDTD

Status Disposition attribute

Description
Dataset status disposition.

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:

- N/A (0)
- NEW (1)
- SHR (2)
- OLD (3)
- MOD (4)

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

Warehouse name
GLORECSDP1

Normal Disposition attribute

Description
Normal dataset disposition.

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:

- N/A (0)
- PASS (1)
- KEEP (2)
- DELETE (3)
- CATLG (4)
- UNCATLG (5)

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

Warehouse name
GLORECNDP1

Abnormal Disposition attribute

Description
Abnormal dataset disposition.

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:

- N/A (0)
- KEEP (1)
- DELETE (2)

- CATLG (3)
- UNCATLG (4)

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

Warehouse name
GLORECADP

SMS Data Class attribute

Description
SMS data class name.

Type String

Warehouse name
GLORECSDC

SMS Storage Class attribute

Description
SMS storage class name.

Type String

Warehouse name
GLORECSSC

SMS Management Class attribute

Description
SMS management class name.

Type String

Warehouse name
GLORECSMC

First SMS Storage Group attribute

Description
First, or only, SMS storage group name.

Type String

Warehouse name
GLORECSSG

Event Processed attribute

Description
Event processed.

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:

- N/A (0)
- Insufficient initial primary space recovered (1)
- Insufficient subsequent primary space recovered (2)
- Secondary space required, but none specified recovered (3)
- Insufficient secondary space recovered (4)
- Secondary allocation space failure recovered (5)
- Excessive secondary extent recovered (6)

- Insufficient volumes recovered (7)
- Insufficient PDS directory blocks (8)
- Space release added to allocation (9)
- NOTCAT2 JCLFAIL processed (10)
- Data Set initialized (11)
- NOTCAT2 ABEND processed (12)
- NOTCAT2 SCRATCH processed (13)
- NOTCAT2 RENAME processed (14)
- NOTCAT2 UNCATALOG processed (15)
- TERM_ALLOC processing (16)
- EAM Processing (17)

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

Warehouse name
GLORECEVNT1

NOTCAT2 Process Point attribute

Description
NOTCAT2 process point.

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:

- Allocation (0)
- Step termination (1)

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

Warehouse name
GLORECNCTT

Test Mode attribute

Description
Indicates if RULEDEF_TEST mode is active.

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 (0)
- YES (1)

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

Warehouse name
GLORECRTST

Tracks Released attribute

Description
Number of tracks released for space release.

Type Integer (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:

- 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
GLORECTRKR

NOTCAT2 Error Volume attribute

Description
If NOTCAT2, first volser of volume in error.

Type String

Warehouse name
GLORECNCTV

NOTCAT2 New Volume attribute

Description
If NOTCAT2, first volser of new data set.

Type String

Warehouse name
GLORECNCTO

ABEND Code attribute

Description
Abend code for NOTCAT2.

Type Integer (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:

- 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
GLORECNCCD

NOTCAT2 New Dataset attribute

Description
New data set name for NOTCAT2_RENAME.

Type String

Warehouse name
GLORECNCNM

Rule Line Number attribute

Description
Line number of matching RULEDEF.

Type Integer (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:

- 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
GLORECLINE

Quantity Set attribute

Description
Quantity set for space-related actions.

Type Integer (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:

- 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
GLORECSPCQ

Unit Type attribute

Description
Unit type for space-related actions.

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:

- N/A (0)
- CYLS (1)
- TRACKS (2)
- BLOCKS (3)
- RECORDS (4)
- K-BYTES (5)
- M-BYTES (6)
- SCALED to 'M' units (7)
- SCALED to 'K' units (8)

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

Warehouse name
GLORECSPCF1

Volume Serial attribute

Description
Volume Serial of the volume added.

Type String

Warehouse name
GLORECVLAD

Count attribute

Description
Event Count.

Type Integer (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:

- 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
GLORECCOUNT or G

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 Timestamp

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_LAUNCH_ERROR (53)
- CONF_FILE_DOES_NOT_EXIST (54)
- CONF_FILE_ACCESS_DENIED (55)
- 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)
- SNMP_MISSING_PASSWORD (65)
- DISABLED (66)

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

Warehouse name
ERROR_CODE or ERRCODE

Product Action Log attribute group

This attribute group provides Advanced Allocation Management Take Action Information.

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 Product Action Log 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 Timestamp

Warehouse name
TIMESTAMP

Time of Occurrence attribute

Description
Time when the action occurred.

Type Timestamp

Warehouse name
ACTTSTMP

Mainframe User ID attribute

Description
Mainframe User ID used for executing the task.

