IBM Tivoli Monitoring for Virtual Environments Agent for Citrix XenDesktop

Version 7.2

User's Guide

SC14-7487-01

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Note
Before using this information and the product it supports, read the information in "Notices" on page 201.

This edition applies to version 7.2 of IBM Tivoli Monitoring for Virtual Environments Agent for Citrix XenDesktop (product number 5724-L92) and to all subsequent releases and modifications until otherwise indicated in new editions.

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Chapter 1. Overview of the agent

The IBM Tivoli Monitoring for Virtual Environments Agent for Citrix XenDesktop (product code V5) provides you with the capability to monitor Citrix XenDesktop. You can also use the agent to take basic actions with the Citrix XenDesktop.

IBM® Tivoli® Monitoring is the base software for the Citrix XenDesktop agent.The Citrix XenDesktop agent monitors the following functions:

- Citrix XenDesktop component
- Event log and alerts
- Citrix XenDesktop services

IBM Tivoli Monitoring

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 achieve 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 take actions, schedule work, and automate manual tasks.

The Tivoli Enterprise Portal is the interface for IBM Tivoli Monitoring products. You can use the consolidated view of your environment as seen in the Tivoli Enterprise Portal to monitor and resolve performance issues throughout the enterprise.

See the IBM Tivoli Monitoring publications listed in “Prerequisite publications” on page 199 for complete information about IBM Tivoli Monitoring and the Tivoli Enterprise Portal.

Functions of the monitoring agent

Citrix XenDesktop component monitoring

Monitors the following components:

- Broker Controller
- Broker Machine
- Desktops
- Desktop Groups
- Broker (Desktop) User
- Broker Session
- Broker Applications
- License Metrics

Event log and alerts monitoring
Monitors the events for the Citrix XenDesktop services that are running on the Citrix XenDesktop controller (broker controller). In addition, the agent monitors the alerts that are reported by the hypervisor.

Citrix XenDesktop services monitoring
Monitors the Citrix XenDesktop services that are running on the Citrix XenDesktop controller. In addition, the agent monitors the status that indicates whether the Citrix XenDesktop services are connected to the database.

Situations
Provides appropriate situations for the following components:

- License Metrics
- Broker Machine
- Broker Session
- Broker Desktops

Actions
Provides Take Action commands for the following actions:

- Create, enable, disable, and remove the desktop group
- Add one or more machines to the desktop group
- Remove machines from the desktop group
- Stop and disconnect the desktop session
- Stop and disconnect the user session
- Disable the configuration settings of a desktop group

New in this release

For version 7.2 of the Citrix XenDesktop agent, the following enhancements were made since version 7.1:

- Changes related to system requirements. See the information about system requirements in Software product compatibility reports (http://publib.boulder.ibm.com/infocenter/prodguid/v1r0/clarity/index.html).
- Additional supported operating systems as listed in the Prerequisites topic for the Citrix XenDesktop agent in the IBM Tivoli Monitoring for Virtual Environments Information Center.
- Added support for Citrix XenDesktop, Version 5.6.
- New attribute groups:
  - Broker Catalog
  - Connection Log
  - Desktop Usage
- New or changed attributes in the following attribute groups:
  - Broker Application
  - Broker Controllers
  - Broker Machine
  - Desktop Groups
  - Desktops in Desktop Group
- New or changed workspaces:
  - Broker Applications
  - Broker Catalog
  - Broker Controller
  - Broker Machines Details

  - Broker Machines Catalog Kind
  - Broker Machines Power State
  - Broker Machines Shutdown
  - Categorized Desktop Groups
  - Desktop Group
  - Desktop Users
  - Machines in Catalog
- New or changed views:
  - Broker Catalog
  - Desktop Usage
  - Connection Log
- New or changed situations:
  - KV5_DesktopsAvailable
  - KV5_DesktopGroupDisabled
  - KV5_Available_Machines_in_CTL
  - KV5_License_server_Conn_Lost
  - KV5_Shutdown_Desktops_AfterUse
- New or changed Take Action commands
  - Disable Shutdown Desktops After Use
- Updated `kv5.baroc` file to support IBM Tivoli Enterprise Console® event mapping changes.
- Added the prerequisites checking utility to verify prerequisites before the agent is installed or upgraded.
- Added the self describing agent support for the monitoring agent.
- Added support for two new authentication types (Kerberos and Negotiate) to connect to the Citrix XenDesktop controller.

Components of the IBM Tivoli Monitoring environment

After you install and set up the Citrix XenDesktop agent, you have an environment that contains the client, server, and monitoring agent implementation for Tivoli Monitoring.

This Tivoli Monitoring environment contains the following components:

Tivoli Enterprise Portal client
The portal has a user interface based on Java™ for viewing and monitoring your enterprise.

Tivoli Enterprise Portal Server
The portal server 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
The monitoring server acts as a collection and control point for alerts received from the monitoring agents, and collects their performance and availability data. The Tivoli Enterprise Monitoring Server is also a repository for historical data.

Tivoli Enterprise Monitoring Agent, Citrix XenDesktop agent
This monitoring agent collects data and distributes the data to the Tivoli Enterprise Monitoring Server, Tivoli Enterprise Portal Server, Tivoli Enterprise Portal, Tivoli Data Warehouse, and Tivoli Integrated Portal.

Multiple copies of this agent can run on the same system.

IBM Tivoli Netcool/OMNIbus

Tivoli Netcool/OMNIbus is an optional component and the recommended event management component. The Netcool/OMNIbus software is a service level management (SLM) system that delivers real-time, centralized monitoring of complex networks and IT domain events. Event information is tracked in a high-performance, in-memory database and presented to specific users through individually configurable filters and views. The software includes automation functions that you can use to perform intelligent processing on managed events. You can use this software to forward events for Tivoli Monitoring situations to Tivoli Netcool/OMNIbus.

IBM Tivoli Enterprise Console

The Tivoli Enterprise Console is an optional component that acts as a central collection point for events from various sources, including events from other Tivoli software applications, Tivoli partner applications, custom applications, network management platforms, and relational database systems. You can view these events through the Tivoli Enterprise Portal (by using the event viewer), and you can forward events from Tivoli Monitoring situations to the Tivoli Enterprise Console component. If you do not already use Tivoli Enterprise Console and need an event management component, you can choose to use IBM Tivoli Netcool/OMNIbus.

IBM Tivoli Common Reporting

Tivoli Common Reporting is a separately installable feature available to users of Tivoli software that provides a consistent approach to generating and customizing reports. Some individual products provide reports that are designed for use with Tivoli Common Reporting and have a consistent look and feel.

IBM Tivoli Application Dependency Discovery Manager (TADDM)

TADDM delivers automated discovery and configuration tracking capabilities to build application maps that provide real-time visibility into application complexity.

IBM Tivoli Business Service Manager

The Tivoli Business Service Manager component delivers real-time information to help you respond to alerts effectively based on business requirements. Optionally, you can use this component to meet service-level agreements (SLAs). Use the Tivoli Business Service Manager tools to help build a service model that you can integrate with Tivoli Netcool/OMNIbus alerts or optionally integrate with data from an SQL data source. Optional components provide access to data from other IBM Tivoli applications such as Tivoli Monitoring and TADDM.

IBM Dashboard Application Services Hub

The Dashboard Application Services Hub has a core set of components that provide such administrative essentials as network security and database management. This component replaces the Tivoli Integrated Portal component after version 2.2.

Tivoli Integrated Portal

Tivoli Integrated Portal helps the interaction and secure passing of data between Tivoli products through a common portal. You can launch from one application to another and within the same dashboard view research different aspects of your managed enterprise. This component is installed automatically with the first Tivoli product that uses the Tivoli Integrated Portal framework. Subsequent products can install updated versions of Tivoli Integrated Portal. After version 2.2, this component is replaced by the Dashboard Application Services Hub.

Agent Management Services

You can use IBM Tivoli Monitoring Agent Management Services to manage the Citrix XenDesktop agent.

Agent Management Services is available for the following IBM Tivoli Monitoring OS agents: Windows, Linux, and UNIX. The services are designed to keep the Citrix XenDesktop agent available, and to provide information about the status of the product to the Tivoli Enterprise Portal. IBM Tivoli Monitoring V6.2.2, Fix Pack 2 or later provides support for Agent Management Services. For more information about Agent Management Services, see *Agent Management Services* in the *IBM Tivoli Monitoring Administrator's Guide*.

User interface options

Installation of the base IBM Tivoli Monitoring software and other integrated applications provides various interfaces that you can use to work with your resources and data.

The following interfaces are available:

Tivoli Enterprise Portal user interface
You can run the Tivoli Enterprise Portal as a desktop application or a browser application. The client interface is a graphical user interface (GUI) based on Java on a Windows or Linux workstation. The browser application is automatically installed with the Tivoli Enterprise Portal Server. The desktop application is installed by using the Tivoli Monitoring installation media or with a Java Web Start application. 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.

Command-line interface
You can use Tivoli Monitoring commands to manage the Tivoli Monitoring components and their configuration. You can also run commands at the Tivoli Enterprise Console event server or the Tivoli Netcool/OMNIbus ObjectServer to configure event synchronization for enterprise situations.

Manage Tivoli Enterprise Monitoring Services window
You can use the window for the Manage Tivoli Enterprise Monitoring Services utility to configure the agent and start Tivoli services not designated to start automatically.

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

IBM Tivoli Enterprise Console
You can use the Tivoli Enterprise Console to help ensure the optimal availability of an IT service for an organization. The Tivoli Enterprise Console is an event management application that integrates system, network, database, and application management. If you do not already use Tivoli Enterprise Console and need an event management component, you can choose to use Tivoli Netcool/OMNIbus.

IBM Tivoli Common Reporting
Use the Tivoli Common Reporting web user interface for specifying report parameters and other report properties, generating formatted reports, scheduling reports, and viewing reports. This user interface is based on the Dashboard Application Services Hub for Tivoli Common Reporting 3.1 and on Tivoli Integrated Portal for earlier versions.

IBM Tivoli Application Dependency Discovery Manager
The Discovery Management Console is the TADDM client user interface for managing discoveries.

IBM Tivoli Business Service Manager
The Tivoli Business Service Manager console provides a graphical user interface that you can use to logically link services and business requirements within the service model. The service model provides an operator with a second-by-second view of how an enterprise is performing at any moment in time or how the enterprise performed over a time period.

IBM Dashboard Application Services Hub
The Dashboard Application Services Hub provides an administrative console for applications that use this framework. It is a web-based console that provides common task navigation for

products, aggregation of data from multiple products into a single view, and the passing of messages between views from different products. This interface replaces the Tivoli Integrated Portal component after version 2.2.

Tivoli Integrated Portal
Web-based products that are built on the Tivoli Integrated Portal framework share a common user interface where you can launch applications and share information. After version 2.2, this interface is replaced by the Dashboard Application Services Hub.

Data sources

Monitoring agents collect data from specific data sources.

The following table shows each Citrix XenDesktop agent attribute group and the mechanism that is used to gather the attributes.

Table 1. Mechanisms used to gather attributes

Attribute group	Collection source
Broker Application	XenDesktop PowerShell SDK
Broker Catalog	XenDesktop PowerShell SDK
Broker Controllers	XenDesktop PowerShell SDK
Broker Machine	XenDesktop PowerShell SDK
Broker Machines Catalog	XenDesktop PowerShell SDK
Broker Machines OS Type	XenDesktop PowerShell SDK
Broker Machines Power State	XenDesktop PowerShell SDK
Broker Machines RAM	XenDesktop PowerShell SDK
Broker Machines Shutdown	XenDesktop PowerShell SDK
Broker Session	XenDesktop PowerShell SDK
Broker User	XenDesktop PowerShell SDK
Connection Log	XenDesktop PowerShell SDK
Desktop Group Available	XenDesktop PowerShell SDK
Desktop Groups	XenDesktop PowerShell SDK
Desktop Groups in Use	XenDesktop PowerShell SDK
Desktop Pooled Non Pooled	XenDesktop PowerShell SDK
Desktops in Desktop Group	XenDesktop PowerShell SDK
Desktop Usage	XenDesktop PowerShell SDK
Event Log Details	XenDesktop Event Log
Hyp Alert Details	XenDesktop PowerShell SDK
License Usage	Windows Management Instrumentation (WMI) class
Performance Object Status	Operating system
Thread Pool Status	Operating system
XenDesktop 4 IMA Networking Service	Perfmon
XenDesktop 4 Licensing Service	Perfmon
XenDesktop 4 MetaFrame Service	Perfmon
XenDesktop 5 Service Instances	XenDesktop 5 PowerShell SDK
XenDesktop 5 Services	Perfmon

Table 1. Mechanisms used to gather attributes (continued)

Attribute group	Collection source
XenDesktop 5 XML Service	Perfmon

Chapter 2. Agent installation and configuration

Agent installation and configuration requires the use of the *IBM Tivoli Monitoring Installation and Setup Guide* and agent-specific installation and configuration information.

To install and configure the Citrix XenDesktop agent, use the *Installing monitoring agents* procedures in the *IBM Tivoli Monitoring Installation and Setup Guide* along with the agent-specific installation and configuration information.

If you are installing silently by using a response file, see *Performing a silent installation of IBM Tivoli Monitoring* in the *IBM Tivoli Monitoring Installation and Setup Guide*.

With the self-describing agent capability, new or updated IBM Tivoli Monitoring agents using IBM Tivoli Monitoring V6.2.3 or later can become operational after installation without having to perform additional product support installation steps. To take advantage of this capability, see *Enabling self-describing agent capability at the hub monitoring server* in the *IBM Tivoli Monitoring Installation and Setup Guide*. Also, see *Self-describing monitoring agents* in the *IBM Tivoli Monitoring Administrator's Guide*.

Requirements

Before installing and configuring the agent, make sure your environment meets the requirements for the IBM Tivoli Monitoring for Virtual Environments Agent for Citrix XenDesktop.

For information about system requirements, see the Software product compatibility reports (http://publib.boulder.ibm.com/infocenter/prodguid/v1r0/clarity/index.html). Search for the Tivoli Monitoring for Virtual Environments product.

For information about requirements, see the Prerequisites topic for the agent in the IBM Tivoli Monitoring for Virtual Environments Information Center (http://pic.dhe.ibm.com/infocenter/tivihelp/v61r1/topic/com.ibm.tivoli.itmvs.doc_7.2/welcome_ve72.htm).

Language pack installation

The steps for installing language packs depend on which operating system and mode of installation you are using.

To install a language pack for the agent support files on the Tivoli Enterprise Monitoring Server, the Tivoli Enterprise Monitoring Agent, and the Tivoli Enterprise Portal Server, make sure that you installed the product in the English language. Then use the steps for the operating system or mode of installation you are using:

- "Installing language packs on Windows systems"
- "Installing language packs on UNIX or Linux systems" on page 10
- "Silent installation of language packs on Windows, UNIX, or Linux systems" on page 10

Installing language packs on Windows systems

You can install the language packs on a Windows system.

Before you begin

First, make sure that you installed the product in the English language.

Procedure

1. On the language pack CD, double-click the `lpinstaller.bat` file to start the installation program.
2. Select the language of the installer and click **OK**.
3. In the Introduction panel, click **Next**
4. Click **Add/Update** and click **Next**.
5. Select the folder where the National Language Support package (`NLSPackage`) files are located. Typically, the NLSPackage files are located in the `nlspackage` folder where the installer executable file is located.
6. Select the language support for the agent of your choice and click **Next**. To make multiple selections, press Ctrl and select the language that you want.
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. After installation completes, click **Finish** to exit the installer.
10. Restart the Tivoli Enterprise Portal, Tivoli Enterprise Portal Server, and Eclipse Help Server if any of these components are installed.

Installing language packs on UNIX or Linux systems

You can install the language packs on a UNIX or Linux system.

Before you begin

First, make sure that you installed the product in the English language.

Procedure

1. Enter the `mkdir` command to create a temporary directory on the computer, for example, `mkdir` *`dir_name`*. Make sure that the full path of the directory does not contain any spaces.
2. Mount the language pack CD to the temporary directory that you created.
3. Enter the following command to start the installation program: `cd` *`dir_name`* `lpinstaller.sh -c` *`install_dir`* where *install_dir* is where you installed IBM Tivoli Monitoring. Typically, the directory name is `/opt/IBM/ITM` for UNIX and Linux systems.
4. Select the language of the installer and click **OK**.
5. In the Introduction panel, click **Next**.
6. Click **Add/Update** and click **Next**.
7. Select the folder where the National Language Support package (`NLSPackage`) files are located. Typically, the `NLSPackage` files are located in the `nlspackage` folder where the installer executable file is located.
8. Select the language support for the agent of your choice and click **Next**. To make multiple selections, press Ctrl and select the language that you want.
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. After installation completes, click **Finish** to exit the installer.
12. Restart the Tivoli Enterprise Portal, Tivoli Enterprise Portal Server, and Eclipse Help Server if any of these components are installed.

Silent installation of language packs on Windows, UNIX, or Linux systems

You can use the silent-mode installation method to install the language packs. In silent mode, the installation process obtains the installation settings from a predefined response file. It does not prompt you for any information.

Before you begin

First, make sure that you installed the product in the English language.

Procedure

1. Copy and paste the `ITM_Agent_LP_silent.rsp` response file template as shown in "Response file example."
2. Change the following parameter settings:

   NLS_PACKAGE_FOLDER
   Folder where the National Language Support package (NLSPackage) files are located. Typically, the NLSPackage files are located in the `nlspackage` folder, for example: `NLS_PACKAGE_FOLDER = //tmp//LP//nlspackage`.

   PROD_SELECTION_PKG
   Name of the language pack to install. Several product components can be included in one language package. You might want to install only some of the available components in a language pack.

   BASE_AGENT_FOUND_PKG_LIST
   Agent for which you are installing language support. This value is usually the same as *PROD_SELECTION_PKG*.

   LANG_SELECTION_LIST
   Language you want to install.
3. Enter the command to install the language pack with a response file (silent installation):
   - For Windows systems:
     `lpinstaller.bat -f path_to_response_file`
   - For UNIX or Linux systems:
     `lpinstaller.sh -c candle_home -f path_to_response_file`

     where *candle_home* is the IBM Tivoli Monitoring base directory.