Type String

Warehouse name
MUSER2

Intercept Status attribute

Description
Intercepts Status - enabled or disabled.

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:

- Disable (0)
- Enable (1)

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

Warehouse name
INTSTAT

Subsystem attribute

Description
Subsystem ID to be updated.

Type String

Warehouse name
SSID

Subsystem Status attribute

Description
Status of subsystem - enabled or disabled.

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:

- Disable (0)
- Enable (1)

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

Warehouse name
SSSTAT

Event attribute

Description
The event that occurred as a result of the action.

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:

- Subsystem Initialized (1)
- Subsystem Terminated (2)
- Subsystem Enabled (3)
- Subsystem Disabled (4)
- RULEDEF Activated (5)
- VGRPDEF Activated (6)
- Product Intercepts Enabled (7)
- Product Intercepts Disabled (8)
- CURVAR_Activated (9)

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

Warehouse name
EVENT1

RULEDEF attribute

Description
Name of RULEDEF to activate.

Type String

Warehouse name
ACTRDEF

VGRPDEF attribute

Description
Name of VGRPDEF to activate.

Type String

Warehouse name
ACTVDEF

VARDEF attribute

Description
Name of VARDEF to activate.

Type String

Warehouse name
ACTVADEF

Request Return Code attribute

Description
Return Code of the request issued.

Type Integer (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:

- 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
RC

ACTVADEF attribute

Description
Name of VARDEF to activate.

Type String

Warehouse name
ACTVADEF

MUSER2 attribute

Description
Mainframe User ID used for executing the task.

Type String.

Warehouse name
MUSER2

EVENT1 attribute

Description
The event that occurred as a result of the action.

Type Integer.

- Subsystem_Initialized (1)
- Subsystem_Terminated (2)
- Subsystem_Enabled (3)
- Subsystem_Disabled (4)
- RULEDEF_Activated (5)
- VGRPDEF_Activated (6)
- Product_Intercepts_Enabled (7)
- Product_Intercepts_Disabled (8)
- CURVAR_Activated (9)

Warehouse name
EVENT1

Subsystem Query attribute group

This attribute group provides information about Subsystem Query

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 Subsystem Query 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 Timestamp

Warehouse name
TIMESTAMP

Subsystem attribute

Description
Subsystem name for the particular query.

Type String

Warehouse name
SSID

Subsystem Active attribute

Description
Indicates if the particular subsystem is current active.

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 (0)
- Yes (1)

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

Warehouse name
SSACTIVE

Subsystem Enabled attribute

Description
Indicates if the particular subsystem is enabled.

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 (0)
- Yes (1)

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

Warehouse name
SSENABLE

Version Number attribute

Description
Version Number.

Type Integer (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:

- 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
VERNUM

Release Number attribute

Description
Release Number.

Type Integer (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:

- 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
RELNUM

SMF RECID attribute

Description
SMF RECID for SMF Recording.

Type Integer (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:

- 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
SMFID

Started Task Name attribute

Description
Started task name for this query.

Type String

Warehouse name
STCNAME

Options Member attribute

Description
Options Member.

Type String

Warehouse name
OPTSMBR

Active RULEDEF attribute

Description
Active RULEDEF for this subsystem.

Type String

Warehouse name
ACTRDEF

RULEDEF Activation Time attribute

Description
Activation time for the RULEDEF.

Type Timestamp

Warehouse name
RDACTTM

Active VGRPDEF attribute

Description
Active volume group definition for this subsystem.

Type String

Warehouse name
ACTVDEF

VGRPDEF Activation Time attribute

Description
Activation time for the volume group definition.

Type Timestamp

Warehouse name
VDACTTM

Active VARDEF attribute

Description
Active variable definition for this subsystem.

Type String

Warehouse name
AVARDEF

VARDEF Activation Time attribute

Description
Activation time for the variable definition.

Type Timestamp

Warehouse name
VAACTTM

Control DSN attribute

Description
Control data set name for this subsystem.

Type String

Warehouse name
CNTLDSN

Insufficient Primary Space attribute

Description
Number of insufficient primary space available conditions recovered.

Type Integer (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:

- 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
RECIPSA

Subsequent Insufficient Primary Space attribute

Description
Number of subsequent insufficient primary space available conditions recovered.

Type Integer (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:

- 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
RECSPSA

Secondary Space Required attribute

Description
Number of secondary space required, but none specified conditions recovered.

Type Integer (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:

- 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
RECNSSS

Insufficient Secondary Space attribute

Description
Number of insufficient secondary space available conditions recovered.

Type Integer (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:

- 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
RECISAR

Secondary Space Allocation Failure attribute

Description
Number of secondary space allocation failure conditions recovered.

Type Integer (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:

- 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
RECISAT

Excessive Secondary Extent attribute

Description
Number of excessive secondary extent conditions recovered.

Type Integer (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:

- 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
RECESE

Insufficient Volumes Available attribute

Description
Number of insufficient volumes available condition recovered.

Type Integer (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:

- 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
RECIVA

Insufficient PDS Directory Blocks Available attribute

Description
Number of insufficient PDS directory blocks available conditions recovered.

Type Integer (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:

- 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
RECIDBA

Space Release Count attribute

Description
Number of times space release was added to an allocation.

Type Integer (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:

- 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
RECSREL

Tracks Recovered attribute

Description
Number of tracks recovered by adding space release.

Type Integer (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:

- 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
RECTRKR

NOTCAT2 Errors attribute

Description
Number of NOTCAT2 errors recovered via JCLFAIL.

Type Integer (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:

- 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
RECNCTJ

Data Set Initialized attribute

Description
Number of data sets initialized.

Type Integer (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:

- 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
RECDSIN

RULEDEF TEST Matches attribute

Description
Number of RULEDEF_TEST matches.

Type Integer (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:

- 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
RECRTST

AVS Function Calls attribute

Description
Number of AVS function calls.

Type Integer (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:

- 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
RECAVSA

Field Processed by EAM attribute

Description
Number of field processed by EAM.

Type Integer (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:

- 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
RECEAMA

Data Set Allocations Failed attribute

Description
Number of data set allocations failed by TERM_ALLOC.

Type Integer (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:

- 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
RECTRMA

Start Time attribute

Description
Starting timestamp for the current statistics count.

Type Timestamp

Warehouse name
RECSTAD

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 whose historical data is being collected. Required disk storage is an important factor to consider 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.
- *Attribute group* is the name of the attribute group as it is displayed in the warehouse configuration panel.
- *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 those 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 Advanced Allocation Management.

Table 1. Capacity planning for historical data logged by IBM Tivoli Advanced Allocation Management

Table	Attribute group	Bytes per instance (agent)	Database bytes per instance (warehouse)	Aggregate bytes per instance (warehouse)
KRJACTREC	KRJ_EVENT_DATA	418	454	566
KRJPOBJST	KRJ_PERFORMANCE_OBJECT_STATUS	288	289	326
KRJZZAOPAL	KRJ_PRODUCT_ACTION_LOG	136	141	193
KRJAOSUBQU	KRJ_SUBSYSTEM_QUERY	288	314	636

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 are delivered with a set of predefined situations that you can use as-is or you can 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 Advanced Allocation Management for z/OS Agent. You can examine and, if necessary, change the conditions or values being monitored by a predefined situation to those 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 new 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 of the IBM Tivoli Advanced Allocation Management for z/OS 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

IBM Tivoli Monitoring 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.

- IBM Tivoli Advanced Allocation Management
  - Not applicable
- Event Data
  - Not applicable
- Product Action Log
  - Not applicable
- Subsystem Query
  - Not applicable

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 1 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.

IBM Tivoli Advanced Allocation Management Navigator item

There are no predefined situations for this Navigator item.

Event Data Navigator item

There are no predefined situations for this Navigator item.

Product Action Log Navigator item

There are no predefined situations for this Navigator item.

Subsystem Query Navigator item

There are no predefined situations for this Navigator item.

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, Tivoli Enterprise Portal receives return code feedback, and advanced automation logic responds with subsequent activities prescribed by the feedback.

A basic Take Action command displays 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 *IBM Tivoli Monitoring 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:

- ACTIVATE_RULEDEFS
- ACTIVATE_VGRPDEFS
- ACTIVATE_CURVARD

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

ACTIVATE_RULEDEFS action

Description

Activate the specified RULEDEFS.