Response file example

```
#     IBM Tivoli Monitoring Agent Language Pack Silent Installation Operation
#
#This is a sample response file for silent installation mode for the IBM Tivoli
#Monitoring Common Language Pack Installer.
#.
#This file uses the IBM Tivoli Monitoring Common Agent Language Pack with the
#install package as an example.
#Note:
#This response file is for the INSTALLATION of language packs only.
#This file does not support UNINSTALLATION of language packs in silent mode.
#-------------------------------------------------------------------------------
#-------------------------------------------------------------------------------
#To successfully complete a silent installation of the the example of Common Agent
#localization pack, complete the following steps:
#
#1.Copy ITM_Agent_LP_silent.rsp to the directory where lpinstaller.bat or
#lpinstaller.sh is located (IBM Tivoli Monitoring Agent Language Pack build
#location).
#
#2.Modify the response file so that it is customized correctly and completely for
#your site.
#  Complete all of the following steps in the response file.
#
#3.After customizing the response file, invoke the silent installation using the
#following command:
#For Windows:
#    lpinstaller.bat -f <path_to_response_file>
```

```
#For UNIX and Linux:
#    lpinstaller.sh -c <candle_home> -f <path_to_response_file>
#Note:<candle_home> is the IBM Tivoli Monitoring base directory.
#-------------------------------------------------------------------------------
#-------------------------------------------------------------------------------
#Force silent install mode.
#-------------------------------------------------------------------------------
INSTALLER_UI=silent
#-------------------------------------------------------------------------------
#Run add and update actions.
#-------------------------------------------------------------------------------
CHOSEN_INSTALL_SET=ADDUPD_SET
#-------------------------------------------------------------------------------
#NLS Package Folder, where the NLS Packages exist.
#For Windows:
#   Use the backslash-backslash(\\) as a file separator (for example,
#C:\\zosgmv\\LCD7-3583-01\\nlspackage).
#For UNIX and Linux:
#   Use the slash-slash (//) as a file separator (for example,
#//installtivoli//lpsilenttest//nlspackage).
#-------------------------------------------------------------------------------
#NLS_PACKAGE_FOLDER=C:\\zosgmv\\LCD7-3583-01\\nlspackage
NLS_PACKAGE_FOLDER=//tmp//LP//nlspackage
#-------------------------------------------------------------------------------
#List the packages to process; both variables are required.
#Each variable requires that full paths are specified.
#Separate multiple entries with a semicolon (;).
#For Windows:
#           Use the backslash-backslash(\\) as a file separator.
#For Unix and Linux:
#           Use the slash-slash (//) as a file separator.
#-------------------------------------------------------------------------------
#PROD_SELECTION_PKG=C:\\zosgmv\\LCD7-3583-01\\nlspackage\\KIP_NLS.nlspkg
#BASE_AGENT_FOUND_PKG_LIST=C:\\zosgmv\\LCD7-3583-01\\nlspackage\\KIP_NLS.nlspkg
PROD_SELECTION_PKG=//tmp//LP//nlspackage//kex_nls.nlspkg;//tmp//LP//nlspackage//
koq_nls.nlspkg
BASE_AGENT_FOUND_PKG_LIST=//tmp//LP//nlspackage//kex_nls.nlspkg;//
tmp//LP//nlspackage//koq_nls.nlspkg
#-------------------------------------------------------------------------------
#List the languages to process.
#Separate multiple entries with semicolons.
#-------------------------------------------------------------------------------
LANG_SELECTION_LIST=pt_BR;fr;de;it;ja;ko;zh_CN;es;zh_TW
```

Prerequisites checking

The prerequisite checker utility verifies whether all the prerequisites that are required for the agent installation are met. The prerequisite checker creates a log file that contains a report of all the prerequisites checks when the prerequisite checker was run.

For the Citrix XenDesktop agent, the prerequisite checker verifies the following requirements:

- Memory
- Disk
- Operating systems

For detailed information about installation prerequisites, see the Prerequisites topic for the agent in the IBM Tivoli Monitoring for Virtual Environments Information Center (http://pic.dhe.ibm.com/infocenter/tivihelp/v61r1/topic/com.ibm.tivoli.itmvs.doc_7.2/prerequisites/ve72_systemreqs.html).

You can run the prerequisite checker in stand-alone mode or remotely. For more information about the prerequisite checker, see "Prerequisite Checking for IBM Tivoli Monitoring Agents" in the *IBM Tivoli Monitoring Installation and Setup Guide*.

Agent-specific installation and configuration

In addition to the installation and configuration information in the *IBM Tivoli Monitoring Installation and Setup Guide*, use this agent-specific configuration information.

Configuring the monitoring agent for Citrix XenDesktop

To configure the monitoring agent for Citrix XenDesktop, you must configure Windows Remote Management 2.0 (WinRM).

Before you begin

Before installing and configuring the agent, make sure your environment meets the requirements for the IBM Tivoli Monitoring for Virtual Environments for Citrix XenDesktop. See the Prerequisites topic for the agent in the IBM Tivoli Monitoring for Virtual Environments Information Center (http://pic.dhe.ibm.com/infocenter/tivihelp/v61r1/topic/com.ibm.tivoli.itmvs.doc_7.2/welcome_ve72.htm).

About this task

This task provides information about configuring WinRM to use the monitoring agent for Citrix XenDesktop. Preferably, you must configure only one instance of the monitoring agent for each Citrix XenDesktop controller. If you configure additional instances of the monitoring agent, the load increases on the computer that hosts the components of the Citrix XenDesktop controller.

Procedure

1. Log on to the computer that hosts the components of the Citrix XenDesktop controller.
2. Click **Start** > **All Programs** > **Accessories** > **Windows PowerShell**. A command prompt opens.
3. At the command prompt, run these commands in the following order:
   a. **winrm quickconfig**
   b. **cd wsman:**
   c. **Set-Item .\localhost\MaxTimeoutms** *value*

      Note: The MaxTimeoutms value must be in the range 500 - 4294967295.
   d. **cd .\localhost\Service**
   e. **Set-Item .\AllowUnencrypted $True** (Run this command only for HTTP communication.)
   f. **cd .\Auth**
   g. If you have selected the authentication type as Basic, set the authentication to True by using the following command:

      Set-Item .\Basic $True

      Note: If you have selected the **Kerberos** or **Negotiate** authentication type, you do not need to set the authentication type to **True**.
4. Click **Start** > **Run**.
5. In the **Open** field, enter `services.msc`. The Services window opens.
6. Right-click **Windows Remote Management (WS-Management)**, and then click **Restart**.

What to do next

If you have selected the **Kerberos** or **Negotiate** authentication type, you must edit the `krb5.ini` file as follows:

```
[libdefaults]
 default_realm = DOMAIN.COM
 default_tkt_enctypes = RC4-HMAC
```

```
 default_tgs_enctypes = RC4-HMAC
 permitted_enctypes   = RC4-HMAC
 forwardable = true
 renewable = true
 noaddresses = true
 clockskew = 300
 udp_preference_limit =1
[realms]
 DOMAIN.COM = {
 kdc = KDC_hostname
 default_domain = domain.com
 }
[domain_realm]
 domain.com = DOMAIN.COM
```

Where:

domain.com: The domain name for the Citrix XenDesktop controller. For example, ITMFVS.COM.

domain.com: The domain name in lowercase.

DOMAIN.COM: The domain name in uppercase.

KDC_hostname: The hostname of the computer where the *Key Distribution Center* is implemented. For example, kdc = IBMITMFVS-AD.ITMFVS.COM.

clockskew: The maximum allowed value for clockskew in seconds. The default value is 300 seconds (five minutes).

Local configuration

Use the procedure in the *IBM Tivoli Monitoring Installation and Setup Guide* to configure the agent on a Windows or Linux system.

The configuration attributes define the Citrix XenDesktop controller that you want to monitor. The attributes define a connection to Citrix XenDesktop controller 4, Citrix XenDesktop controller 5, or Citrix XenDesktop controller 5.6.

Configuration values

For both local and remote configuration, you provide the configuration values for the agent to operate.

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

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

Data Source (DATASOURCE)

Null

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

This group defines information that applies to the entire agent.

Authentication Type

The type of authentication.

The type is string.

This value is required.

Default value: Kerberos

Data Source Address (HOST_ADDRESS)
The host name or IP address of the Citrix XenDesktop controller.

The type is string.

This value is required.

Default value: None

Data Source Password (PASSWORD)
The password of the data source.

The type is password.

This value is required.

Default value: None

Data Source User ID (USERNAME)

- If you select **Kerberos** or **Negotiate** from the **Authentication Type** list, enter the domain user ID of the Citrix XenDesktop controller.
- If you select **Basic** from the **Authentication Type** list, enter the local administrator user ID of the Citrix XenDesktop controller.

The type is string.

This value is required.

Default value: None

License Server (LICSERVER)
Null

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

This group defines information that applies to the entire agent.

License Server User ID (LIC_SERVER_NTUSERNAME)
The administrator user ID of the License Server in the domain\username or hostname\username format.

The type is string.

This value is required.

Default value: None

License Server Password (LIC_SERVER_PASSWORD)
The password of the License Server.

The type is password.

This value is required.

Default value: None

Data Provider Configuration (DATA_PROVIDER)
Null

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

This group defines information that applies to the entire agent.

Maximum Number of Data Provider Log Files (KV5_LOG_FILE_MAX_COUNT)
The maximum number of data provider log files that are created.

The type is numeric.

This value is required.

Default value: 10

Maximum Size in KB of Data Provider Log (KV5_LOG_FILE_MAX_SIZE)
The maximum amount of data (in KB) that the data provider writes to a single log file before a new log file is created.

The type is numeric.

This value is required.

Default value: 5190

Level of Detail in Data Provider Log (KV5_LOG_LEVEL)
The amount of detail that the data provider includes in its log files.

The type is one of the following values:

- Off
- Severe
- Warning
- Info
- Fine
- Finer
- Finest
- All

This value is required.

Default value: INFO

Validate SSL Certificates (KV5_SSL_VALIDATE_CERTIFICATES)
This value indicates whether the agent validates Secure Sockets Layer (SSL) certificate when using SSL to communicate through the network.

The type is one of the following values:

- Yes (Recommended)
- No (Potentially Insecure)

This value is required.

Default value: Yes

Remote installation and configuration

You can install the monitoring agent remotely from the Tivoli Enterprise Portal or from the command line.

When installing the agent remotely, you must provide the configuration values for the agent to operate. See “Configuration values” on page 14.

To install from the portal, see the *IBM Tivoli Monitoring Installation and Setup Guide*.

To remotely install or configure an agent through the Tivoli Enterprise Portal, you must have installed the application support for that agent (Tivoli Enterprise Monitoring Server, Tivoli Enterprise Portal Server, and Tivoli Enterprise Portal). You must also have installed the agent bundle into the Remote Deploy Depot.

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

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

```
tacmd addSystem -t V5 -n OS_Agent_ManagedSystemName:NT
-p INSTANCE="InstanceName"
```

OS_Agent_ManagedSystemName
The managed system name of the OS agent that is running on the system where you want to deploy the monitoring agent for Citrix XenDesktop remotely. This configuration option is present in the **tacmd listsystems** command when the OS agent points to the respective monitoring systems.

InstanceName
The name of the instance.

Enabling SSL communication with the Citrix XenDesktop data source

Enable SSL to configure the monitoring agent for Citrix XenDesktop to securely communicate with its data source (broker controller). To enable SSL communication, you must add the data source SSL certificate to the agent's certificate truststore.

Before you begin

Before you add a data source SSL certificate, install the certificate and export the certificate file to the DER encoded binary X.509 (.CER) format.

About this task

To add a data source SSL certificate to the agent's certificate truststore, you must create the HTTPS listeners on the computer that hosts the components of the Citrix XenDesktop controller, and then add the data source SSL certificate to the agent's certificate truststore.

Creating HTTPS listeners

You must run the **winrm** command to create the HTTPS listeners on the computer that hosts the components of the Citrix XenDesktop controller.

Procedure

1. Log on to the computer that hosts the components of the Citrix XenDesktop controller.
2. Open a command prompt.
3. At the command prompt, run these commands in the following order:
   a. **winrm quickconfig –transport:https**
   b. **winrm enumerate winrm/config/listener**

   Note: Ensure that for the HTTPS listener, the values for the `CertificateThumbprint` property are not blank.

Adding a data source SSL certificate

You must run the **keytool** command to add the data source SSL certificate to the agent's certificate truststore.

Before you begin

- Create the HTTPS listeners. For detailed information, see Creating HTTPS listeners.
- Specify the Java runtime `bin` directory for your operating system:
  - Windows (32-bit): `set PATH=%PATH%;install_dir\CNPSJ\java\bin`
  - Windows (64-bit): `set PATH=%PATH%;install_dir\CNPSJ\java\bin`
  - Linux (32-bit): `PATH="$PATH":install_dir/JRE/li6263/bin`
  - Linux (64-bit): `PATH="$PATH":install_dir/JRE/lx8266/bin`

Procedure

1. Copy the certificate file from your data source (broker controller) to the computer where the agent is installed.
2. Save the certificate file on the computer where the agent is installed.
3. At a command prompt, run the **keytool** command in the following format:

   ```
   keytool -import -noprompt -trustcacerts -alias CertificateAlias –file CertificateFile
    -keystore truststore
   ```

   where:

   CertificateAlias
   A unique reference for each certificate added to the agent's certificate truststore. For example, an appropriate alias for the certificate from *datasource.example.com* is datasource.

   CertificateFile
   The complete file path of the Citrix XenDesktop data source certificate file that you are adding to the truststore.

   Truststore
   The complete path of the Citrix XenDesktop agent certificate database. Use the following file paths:
   - Windows (32-bit): *install_dir*\tmaitm6\kv5.truststore
   - Windows (64-bit): *install_dir*\tmaitm6_x64\kv5.truststore
   - Linux (32-bit): *install_dir*/li6263/v5/etc/kv5.truststore
   - Linux (64-bit): *install_dir*/lx8266/v5/etc/kv5.truststore

     Note: When you use the *install_dir*/li6263/v5/etc/kv5.truststore and *install_dir*/lx8266/v5/etc/kv5.truststore file paths, you must create an `etc` directory in the `v5` directory.
4. At the command prompt, type a new password, and press Enter.

Chapter 3. Workspaces reference

A workspace is the working area of the Tivoli Enterprise Portal application window. The Navigator tree contains a list of the workspaces provided by the agent.

About workspaces

Use the Navigator tree to select the workspace you want to see. As part of the application window, 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. You can also use the Workspace Gallery tool as described in the *Tivoli Enterprise Portal User's Guide* to open workspaces.

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

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

Workspace views can be any combination of query-based views, event views, and special purpose views.

Additional information about workspaces

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

For a list of the predefined workspaces for this monitoring agent and a description of each workspace, see Predefined workspaces and the information about 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 "Attribute groups for the monitoring agent" on page 25.

Predefined workspaces

The Citrix XenDesktop agent provides predefined workspaces, which are organized by Navigator item.

- Citrix XenDesktop Navigator item
  - Citrix XenDesktop workspace
- Broker Controller Navigator item
  - Broker Controller workspace
- Broker Machines Navigator item
  - Broker Catalog workspace
  - Broker Machines workspace
  - Broker Machines Catalog Kind workspace

- Broker Machines Details workspace
- Broker Machines OS Type workspace
- Broker Machines Power State workspace
- Broker Machines RAM workspace
- Broker Machines Shutdown workspace

- Desktop Group Navigator item
  - Broker Applications workspace
  - Categorized Desktop Groups workspace
  - Desktop Group workspace
- Desktop Users Navigator item
  - Desktop Users workspace
- Event Log Navigator item
  - Event Log workspace
- Services Navigator item
  - Availability XenDesktop workspace
  - Availability XenDesktop 4 workspace
  - XenDesktop 4 Services workspace
  - XenDesktop Services workspace

Workspace descriptions

Each workspace description provides information about the workspace such as the purpose and a list of views in the workspace.

Workspaces are listed under Navigator items.

Citrix XenDesktop Navigator item

The workspace descriptions are organized by the Navigator item to which the workspaces are relevant.

Citrix XenDesktop workspace

This workspace provides information about the situations that have been triggered and the predefined Take Action commands.

This workspace contains the following views:

Message Log

Displays information about the situations that have been triggered.

Take Action

Displays a list of predefined Take Action commands.

Broker Controller Navigator item

The workspace descriptions are organized by the Navigator item to which the workspaces are relevant.

Broker Controller workspace

This workspace provides information about the broker controllers in a site.

This workspace contains the following views:

Broker Controller

Displays the details of a specific broker controller.

License Usage

Displays the license details for a specific license server.

Broker Machines Navigator item

The workspace descriptions are organized by the Navigator item to which the workspaces are relevant.

Broker Catalog workspace

This workspace provides information about the broker catalogs that are available in a specific broker site.

This workspace contains the following view:

Broker Catalog

Displays information about the broker catalogs that are available in a specific broker site.

Broker Machines workspace

This workspace provides information about the broker machines that belong to a site.

This workspace contains the following views:

RAM Displays information about the amount of memory that is allocated to the broker machines. This view provides a link to view the details of broker machines that are organized by the amount of allocated memory.

OS Type

Displays information about the operating system of the broker machines. This view provides a link to view the details of broker machines that are organized by the operating system name.

Catalog Kind

Displays information about the catalogs that the broker machines belong to. This view provides a link to view the broker machines that are organized by the catalog type.

Shutdown Status After Use

Displays information about the power state of the broker machines after the user logs off. This view provides a link to view the broker machines that are organized by the power state after the user logs off.

Power State

Displays information about the power state of the broker machines. This view provides a link to view the details of broker machines that are organized by the power state.

Broker Machines Catalog Kind workspace

This workspace provides information about the broker machines that are organized by the catalog type that the broker machines belong to.

This workspace contains the following view:

Broker Machines

Displays information about the broker machines that are organized by the catalog type that the broker machines belong to.

Broker Machines Details workspace

This workspace provides information about the broker machines that belong to a site.

This workspace contains the following view:

Broker Machines

Displays information about the broker machines that belong to a site.

Broker Machines OS Type workspace

This workspace provides information about the broker machines that are organized by the operating system.

This workspace contains the following view:

Broker Machines

Displays information about the broker machines that are organized by the operating system.

Broker Machines Power State workspace

This workspace provides information about the broker machines that are organized by the power state.

This workspace contains the following view:

Broker Machines

Displays information about the broker machines that are organized by the power state.

Broker Machines RAM workspace
This workspace provides information about the broker machines that are organized by the amount of allocated memory.

This workspace contains the following view:
Broker Machines
Displays information about the broker machines that are organized by the amount of allocated memory.

Broker Machines Shutdown workspace
This workspace provides information about the broker machines that are organized by the power state of the broker machines after the user logs off.

This workspace contains the following view:
Broker Machines
Displays information about the broker machines that are organized by the power state of the broker machines after the user logs off.

Desktop Group Navigator item

The workspace descriptions are organized by the Navigator item to which the workspaces are relevant.

Broker Applications workspace
This workspace provides information about the broker applications. This workspace is available only for Citrix XenDesktop 5.

This workspace contains the following views:
Broker Applications
Displays information about the broker applications.
Application Instances Graph
Displays a graph that contains information about the broker application instances that are running on the broker desktops.

Categorized Desktop Groups workspace
This workspace provides information about the broker desktop groups.

This workspace contains the following views:
Desktop Groups
Displays all the desktop groups. This view provides a link to view the details of desktops that belong to a specific desktop group.
Desktop Groups in Use
Displays information about the desktops that are currently used.
Desktop Groups Available
Displays information about the desktops that are available.
Desktop Usage
Displays information about the desktop usage in the desktop groups.

Desktop Group workspace
This workspace provides information about the desktops that belong to a specific desktop group.

This workspace contains the following views:
Desktops
Displays information about all the desktops that belong to a specific desktop group.
Desktop Status in Desktop Group
Displays a pie chart that contains information about the status of desktops.
Availability for Desktops
Displays a pie chart that contains information about the desktops, which are available in a specific desktop group.

Desktop Users Navigator item

The workspace descriptions are organized by the Navigator item to which the workspaces are relevant.

Desktop Users workspace

This workspace provides information about the desktop users and desktop user sessions.

This workspace contains the following views:

Desktop Users

Displays information about all the desktop users.

Broker Session

Displays information about all the desktop user sessions.

Connection Log

Displays information about the brokering connections of the desktop user sessions.

Event Log Navigator item

The workspace descriptions are organized by the Navigator item to which the workspaces are relevant.

Event Log workspace

This workspace provides information about the recent 250 events on the broker controller.

This workspace contains the following views:

Event Log Details

Displays information about the event logs for the Citrix XenDesktop services.

Hyervisor Alert Details

Displays information about the alerts that are reported by the hypervisor.

Services Navigator item

The workspace descriptions are organized by the Navigator item to which the workspaces are relevant.

Availability XenDesktop workspace

This workspace provides information about the Citrix XenDesktop 5.0 and Citrix XenDesktop 5.6 services.

This workspace contains the following views:

XenDesktop Services

Displays information about all the Citrix XenDesktop 5.0 and Citrix XenDesktop 5.6 services.

XenDesktop Service Instances

Displays information about all the Citrix XenDesktop 5.0 and Citrix XenDesktop 5.6 service instances.

XenDesktop XML Service

Displays information about the Citrix XenDesktop 5.0 and Citrix XenDesktop 5.6 XML Services.

Availability XenDesktop 4 workspace

This workspace provides information about the Citrix XenDesktop 4 services.

This workspace contains the following views:

XenDesktop 4 IMA Networking Service

Displays information about the Citrix XenDesktop 4 Independent Management Architecture (IMA) Networking Service.

XenDesktop 4 Licensing Service

Displays information about the Citrix XenDesktop 4 Licensing Service.

XenDesktop 4 MetaFrame Service

Displays information about the Citrix XenDesktop 4 MetaFrame Service.

XenDesktop 4 Services workspace

This workspace provides information about the Citrix XenDesktop 4 services.

This workspace contains the following views:

XenDesktop 4 IMA Networking Service

Displays a plot chart that contains information about the Citrix XenDesktop 4 Networking Service.

XenDesktop 4 Licensing Service
Displays a plot chart that contains information about the Citrix XenDesktop 4 Licensing Service.

XenDesktop 4 MetaFrame Service
Displays a plot chart that contains information about the Citrix XenDesktop 4 MetaFrame Service.

XenDesktop Services workspace
This workspace provides information about the Citrix XenDesktop 5.0 and Citrix XenDesktop 5.6 services.

This workspace contains the following views:

XenDesktop Services
Displays a plot chart that contains information about all the Citrix XenDesktop 5.0 and Citrix XenDesktop 5.6 services.

XenDesktop XML Service
Displays a plot chart that contains information about the Citrix XenDesktop 5.0 and Citrix XenDesktop 5.6 XML Services.

Chapter 4. Attributes reference

Attributes are the application properties that are being measured and reported by the IBM Tivoli Monitoring for Virtual Environments Agent for Citrix XenDesktop.

About attributes

Attributes are organized into attribute groups. Attributes in an attribute group relate to a single object such as an application, or to a single kind of data such as status information.

Attributes in a group can be used in queries, query-based views, situations, policy workflows, take action definitions, and launch application definitions. Chart or table views and situations are two examples of how attributes in a group can be used:

- 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 Properties editor to 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 values you assign to the situation attributes are compared with the values collected by the Citrix XenDesktop agent and registers an *event* if the condition is met. You are alerted to events by indicator icons that are displayed in the Navigator.

Additional information about attributes

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

For a list of the attribute groups, a list of the attributes in each attribute group, and descriptions of the attributes for this monitoring agent, see "Attribute groups for the monitoring agent" and "Attributes in each attribute group" on page 27.

Attribute groups for the monitoring agent

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

- Attribute group name: Broker Application
  - Table name: KV5BRAPP
  - Warehouse table name: KV5_BROKER_APPLICATION or KV5BRAPP
- Attribute group name: Broker Catalog
  - Table name: KV5BCTL
  - Warehouse table name: KV5_BROKER_CATALOG or KV5BCTL
- Attribute group name: Broker Controllers
  - Table name: KV5CNTRLR
  - Warehouse table name: KV5_BROKER_CONTROLLERS or KV5CNTRLR
- Attribute group name: Broker Machine

  - Table name: KV5MACHINE
  - Warehouse table name: KV5_BROKER_MACHINE or KV5MACHINE
- Attribute group name: Broker Machines Catalog
  - Table name: KV5CATALOG
  - Warehouse table name: KV5_BROKER_MACHINES_CATALOG or KV5CATALOG
- Attribute group name: Broker Machines OS Type
  - Table name: KV5OSTYPE
  - Warehouse table name: KV5_BROKER_MACHINES_OS_TYPE or KV5OSTYPE
- Attribute group name: Broker Machines Power State
  - Table name: KV5PWRSTAT
  - Warehouse table name: KV5_BROKER_MACHINES_POWER_STATE or KV5PWRSTAT
- Attribute group name: Broker Machines RAM
  - Table name: KV5RAM
  - Warehouse table name: KV5_BROKER_MACHINES_RAM or KV5RAM
- Attribute group name: Broker Machines Shutdown
  - Table name: KV5SHUTDWN
  - Warehouse table name: KV5_BROKER_MACHINES_SHUTDOWN or KV5SHUTDWN
- Attribute group name: Broker Session
  - Table name: KV5USRSSON
  - Warehouse table name: KV5_BROKER_SESSION or KV5USRSSON
- Attribute group name: Broker User
  - Table name: KV5DUSR
  - Warehouse table name: KV5_BROKER_USER or KV5DUSR
- Attribute group name: Connection Log
  - Table name: KV5CONNLOG
  - Warehouse table name: KV5_CONNECTION_LOG or KV5CONNLOG
- Attribute group name: Desktop Group Available
  - Table name: KV5DKGRAV
  - Warehouse table name: KV5_DESKTOP_GROUPS_AVAILABLE or KV5DKGRAV
- Attribute group name: Desktop Groups
  - Table name: KV5DSKGRPS
  - Warehouse table name: KV5_DESKTOP_GROUPS or KV5DSKGRPS
- Attribute group name: Desktop Groups in Use
  - Table name: KV5DKGRUSE
  - Warehouse table name: KV5_DESKTOP_GROUPS_INUSE or KV5DKGRUSE
- Attribute group name: Desktop Pooled Non Pooled
  - Table name: KV5DKPOOL
  - Warehouse table name: KV5_DESKTOP_POOLED_NON_POOLED or KV5DKPOOL
- Attribute group name: Desktop Usage
  - Table name: KV5USAG
  - Warehouse table name: KV5_DESKTOP_USAGE or KV5USAG
- Attribute group name: Desktops in Desktop Group
  - Table name: KV5DKINGR
  - Warehouse table name: KV5_DESKTOP_IN_GROUP or KV5DKINGR
- Attribute group name: Event Log Details

  - Table name: KV5EVTLGDT
  - Warehouse table name: KV5_EVENT_LOG_DETAILS or KV5EVTLGDT
- Attribute group name: Hyp Alert Details
  - Table name: KV5HYPALRT
  - Warehouse table name: KV5_HYP_ALERT_DETAILS or KV5HYPALRT
- Attribute group name: License Usage
  - Table name: KV5LUSE
  - Warehouse table name: KV5_LICENSE_USAGE or KV5LUSE
- Attribute group name: Performance Object Status
  - Table name: KV5POBJST
  - Warehouse table name: KV5_PERFORMANCE_OBJECT_STATUS or KV5POBJST
- Attribute group name: Thread Pool Status
  - Table name: KV5THPLST
  - Warehouse table name: KV5_THREAD_POOL_STATUS or KV5THPLST
- Attribute group name: XenDesktop 4 IMA Networking Service
  - Table name: KV5XD4NET
  - Warehouse table name: KV5_XD4_NETWORKING_SERVICE or KV5XD4NET
- Attribute group name: XenDesktop 4 Licensing Service
  - Table name: KV5XD4LIC
  - Warehouse table name: KV5_XD4_LICENSING_SERVICE or KV5XD4LIC
- Attribute group name: XenDesktop 4 MetaFrame Service
  - Table name: KV5XD4MF
  - Warehouse table name: KV5_XD4_METAFRAME_SERVICE or KV5XD4MF
- Attribute group name: XenDesktop Service Instances
  - Table name: KV5XD5IN
  - Warehouse table name: KV5_XD5_SERVICE_INSTANCES or KV5XD5IN
- Attribute group name: XenDesktop Services
  - Table name: KV5XD5SER
  - Warehouse table name: KV5_XENDESKTOP5_SERVICES or KV5XD5SER
- Attribute group name: XenDesktop XML Service
  - Table name: KV5XD5XML
  - Warehouse table name: KV5_XD5_XML_SERVICE or KV5XD5XML

Attributes in each attribute group

Attributes in each Citrix XenDesktop agent attribute group collect data that the agent uses for monitoring.

The descriptions of the attribute groups contain the following information:

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

Attribute descriptions
Information such as description, type, source, and warehouse name, as applicable, 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.

The Source information sometimes uses C programming code syntax for if-then-else clauses to describe how an attribute is derived, for example:

```
(CPU_Pct < 0 ) || (Memory_Pct < 0 )? 0 : 1
```

This example means that if the CPU_Pct attribute is less than 0 or if the Memory_Pct attribute is less than 0, then the attribute is set to 0. Otherwise, the attribute is set to 1.

Broker Application attribute group

This attribute group provides information about the applications that belong to the desktop group.

Historical group

This attribute group is eligible for use with Tivoli Data Warehouse.

Attribute descriptions

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

Node attribute: This attribute is a key attribute.

Description

The managed system name of the agent.

Type

String

Source

The source for this attribute is the agent.

Warehouse name

NODE

Timestamp attribute

Description

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

Type

String

Source

The source for this attribute is the agent.

Warehouse name

TIMESTAMP

Application Type attribute

Description

The type of the application.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

APPLICATIONTYPE or APPTYP

Name attribute

Description

The name of the application.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

NAME or APPNAM

CPU Priority Level attribute

Description

The processor priority level that is set for the application. The valid values are High, AboveNormal, Normal, BelowNormal, and Low.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

CPUPRIORITYLEVEL or CPUPRIO

Enabled attribute

Description

The enabled status of the application. The valid values are True and False.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

ENABLED or ENABL

Visible attribute

Description

Indicates whether the application is visible to the users. The valid values are True and False.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

VISIBLE or VISIBL

Window Size Type attribute

Description

The measuring unit for the size of the application window. The valid values are Pixels and Percent.

Type

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

- Unavailable (-1)

- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

WINDOWSIZE_TYPE or WINSIZ

Window Width attribute

Description

The width of the application window.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

WINDOWWIDTH or WINWITH

Shortcut Added to Desktop attribute

Description

Indicates whether the shortcut icon of the application is displayed on the user device. The valid values are True and False.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

SHORTCUTADDEDTODESKTOP or SHOTCUT

Number of Instances attribute

Description

The number of instances of the application that are running on the user devices.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

NO_OF_INSTANCE or NOOFINST

Window Scale attribute

Description

The default scale (in percentage) of an application window. The valid values are 1 - 100.

Type

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

- Unavailable (-1)

- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
WINDOWSCALE or WINWD

Window Height attribute

Description
The default height (in pixels) of an application window.

Type
String with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
WINDOWHEIGHT or WINHEI

Audio Required attribute

Description
Indicates whether the user device requires an audio device to support audio that is associated with the application.

Type
String with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
AUDIOREQUIRED or AUD_REQ

Audio Type attribute

Description
The type of audio required on the user device to support audio that is associated with the application. The valid values are None and Basic.

Type
String with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
AUDIOTYPE or AUD_TYPE

Broker Catalog attribute group

This attribute group provides information about the broker catalogs that are available in a broker site.

Historical group
This attribute group is eligible for use with Tivoli Data Warehouse.

Attribute descriptions
The following list contains information about each attribute in the Broker Catalog attribute group:

Node attribute: This attribute is a key attribute.

Description

The managed system name of the agent.

Type

String

Source

The source for this attribute is the agent.

Warehouse name

NODE

Timestamp attribute

Description

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

Type

String

Source

The source for this attribute is the agent.

Warehouse name

TIMESTAMP

Catalog UID attribute

Description

The unique ID of the broker catalog.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

UID

Catalog Name attribute

Description

The name of the broker catalog.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

NAME or CATANAME

Allocation Type attribute

Description

Indicates the type that is used to assign the broker machines to the users. The valid values are Permanent and Random.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

ALLOCATION_TYPE or ALLTYPE

Assigned to Users attribute

Description

The number of broker machines that are assigned to the users.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

ASSIGNEDUSERS or ASSUSR

Available and Assigned to Users attribute

Description

The number of available broker machines that are assigned to the users, and that are available in a catalog to be added into a desktop group.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

AVAILABLEASSIGNED or AVLASSCNT

Available Count attribute

Description

The number of available broker machines that belong to a broker catalog.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

AVAILABLECOUNT or AVLCNT

Available Unassigned Count attribute

Description

The number of available broker machines that are not assigned to any user.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

AVAILABLEUNASSIGNEDCOUNT or AVLUNASS

Catalog Kind attribute

Description

The type of broker catalog. The valid values are ThinCloned, SingleImage, PowerManaged, Unmanaged, Pvs, Pvd, and PvsPvd.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

CATALOGKIND or CATAKND

Unassigned Count attribute

Description

The number of broker machines that are not assigned.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

UNASSIGNEDCOUNT or UNASSCNT

Used Count attribute

Description

The number of broker machines that are used in a desktop group.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

USEDCOUNT or USECNT

PVS Address attribute

Description

The IP address or host name of the provisioning services (Pvs) server.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

PVSADDRESS or PVSADD

PVS Domain attribute

Description

The Active Directory domain of the Pvs server.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

PVSDOMAIN

Broker Controllers attribute group

This attribute group contains attributes that provide information about the broker controller. The broker controller is also referred to as controller or Desktop Delivery Controller (DDC).

Historical group

This attribute group is eligible for use with Tivoli Data Warehouse.

Attribute descriptions

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

Node attribute: This attribute is a key attribute.

Description

The managed system name of the agent.

Type

String

Source

The source for this attribute is the agent.

Warehouse name

NODE

Timestamp attribute

Description

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

Type

String

Source

The source for this attribute is the agent.

Warehouse name

TIMESTAMP

Controller Version attribute

Description

The version of the broker service that is running on the controller.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

CONTROLLER_VERSION or BCVER

Active Site Services attribute

Description

The list of the active broker services that are running on the controller.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

ACTIVE_SITE_SERVICES or BCASS

Desktops Registered attribute

Description

The total number of desktops that are registered for the controller.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

DESKTOPS_REGISTERED or BCREG

UID attribute

Description

The unique ID of the controller.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

UID or BCUID

OS Type attribute

Description

The operating system on which the controller is installed.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
OS_TYPE or BCOSTP

OS Version attribute

Description
The version of the operating system on which the controller is installed.

Type
String with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
OS_VERSION or BCOSV

DNS Name attribute

Description
The Domain Name System (DNS) name of the controller.

Type
String with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
DNS_NAME or BCDNS

Last Activity Time attribute

Description
The time of the last activity on the controller.

Type
String with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
LAST_ACTIVITY_TIME or BCLAT

Last Start Time attribute

Description
The time when the controller was last started.

Type
String with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
LAST_START_TIME or BCLST

Machine Name attribute

Description

The name of the controller.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

MACHINE_NAME or BCMCN

State attribute

Description

Indicates the current status of the controller. The valid values are Failed, Off, On, and Active.

Type

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

- Failed (Failed)
- On (On)
- Off (Off)
- Active (Active)
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

STATE or BCSTATE

Licensing Grace Period Active attribute

Description

Indicates whether the licensing grace period of 30 days is started, and is in active mode. The valid values are True and False.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

LICENSING_GRACE_PERIOD_ACTIVE or LGPA

Broker Machine attribute group

This attribute group contains attributes that provide information about the broker machine.

Historical group

This attribute group is eligible for use with Tivoli Data Warehouse.

Attribute descriptions

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

Node attribute: This attribute is a key attribute.

Description

The managed system name of the agent.

Type

String

Source

The source for this attribute is the agent.

Warehouse name

NODE

Timestamp attribute

Description

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

Type

String

Source

The source for this attribute is the agent.

Warehouse name

TIMESTAMP

UID attribute

Description

The unique ID of the broker machine.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

UID

DNS Name attribute

Description

The broker machine name that is retrieved from the Domain Name System (DNS).

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

DNS_NAME

Hypervisor Connection Name attribute

Description

The name of the hypervisor connection that hosts the broker machine. This attribute value is blank if the broker machine is not a virtual machine.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

HYP_CONNECTION_NAME or HYP_CON_NM

Will Shutdown After Use attribute

Description

Indicates whether the broker machine is automatically turned off after the user has logged off.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

SHUTDOWN_AFTER_USE or SHUTDOWN

Power State attribute

Description

The power state of the broker machine.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

POWER_STATE or PWR_STATE

Machine Name attribute

Description

The name of the broker machine.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

MACHINE_NAME or MACHINE_NM

Catalog Kind attribute: This attribute is a key attribute.

Description

The type of catalog that the broker machine belongs to.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

CATALOG_KIND or CTLK

OS Type attribute: This attribute is a key attribute.

Description

The operating system of the broker machine.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

OSTYPE or BMOSTP

RAM in MB attribute: This attribute is a key attribute.

Description

The amount of memory that is allocated to the broker machine.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

RAM or BMRAM

Catalog UID attribute

Description

The unique ID of the catalog that the broker machine belongs to.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

CATALOGUID or CTID

Desktop UID attribute

Description

The unique ID of the desktop that is associated with a broker machine.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
DESKTOPUID or DEID

Catalog Name attribute

Description
The name of the catalog that the broker machine belongs to.

Type
String with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
CATALOGNAME or CTNAM

Hosted Machine ID attribute

Description
The unique ID that the hypervisor uses to identify a broker machine.

Type
String with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
HOSTEDMACHINEID or HMID

Hosted Machine Name attribute

Description
The name that the hypervisor uses to identify a broker machine.

Type
String with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
HOSTEDMACHINENAME or HM_NAME

Assigned Status attribute

Description
Indicates whether the broker machine is assigned to the users, a client IP address, or a client endpoint name.

Type
String with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
ISASSIGNED or ISASS

Power Action Pending attribute

Description
Indicates whether the power action is waiting to execute. The valid values are True and False.

Type
String with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
POWERACTIONPENDING or POW_ACTION

Registration State attribute

Description
The registration status of the broker machine. The valid values are Registered, Unregistered, and AgentError.

Type
String with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
REGISTRATIONSTATE or REG_STATE

Pvd Stage attribute

Description
The status of the Personal vDisk (Pvd) of the broker machine. The valid values are None, Requested, PoweringOn, and Working.

Type
String with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
PVD_STAGE or BM_PST

Broker Machines Catalog attribute group

This attribute group provides information about the number of broker machines in a catalog and the catalogs that the broker machines belong to.

Historical group
This attribute group is eligible for use with Tivoli Data Warehouse.

Attribute descriptions
The following list contains information about each attribute in the Broker Machines Catalog attribute group:

Node attribute: This attribute is a key attribute.

Description
The managed system name of the agent.
Type
String
Source
The source for this attribute is the agent.
Warehouse name
NODE

Timestamp attribute
Description
The local time at the agent when the data was collected.
Type
String
Source
The source for this attribute is the agent.
Warehouse name
TIMESTAMP

Catalog Kind attribute
Description
The type of catalog that the broker machine belongs to.
Type
String with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.
Warehouse name
CATALOG_KIND or CTLK

Number of Machines attribute
Description
The number of broker machines that belong to a category that is based on the catalog type.
Type
Integer (32-bit numeric property) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.
Warehouse name
NUMBER_OF_MACHINES or COUNT

Broker Machines OS Type attribute group

This attribute group provides information about the broker machines that are powered on and have similar operating system. This attribute group is valid only for Citrix XenDesktop 5.

Historical group
This attribute group is eligible for use with Tivoli Data Warehouse.

Attribute descriptions
The following list contains information about each attribute in the Broker Machines OS Type attribute group:

Node attribute: This attribute is a key attribute.