System command

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

```
ACTIVATE_RULEDEFS \

   [SSID]

   [ACTRDEF]
```

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

```
ACTIVATE_RULEDEFS \

[&{SSID}] \

[&{ACTRDEF}]
```

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

```
ACTIVATE_RULEDEFS \

[&WaitOnSituation:SSID] \

[&WaitOnSituation:ACTRDEF]
```

Arguments

- **Name:** SSID
  Description: Subsystem ID
  Default:
- **Name:** ACTRDEF
  Description: RULEDEFS to be activated
  Default:

Return codes

- **Return Code:** 0
  Return Code Type: OK
  Operating systems: Linux 2.4 (Intel), Windows
  Message ID: KRJ0000I
  Message: `The RULEDEFS update was successfully requested`
- **Return Code:** 4
  Return Code Type: INSUFFICIENT_USER_AUTHORITY
  Operating systems: Linux 2.4 (Intel), Windows
  Message ID: KRJ0004E
  Message: `User ID Translation failed.`
- **Return Code:** 8
  Return Code Type: GENERAL_ERROR

Operating systems: Linux 2.4 (Intel), Windows
Message ID: KRJ0008E
Message: `Bad Parameter List.`

- **Return Code:** 1
  Return Code Type: NOT_RUNNING
  Operating systems: Linux 2.4 (Intel), Windows
  Message ID: KRJ0012S
  Message: `Bad KRS Environment.`

ACTIVATE_VGRPDEFS action

Description

Activate the specified VGRPDEFS.

System command

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

```
ACTIVATE_VGRPDEFS \

   [SSID]

   [ACTVDEF]
```

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

```
ACTIVATE_VGRPDEFS \

[&{SSID}] \

[&{ACTVDEF}]
```

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

```
ACTIVATE_VGRPDEFS \

[&WaitOnSituation:SSID] \

[&WaitOnSituation:ACTVDEF]
```

Arguments

- **Name:** SSID
  Description: Subsystem ID
  Default:
- **Name:** ACTVDEF
  Description: VGRPDEFS to be activated
  Default:

Return codes

- **Return Code:** 0
  Return Code Type: OK
  Operating systems: Linux 2.4 (Intel), Windows
  Message ID: KRJ0001I
  Message: `The VGRPDEFS update was successfully requested.`
- **Return Code:** 4

Return Code Type: INSUFFICIENT_USER_AUTHORITY
Operating systems: Linux 2.4 (Intel), Windows
Message ID: KRJ0004E
Message: `User ID Translation failed.`

- **Return Code:** 8
  Return Code Type: GENERAL_ERROR
  Operating systems: Linux 2.4 (Intel), Windows
  Message ID: KRJ0008E
  Message: `Bad Parameter List.`
- **Return Code:** 1
  Return Code Type: NOT_RUNNING
  Operating systems: Linux 2.4 (Intel), Windows
  Message ID: KRJ0012S
  Message: `Bad KRS Environment.`

ACTIVATE_CURVARD action

Description

Activate the specified CURVARD.

System command

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

```
ACTIVATE_CURVARD \

   [SSID]

   [CURVARD]
```

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

```
ACTIVATE_CURVARD \

[&{SSID}] \

[&{CURVARD}]
```

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

```
ACTIVATE_CURVARD \

[&WaitOnSituation:SSID] \

[&WaitOnSituation:CURVAR]
```

Arguments

- **Name:** SSID
  Description: Subsystem ID
  Default:
- **Name:** CURVARD
  Description: CURVARD to be activated
  Default:

Return codes

- **Return Code:** 0
  Return Code Type: OK
  Operating systems: Linux 2.4 (Intel), Windows
  Message ID: KRJ0001I
  Message: `The CURVARD update was successfully requested.`
- **Return Code:** 4
  Return Code Type: INSUFFICIENT_USER_AUTHORITY
  Operating systems: Linux 2.4 (Intel), Windows
  Message ID: KRJ0004E
  Message: `User ID Translation failed.`
- **Return Code:** 8
  Return Code Type: GENERAL_ERROR
  Operating systems: Linux 2.4 (Intel), Windows
  Message ID: KRJ0008E
  Message: `Bad Parameter List.`
- **Return Code:** 1
  Return Code Type: NOT_RUNNING
  Operating systems: Linux 2.4 (Intel), Windows
  Message ID: KRJ0012S
  Message: `Bad KRS Environment.`

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 *IBM Tivoli Monitoring 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 Advanced Allocation Management for z/OS 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 68 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 54 for lists of all trace log files and their locations. See the *IBM Tivoli Monitoring User's Guide* for general information about the IBM Tivoli Monitoring environment.
IBM Tivoli Advanced Allocation Management 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 Advanced Allocation Management for z/OS Monitoring 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 *install_dir*/bin directory, where *install_dir* is the directory where you installed the monitoring agent.

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 Advanced Allocation Management for z/OS Agent is logging. *Logging* refers to the text messages and trace data generated by the IBM Tivoli Advanced Allocation Management for z/OS 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" on page 54 for more information.