Description
The managed system name of the agent.
Type
String
Source
The source for this attribute is the agent.
Warehouse name
NODE

Timestamp attribute
Description
The local time at the agent when the data was collected.
Type
String
Source
The source for this attribute is the agent.
Warehouse name
TIMESTAMP

OS Type attribute
Description
The operating system of the broker machine.
Type
String with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.
Warehouse name
NAME

Number of Machines attribute
Description
The number of broker machines that belong to a category, which is based on the operating system.
Type
Integer (32-bit numeric property) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.
Warehouse name
NUMBER_OF_MACHINES or COUNT

Broker Machines Power State attribute group

This attribute group provides information about the power state of broker machines and the number of broker machines that belong to a category, which is based on the power state.

Historical group
This attribute group is eligible for use with Tivoli Data Warehouse.

Attribute descriptions
The following list contains information about each attribute in the Broker Machines Power State attribute group:

Node attribute: This attribute is a key attribute.

Description
The managed system name of the agent.
Type
String
Source
The source for this attribute is the agent.
Warehouse name
NODE

Timestamp attribute
Description
The local time at the agent when the data was collected.
Type
String
Source
The source for this attribute is the agent.
Warehouse name
TIMESTAMP

Status attribute
Description
The power state of the broker machine.
Type
String with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.
Warehouse name
STATUS

Number of Machines attribute
Description
The number of broker machines that belong to a category, which is based on the power state.
Type
Integer (32-bit numeric property) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.
Warehouse name
NUMBER_OF_MACHINES or COUNT

Broker Machines RAM attribute group

This attribute group provides information about the broker machines that have similar memory size (in MB). This attribute group is valid only for Citrix XenDesktop 5.

Historical group
This attribute group is eligible for use with Tivoli Data Warehouse.

Attribute descriptions
The following list contains information about each attribute in the Broker Machines RAM attribute group:

Node attribute: This attribute is a key attribute.

Description
The managed system name of the agent.
Type
String
Source
The source for this attribute is the agent.
Warehouse name
NODE

Timestamp attribute
Description
The local time at the agent when the data was collected.
Type
String
Source
The source for this attribute is the agent.
Warehouse name
TIMESTAMP

RAM in MB attribute
Description
The amount of memory allocated to the broker machines that belong to a catalog for which the provision schema is defined.
Type
Integer (32-bit numeric property) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.
Warehouse name
SIZE

Number of Machines attribute
Description
The number of broker machines that belong to a catalog for which the provision schema is defined.
Type
Integer (32-bit numeric property) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.
Warehouse name
NUMBER_OF_MACHINES or COUNT

Broker Machines Shutdown attribute group

This attribute group provides information about the power state of broker machines and the number of broker machines that belong to a category, which is based on the power state after the user logs off.

Historical group
This attribute group is eligible for use with Tivoli Data Warehouse.

Attribute descriptions
The following list contains information about each attribute in the Broker Machines Shutdown attribute group:

Node attribute: This attribute is a key attribute.

Description

The managed system name of the agent.

Type

String

Source

The source for this attribute is the agent.

Warehouse name

NODE

Timestamp attribute

Description

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

Type

String

Source

The source for this attribute is the agent.

Warehouse name

TIMESTAMP

Status attribute

Description

The power state of broker machines after the user logs off.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

STATUS

Number of Machines attribute

Description

The number of broker machines that belong to a category, which is based on the power state after the user logs off.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

NUMBER_OF_MACHINES or COUNT

Broker Session attribute group

This attribute group provides information about the desktop user sessions.

Historical group

This attribute group is eligible for use with Tivoli Data Warehouse.

Attribute descriptions

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

Node attribute: This attribute is a key attribute.

Description
The managed system name of the agent.
Type
String
Source
The source for this attribute is the agent.
Warehouse name
NODE

Timestamp attribute
Description
The local time at the agent when the data was collected.
Type
String
Source
The source for this attribute is the agent.
Warehouse name
TIMESTAMP

Autonomously Brokered attribute
Description
Indicates whether the desktop user session is autonomously brokered. The valid values are True and False.
Type
String with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.
Warehouse name
AUTONOMOUSLYBROKERED or AUTONBROKR

Brokering Time attribute
Description
The time when the desktop user session was brokered.
Type
String with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.
Warehouse name
BROKERINGTIME or BRKTIME

Brokering User Name attribute
Description
The full name of the desktop session user.
Type
String with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

BROKERINGUSERNAME or BRKUSR

Brokering User SID attribute

Description

The security ID (SID) of the desktop session user.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

BROKERINGUSERSID or BRKUSRSID

Client IP Address attribute

Description

The IP address of the Citrix client, which is installed on the user device for the desktop user session.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

CLIENTADDRESS or CLINTADDR

Client Name attribute

Description

The name of the Citrix client, which is installed on the user device for the desktop user session.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

CLIENTNAME or CLNTNAM

Client Version attribute

Description

The version of the Citrix client, which is installed on the user device for the desktop user session.

Type

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

- Unavailable (-1)

- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

CLIENTVERSION or CLNTVER

Connected Through Host Name attribute

Description

The host name of the user device where the desktop user session is brokered.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

CONNECTEDVIAHOSTNAME or CNCTVIAHN

Connected Through IP attribute

Description

The IP address of the user device where the desktop user session is brokered.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

CONNECTEDVIAIP or CNCTVIAIP

Desktop SID attribute

Description

The security ID of the desktop that is delivered to the session user.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

DESKTOPSID or DKSTPSID

Desktop UID attribute

Description

The unique ID of the desktop that is delivered to the session user.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

DESKTOPUID or DKSTPUID

Device ID attribute

Description

The ID of the user device where the desktop session is brokered.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

DEVICEID or DVICID

Hardware ID attribute

Description

The hardware ID of the user device where the Citrix client is installed.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

HARDWAREID or H_W_ID

Launched Through Host Name attribute

Description

The host name of the Web Interface server through which the desktop user session is brokered.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

LAUNCHEDVIAHOSTNAME or LNCHVIAHN

Launched Through IP attribute

Description

The IP address of the Web Interface server through which the desktop user session is brokered.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

LAUNCHEDVIAIP or LNCHVIAIP

Protocol attribute

Description

The name of connection protocol through which the desktop session is brokered.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

PROTOCOL

Secure ICA Active attribute

Description

Indicates whether the desktop user session uses the SecureICA encryption method for client-server communication. The valid values are True and False.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

SECUREICAACTIVE or ISSECURICA

Session ID attribute

Description

The session ID of the desktop user session.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

SESSIONID or SESONID

Session State attribute

Description

The status of the desktop user session. The valid values are Other, PreparingSession, Connected, Active, Disconnected, Reconnecting, NonBrokeredSession, and Unknown.

Type

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

- Unavailable (-1)

- NA (-2)
- Disconnected (Disconnected)
- Unknown (Unknown)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

SESSIONSTATE or SESONSTAT

Session State Change Time attribute

Description

The time when the status of the desktop user session was changed.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

SESSIONSTATECHANGETIME or SESONSTTM

Smart Access Tags attribute

Description

Indicates whether the desktop user session is compatible with the smart access filter settings.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

SMARTACCESSTAGS or SMRTACSTAG

Start Time attribute

Description

The time when the desktop user session was started.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

STARTTIME or STRTTIM

UID attribute

Description

The unique ID of the desktop user session.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
UID

User Name attribute

Description
The user name of the desktop session user.

Type
String with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
USERNAME or USRNAM

User SID attribute

Description
The security ID of the user who is currently accessing the desktop by using the Remote Desktop Protocol (RDP).

Type
String with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
USERSID or USRSID

Machine Name attribute

Description
The name of the broker machine, which is used by the desktop session user.

Type
String with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
MACHINENAME or MNAME

Broker User attribute group

This attribute group provides information about the desktop users. The desktop users are also referred to as broker users.

Historical group
This attribute group is eligible for use with Tivoli Data Warehouse.

Attribute descriptions

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

Node attribute: This attribute is a key attribute.

Description

The managed system name of the agent.

Type

String

Source

The source for this attribute is the agent.

Warehouse name

NODE

Timestamp attribute

Description

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

Type

String

Source

The source for this attribute is the agent.

Warehouse name

TIMESTAMP

Full Name attribute

Description

The full name of a desktop user.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

FULL_NAME or USRFNM

Name attribute

Description

The user name of a desktop user.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

USER_NAME or USRNM

SID attribute

Description

The Security ID (SID) of a desktop user.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
USER_SID or USRSID

Connection Log attribute group

This attribute group provides information about the brokering connections of the desktop user sessions. This attribute group is available only for Citrix XenDesktop 5.6.

Historical group
This attribute group is eligible for use with Tivoli Data Warehouse.

Attribute descriptions
The following list contains information about each attribute in the Connection Log attribute group:

Node attribute: This attribute is a key attribute.

Description
The managed system name of the agent.

Type
String

Source
The source for this attribute is the agent.

Warehouse name
NODE

Timestamp attribute

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

Type
String

Source
The source for this attribute is the agent.

Warehouse name
TIMESTAMP

UID attribute

Description
The unique ID of the desktop user session.

Type
Integer (32-bit numeric property) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
UID or CLOGUID

Machine Name attribute

Description
The name of the broker machine that is used by the desktop session user.

Type
String with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

MACHINE_NAME or MACNAME

Brokering Time attribute

Description

The time when the desktop user session was started.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

BROKERING_TIME or BROKTIME

Brokering User Name attribute

Description

The user name of the desktop session user.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

BROKERING_USER_NAME or BUSRNM

Brokering User UPN attribute

Description

The User Principle Name (UPN) of the desktop session user.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

BROKERING_USER_UPN or BUSRUPN

Connection Failure Reason attribute

Description

The reason for the connection failure of the desktop user session.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

CONNECTION_FAILURE_REASON or CFAILRSN

Disconnected attribute

Description

Indicates whether the desktop user session is disconnected. The valid values are True and False.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

DISCONNECTED or DISCONN

End Time attribute

Description

The time when the desktop user session was closed.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

END_TIME or ENTIME

Establishment Time attribute

Description

The time when the desktop user session was started.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

ESTABLISHMENT_TIME or ESTTIME

Machine DNS Name attribute

Description

The Domain Name System (DNS) name of the broker machine.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
MACHINE_DNS_NAME or MACDNSNM

Machine UID attribute

Description
The unique ID of the broker machine.

Type
Integer (32-bit numeric property) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
MACHINE_UID or MACUID

Desktop Group Available attribute group

This attribute group provides information about the desktop groups that are available.

Historical group
This attribute group is eligible for use with Tivoli Data Warehouse.

Attribute descriptions
The following list contains information about each attribute in the Desktop Group Available attribute group:

Node attribute: This attribute is a key attribute.

Description
The managed system name of the agent.

Type
String

Source
The source for this attribute is the agent.

Warehouse name
NODE

Timestamp attribute

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

Type
String

Source
The source for this attribute is the agent.

Warehouse name
TIMESTAMP

Available Desktop % attribute

Description
The percentage of desktops that are available in the desktop group.

Type
String with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
DSKAVL_RANG or DKAVL

Number of Desktop Groups attribute

Description

The number of desktop groups that belong to a category, which is based on desktop availability.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

DSKAVL_VALUE or DKNAVV

Desktop Groups attribute group

This attribute group provides information about the broker desktop groups. The broker desktop group is also referred to as desktop group.

Historical group

This attribute group is eligible for use with Tivoli Data Warehouse.

Attribute descriptions

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

Node attribute: This attribute is a key attribute.

Description

The managed system name of the agent.

Type

String

Source

The source for this attribute is the agent.

Warehouse name

NODE

Timestamp attribute

Description

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

Type

String

Source

The source for this attribute is the agent.

Warehouse name

TIMESTAMP

Published Name attribute

Description

The displayed name of the desktop group.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

PUBLISHED_NAME or PUB_NAME

Desktop Kind attribute

Description

The type of desktop in the desktop group.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

DESKTOP_KIND or DSK_KND

Total Desktops attribute

Description

The total number of desktops in the desktop group.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

TOTAL_DESKTOPS or TOTAL_DSK

Desktops Available attribute

Description

The number of desktops that are available in the desktop group.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

DESKTOPS_AVAILABLE or DSK_AVLB

Desktops Disconnected attribute

Description

The number of disconnected desktops in the desktop group.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

DESKTOPS_DISCONNECTED or DSK_DISCON

Desktops in Use attribute

Description

The number of desktops that are currently used.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

DESKTOPS_IN_USE or DSK_INUSE

Desktops Never Registered attribute

Description

The number of desktops that are never registered.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

DESKTOPS_NEVER_REGISTERED or DNVREG

Desktops Unregistered attribute

Description

The number of desktops that are currently not registered.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

DESKTOPS_UNREGISTERED or DNTREG

Enabled attribute

Description

The enabled status of the desktop group. The valid values are True and False.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

ENABLED or DSK_ENB

Desktop Group UID attribute

Description

The unique ID of the desktop group.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

DESKTOP_GROUP_UID or DSKG_UID

In Maintenance Mode attribute

Description

Indicates whether the desktop group is in the maintenance mode.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

IN_MAINTENANCE_MODE or INMNTMD

Shutdown Desktops After Use attribute

Description

Indicates whether the desktops that belong to a desktop group are automatically turned off after each user session is completed.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

SHUTDOWN_DESKTOPS_AFTER_USE or SHTDTAUS

Automatic Power on for Assigned attribute

Description

Indicates whether the assigned desktops that belong to a desktop group must be turned on automatically.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

AUTOMATIC_POWER_ON_FOR_ASSIGNED or APOFA

Desktops Preparing attribute

Description

The number of desktops that are preparing to be delivered to the user. This attribute is available only for Citrix XenDesktop 5.6.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

DESKTOPS_PREPARING or DNPREG

Desktops Available Percentage attribute

Description

Desktops Available Percent.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

DESKTOPS_AVAILABLE_PERCENT or DA_PER

Desktop Groups in Use attribute group

This attribute group provides information about the desktop groups that are currently used.

Historical group

This attribute group is eligible for use with Tivoli Data Warehouse.

Attribute descriptions

The following list contains information about each attribute in the Desktop Groups in Use attribute group:

Node attribute: This attribute is a key attribute.

Description

The managed system name of the agent.

Type

String

Source

The source for this attribute is the agent.

Warehouse name

NODE

Timestamp attribute

Description

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

Type

String

Source

The source for this attribute is the agent.

Warehouse name

TIMESTAMP

Desktop Utilization % attribute

Description
The percentage of desktops that are currently used.

Type
String with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
DSKUTL_RANG or DKUTL

Number of Desktop Groups attribute

Description
The number of desktop groups that belong to a category, which is based on the currently used desktops.

Type
Integer (32-bit numeric property) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
DSKUTL_VALUE or DKNUSE

Desktop Pooled Non Pooled attribute group

This attribute group provides information about the types of desktops.

Historical group
This attribute group is eligible for use with Tivoli Data Warehouse.

Attribute descriptions
The following list contains information about each attribute in the Desktop Pooled Non Pooled attribute group:

Node attribute: This attribute is a key attribute.

Description
The managed system name of the agent.

Type
String

Source
The source for this attribute is the agent.

Warehouse name
NODE

Timestamp attribute

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

Type
String

Source
The source for this attribute is the agent.

Warehouse name
TIMESTAMP

Pooled Desktops attribute

Description
The number of pooled desktops.

Type
Integer (32-bit numeric property) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
DSK_POOLED or DSKPOOL

Non Pooled Desktops attribute

Description
The number of non-pooled desktops.

Type
Integer (32-bit numeric property) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
DSK_NONPOOLED or DSKNPOOL

Desktop Usage attribute group

This attribute group provides information about the desktop usage in the desktop groups. This attribute group is available for Citrix XenDesktop 5.0 and Citrix XenDesktop 5.6.

Historical group
This attribute group is eligible for use with Tivoli Data Warehouse.

Attribute descriptions
The following list contains information about each attribute in the Desktop Usage attribute group:

Node attribute: This attribute is a key attribute.

Description
The managed system name of the agent.

Type
String

Source
The source for this attribute is the agent.

Warehouse name
NODE

Timestamp attribute

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

Type
String

Source
The source for this attribute is the agent.

Warehouse name
TIMESTAMP

Desktop Group UID attribute

Description
The unique ID of the desktop group.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

DESKTOP_GROUP_UID or DGUID

In Use attribute

Description

The number of desktops that are currently used.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

IN_USE or INUSE

Timestamp attribute

Description

The date and time when the desktop group was used.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

DTIMESTAMP or TIMSTMP

Desktops in Desktop Group attribute group

This attribute group provides information about the desktops that belong to a desktop group.

Historical group

This attribute group is eligible for use with Tivoli Data Warehouse.

Attribute descriptions

The following list contains information about each attribute in the Desktops in Desktop Group attribute group:

Node attribute: This attribute is a key attribute.

Description

The managed system name of the agent.

Type

String

Source

The source for this attribute is the agent.

Warehouse name

NODE

Timestamp attribute

Description
The local time at the agent when the data was collected.
Type
String
Source
The source for this attribute is the agent.
Warehouse name
TIMESTAMP

Desktop UID attribute
Description
The unique ID of the desktop.
Type
Integer (32-bit numeric property) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.
Warehouse name
UID or DSKUID

Hosted Machine Name attribute
Description
The name of the hypervisor machine that hosts the desktop.
Type
String with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.
Warehouse name
HOSTED_MACHINE_NAME or HOSTSVR

Device ID attribute
Description
The device ID of the desktop.
Type
String with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.
Warehouse name
DEVICE_ID or DVID

OS Type attribute
Description
The operating system of the desktop.
Type
String with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

OS_TYPE or OSTYP

Power State attribute

Description

The power state of the desktop.

Type

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

- Unavailable (-1)
- NA (-2)
- Off (-3)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

POWER_STATE or PWRST

Catalog Kind attribute

Description

The type of catalog that the desktop belongs to.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

CATALOG_KIND or CTKND

Desktop Group UID attribute

Description

The unique ID of desktop group that the desktop belongs to.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

DSKGRP_UID or DSKGUID

Desktop Group Name attribute

Description

The name of desktop group that the desktop belongs to.

Type

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

- Unavailable (-1)

- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

DESKTOP_GROUP or DSKGRP

Registration State attribute

Description

The registration status of the desktop. The valid values are Registered and Unregistered.

Type

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

- Unavailable (-1)
- NA (-2)
- Unregistered (Unregistered)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

REGISTRATION_STATE or DSKRS

Last Deregistration Reason attribute

Description

The reason to unregister the desktop.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

LAST_DEREGISTRATION_REASON or DSKLDR

Last Connection Failure attribute

Description

The reason for the last connection failure of the desktop.

Type

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

- Unavailable (-1)
- NA (-2)
- None (-3)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

LAST_CONNECTION_FAILURE or DSKLCF

Applications in Use attribute

Description

The names of the applications that are running on the desktop.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

APPLICATIONS_IN_USE or DSKAPPUSE

Associated User UPN attribute

Description

The User Principle Name (UPN) of the desktop user.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

ASSOCIATED_USER_UPN or DSKUPN

Catalog Name attribute

Description

The name of the catalog that the desktop belongs to.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

CATALOG_NAME or DSKCATNM

DNS Name attribute

Description

The Domain Name System (DNS) name of the desktop.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

DNS_NAME or DSKDNSNM

Desktop Kind attribute

Description

The type of the desktop. The valid values are Private, Shared, PrivateApp, and SharedApp.