Problem classification

The following types of problems might occur with the IBM Tivoli Advanced Allocation Management for z/OS 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, as well as describing 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 55
- "Examples: using trace logs" on page 56
- "Setting RAS trace parameters" on page 57

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 55 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 Advanced Allocation Management, the product code is rj.
- *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.

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.
	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.
	The name of the RAS log file is as follows: • **Windows:** *install_dir*\logs\ *hostname*_ms_*timestamp-nn*.log • **UNIX:** *install_dir*/logs/ hostname_productcode_timestamp.log **Note:** File names for RAS1 logs include a hexadecimal time stamp. Also on UNIX, 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.
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, 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.
	The teps_odbc.log file is located in the following path • **Windows**: *install_dir*\InstallITM path. • **UNIX**: *install_dir*/logs	When you enable historical reporting, this log file traces the status of the warehouse proxy agent.

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

System where log is located	File name and path	Description
	The agent operations log files are as follows: *instance_hostname*_RJ.LG0 is the current log created when the agent was started *instance_hostname*_RJ.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 • **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.
	The Take Action command log files are as follows: • *host*_rj_*takeactioncommand*.log The logs are in the following directories: • **Windows:** *install_dir*\tmaitm6\logs • **UNIX:** *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 host 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, though the first is always retained, because it includes configuration parameters. *productcode* specifies the product codes, for example, um for Universal Agent or nt for Windows.		

See the *IBM Tivoli Monitoring Installation and Setup Guide* for more information on 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:RJ is ON-LINE.
. . .
(42C3079B.0000-6A4:kpxreqhb.cpp,644,"HeartbeatInserter") Remote node SERVER5B:RJ is OFF-LINE.
```

Key points regarding the preceding excerpt:

- The monitoring server appends the **RJ** product code to the server name to form a unique name (`SERVER5B:RJ`) for this instance of the IBM Tivoli Advanced Allocation Management for z/OS Agent. This unique name enables you to 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, 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 pop-up menu. For example, if you want to view the trace log of the IBM Tivoli Advanced Allocation Management 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 Advanced Allocation Management for z/OS Agent uses RAS1 tracing and generates the logs described in Table 3 on page 55. The default RAS1 trace level is ERROR.

Before you begin

See "Overview of log file management" on page 54 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 to 60 MB for each agent that is running on a computer. For example, each database instance that you monitor can generate 45 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 55 that include a process ID number (PID).

Consider using 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 them 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 whose 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)`

     Notes®: 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 them 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\KRJENV

   UNIX: *install_dir*/config/rj.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.

Problems and workarounds

The following sections provide symptoms and workarounds for problems that might occur with the IBM Tivoli Advanced Allocation Management for z/OS Agent:

- "Installation and configuration troubleshooting" on page 59
- "Remote deployment troubleshooting" on page 61
- "Agent troubleshooting" on page 62
- "Workspace troubleshooting" on page 63
- "Situation troubleshooting" on page 65

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 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 already 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 UNIX.	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 already installed.
A problem can arise when you install and configure a new monitoring agent to a computer where other agents are running as described in this example: • Agents are running on 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 re-configured 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 on 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 is not able to 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 KRJCMA 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 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 off-loaded and a data transfer between memory and the network card can continue without using CPU processing power. Bus-mastering cards are generally 32-bit and are based on PCI or EISA bus architectures.

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, 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*.

Remote deployment troubleshooting

Table 6 on page 62 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.

Table 6. Remote deployment problems and solutions

Problem	Solution
While you are using the remote deployment feature to install the IBM Tivoli Advanced Allocation Management for z/OS 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 on the remote deployment feature.)	Do not close or modify this window. It is part of the installation process and is dismissed automatically.
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 57. The trace options settings that you can set on the `KBB_RAS1=` and `KDC_DEBUG=` lines potentially generate large amounts of data.
When using the F1 key or selecting Help --> Contents and Index, you receive a message in your Microsoft Internet Explorer browser which states, "It seems javascript is disabled in your browser, please enable it and reload again, or click here to view without javascript." If you select 'here', the Tivoli Enterprise Portal V6.1 Help is displayed, but the agent help is not.	Ensure that the local site is added to the trusted site for the browser, and then enable the javascript.
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 desired protocol (or delivery mechanism) for RPCs. "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 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) provided that 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 that 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 that 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 EPHEMERAL IP.PIPE. (This 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 64 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. Do the following 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 tool bar 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 Web site to enable the **PerfProc** performance object: `http://www.microsoft.com/windows2000/techinfo /reskit/tools/existing /exctrlst-o.asp` 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 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.
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 on 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. Be aware that 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.

Table 8. Workspace problems and solutions (continued)

Problem	Solution
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.
Navigator items and workspace titles are labeled with internal names such as `Kxx:XXX0000` or `Kxx:XXX0000` rather than the correct names (such as Disk), where XX and xx represent the two character agent code.	Ensure 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 57. 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 39 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 Linux, a 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 **% Memory Free** attribute and avoid the need for math operators.

Table 9. General situation problems and solutions (continued)

Problem	Solution
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 pop-up 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.	There is a timeout 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 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 tree view, 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.

Table 10. Problems with configuring situations that you solve in the Situation Editor (continued)

Problem	Solution
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.