Type

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

- Unavailable (-1)

- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

DESKTOP_KIND or DSKKIND

Controller Name attribute

Description

The DNS name of controller that the desktop is registered with.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

CONTROLLER_NAME or DSKBC_NAM

In Maintenance Mode attribute

Description

Indicates whether the desktop is in maintenance mode.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

IN_MAINTENANCE_MODE or DSKMAINTMD

Assigned Status attribute

Description

Indicates whether the desktop is assigned.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

ISASSIGNED or DSKASIGNED

Published Application attribute

Description

The name of the application that is published on the desktop.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

PUBLISHED_APPLICATION or DSKAPPSPUB

Session Username attribute

Description

The user name that is associated with the current session on the desktop.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

SESSION_USERNAME or DSKSESNUNM

Last Connection Time attribute

Description

Indicates the time when the desktop was last connected.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

LAST_CONNECTION_TIME or DSKLSTCNTM

Last Connection User attribute

Description

The name of the user who last attempted to connect to the desktop.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

LAST_CONNECTION_USER or DSKLSTUSR

Catalog UID attribute

Description

The unique ID of the catalog that the desktop belongs to.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
CATALOG_UID or DSKCATUID

Session UID attribute

Description
The unique ID of the session that is associated with the desktop.

Type
Integer (32-bit numeric property) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
SESSION_UID or DSKSESONID

Last Error Reason attribute

Description
The reason for the last error occurred on the desktop. This attribute is available only for Citrix XenDesktop 5.6.

Type
String with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
LAST_ERROR_REASON or LERRESN

Last Error Time attribute

Description
The time when the last error occurred on the desktop. This attribute is available only for Citrix XenDesktop 5.6.

Type
String with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
LAST_ERROR_TIME or LERRTIM

Machine Internal State attribute

Description
The internal status of the broker machine. This attribute is available only for Citrix XenDesktop 5.6.

Type
String with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

MACHINE_INTERNAL_STATE or MACIS

Pvd Stage attribute

Description

The status of the Personal vDisk (Pvd) of the broker machine. The valid values are None, Requested, PoweringOn, and Working.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

DPVD_STAGE or DPVDSTG

Event Log Details attribute group

This attribute group provides information about event logs for the Citrix XenDesktop services.

Historical group

This attribute group is eligible for use with Tivoli Data Warehouse.

Attribute descriptions

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

Node attribute: This attribute is a key attribute.

Description

The managed system name of the agent.

Type

String

Source

The source for this attribute is the agent.

Warehouse name

NODE

Timestamp attribute

Description

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

Type

String

Source

The source for this attribute is the agent.

Warehouse name

TIMESTAMP

Time attribute

Description

The time when the event was generated.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
TIME

Entry Type attribute

Description
The type of the event.

Type
String with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
ENTRY_TYPE

Source attribute

Description
The source of the event.

Type
String with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
SOURCE

Message attribute

Description
The description of the event.

Type
String with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
MESSAGE

Hyp Alert Details attribute group

This attribute group provides information about the alerts that are reported by the hypervisor.

Historical group
This attribute group is eligible for use with Tivoli Data Warehouse.

Attribute descriptions
The following list contains information about each attribute in the Hyp Alert Details attribute group:

Node attribute: This attribute is a key attribute.

Description
The managed system name of the agent.

Type

String

Source

The source for this attribute is the agent.

Warehouse name

NODE

Timestamp attribute

Description

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

Type

String

Source

The source for this attribute is the agent.

Warehouse name

TIMESTAMP

Severity attribute

Description

The severity of an alert.

Type

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

- Unavailable (-1)
- NA (-2)
- Yellow (Yellow)
- Red (Red)
- Green (Green)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

SEVERITY

Time attribute

Description

The time when an alert was generated.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

TIME

Hypervisor Connection UID attribute

Description

The unique ID of the hypervisor connection for which an alert was generated.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

HYP_CONN_UID or HYP_CN_UID

Hosting Server Name attribute

Description

The name of the hypervisor server for which an alert was generated.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

SERVER_NAME or HSVR_NAME

Metric attribute

Description

The server metric for which an alert was generated.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

METRIC

Trigger Interval attribute

Description

The duration between the two alerts.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

TRIGGER_INTERVAL or INTERVAL

Trigger Level attribute

Description

The warning or error threshold level at which an alert was generated.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
TRIGGER_LEVEL or LEVEL

Trigger Period attribute

Description
The duration between the time when the server metric exceeded the warning or error threshold and the time when an alert was generated.

Type
String with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
TRIGGER_PERIOD or PERIOD

License Usage attribute group

This attribute group provides information about the Citrix XenDesktop license usage.

Historical group
This attribute group is eligible for use with Tivoli Data Warehouse.

Attribute descriptions
The following list contains information about each attribute in the License Usage attribute group:

Node attribute: This attribute is a key attribute.

Description
The managed system name of the agent.

Type
String

Source
The source for this attribute is the agent.

Warehouse name
NODE

Timestamp attribute

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

Type
String

Source
The source for this attribute is the agent.

Warehouse name
TIMESTAMP

License Full Product Name attribute

Description
The name of the product that the license belongs to.

Type
String with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
LICENSE_PRODUCT_NAME or LIC_PRD_NM

Licenses in Use attribute

Description

The number of Citrix XenDesktop licenses that are currently used.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

LICENSES_IN_USE or LSUSE

Licenses Available attribute

Description

The number of Citrix XenDesktop licenses that are available.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

LICENSES_AVAILABLE or LSAVAI

License Overdraft attribute

Description

The number of overdraft Citrix XenDesktop licenses.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

LICENSE_OVERDRAFT or LSOVR_DRFT

Licenses in Use Percent attribute

Description

The percentage of Citrix XenDesktop licenses that are currently used.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

LICENSES_IN_USE_PERCENT or LIUPER

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 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

Source

The source for this attribute is the agent.

Warehouse name

NODE

Timestamp attribute

Description

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

Type

String

Source

The source for this attribute is the agent.

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 that are 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 value is the value that is 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 that are shown in parentheses. The following values are defined:

- ACTIVE (0)
- INACTIVE (1)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

OBJECT_STATUS or OBJSTTS

Error Code attribute

Description

The error code that is 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 that are shown in parentheses. The following values are defined:

- NO ERROR (0)
- GENERAL ERROR (1)
- OBJECT NOT FOUND (2)
- COUNTER NOT FOUND (3)
- NAMESPACE ERROR (4)
- OBJECT CURRENTLY UNAVAILABLE (5)
- COM LIBRARY INIT FAILURE (6)
- SECURITY INIT FAILURE (7)
- PROXY SECURITY FAILURE (9)
- NO INSTANCES RETURNED (10)
- ASSOCIATOR QUERY FAILED (11)
- REFERENCE QUERY FAILED (12)

- NO RESPONSE RECEIVED (13)
- CANNOT FIND JOINED QUERY (14)
- CANNOT FIND JOIN ATTRIBUTE IN QUERY 1 RESULTS (15)
- CANNOT FIND JOIN ATTRIBUTE IN QUERY 2 RESULTS (16)
- QUERY 1 NOT A SINGLETON (17)
- QUERY 2 NOT A SINGLETON (18)
- NO INSTANCES RETURNED IN QUERY 1 (19)
- NO INSTANCES RETURNED IN QUERY 2 (20)
- CANNOT FIND ROLLUP QUERY (21)
- CANNOT FIND ROLLUP ATTRIBUTE (22)
- FILE OFFLINE (23)
- NO HOSTNAME (24)
- MISSING LIBRARY (25)
- ATTRIBUTE COUNT MISMATCH (26)
- ATTRIBUTE NAME MISMATCH (27)
- COMMON DATA PROVIDER NOT STARTED (28)
- CALLBACK REGISTRATION ERROR (29)
- MDL LOAD ERROR (30)
- AUTHENTICATION FAILED (31)
- CANNOT RESOLVE HOST NAME (32)
- SUBNODE UNAVAILABLE (33)
- SUBNODE NOT FOUND IN CONFIG (34)
- ATTRIBUTE ERROR (35)
- CLASSPATH ERROR (36)
- CONNECTION FAILURE (37)
- FILTER SYNTAX ERROR (38)
- FILE NAME MISSING (39)
- SQL QUERY ERROR (40)
- SQL FILTER QUERY ERROR (41)
- SQL DB QUERY ERROR (42)
- SQL DB FILTER QUERY ERROR (43)
- PORT OPEN FAILED (44)
- ACCESS DENIED (45)
- TIMEOUT (46)
- NOT IMPLEMENTED (47)
- REQUESTED A BAD VALUE (48)
- RESPONSE TOO BIG (49)
- GENERAL RESPONSE ERROR (50)
- SCRIPT NONZERO RETURN (51)
- SCRIPT NOT FOUND (52)
- SCRIPT LAUNCH ERROR (53)
- CONF FILE DOES NOT EXIST (54)
- CONF FILE ACCESS DENIED (55)
- INVALID CONF FILE (56)
- EIF INITIALIZATION FAILED (57)
- CANNOT OPEN FORMAT FILE (58)
- FORMAT FILE SYNTAX ERROR (59)
- REMOTE HOST UNAVAILABLE (60)
- EVENT LOG DOES NOT EXIST (61)
- PING FILE DOES NOT EXIST (62)
- NO PING DEVICE FILES (63)
- PING DEVICE LIST FILE MISSING (64)
- SNMP MISSING PASSWORD (65)
- DISABLED (66)
- URLS FILE NOT FOUND (67)
- XML PARSE ERROR (68)

- NOT INITIALIZED (69)
- ICMP SOCKETS FAILED (70)
- DUPLICATE CONF FILE (71)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

ERROR_CODE or ERRCODE

Last Collection Start attribute

Description

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

Type

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

- NOT COLLECTED (0691231190000000)
- NOT COLLECTED (0000000000000001)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

LAST_COLLECTION_START or COLSTRT

Last Collection Finished attribute

Description

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

Type

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

- NOT COLLECTED (0691231190000000)
- NOT COLLECTED (0000000000000001)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

LAST_COLLECTION_FINISHED or COLFINI

Last Collection Duration attribute

Description

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

Type

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

Warehouse name

LAST_COLLECTION_DURATION or COLDURA

Average Collection Duration attribute

Description

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

Type

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

- NO DATA (-100)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

AVERAGE_COLLECTION_DURATION or COLAVGD

Refresh Interval attribute

Description

The interval at which this group is refreshed in seconds.

Type

Integer (32-bit counter)

Warehouse name

REFRESH_INTERVAL or REFRINT

Number of Collections attribute

Description

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

Type

Integer (32-bit counter)

Warehouse name

NUMBER_OF_COLLECTIONS or NUMCOLL

Cache Hits attribute

Description

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

Type

Integer (32-bit counter)

Warehouse name

CACHE_HITS or CACHEHT

Cache Misses attribute

Description

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

Type

Integer (32-bit counter)

Warehouse name

CACHE_MISSES or CACHEMS

Cache Hit Percent attribute

Description

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

Type

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

Warehouse name

CACHE_HIT_PERCENT or CACHPCT

Intervals Skipped attribute

Description

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

Type

Integer (32-bit counter)

Warehouse name

INTERVALS_SKIPPED or INTSKIP

Thread Pool Status attribute group

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

Historical group

This attribute group is eligible for use with Tivoli Data Warehouse.

Attribute descriptions

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

Node attribute: This attribute is a key attribute.

Description

The managed system name of the agent.

Type

String

Source

The source for this attribute is the agent.

Warehouse name

NODE

Timestamp attribute

Description

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

Type

String

Source

The source for this attribute is the agent.

Warehouse name

TIMESTAMP

Thread Pool Size attribute

Description

The number of threads currently existing in the thread pool.

Type

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

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

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

THREAD_POOL_SIZE or THPSIZE

Thread Pool Max Size attribute

Description

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

Type

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

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

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

THREAD_POOL_MAX_SIZE or TPMAXSZ

Thread Pool Active Threads attribute

Description

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

Type

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

- NO DATA (-1)

- NO DATA (-100)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

THREAD_POOL_ACTIVE_THREADS or TPACTTH

Thread Pool Avg Active Threads attribute

Description

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

Type

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

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

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

THREAD_POOL_AVG_ACTIVE_THREADS or TPAVGAT

Thread Pool Min Active Threads attribute

Description

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

Type

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

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

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

THREAD_POOL_MIN_ACTIVE_THREADS or TPMINAT

Thread Pool Max Active Threads attribute

Description

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

Type

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

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

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

THREAD_POOL_MAX_ACTIVE_THREADS or TPMAXAT

Thread Pool Queue Length attribute

Description

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

Type

Integer (32-bit gauge) with enumerated values. The strings are displayed in the

Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- NO DATA (-1)
- NO DATA (-100)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

THREAD_POOL_QUEUE_LENGTH or TPQLGTH

Thread Pool Avg Queue Length attribute

Description

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

Type

Real number (32-bit gauge) with two decimal places of precision with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- NO DATA (-1)
- NO DATA (-100)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

THREAD_POOL_AVG_QUEUE_LENGTH or TPAVGQL

Thread Pool Min Queue Length attribute

Description

The minimum length the thread pool queue has reached.

Type

Integer (32-bit counter) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- NO DATA (-1)
- NO DATA (-100)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

THREAD_POOL_MIN_QUEUE_LENGTH or TPMINQL

Thread Pool Max Queue Length attribute

Description

The peak length the thread pool queue has reached.

Type

Integer (32-bit counter) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- NO DATA (-1)
- NO DATA (-100)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

THREAD_POOL_MAX_QUEUE_LENGTH or TPMAXQL

Thread Pool Avg Job Wait attribute

Description

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

Type

Real number (32-bit gauge) with two decimal places of precision with

enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- NO DATA (-1)
- NO DATA (-100)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
THREAD_POOL_AVG_JOB_WAIT or TPAVJBW

Thread Pool Total Jobs attribute

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

Type
Integer (32-bit counter) with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- NO DATA (-1)
- NO DATA (-100)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
THREAD_POOL_TOTAL_JOBS or TPTJOBS

XenDesktop 4 IMA Networking Service attribute group

This attribute group provides information about the Citrix XenDesktop 4 Independent Management Architecture (IMA) Network Service.

Historical group
This attribute group is eligible for use with Tivoli Data Warehouse.

Attribute descriptions
The following list contains information about each attribute in the XenDesktop 4 IMA Networking Service attribute group:

Node attribute: This attribute is a key attribute.

Description
The managed system name of the agent.

Type
String

Source
The source for this attribute is the agent.

Warehouse name
NODE

Timestamp attribute

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

Type
String

Source
The source for this attribute is the agent.

Warehouse name
TIMESTAMP

Total Network Connections attribute

Description
The total number of active IMA network connections.

Type
Real number (64-bit numeric property) with four decimal places of precision with

enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
TOTAL_NETWORK_CONNECTIONS or NETCONN

Bytes Sent Per Sec attribute

Description
The amount of network traffic (in bytes) sent per second for IMA communication.

Type
Real number (64-bit numeric property) with four decimal places of precision with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
BYTES_SENT_PER_SEC or BYTESSENT

Bytes Received Per Sec attribute

Description
The amount of network traffic (in bytes) received per second for IMA communication.

Type
Real number (64-bit numeric property) with four decimal places of precision with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
BYTES_RECEIVED_PER_SEC or BYTES_REC

XenDesktop 4 Licensing Service attribute group

This attribute group provides information about the Citrix XenDesktop 4 Licensing Service.

Historical group
This attribute group is eligible for use with Tivoli Data Warehouse.

Attribute descriptions
The following list contains information about each attribute in the XenDesktop 4 Licensing Service attribute group:

Node attribute: This attribute is a key attribute.

Description
The managed system name of the agent.

Type
String

Source
The source for this attribute is the agent.

Warehouse name
NODE

Timestamp attribute

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

Type
String

Source
The source for this attribute is the agent.

Warehouse name
TIMESTAMP

Average License Check in Response Time attribute

Description
The average response time (in milliseconds) that is required for a license check-in request.

Type
Real number (64-bit numeric property) with four decimal places of precision with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
AVERAGE_LICENSE_CHECK_IN_RESPONSE_TIME or AVGCHKINRS

Average License Check out Response Time attribute

Description
The average response time (in milliseconds) that is required for a license check-out request.

Type
Real number (64-bit numeric property) with four decimal places of precision with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
AVERAGE_LICENSE_CHECK_OUT_RESPONSE_TIME or CHKOUTRES

Last Recorded License Check in Response Time attribute

Description
The time (in milliseconds) taken by the last license check-in request.

Type
Real number (64-bit numeric property) with four decimal places of precision with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

LAST_RECORDED_LICENSE_CHECK_IN_RESPONSE_TIME or LCHKINRES

Last Recorded License Check out Response Time attribute

Description

The time (in milliseconds) taken by the last license check-out request.

Type

Real number (64-bit numeric property) with four decimal places of precision with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

LAST_RECORDED_LICENSE_CHECK_OUT_RESPONSE_TIME or LCHECKOUT

License Server Connection Failure attribute

Description

The duration for which the Citrix MetaFrame Presentation server is disconnected from the license server.

Type

Real number (64-bit numeric property) with four decimal places of precision with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

LICENSE_SERVER_CONNECTION_FAILURE or CONNFAIL

Maximum License Check in Response Time attribute

Description

The maximum response time (in milliseconds) that is required for a license check-in request.

Type

Real number (64-bit numeric property) with four decimal places of precision with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

MAXIMUM_LICENSE_CHECK_IN_RESPONSE_TIME or MCHECKIN

Maximum License Check out Response Time attribute

Description

The maximum response time (in milliseconds) that is required for a license check-out request.

Type

Real number (64-bit numeric property) with four decimal places of precision with

enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
MAXIMUM_LICENSE_CHECK_OUT_RESPONSE_TIME or MAXCHKOUT

XenDesktop 4 MetaFrame Service attribute group

This attribute group provides information about the Citrix XenDesktop 4 MetaFrame Service.

Historical group
This attribute group is eligible for use with Tivoli Data Warehouse.

Attribute descriptions
The following list contains information about each attribute in the XenDesktop 4 MetaFrame Service attribute group:

Node attribute: This attribute is a key attribute.

Description
The managed system name of the agent.

Type
String

Source
The source for this attribute is the agent.

Warehouse name
NODE

Timestamp attribute

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

Type
String

Source
The source for this attribute is the agent.

Warehouse name
TIMESTAMP

Application Resolutions Per Sec attribute

Description
The number of application resolutions (application start requests) per second.

Type
Real number (64-bit numeric property) with four decimal places of precision with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
APP_RESOLUTIONS_PERSEC or APP_RESPS

Application Enumerations Per Sec attribute

Description
The number of application enumerations (requests for application list) per second.

Type
Real number (64-bit numeric property) with four decimal places of precision with

enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
APPLICATION_ENUMERATIONS_PERSEC or APP_ENUPS

Filtered Applications Enumerations Per Sec attribute

Description
The number of filtered application enumerations (requests for application list) per second.

Type
Real number (64-bit numeric property) with four decimal places of precision with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
FILTERED_APP_ENUMERATIONS_PERSEC or FIL_APP_PS

Application Resolution Time attribute

Description
The time required to complete a resolution of an application.

Type
Real number (64-bit numeric property) with four decimal places of precision with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
APP_RESOLUTION_TIME or APP_RES

DataStore Bytes Read Per Sec attribute

Description
The number of bytes that are read per second from the data store.

Type
Real number (64-bit numeric property) with four decimal places of precision with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
DATASTORE_BYTES_READ_PERSEC or DS_BYTES_R

LocalHostCache Bytes Read Per Sec attribute

Description

The number of bytes that are read per second from the local host cache (LHC).

Type

Real number (64-bit numeric property) with four decimal places of precision with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

LOCALHOSTCACHE_BYTES_READ_PERSEC or CACHE_B_R

DynamicStore Bytes Read Per Sec attribute

Description

The number of bytes that are read per second from the dynamic store.

Type

Real number (64-bit numeric property) with four decimal places of precision with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

DYNAMICSTORE_BYTES_READ_PERSEC or DS_WRITE

DataStore Bytes Written Per Sec attribute

Description

The number of bytes that are written per second to the data store.

Type

Real number (64-bit numeric property) with four decimal places of precision with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

DATASTORE_BYTES_WRITTEN_PERSEC or DS_WRPS

LocalHostCache Bytes Written Per Sec attribute

Description

The number of bytes that are written per second to the LHC.

Type

Real number (64-bit numeric property) with four decimal places of precision with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

LOCALHOSTCACHEBYTES_WRITTEN_PERSEC or CACHE_WPS

DynamicStore Bytes Written Per Sec attribute

Description

The number of bytes that are written per second to the dynamic store.

Type

Real number (64-bit numeric property) with four decimal places of precision with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

DYNAMICSTORE_BYTES_WRITTEN_PERSEC or DY_BY_W_PS

DataStore Reads Per Sec attribute

Description

The number of data reads from the data store per second.

Type

Real number (64-bit numeric property) with four decimal places of precision with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

DATASTORE_READS_PERSEC or DS_R_PS

LocalHostCache Reads Per Sec attribute

Description

The number of data reads from the LHC per second.

Type

Real number (64-bit numeric property) with four decimal places of precision with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

LOCALHOSTCACHE_READS_PERSEC or CACHE_READ

DynamicStore Reads Per Sec attribute

Description

The number of data reads from the dynamic store per second.

Type

Real number (64-bit numeric property) with four decimal places of precision with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

DYNAMIC_READS_PERSEC or DY_RE_PS

DataStore Writes Per Sec attribute

Description

The number of data writes to the data store per second.

Type

Real number (64-bit numeric property) with four decimal places of precision with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

DATASTORE_WRITES_PERSEC or DS_WR_PS

LocalHostCache Writes Per Sec attribute

Description

The number of data writes to the LHC.

Type

Real number (64-bit numeric property) with four decimal places of precision with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

LOCALHOSTCACHE_WRITES_PERSEC or LCHE_W_PS

DynamicStore Writes Per Sec attribute

Description

The number of data writes to the dynamic store per second.

Type

Real number (64-bit numeric property) with four decimal places of precision with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

DYNAMICSTORE_WRITES_PERSEC or DYWR_PS

Zone Elections Won attribute

Description

The number of times a server in the farm won a zone election.

Type

Real number (64-bit numeric property) with four decimal places of precision with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

ZONE_ELECTIONS_WON or ELE_WON

Zone Elections attribute

Description

The number of zone data collector (ZDC) elections that occurred in the presentation server farm.

Type

Real number (64-bit numeric property) with four decimal places of precision with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

ZONE_ELECTIONS or ELEC

DataStore Connection Failure attribute

Description

The duration for which the Citrix MetaFrame Presentation server is disconnected from the data store.

Type

Real number (64-bit numeric property) with four decimal places of precision with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

DATA_STORE_CONNECTION_FAILURE or CONN_FAIL

DynamicStore Update Bytes Received attribute

Description

The number of bytes that are received in the dynamic store update packets.

Type

Real number (64-bit numeric property) with four decimal places of precision with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

DYNAMICSTORE_UPDATE_BYTES_RECEIVED or DT_U_RES_R

DynamicStore Update Response Bytes Sent attribute

Description

The number of bytes that are sent in response to the dynamic store update packets.

Type

Real number (64-bit numeric property) with four decimal places of precision with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

DYNAMICSTORE_UPDATE_RESPONSE_BYTES_SENT or DT_U_RESSE

DynamicStore Update Packets Received attribute

Description

The number of update packets that are received by the dynamic store.

Type

Real number (64-bit numeric property) with four decimal places of precision with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

DYNAMICSTORE_UPDATE_PACKETS_RECEIVED or DT_U_PKT_R

DynamicStore Query Request Bytes Received attribute

Description

The number of bytes that are received in the dynamic store query request packets.

Type

Real number (64-bit numeric property) with four decimal places of precision with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

DYNAMICSTORE_QUERY_REQUEST_AND_BYTES_RECEIVED or DTQ_REQB_R

DynamicStore Query Response Bytes Sent attribute

Description

The number of bytes that are sent in response to the dynamic store queries.

Type

Real number (64-bit numeric property) with four decimal places of precision with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

DYNAMICSTORE_QUERY_RESPONSEAND_BYTES_SENT or DT_QRESB_S

DynamicStore Query Count attribute

Description

The number of dynamic store queries that are executed.

Type

Real number (64-bit numeric property) with four decimal places of precision with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

DYNAMICSTORE_QUERY_COUNT or DS_QUCNT

DynamicStore Gateway Update Bytes Sent attribute

Description

The number of bytes that are sent across gateways to the remote data collectors.

Type

Real number (64-bit numeric property) with four decimal places of precision with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

DYNAMICSTORE_GATEWAY_UPDATEAND_BYTES_SENT or DS_GW_UBYS

DynamicStore Gateway Update Count attribute

Description

The number of dynamic store update packets that are sent to the remote data collectors.

Type

Real number (64-bit numeric property) with four decimal places of precision with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

DYNAMICSTORE_GATEWAY_UPDATE_COUNT or DY_GUP_CNT

WorkItem Queue Executing Count attribute

Description

The number of work items that are currently being executed.

Type

Real number (64-bit numeric property) with four decimal places of precision with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:

- Unavailable (-1)

- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

WORKITEM_QUEUE_EXECUTING_COUNT or WIQEXECNT

WorkItem Queue Ready Count attribute

Description

The number of work items that are ready to be executed.

Type

Real number (64-bit numeric property) with four decimal places of precision with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

WORKITEM_QUEUE_READY_COUNT or WIQ_RDYCNT

WorkItem Queue Pending Count attribute

Description

The number of work items that are waiting to be executed.

Type

Real number (64-bit numeric property) with four decimal places of precision with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

WORKITEM_QUEUE_PENDING_COUNT or WIQ_PNDCNT

DataStore Bytes Read attribute

Description

The number of bytes that are read from the data store.

Type

Real number (64-bit numeric property) with four decimal places of precision with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

DATASTORE_BYTES_READ or DS_BYTESRE

DataStore Reads attribute

Description

The number of data reads from the data store.

Type

Real number (64-bit numeric property) with four decimal places of precision with

enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
DATASTORE_READS or RSWIQEXE_C

Resolution WorkItem Queue Executing Count attribute

Description
The number of application resolution requests that are currently being executed.

Type
Real number (64-bit numeric property) with four decimal places of precision with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
RESOLUTION_WORKITEM_QUEUE_EXECUTING_COUNT or RESWIQ_EC

Resolution WorkItem Queue Ready Count attribute

Description
The number of application resolution requests that are ready to be executed.

Type
Real number (64-bit numeric property) with four decimal places of precision with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
RESOLUTION_WORKITEM_QUEUE_READY_COUNT or RSWIQ_RDYC

Application Resolutions Failed Per Sec attribute

Description
The number of application resolutions that failed per second.

Type
Real number (64-bit numeric property) with four decimal places of precision with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
APPLICATION_RESOLUTIONS_FAILED_PERSEC or AP_RES_FPS

Number of XML Threads attribute

Description

The number of threads that are allocated to the web-based sessions to establish a connection for a user request.

Type

Real number (64-bit numeric property) with four decimal places of precision with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

NUMBER_OF_XML_THREADS or N_XMLT

Maximum Number of XML Threads attribute

Description

The maximum number of threads that are allocated to the web-based sessions to establish a connection for a user request.

Type

Real number (64-bit numeric property) with four decimal places of precision with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

MAXIMUM_NUMBER_OF_XML_THREADS or MAX_NXMLT

Number of Busy XML Threads attribute

Description

The number of requests that are currently being executed by the Citrix XML Service.

Type

Real number (64-bit numeric property) with four decimal places of precision with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

NUMBER_OF_BUSY_XML_THREADS or N_BUSY_XML

XenDesktop Service Instances attribute group

This attribute group provides information about the Citrix XenDesktop 5.0 and Citrix XenDesktop 5.6 service instances.

Historical group

This attribute group is eligible for use with Tivoli Data Warehouse.

Attribute descriptions

The following list contains information about each attribute in the XenDesktop Service Instances attribute group:

Node attribute: This attribute is a key attribute.

Description
The managed system name of the agent.
Type
String
Source
The source for this attribute is the agent.
Warehouse name
NODE

Timestamp attribute
Description
The local time at the agent when the data was collected.
Type
String
Source
The source for this attribute is the agent.
Warehouse name
TIMESTAMP

Service Group UID attribute
Description
The unique ID of the service group that the service instance belongs to.
Type
String with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.
Warehouse name
SERVICEGROUPUID or SRCGPID

Service Group Name attribute
Description
The name of the service group that the service instance belongs to.
Type
String with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.
Warehouse name
SERVICEGROUPNAME or SRCGPNAME

Service UID attribute
Description
The unique ID of the service.
Type
String with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
SERVICE_UID or SRCUID

Service Type attribute

Description
The type of the service.

Type
String with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
SERVICE_TYPE or SRCTYPE

Service Instance Address attribute

Description
The connection address of the service instance.

Type
String with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
ADDRESS

Service Instance Binding attribute

Description
The binding (connection protocol) type that is used for communication with the service instance.

Type
String with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
BINDING

Service Instance Version attribute

Description
The full build version of the service instance.

Type
String with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
VERSION

Service Account attribute

Description
The Active Directory account name for the computer where the service instance is running.

Type
String with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
SERVICE_ACCOUNT or SRCACC

Service Account SID attribute

Description
The security ID of the Active Directory account for the computer where the service instance is running.

Type
String with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
SERVICE_ACCOUNT_SID or SRCAC_SID

Interface Type attribute

Description
The type of interface provided by the service instance. The valid values are SDK, InterService, and Peer.

Type
String with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:
- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name
INTERFACE_TYPE or INT_TYPE

XenDesktop Services attribute group

This attribute group provides information about the Citrix XenDesktop 5.0 and Citrix XenDesktop 5.6 services.

Historical group
This attribute group is eligible for use with Tivoli Data Warehouse.

Attribute descriptions
The following list contains information about each attribute in the XenDesktop Services attribute group:

Node attribute: This attribute is a key attribute.

Description

The managed system name of the agent.

Type

String

Source

The source for this attribute is the agent.

Warehouse name

NODE

Timestamp attribute

Description

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

Type

String

Source

The source for this attribute is the agent.

Warehouse name

TIMESTAMP

Service Name attribute

Description

The name of the Citrix XenDesktop service.

Type

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

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

SERVICENAME or SER_NAME

DB Connection Status attribute

Description

Indicates whether the Citrix XenDesktop service is connected to the database. The valid values are Yes and No.

Type

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

- Yes (1)
- No (0)
- Unavailable (-1)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

DBCONNECTED or DBCONN

Database Transactions Per Sec attribute

Description

The number of database transactions that are executed per second by the current Citrix XenDesktop service.

Type

Real number (64-bit numeric property) with four decimal places of precision with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:

- Unavailable (-1)

- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

DBTRANS_PER_SEC or DBTRANS

Average Database Transactions Per Sec attribute

Description

The average number of database transactions that are executed per second by the current Citrix XenDesktop service.

Type

Real number (64-bit numeric property) with four decimal places of precision with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

AVGDBTRANSPERSEC or AVGDBTRA

Registration Average Request Time attribute

Description

The average time taken by the Citrix XenDesktop service to register desktops with the broker controller.

Type

Real number (64-bit numeric property) with four decimal places of precision with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

REG_AVG_REQ_TIME or REG_REQ

Registration Request Per Sec attribute

Description

The number of desktop registration requests that are executed by the Citrix XenDesktop service per second.

Type

Real number (64-bit numeric property) with four decimal places of precision with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

REG_REQ_PER_SEC or REG_PERSEC

Registration Request Rejected Per Sec attribute

Description

The number of desktop registration requests that are rejected by the Citrix XenDesktop service per second.

Type

Real number (64-bit numeric property) with four decimal places of precision with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

REG_REQ_REJECTS_PER_SEC or REG_REJ

XenDesktop XML Service attribute group

This attribute group provides information about the Citrix XenDesktop 5.0 and Citrix XenDesktop 5.6 XML Services. The XML Service communicates the published application information to the servers that are running the Web Interface.

Historical group

This attribute group is eligible for use with Tivoli Data Warehouse.

Attribute descriptions

The following list contains information about each attribute in the XenDesktop XML Service attribute group:

Node attribute: This attribute is a key attribute.

Description

The managed system name of the agent.

Type

String

Source

The source for this attribute is the agent.

Warehouse name

NODE

Timestamp attribute

Description

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

Type

String

Source

The source for this attribute is the agent.

Warehouse name

TIMESTAMP

Transaction Name attribute

Description

The name of the XML Service transaction.

Type

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

- Unavailable (-1)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

TRANSACTION_NAME or TNAM

Average Transaction Time attribute

Description

The average time required for the XML Service transaction.

Type

Real number (64-bit numeric property) with four decimal places of precision with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

AVERAGE_TRANSACTION_TIME or AVGTIME

Concurrent Transactions attribute

Description

The number of concurrent XML Service transactions.

Type

Real number (64-bit numeric property) with four decimal places of precision with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

CONCURRENT_TRANSACTIONS or CONTRAS

Transactions Per Sec attribute

Description

The number of XML Service transactions per second.

Type

Real number (64-bit numeric property) with four decimal places of precision with enumerated values. The strings are displayed in the Tivoli Enterprise Portal. The warehouse and queries return the values that are shown in parentheses. The following values are defined:

- Unavailable (-1)
- NA (-2)

Any other value is the value that is returned by the agent in the Tivoli Enterprise Portal.

Warehouse name

TRANSACTIONS_PER_SEC or TRA_PS

Disk capacity planning for historical data

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

The Capacity planning for historical data table provides the following information required to calculate disk space for this monitoring agent:

Table Table name as it is displayed in the warehouse database, if the attribute group is configured to be written to the warehouse. The table name listed here corresponds to the table name in "Attribute groups for the monitoring agent" on page 25.

Attribute group
Name of the attribute group used to create the table in the warehouse database if it is short enough to fit in the table naming constraints of the database being used for the warehouse. The attribute group name listed here corresponds to the Warehouse table name in "Attribute groups for the monitoring agent" on page 25.

Bytes per row (agent)
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 row (warehouse)
Estimate of the record length for detailed records written to the warehouse database, if the attribute group is configured to be written to the warehouse. Detailed records are records that have been uploaded from the agent for long-term historical data collection. This estimate can be used for warehouse disk-space planning purposes.

Aggregate bytes per row (warehouse)
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 rows of data that you plan to collect. An attribute group can have single or multiple rows 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 rows is two.

Table 2. Capacity planning for historical data logged by the Citrix XenDesktop agent

Table	Attribute group	Bytes per row (agent)	Database bytes per row (warehouse)	Aggregate bytes per row (warehouse)
KV5BRAPP	KV5_BROKER_APPLICATION	1280	1289	1326
KV5BCTL	KV5_BROKER_CATALOG	700	708	745
KV5CNTRLR	KV5_BROKER_CONTROLLERS	1180	1188	1225
KV5MACHINE	KV5_BROKER_MACHINE	1876	1890	1927
KV5CATALOG	KV5_BROKER_MACHINES_CATALOG	180	178	215
KV5OSTYPE	KV5_BROKER_MACHINES_OS_TYPE	180	178	215
KV5PWRSTAT	KV5_BROKER_MACHINES_POWER_STATE	180	178	215
KV5RAM	KV5_BROKER_MACHINES_RAM	84	82	119
KV5SHUTDWN	KV5_BROKER_MACHINES_SHUTDOWN	180	178	215
KV5USRSSON	KV5_BROKER_SESSION	2676	2698	2735
KV5DUSR	KV5_BROKER_USER	376	375	412
KV5CONNLOG	KV5_CONNECTION_LOG	984	991	1028
KV5DSKGRPS	KV5_DESKTOP_GROUPS	808	819	856
KV5DKGRAV	KV5_DESKTOP_GROUPS_AVAILABLE	180	178	215
KV5DKGRUSE	KV5_DESKTOP_GROUPS_INUSE	180	178	215
KV5DKINGR	KV5_DESKTOP_IN_GROUP	2688	2713	2750
KV5DKPOOL	KV5_DESKTOP_POOLED_NON_POOLED	84	82	119
KV5USAG	KV5_DESKTOP_USAGE	280	279	316
KV5EVTLGDT	KV5_EVENT_LOG_DETAILS	1376	1380	1417

Table 2. Capacity planning for historical data logged by the Citrix XenDesktop agent (continued)

Table	Attribute group	Bytes per row (agent)	Database bytes per row (warehouse)	Aggregate bytes per row (warehouse)
KV5HYPALRT	KV5_HYP_ALERT_DETAILS	876	880	917
KV5LUSE	KV5_LICENSE_USAGE	192	193	230
KV5POBJST	KV5_PERFORMANCE_OBJECT_STATUS	352	399	664
KV5THPLST	KV5_THREAD_POOL_STATUS	124	168	550
KV5XD4LIC	KV5_XD4_LICENSING_SERVICE	132	191	228
KV5XD4MF	KV5_XD4_METAFRAME_SERVICE	380	718	755
KV5XD4NET	KV5_XD4_NETWORKING_SERVICE	100	123	160
KV5XD5IN	KV5_XD5_SERVICE_INSTANCES	1076	1082	1119
KV5XD5XML	KV5_XD5_XML_SERVICE	200	224	261
KV5XD5SER	KV5_XENDESKTOP5_SERVICES	220	263	300

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

Chapter 5. Situations reference

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 the Tivoli Enterprise Portal by using the Situation Editor or from the command-line interface using the tacmd commands for situations. You can manage private situations in the private configuration XML file.

About situations

The monitoring agents that you use to monitor your system environment include a set of predefined situations that you can use as-is. You can also create new situations to meet your requirements.

Predefined situations contain attributes that check for system conditions common to many enterprises. Using predefined situations can improve the speed with which you can begin using the IBM Tivoli Monitoring for Virtual Environments Agent for Citrix XenDesktop. You can change the conditions or values being monitored by a predefined situation to the conditions or values best suited to your enterprise.

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

Formula
Formula describing the condition being tested.

Distribution
List of managed systems (operating systems, subsystems, or applications) to which the situation can be distributed. All the Citrix XenDesktop 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.

EIF Customize forwarding of the event to an Event Integration Facility receiver. (Available when the Tivoli Enterprise Monitoring Server is configured to forward events.)

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

Additional information about situations

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

For a list of the predefined situations and information about each individual situation for this monitoring agent, see "Predefined situations."

Predefined situations

The monitoring agent contains predefined situations, which are organized by Navigator item.

- Citrix XenDesktop
  - Not applicable
- Broker Controller
  - KV5_License_server_Conn_Lost

  - KV5_LicenseUsageThreshold
- Broker Machines
  - KV5_Available_Machines_in_CTL
- Desktop Group
  - KV5_DesktopGroupDisabled
  - KV5_Shutdown_Desktops_AfterUse
  - KV5_DesktopsAvailable
  - KV5_BrokerMachineUnregistered
- Desktop Users
  - KV5_BrokerSessionDisconnected
  - KV5_BrokerSessionRunning
- Event Log
  - Not applicable
- Services
  - Not applicable

Situation descriptions

Each situation description provides information about the situation that you can use to monitor the condition of systems in your network.

The situation descriptions provide the following information:

Description
Information about the conditions that the situation tests.

Formula
Syntax that contains one or more logical expressions that describe 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 elapse between one sample of data that the monitoring agent collects for the server and the next sample.