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 numerical values in the formula match your monitoring goal. b. (*Optional*) Click 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 numerical 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 numerical 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 workspace. **Note:** The situation does not need to be displayed in the workspace. It is sufficient that the situation be associated with any workspace.
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**.

Table 11. Problems with configuration of situations that you solve in the Workspace area (continued)

Problem	Solution
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 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 55. 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 pop-up 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 65. If the Take Action command fails, see *IBM Tivoli Monitoring Troubleshooting Guide* for general information on troubleshooting Take Action commands.

Tivoli Common Reporting troubleshooting

For information about troubleshooting for the Tivoli Common Reporting tool, see http://publib.boulder.ibm.com/infocenter/tivihelp/v3r1/topic/com.ibm.tivoli.tcr.doc/tcr_welcome.html.

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
Go to the IBM Software Support site at http://www.ibm.com/software/support/probsub.html and follow the instructions.

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.

Informational, warning, and error messages

This chapter introduces message logging and explains how to gather information from those logs.

Message logging refers to the text and numeric messages created by the software. These messages relay information about how the system or application is performing and can alert you to exceptional conditions when they occur. Messages are sent to an output destination, such as a file, database, or console screen.

If you receive a warning or error message, you can do one of the following:

- Follow the instructions listed in the Detail window of the message if this information is included there.
- Consult the message details listed in this chapter to see what action you can take to correct the problem.
- Consult the message log for message ID and text, time and date of the message, as well as other data you can use to diagnose the problem.

Message format

IBM Tivoli Advanced Allocation Management for z/OS Agent messages have the following format:

Message ID and text
Explanation
Operator Response

The message ID has the following format:

`CCC####severity`

where:

CCC Prefix that indicates the component to which the message applies. The component is one of the following:

KRJ General IBM Tivoli Advanced Allocation Management for z/OS Agent messages

Number of the message

severity
Severity of the message. There are three levels of severity:

I Informational messages provide feedback about something that happened in the product or system that might be important. These messages can provide guidance when you are requesting a specific action from the product.

W Warning messages call your attention to an exception condition. The condition might not be an error but can cause problems if not resolved.

E Error messages indicate that an action cannot be completed because of a user or system error. These messages require user response.

The *Text* of the message provides a general statement regarding the problem or condition that occurred. The *Explanation* provides additional information about the message and what might have caused the condition. The *Operator Response* provides actions to take in response to the condition, particularly for error messages (messages with the "E" suffix).

Note: Many message texts and explanations contain variables, such as the specific name of a server or application. Those variables are represented in this chapter as symbols, such as "&1." Actual messages contain values for these variables.

This chapter includes the messages for the following software:

- IBM Tivoli Advanced Allocation Management for z/OS Agent

IBM Tivoli Advanced Allocation Management for z/OS Agent messages

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KRJ5030I This is a sample message.

Explanation: Explanation of the message.

Operator response: None.

KRJ0000I The RULEDEFS update was successfully requested

Explanation: A RULEDEFS update was requested.

Operator response: None.

KRJ0001I The VGRPDEFS update was successfully requested.

Explanation: A VGRPDEFS update was requested.

Operator response: None.

KRJ0004E User ID Translation failed.

Explanation: An invalid User ID was used for the Take Action

Operator response: Check to make sure the user ID being used has sufficient authority for the Take Action to be used.

KRJ0008E Bad Parameter List.

Explanation: Parameter list is invalid.

Operator response: Check to make sure the parameters used are valid.

KRJ0012S Bad KRS Environment.

Explanation: The invalid KRS environment was encountered.

Operator response: Check to make sure the KRS environment is up and running.

Appendix A. IBM Tivoli Enterprise Console event mapping

Each event class corresponds to an attribute group in the IBM Tivoli Enterprise Console. For a description of the event slots for each event class, see the lists in this appendix. For more information about mapping attribute groups to event classes, see the *IBM Tivoli Monitoring Administrator's Guide*.

Generic event mapping provides useful event class and attribute information for situations that do not have specific event mapping defined. BAROC files are found on the Tivoli Enterprise Monitoring Server in the installation directory in TECLIB (that is, *install_dir*/cms/TECLIB for Windows systems and *install_dir*/tables/*TEMS_hostname*/TECLIB for UNIX systems). IBM Tivoli Enterprise Console event synchronization provides a collection of ready-to-use rule sets that you can deploy with minimal configuration. Be sure to install IBM Tivoli Enterprise Console event synchronization to access the correct Sentry.baroc, which is automatically included during base configuration of IBM Tivoli Enterprise Console rules if you indicate that you want to use an existing rulebase. See the *IBM Tivoli Monitoring Installation and Setup Guide* for details.

Each of the event classes is a child of KRJ_Base and is defined in the krj.baroc (version 3.3) file. The KRJ_Base event class can be used for generic rules processing for any event from the IBM Tivoli Advanced Allocation Management.

For events generated by situations in the Event Data attribute group, Tivoli Enterprise Console® events are sent using the ITM_KRJ_EVENT_DATA class. This class contains the following slots:

- node: STRING
- timestamp: STRING
- glorectme: STRING
- glorecsid: STRING
- glorecstp: INTEGER
- glorecstp_enum: STRING
- glorecssn: STRING
- glorecstc: STRING
- glorecsom: STRING
- glorecscd: STRING
- glorecsf1: INTEGER
- glorecsf1_enum: STRING
- glorecsf2: INTEGER