Situation persistence
Whether the conditions specified in the situation evaluate to "true" for the defined number of occurrences in a row before the situation is raised. The default of one means that 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, when another situation is true, or whichever occurs first if both are selected.

Citrix XenDesktop Navigator item

No predefined situations are included for this Navigator item.

Broker Controller Navigator item

The situation descriptions are organized by the Navigator item to which the situations are relevant.

KV5_License_server_Conn_Lost situation

Description

The connection to the license server is lost.

The situation is evaluated for the table.

Formula

```
*IF *VALUE KV5_BROKER_CONTROLLERS.Licensing_Grace_Period_Active *EQ True
```

See "Attributes in each attribute group" on page 27 for descriptions of the attributes in this formula.

Distribution

This situation is automatically distributed to instances of this agent.

Run at startup

Yes

Sampling interval

30 seconds

Situation persistence

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

Error conditions

Critical

Clearing conditions

The situation clears when the condition becomes false.

KV5_LicenseUsageThreshold situation

Description

The license usage count exceeded the threshold value.

The situation is evaluated for the table.

Formula

```
*IF *VALUE KV5_LICENSE_USAGE.Licenses_In_Use_Percent *GT 90
```

See "Attributes in each attribute group" on page 27 for descriptions of the attributes in this formula.

Distribution

This situation is automatically distributed to instances of this agent.

Run at startup

Yes

Sampling interval

30 seconds

Situation persistence

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

Error conditions

Warning

Clearing conditions

The situation clears when the condition becomes false.

Broker Machines Navigator item

The situation descriptions are organized by the Navigator item to which the situations are relevant.

KV5_Available_Machines_in_CTL situation

Description

The number of available desktops in the catalog is low.

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

Formula

```
*IF *VALUE KV5_BROKER_CATALOG.AvailableCount *LT 5
```

See "Attributes in each attribute group" on page 27 for descriptions of the attributes in this formula.

Distribution

This situation is automatically distributed to instances of this agent.

Run at startup

Yes

Sampling interval

30 seconds

Situation persistence

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

Error conditions

Warning

Clearing conditions

The situation clears when the condition becomes false.

Desktop Group Navigator item

The situation descriptions are organized by the Navigator item to which the situations are relevant.

KV5_DesktopGroupDisabled situation

Description

The desktop group is disabled.

The situation is evaluated for the table.

Formula

```
*IF *VALUE KV5_DESKTOP_GROUPS.Enabled *EQ False
```

See "Attributes in each attribute group" on page 27 for descriptions of the attributes in this formula.

Distribution

This situation is automatically distributed to instances of this agent.

Run at startup

Yes

Sampling interval

30 seconds

Situation persistence

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

Error conditions

Warning

Clearing conditions

The situation clears when the condition becomes false.

KV5_Shutdown_Desktops_AfterUse situation

Description

The desktop group is set up to turn off all desktops after use.

The situation is evaluated for the table.

Formula

```
*IF *VALUE KV5_DESKTOP_GROUPS.Shutdown_Desktops_After_Use *EQ True
```

See "Attributes in each attribute group" on page 27 for descriptions of the attributes in this formula.

Distribution

This situation is automatically distributed to instances of this agent.

Run at startup

Yes

Sampling interval
30 seconds
Situation persistence
The number of times the conditions of the situation must occur for the situation to be true is 1.
Error conditions
Warning
Clearing conditions
The situation clears when the condition becomes false.

KV5_DesktopsAvailable situation
Description
The number of available desktops is low.

The situation is evaluated for the table.
Formula
```
*IF *VALUE KV5_DESKTOP_GROUPS.Desktops_Available_Percent *LT 20
```
See "Attributes in each attribute group" on page 27 for descriptions of the attributes in this formula.
Distribution
This situation is automatically distributed to instances of this agent.
Run at startup
Yes
Sampling interval
30 seconds
Situation persistence
The number of times the conditions of the situation must occur for the situation to be true is 1.
Error conditions
Warning
Clearing conditions
The situation clears when the condition becomes false.

KV5_BrokerMachineUnregistered situation
Description
The broker machine is unregistered from the broker controller.

The situation is evaluated for the table.
Formula
```
*IF *VALUE KV5_DESKTOP_IN_GROUP.Registration_State *EQ Unregistered
```
See "Attributes in each attribute group" on page 27 for descriptions of the attributes in this formula.
Distribution
This situation is automatically distributed to instances of this agent.
Run at startup
Yes
Sampling interval
30 seconds
Situation persistence
The number of times the conditions of the situation must occur for the situation to be true is 1.
Error conditions
Warning
Clearing conditions
The situation clears when the condition becomes false.

Desktop Users Navigator item

The situation descriptions are organized by the Navigator item to which the situations are relevant.

KV5_BrokerSessionDisconnected situation

Description

The broker session is disconnected.

The situation is evaluated for the table.

Formula

```
*IF *VALUE KV5_BROKER_SESSION.SessionState *EQ Disconnected
```

See "Attributes in each attribute group" on page 27 for descriptions of the attributes in this formula.

Distribution

This situation is automatically distributed to instances of this agent.

Run at startup

Yes

Sampling interval

30 seconds

Situation persistence

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

Error conditions

Warning

Clearing conditions

The situation clears when the condition becomes false.

KV5_BrokerSessionRunning situation

Description

The broker machine is disconnected.

The situation is evaluated for the table.

Formula

```
*IF *VALUE KV5_BROKER_SESSION.SessionState *EQ Unknown
```

See "Attributes in each attribute group" on page 27 for descriptions of the attributes in this formula.

Distribution

This situation is automatically distributed to instances of this agent.

Run at startup

Yes

Sampling interval

30 seconds

Situation persistence

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

Error conditions

Warning

Clearing conditions

The situation clears when the condition becomes false.

Event Log Navigator item

No predefined situations are included for this Navigator item.

Services Navigator item

No predefined situations are included for this Navigator item.

Chapter 6. Take Action commands reference

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

About Take Action commands

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.

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

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

Additional information about Take Action commands

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

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

Predefined Take Action commands

Not all agents have predefined Take Action commands. But you can create Take Action commands for any agent.

This monitoring agent contains the following Take Action commands:

- Add Machine to Desktop Group
- Add Machines to Desktop Group
- Disable Desktop Group
- Disable Shutdown Desktops After Use
- Disconnect Desktop Session
- Disconnect User Session
- Enable Desktop Group
- New Desktop Group
- Remove Desktop Group
- Remove Machine from Desktop Group
- Stop Desktop Session
- Stop User Session

Take Action command descriptions

Each Take Action command description provides information you can use to decide whether to run the Take Action command or whether to include the Take Action command in a situation or a policy.

The descriptions of the Take Action commands provide the following information:

Description
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.

Add Machine to Desktop Group action

Adds only one broker machine to the desktop group.

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

```
ADD_MACHINE_TO_DESKTOP_GROUP \

   [KV5_BROKER_MACHINE.UID]

   [KV5_DESKTOP_GROUPS.Desktop_group_UID]
```

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

```
ADD_MACHINE_TO_DESKTOP_GROUP \

[&{KV5_BROKER_MACHINE.UID}] \

[&{KV5_DESKTOP_GROUPS.Desktop_group_UID}]
```

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

```
ADD_MACHINE_TO_DESKTOP_GROUP \

[&WaitOnSituation:KV5_BROKER_MACHINE.UID] \

[&WaitOnSituation:KV5_DESKTOP_GROUPS.Desktop_group_UID]
```

Command arguments

- **Name:** KV5_BROKER_MACHINE.UID
  - **Description:** The unique ID of the broker machine that you want to add to the desktop group.
  - **Default:** null
- **Name:** KV5_DESKTOP_GROUPS.Desktop_group_UID
  - **Description:** The unique ID of the desktop group to which you want to add the broker machine.
  - **Default:** null

Destination systems
_EnDDESTINATIONS_NONE_OR_LIST_EnD

Return codes

- Return Code: 0
  - Return Code Type: SUCCESS

  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries®), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50000E
  - Message: The task was completed.
- Return Code: 1
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50001E
  - Message: The argument for the BrokerMachineUID parameter is invalid.
- Return Code: 2
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50002E
  - Message: The argument for the BrokerMachineUID parameter is invalid.
- Return Code: 3
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50003E
  - Message: The argument for the DesktopGroupUID parameter is invalid.
- Return Code: 4
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50004E
  - Message: The argument for the DesktopGroupUID parameter is invalid.
- Return Code: 184
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50007E
  - Message: The broker machine does not exist.
- Return Code: 8
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50008E
  - Message: An unidentified error has occurred.
- Return Code: 10
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50010E
  - Message: The Citrix XenDesktop version does not support the Take Action command.

- Return Code: 181
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50181E
  - Message: The broker machine is already allocated.
- Return Code: 182
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50182E
  - Message: The desktop group was not found.
- Return Code: 183
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50183E
  - Message: The operation is not compatible with the desktop group.
- Return Code: 12
  - Return Code Type: INSUFFICIENT_USER_AUTHORITY
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV51004
  - Message: WARNING::NO MESSAGE FOUND FOR THIS RETURN CODE!!!!!

Add Machines to Desktop Group action

Adds various broker machines to the desktop group.

System command

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

```
ADD_MACHINES_TO_DESKTOP_GROUP \

   [KV5_XENCATALOG.CATALOG_UID]

   [KV5_DESKTOP_GROUPS.Desktop_group_UID]

   [KV5_DESKTOPGROUP.Broker_MACHINE_COUNT]
```

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

```
ADD_MACHINES_TO_DESKTOP_GROUP \

[&{KV5_XENCATALOG.CATALOG_UID}] \

[&{KV5_DESKTOP_GROUPS.Desktop_group_UID}] \

[&{KV5_DESKTOPGROUP.Broker_MACHINE_COUNT}]
```

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

```
ADD_MACHINES_TO_DESKTOP_GROUP \

[&WaitOnSituation:KV5_XENCATALOG.CATALOG_UID] \
```

```
[&WaitOnSituation:KV5_DESKTOP_GROUPS.Desktop_group_UID] \

[&WaitOnSituation:KV5_DESKTOPGROUP.Broker_MACHINE_COUNT]
```

Command arguments

- **Name:** KV5_XENCATALOG.CATALOG_UID
  - **Description:** The unique ID of the catalog that the broker machines belong to.
  - **Default:** null
- **Name:** KV5_DESKTOP_GROUPS.Desktop_group_UID
  - **Description:** The unique ID of the desktop group to which you want to add broker machines.
  - **Default:** null
- **Name:** KV5_DESKTOPGROUP.Broker_MACHINE_COUNT
  - **Description:** The number of broker machines that you want to add to the desktop group.
  - **Default:** null

Destination systems

_EnDDESTINATIONS_NONE_OR_LIST_EnD

Return codes

- Return Code: 0
  - Return Code Type: SUCCESS
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50000E
  - Message: The task was completed.
- Return Code: 3
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50003E
  - Message: The argument for the DesktopGroupUID parameter is invalid.
- Return Code: 4
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50004E
  - Message: The argument for the DesktopGroupUID parameter is invalid.
- Return Code: 8
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50008E
  - Message: An unidentified error has occurred.
- Return Code: 10
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50010E

  - Message: The Citrix XenDesktop version does not support the Take Action command.
- Return Code: 101
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50101E
  - Message: The argument for the Catalog parameter is invalid.
- Return Code: 102
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50102E
  - Message: The unique ID of the catalog must be an integer.
- Return Code: 103
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50103E
  - Message: The argument for the COUNT parameter is invalid.
- Return Code: 104
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50104E
  - Message: The value of the COUNT parameter must be a positive integer.
- Return Code: 105
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50105E
  - Message: No broker machines are available in the catalog.
- Return Code: 106
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50106E
  - Message: The catalog does not contain the specified number of broker machines. However, the broker machines that are currently available in the catalog are added to the desktop group.
- Return Code: 107
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50107E
  - Message: The broker machines are added to the desktop group.
- Return Code: 108
  - Return Code Type: GENERAL_ERROR

  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50108E
  - Message: The catalog does not exist.
- Return Code: 109
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50109E
  - Message: The desktop group was not found.
- Return Code: 1
  - Return Code Type: NOT_APPLICABLE
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV51001
  - Message: WARNING::NO MESSAGE FOUND FOR THIS RETURN CODE!!!!!
- Return Code: 2
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV51002
  - Message: WARNING::NO MESSAGE FOUND FOR THIS RETURN CODE!!!!!
- Return Code: 12
  - Return Code Type: INSUFFICIENT_USER_AUTHORITY
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV51004
  - Message: WARNING::NO MESSAGE FOUND FOR THIS RETURN CODE!!!!!

Disable Desktop Group action

Disables the desktop group.

System command

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

```
DISABLE_DESKTOP_GROUP \

   [KV5_DESKTOP_GROUPS.Desktop_group_UID]
```

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

```
DISABLE_DESKTOP_GROUP \

[&{KV5_DESKTOP_GROUPS.Desktop_group_UID}]
```

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

```
DISABLE_DESKTOP_GROUP \

[&WaitOnSituation:KV5_DESKTOP_GROUPS.Desktop_group_UID]
```

Command arguments

- **Name:** KV5_DESKTOP_GROUPS.Desktop_group_UID
  - **Description:** The unique ID of the desktop group that you want to disable.
  - **Default:** null

Destination systems

_EnDDESTINATIONS_NONE_OR_LIST_EnD

Return codes

- Return Code: 0
  - Return Code Type: SUCCESS
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50000E
  - Message: The task was completed.
- Return Code: 3
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50003E
  - Message: The argument for the DesktopGroupUID parameter is invalid.
- Return Code: 4
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50004E
  - Message: The argument for the DesktopGroupUID parameter is invalid.
- Return Code: 6
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50006E
  - Message: The desktop group does not exist.
- Return Code: 8
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50008E
  - Message: An unidentified error has occurred.
- Return Code: 1
  - Return Code Type: NOT_APPLICABLE
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV51001
  - Message: WARNING::NO MESSAGE FOUND FOR THIS RETURN CODE!!!!!
- Return Code: 2
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)

- Message ID: KV51002
- Message: WARNING::NO MESSAGE FOUND FOR THIS RETURN CODE!!!!!

- Return Code: 12
  - Return Code Type: INSUFFICIENT_USER_AUTHORITY
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV51004
  - Message: WARNING::NO MESSAGE FOUND FOR THIS RETURN CODE!!!!!

Disable Shutdown Desktops After Use action

Disables the desktop group configuration property that is set to turn off all the desktops in the desktop group when the user has logged off or disconnected the session.

System command

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

```
DISABLE_SHUTDOWN_DESKTOPS_AFTER_USE \

   [KV5_DESKTOP_GROUPS.Desktop_group_UID]
```

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

```
DISABLE_SHUTDOWN_DESKTOPS_AFTER_USE \

[&{KV5_DESKTOP_GROUPS.Desktop_group_UID}]
```

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

```
DISABLE_SHUTDOWN_DESKTOPS_AFTER_USE \

[&WaitOnSituation:KV5_DESKTOP_GROUPS.Desktop_group_UID]
```

Command arguments

- **Name:** KV5_DESKTOP_GROUPS.Desktop_group_UID
  - **Description:** The unique ID of the desktop group for which you want to disable the configuration property that is set to turn off all the desktops after the user has logged off or disconnected the session.
  - **Default:** null

Destination systems

_EnDDESTINATIONS_NONE_OR_LIST_EnD

Return codes

- Return Code: 0
  - Return Code Type: SUCCESS
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50000E
  - Message: The task was completed.
- Return Code: 3
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50003E

  - Message: The argument for the DesktopGroupUID parameter is invalid.
- Return Code: 4
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50004E
  - Message: The argument for the DesktopGroupUID parameter is invalid.
- Return Code: 6
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50006E
  - Message: The desktop group does not exist.
- Return Code: 8
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50008E
  - Message: An unidentified error has occurred.
- Return Code: 1
  - Return Code Type: NOT_APPLICABLE
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV51001
  - Message: WARNING::NO MESSAGE FOUND FOR THIS RETURN CODE!!!!!
- Return Code: 2
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV51002
  - Message: WARNING::NO MESSAGE FOUND FOR THIS RETURN CODE!!!!!
- Return Code: 12
  - Return Code Type: INSUFFICIENT_USER_AUTHORITY
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV51004
  - Message: WARNING::NO MESSAGE FOUND FOR THIS RETURN CODE!!!!!

Disconnect Desktop Session action

Disconnects the active desktop session.

System command

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

```
DISCONNECT_DESKTOP_SESSION \

   [KV5_Desktop_In_Group.Uid]
```

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

```
DISCONNECT_DESKTOP_SESSION \

[&{KV5_Desktop_In_Group.Uid}]
```

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

```
DISCONNECT_DESKTOP_SESSION \

[&WaitOnSituation:KV5_Desktop_In_Group.Uid]
```

Command arguments

- **Name:** KV5_Desktop_In_Group.Uid
  - **Description:** The unique ID of the desktop session that you want to disconnect.
  - **Default:** null

Destination systems

_EnDDESTINATIONS_NONE_OR_LIST_EnD

Return codes

- Return Code: 0
  - Return Code Type: SUCCESS
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50000E
  - Message: The task was completed.
- Return Code: 8
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50008E
  - Message: An unidentified error has occurred.
- Return Code: 10
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50010E
  - Message: The Citrix XenDesktop version does not support the Take Action command.
- Return Code: 161
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50161E
  - Message: The unique ID of the desktop cannot be blank.
- Return Code: 162
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50162E
  - Message: The unique ID of the desktop must be numeric.

- Return Code: 166
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50163E
  - Message: The desktop with the specified unique ID is not available.
- Return Code: 1
  - Return Code Type: NOT_APPLICABLE
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV51001
  - Message: WARNING::NO MESSAGE FOUND FOR THIS RETURN CODE!!!!!
- Return Code: 2
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV51002
  - Message: WARNING::NO MESSAGE FOUND FOR THIS RETURN CODE!!!!!
- Return Code: 12
  - Return Code Type: INSUFFICIENT_USER_AUTHORITY
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV51004
  - Message: WARNING::NO MESSAGE FOUND FOR THIS RETURN CODE!!!!!

Disconnect User Session action

Disconnects the active desktop session for a specific desktop user.

System command

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

```
DISCONNECT_USER_SESSION \

   [KV5_Broker_Session.UserName]
```

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

```
DISCONNECT_USER_SESSION \

[&{KV5_Broker_Session.UserName}]
```

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

```
DISCONNECT_USER_SESSION \

[&WaitOnSituation:KV5_Broker_Session.UserName]
```

Command arguments

- **Name:** KV5_Broker_Session.UserName
  - **Description:** The user name of the user whose desktop session you want to disconnect.
  - **Default:** null

Destination systems

_EnDDESTINATIONS_NONE_OR_LIST_EnD

Return codes

- Return Code: 0
  - Return Code Type: SUCCESS
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50000E
  - Message: The task was completed.
- Return Code: 8
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50008E
  - Message: An unidentified error has occurred.
- Return Code: 165
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50165E
  - Message: WARNING::NO MESSAGE FOUND FOR THIS RETURN CODE!!!!!
- Return Code: 171
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50171E
  - Message: The user name cannot be blank.
- Return Code: 166
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50172E
  - Message: The specified user name is not available.
- Return Code: 1
  - Return Code Type: NOT_APPLICABLE
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV51001
  - Message: WARNING::NO MESSAGE FOUND FOR THIS RETURN CODE!!!!!
- Return Code: 2
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV51002
  - Message: WARNING::NO MESSAGE FOUND FOR THIS RETURN CODE!!!!!
- Return Code: 12

- Return Code Type: INSUFFICIENT_USER_AUTHORITY
- Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
- Message ID: KV51004
- Message: WARNING::NO MESSAGE FOUND FOR THIS RETURN CODE!!!!!