- glorecsf2_enum: STRING
- glorecjbn: STRING
- glorecstn: STRING
- glorecpst: STRING
- glorecpgm: STRING
- glorecdsn: STRING
- glorecddn: STRING
- glorecast: INTEGER

- glorecast1: INTEGER
- glorecast_enum: STRING
- glorecdsg: INTEGER
- glorecdsg1: INTEGER
- glorecdsg_enum: STRING
- glorecds2: INTEGER
- glorecds2_enum: STRING
- glorecdsm: INTEGER
- glorecdsm_enum: STRING
- glorecdtd: INTEGER
- glorecdtd_enum: STRING
- glorecsdp: INTEGER
- glorecsdp1: INTEGER
- glorecsdp_enum: STRING
- glorecndp: INTEGER
- glorecndp1: INTEGER
- glorecndp_enum: STRING
- glorecadp: INTEGER
- glorecadp_enum: STRING
- glorecsdc: STRING
- glorecssc: STRING
- glorecsmc: STRING
- glorecssg: STRING
- glorecevnt: INTEGER
- glorecevnt1: INTEGER
- glorecevnt_enum: STRING
- glorecnctt: INTEGER
- glorecnctt_enum: STRING
- glorecrtst: INTEGER
- glorecrtst_enum: STRING
- glorectrkr: INTEGER
- glorecnctv: STRING
- glorecncto: STRING
- glorecnccd: INTEGER
- glorecncnm: STRING
- glorecline: INTEGER
- glorecspcq: INTEGER
- glorecspcf: INTEGER
- glorecspcf1: INTEGER
- glorecspcf_enum: STRING
- glorecvlad: STRING
- gloreccount: INTEGER

For events generated by situations in the Performance Object Status attribute group, Tivoli Enterprise Console events are sent using the ITM_KRJ_PERFORMANCE_OBJECT_STATUS class. This class contains the following slots:

- node: STRING
- timestamp: STRING
- query_name: STRING
- object_name: STRING
- object_type: INTEGER
- object_type_enum: STRING
- object_status: INTEGER
- object_status_enum: STRING
- error_code: INTEGER
- error_code_enum: STRING

For events generated by situations in the Product Action Log attribute group, Tivoli Enterprise Console events are sent using the ITM_KRJ_PRODUCT_ACTION_LOG class. This class contains the following slots:

- node: STRING
- timestamp: STRING
- acttstmp: STRING
- muser: STRING
- intstat: INTEGER
- intstat_enum: STRING
- ssid: STRING
- ssstat: INTEGER
- ssstat_enum: STRING
- event: INTEGER
- event_enum: STRING
- actrdef: STRING
- actvdef: STRING
- rc: INTEGER

For events generated by situations in the Subsystem Query attribute group, Tivoli Enterprise Console events are sent using the ITM_KRJ_SUBSYSTEM_QUERY class. This class contains the following slots:

- node: STRING
- timestamp: STRING
- ssid: STRING
- ssactive: INTEGER
- ssactive_enum: STRING
- ssenable: INTEGER
- ssenable_enum: STRING
- vernum: INTEGER
- relnum: INTEGER
- smfid: INTEGER
- stcname: STRING

- optsmbr: STRING
- actrdef: STRING
- rdacttm: STRING
- actvdef: STRING
- vdacttm: STRING
- cntldsn: STRING
- recipsa: INTEGER
- recspsa: INTEGER
- recnsss: INTEGER
- recisar: INTEGER
- recisat: INTEGER
- recese: INTEGER
- reciva: INTEGER
- recidba: INTEGER
- recsrel: INTEGER
- rectrkr: INTEGER
- recnctj: INTEGER
- recdsin: INTEGER
- recrtst: INTEGER
- recavsa: INTEGER
- receama: INTEGER
- rectrma: INTEGER
- recstad: STRING

Appendix B. Documentation library

This appendix contains information about the publications related to the IBM Tivoli Advanced Allocation Management for z/OS Agent. These publications are listed in the following categories:

- IBM Tivoli Advanced Allocation Management for z/OS Agent library
- Prerequisite publications
- Related publications

See the *IBM Tivoli Monitoring, OMEGAMON XE, and Composite Application Manager products: Documentation Guide*, SC23-8816, for information about accessing and using publications. You can find the *Documentation Guide* in the IBM Tivoli Monitoring and OMEGAMON® XE Information Center at http://publib.boulder.ibm.com/infocenter/tivihelp/v15r1/topic/com.ibm.docguide.doc/DocGuide.htm.

To find a list of new and changed publications, click **What's new** on the Welcome page of the IBM Tivoli Monitoring and OMEGAMON XE Information Center. To find publications from the previous version of a product, click **Previous information centers** on the Welcome page for the product.

IBM Tivoli Advanced Allocation Management for z/OS Agent library

There is one document specific to the IBM Tivoli Advanced Allocation Management for z/OS Agent: *IBM Tivoli Advanced Allocation Management for z/OS Monitoring Agent User's Guide*. This publication provides agent-specific information for configuring, using, and troubleshooting the IBM Tivoli Advanced Allocation Management for z/OS Agent

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

Use the information in this guide with the *IBM Tivoli Monitoring User's Guide* to monitor IBM Tivoli Advanced Allocation Management resources.

Prerequisite publications

To use the information in this publication effectively, you must have some prerequisite knowledge, which you can obtain from the following IBM Tivoli Monitoring publications:

- *Exploring IBM Tivoli Monitoring*
- *IBM Tivoli Monitoring Administrator's Guide*
- *IBM Tivoli Monitoring Agent Builder User's Guide*
- *IBM Tivoli Monitoring Command Reference*
- *IBM Tivoli Monitoring: Configuring Tivoli Enterprise Monitoring Server on z/OS*
- *IBM Tivoli Monitoring Installation and Setup Guide*
- *IBM Tivoli Monitoring: Messages*
- *IBM Tivoli Monitoring Troubleshooting Guide*
- *IBM Tivoli Monitoring: Upgrading from Tivoli Distributed Monitoring*

- *IBM Tivoli Monitoring: Upgrading from V5.1.2*
- *IBM Tivoli Monitoring User's Guide*
- *IBM Tivoli Monitoring: i5/OS™ Agent User's Guide*
- *IBM Tivoli Monitoring: Linux OS Agent User's Guide*
- *IBM Tivoli Monitoring: UNIX Log OS Agent User's Guide*
- *IBM Tivoli Monitoring: UNIX OS Agent User's Guide*
- *IBM Tivoli Monitoring: Windows OS Agent User's Guide*
- *IBM Tivoli Monitoring Universal Agent User's Guide*
- *IBM Tivoli Monitoring Universal Agent API and Command Programming Reference Guide*

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 Builder's Guide*

Other sources of documentation

You can also obtain technical documentation about Tivoli Monitoring and OMEGAMON XE products from the following sources:

- IBM Tivoli Open Process Automation Library (OPAL)

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

  OPAL is an online catalog that contains integration documentation as well as other downloadable product extensions. This library is updated daily.
- Redbooks

  http://www.redbooks.ibm.com/

  IBM Redbooks®, Redpapers, and Redbooks Technotes provide information about products from platform and solution perspectives.
- Technotes

  You can find Technotes through the IBM Software Support Web site at http://www.ibm.com/software/support/probsub.html, or more directly through your product Web site, which contains a link to Technotes (under **Solve a problem**).

  Technotes provide the latest information about known product limitations and workarounds.

Appendix C. 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 on 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.

Appendix D. Notices

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