Enable Desktop Group action

Enables the desktop group.

System command

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

```
ENABLE_DESKTOP_GROUP \

   [KV5_DESKTOP_GROUPS.Desktop_group_UID]
```

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

```
ENABLE_DESKTOP_GROUP \

[&{KV5_DESKTOP_GROUPS.Desktop_group_UID}]
```

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

```
ENABLE_DESKTOP_GROUP \

[&WaitOnSituation:KV5_DESKTOP_GROUPS.Desktop_group_UID]
```

Command arguments

- **Name:** KV5_DESKTOP_GROUPS.Desktop_group_UID
  - **Description:** The unique ID of the desktop group that you want to enable.
  - **Default:** null

Destination systems

_EnDDESTINATIONS_NONE_OR_LIST_EnD

Return codes

- Return Code: 0
  - Return Code Type: SUCCESS
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50000E
  - Message: The task was completed.
- Return Code: 3
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50003E
  - Message: The argument for the DesktopGroupUID parameter is invalid.
- Return Code: 4
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)

  - Message ID: KV50004E
  - Message: The argument for the DesktopGroupUID parameter is invalid.
- Return Code: 6
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50006E
  - Message: The desktop group does not exist.
- Return Code: 8
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50008E
  - Message: An unidentified error has occurred.
- Return Code: 1
  - Return Code Type: NOT_APPLICABLE
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV51001
  - Message: WARNING::NO MESSAGE FOUND FOR THIS RETURN CODE!!!!!
- Return Code: 2
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV51002
  - Message: WARNING::NO MESSAGE FOUND FOR THIS RETURN CODE!!!!!
- Return Code: 12
  - Return Code Type: INSUFFICIENT_USER_AUTHORITY
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV51004
  - Message: WARNING::NO MESSAGE FOUND FOR THIS RETURN CODE!!!!!

New Desktop Group action

Creates a new desktop group.

System command

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

```
NEW_DESKTOP_GROUP \

   [KV5_DESKTOPGROUP.DESKTOPGROUP_NAME]

   [KV5_DESKTOP_GROUPS.Published_Name]

   [KV5_DESKTOP_GROUPS.Desktop_Kind]
```

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

```
NEW_DESKTOP_GROUP \

[&{KV5_DESKTOPGROUP.DESKTOPGROUP_NAME}] \

[&{KV5_DESKTOP_GROUPS.Published_Name}] \

[&{KV5_DESKTOP_GROUPS.Desktop_Kind}]
```

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

```
NEW_DESKTOP_GROUP \

[&WaitOnSituation:KV5_DESKTOPGROUP.DESKTOPGROUP_NAME] \

[&WaitOnSituation:KV5_DESKTOP_GROUPS.Published_Name] \

[&WaitOnSituation:KV5_DESKTOP_GROUPS.Desktop_Kind]
```

Command arguments

- **Name:** KV5_DESKTOPGROUP.DESKTOPGROUP_NAME
  - **Description:** The name of the new desktop group.
  - **Default:** null
- **Name:** KV5_DESKTOP_GROUPS.Published_Name
  - **Description:** The displayed name of the desktop group.
  - **Default:** null
- **Name:** KV5_DESKTOP_GROUPS.Desktop_Kind
  - **Description:** The type of the desktop that belongs to the desktop group. The valid values are Private, Shared, PrivateApp, and SharedApp.
  - **Default:** null

Destination systems

_EnDDESTINATIONS_NONE_OR_LIST_EnD

Return codes

- Return Code: 0
  - Return Code Type: SUCCESS
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50000E
  - Message: The task was completed.
- Return Code: 8
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50008E
  - Message: An unidentified error has occurred.
- Return Code: 141
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50141E
  - Message: The argument for the PublishedName parameter is invalid.
- Return Code: 142

  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50142E
  - Message: The argument for the Name parameter is invalid.
- Return Code: 143
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50143E
  - Message: The argument for the DesktopKind parameter is invalid.
- Return Code: 144
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50144E
  - Message: The desktop type is invalid.
- Return Code: 145
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50145E
  - Message: The desktop group already exists.
- Return Code: 1
  - Return Code Type: NOT_APPLICABLE
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV51001
  - Message: WARNING::NO MESSAGE FOUND FOR THIS RETURN CODE!!!!!
- Return Code: 2
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV51002
  - Message: WARNING::NO MESSAGE FOUND FOR THIS RETURN CODE!!!!!
- Return Code: 12
  - Return Code Type: INSUFFICIENT_USER_AUTHORITY
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV51004
  - Message: WARNING::NO MESSAGE FOUND FOR THIS RETURN CODE!!!!!

Remove Desktop Group action

Removes the desktop group.

System command

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

```
REMOVE_DESKTOP_GROUP \

   [KV5_Desktop_Groups.Desktop_group_UID]
```

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

```
REMOVE_DESKTOP_GROUP \

[&{KV5_Desktop_Groups.Desktop_group_UID}]
```

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

```
REMOVE_DESKTOP_GROUP \

[&WaitOnSituation:KV5_Desktop_Groups.Desktop_group_UID]
```

Command arguments

- **Name:** KV5_Desktop_Groups.Desktop_group_UID
  - **Description:** The unique ID of the desktop group that you want to remove.
  - **Default:** null

Destination systems

_EnDDESTINATIONS_NONE_OR_LIST_EnD

Return codes

- Return Code: 0
  - Return Code Type: SUCCESS
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50000E
  - Message: The task was completed.
- Return Code: 3
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50003E
  - Message: The argument for the DesktopGroupUID parameter is invalid.
- Return Code: 4
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50004E
  - Message: The argument for the DesktopGroupUID parameter is invalid.
- Return Code: 151
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50006E
  - Message: The desktop group does not exist.
- Return Code: 8
  - Return Code Type: GENERAL_ERROR

  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50008E
  - Message: An unidentified error has occurred.
- Return Code: 1
  - Return Code Type: NOT_APPLICABLE
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV51001
  - Message: WARNING::NO MESSAGE FOUND FOR THIS RETURN CODE!!!!!
- Return Code: 2
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV51002
  - Message: WARNING::NO MESSAGE FOUND FOR THIS RETURN CODE!!!!!
- Return Code: 12
  - Return Code Type: INSUFFICIENT_USER_AUTHORITY
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV51004
  - Message: WARNING::NO MESSAGE FOUND FOR THIS RETURN CODE!!!!!

Remove Machine from Desktop Group action

Removes a broker machine from the desktop group.

System command

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

```
REMOVE_MACHINE_FROM_DESKTOP_GROUP \

   [KV5_Broker_Machine.UID]

   [KV5_DESKTOP_GROUPS.Desktop_group_UID]
```

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

```
REMOVE_MACHINE_FROM_DESKTOP_GROUP \

[&{KV5_Broker_Machine.UID}] \

[&{KV5_DESKTOP_GROUPS.Desktop_group_UID}]
```

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

```
REMOVE_MACHINE_FROM_DESKTOP_GROUP \

[&WaitOnSituation:KV5_Broker_Machine.UID] \

[&WaitOnSituation:KV5_DESKTOP_GROUPS.Desktop_group_UID]
```

Command arguments

- **Name:** KV5_Broker_Machine.UID

- **Description:** The unique ID of the broker machine that you want to remove from the desktop group.
- **Default:** null

- **Name:** KV5_DESKTOP_GROUPS.Desktop_group_UID
  - **Description:** The unique ID of the desktop group from which you want to remove the broker machine.
  - **Default:** null

Destination systems

_EnDDESTINATIONS_NONE_OR_LIST_EnD

Return codes

- Return Code: 0
  - Return Code Type: SUCCESS
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50000E
  - Message: The task was completed.
- Return Code: 1
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50001E
  - Message: The argument for the BrokerMachineUID parameter is invalid.
- Return Code: 2
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50002E
  - Message: The argument for the BrokerMachineUID parameter is invalid.
- Return Code: 3
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50003E
  - Message: The argument for the DesktopGroupUID parameter is invalid.
- Return Code: 4
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50004E
  - Message: The argument for the DesktopGroupUID parameter is invalid.
- Return Code: 115
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50007E
  - Message: The broker machine does not exist.

- Return Code: 8
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50008E
  - Message: An unidentified error has occurred.
- Return Code: 9
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50009E
  - Message: The object does not exist.
- Return Code: 10
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50010E
  - Message: The Citrix XenDesktop version does not support the Take Action command.
- Return Code: 114
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50114E
  - Message: The broker machine is not available in the desktop group.
- Return Code: 116
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50116E
  - Message: The user session is active on the broker machine.
- Return Code: 117
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50117E
  - Message: WARNING::NO MESSAGE FOUND FOR THIS RETURN CODE!!!!!
- Return Code: 12
  - Return Code Type: INSUFFICIENT_USER_AUTHORITY
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV51004
  - Message: WARNING::NO MESSAGE FOUND FOR THIS RETURN CODE!!!!!

Stop Desktop Session action

Stops or logs off the desktop session.

System command

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

```
STOP_DESKTOP_SESSION \

   [KV5_Desktop_In_Group.Uid]
```

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

```
STOP_DESKTOP_SESSION \

[&{KV5_Desktop_In_Group.Uid}]
```

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

```
STOP_DESKTOP_SESSION \

[&WaitOnSituation:KV5_Desktop_In_Group.Uid]
```

Command arguments

- **Name:** KV5_Desktop_In_Group.Uid
  - **Description:** The unique ID of the desktop session that you want to stop.
  - **Default:** null

Destination systems

_EnDDESTINATIONS_NONE_OR_LIST_EnD

Return codes

- Return Code: 0
  - Return Code Type: SUCCESS
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50000E
  - Message: The task was completed.
- Return Code: 8
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50008E
  - Message: An unidentified error has occurred.
- Return Code: 10
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50010E
  - Message: The Citrix XenDesktop version does not support the Take Action command.
- Return Code: 161
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50161E
  - Message: The unique ID of the desktop cannot be blank.

- Return Code: 162
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50162E
  - Message: The unique ID of the desktop must be numeric.
- Return Code: 164
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50163E
  - Message: The desktop with the specified unique ID is not available.
- Return Code: 1
  - Return Code Type: NOT_APPLICABLE
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV51001
  - Message: WARNING::NO MESSAGE FOUND FOR THIS RETURN CODE!!!!!
- Return Code: 2
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV51002
  - Message: WARNING::NO MESSAGE FOUND FOR THIS RETURN CODE!!!!!
- Return Code: 12
  - Return Code Type: INSUFFICIENT_USER_AUTHORITY
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV51004
  - Message: WARNING::NO MESSAGE FOUND FOR THIS RETURN CODE!!!!!

Stop User Session action

Stops or logs off the desktop session for a specific desktop user.

System command

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

```
STOP_USER_SESSION \

   [KV5_Broker_Session.UserName]
```

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

```
STOP_USER_SESSION \

[&{KV5_Broker_Session.UserName}]
```

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

```
STOP_USER_SESSION \

[&WaitOnSituation:KV5_Broker_Session.UserName]
```

Command arguments

- **Name:** KV5_Broker_Session.UserName
  - **Description:** The user name of the desktop user whose session you want to stop.
  - **Default:** null

Destination systems

_EnDDESTINATIONS_NONE_OR_LIST_EnD

Return codes

- Return Code: 0
  - Return Code Type: SUCCESS
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50000E
  - Message: The task was completed.
- Return Code: 8
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50008E
  - Message: An unidentified error has occurred.
- Return Code: 179
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50171E
  - Message: The user name cannot be blank.
- Return Code: 164
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV50172E
  - Message: The specified user name is not available.
- Return Code: 1
  - Return Code Type: NOT_APPLICABLE
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV51001
  - Message: WARNING::NO MESSAGE FOUND FOR THIS RETURN CODE!!!!!
- Return Code: 2
  - Return Code Type: GENERAL_ERROR
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV51002
  - Message: WARNING::NO MESSAGE FOUND FOR THIS RETURN CODE!!!!!

- Return Code: 12
  - Return Code Type: INSUFFICIENT_USER_AUTHORITY
  - Operating systems: Linux 2.6 (Intel), Linux (64-bit zSeries), Linux (64-bit x86), Windows, Windows (64-bit)
  - Message ID: KV51004
  - Message: WARNING::NO MESSAGE FOUND FOR THIS RETURN CODE!!!!!

Chapter 7. Policies reference

Policies are used as an advanced automation technique for implementing more complex workflow strategies than you can create through simple automation. All agents do not provide predefined policies, but you can create policies for any agent.

A *policy* is a set of automated system processes that can take 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, the Tivoli Enterprise Portal receives return-code feedback, and advanced automation logic responds with subsequent activities prescribed by the feedback.

For more information about working with policies, see *Automation with policies* in the *Tivoli Enterprise Portal User's Guide*.

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

Predefined policies

Not all agents have predefined policies. But you can create policies for any agent.

The IBM Tivoli Monitoring for Virtual Environments Agent for Citrix XenDesktop does not provide predefined policies.

Chapter 8. Troubleshooting

Problems can be related to IBM Tivoli Monitoring or the specific agent that you are using.

For general troubleshooting information, see the *IBM Tivoli Monitoring Troubleshooting Guide*. For other problem-solving options, see "Support information" on page 174.

You can resolve some problems by ensuring that your system matches the system requirements listed in the Prerequisites topic for the agent in the information center, or in the Requirements topic of the agent user's guide.

The following activities can help you find a solution to the problem you are having:

- "Gathering product information for IBM Software Support"
- "Using logging" on page 150
- "Consulting the lists of identified problems and workarounds" on page 150

Gathering product information for IBM Software Support

Before contacting IBM Software Support about a problem you are experiencing with this product, gather the information shown in Table 3.

Table 3. 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 "Principal trace log files" on page 151 for lists of all trace log files and their locations. For general information about the IBM Tivoli Monitoring environment, see the *Tivoli Enterprise Portal User's Guide*.
Citrix XenDesktop information	Version number and patch level
Operating system	Operating system version number and patch level
Messages	Messages and other information displayed on the screen
Version numbers for IBM Tivoli Monitoring	Version number of the following members of the monitoring environment: • IBM Tivoli Monitoring. Also provide the patch level, if available. • IBM Tivoli Monitoring for Virtual Environments Agent for Citrix XenDesktop
Screen captures	Screen captures of incorrect output, if any
(UNIX systems only) Core dump files	If the system stops on UNIX systems, collect the core dump file from the *install_dir*/bin directory, where *install_dir* is the directory where you installed the monitoring agent.

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

For information about working with IBM Software Support, see IBM Support Portal Service Requests and PMRs (http://www.ibm.com/support/entry/portal/Open_service_request/Software/Software_support_(general)).

Using logging

Logging is the primary troubleshooting feature in the Citrix XenDesktop agent. *Logging* refers to the text messages and trace data that is generated by the Citrix XenDesktop agent. Messages and trace data are sent to a file.

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

Consulting the lists of identified problems and workarounds

Known problems are organized into types such as those in the following list to make them easier to locate:

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

Information about symptoms and detailed workarounds for these types of problems is located in "Problems and workarounds" on page 160.

For general troubleshooting information, see the *IBM Tivoli Monitoring Troubleshooting Guide*.

Trace logging

Trace logs are used to capture information about the operating environment when component software fails to operate as designed.

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 information to learn how to configure and use trace logging:

- "Principal trace log files" on page 151
- "Examples: Using trace logs" on page 154
- "Setting RAS trace parameters by using the GUI" on page 155

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

IBM Software Support personnel use 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

Knowing the naming conventions for log files helps you to find the files.

Agent log file naming conventions

Table 4 provides the names, locations, and descriptions of IBM Tivoli Monitoring general RAS1 log files. The log file names for the Citrix XenDesktop agent adhere to the following naming convention:

Windows systems
hostname_productcode_instance-name_program_HEXtimestamp-nn.log

Linux and UNIX systems
hostname_productcode_instance-name_program_HEXtimestamp-nn.log

Where:

hostname
Host name of the computer where the monitoring component is running.

productcode
Two-character product code. For IBM Tivoli Monitoring for Virtual Environments Agent for Citrix XenDesktop, the product code is v5.

instance-name
Instance name of the agent.

program
Name of the program being run.

HEXtimestamp
Hexadecimal time stamp representing the time at which the program started.

nn Rolling log suffix.

Principal trace log files

Trace log files are located on various systems.

Table 4 contains locations, file names, and descriptions of trace logs that can help determine the source of problems with agents.

Table 4. Trace log files for troubleshooting agents

System where log is located	File name and path	Description
On the Tivoli Enterprise Monitoring Server	• **Windows:** The IBM Tivoli Monitoring *timestamp*.log file in the *install_dir*\InstallITM path • **UNIX:** The candle_installation.log file in the *install_dir*/logs path • **Linux:** The candle_installation.log file in the *install_dir*/logs path	Provides details about products that are installed. **Note:** Trace logging is enabled by default. A configuration step is not required to enable this tracing.
On the Tivoli Enterprise Monitoring Server	The Warehouse_Configuration.log file is in the following location on Windows systems: *install_dir*\InstallITM	Provides details about the configuration of data warehousing for historical reporting.

Table 4. Trace log files for troubleshooting agents (continued)

System where log is located	File name and path	Description
On the Tivoli Enterprise Monitoring Server	The name of the RAS log file is as follows: • **Windows:** *install_dir*\logs\ *hostname*_ms_*timestamp-nn*.log • **UNIX:** *install_dir*/logs/ *hostname*_ms_*timestamp-nn*.log • **Linux:** *install_dir*/logs/ *hostname*_ms_*timestamp-nn*.log **Note:** File names for RAS1 logs include a hexadecimal time stamp. Also on UNIX systems, a log with a decimal time stamp is provided: *hostname_productcode_timestamp*.log and *hostname_productcode_ timestamp*.pid nnnnn in the *install_dir*/logs path, where *nnnnn* is the process ID number.	Traces activity on the monitoring server.
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 • **Linux:** *install_dir* /logs/*hostname*_cq_HEXtimestamp-nn.log **Note:** File names for RAS1 logs include a hexadecimal time stamp. Also on UNIX systems, a log with a decimal time stamp is provided: *hostname_productcode_timestamp* .log and *hostname_productcode_ timestamp*.pid*nnnnn* in the *install_dir*/logs path, where *nnnnn* is the process ID number.	Traces activity on the portal server.
On the Tivoli Enterprise Portal Server	The teps_odbc.log file is located in the following path: • **Windows:** *install_dir*\InstallITM • **UNIX:** *install_dir*/logs • **Linux:** *install_dir*/logs	When you enable historical reporting, this log file traces the status of the warehouse proxy agent.

Table 4. Trace log files for troubleshooting agents (continued)

System where log is located	File name and path	Description
On the computer that hosts the monitoring agent	The RAS1 log files are as follows: • **Windows:** *hostname*_v5_*instance_name*_kv5agent_HEXtimestamp-nn.log in the *install_dir*\tmaitm6\logs directory • **UNIX:** *hostname*_v5_*instance_name*_kv5agent_HEXtimestamp-nn.log in the *install_dir*/logs directory • **Linux:** *hostname*_v5_*instance_name*_kv5agent_HEXtimestamp-nn.log in the *install_dir*/logs directory These logs are in the following directories: • **Windows:** *install_dir*\tmaitm6\logs • **UNIX:** *install_dir*/logs • **Linux:** *install_dir*/logs On Linux systems, the following additional logs are provided: – *hostname*_v5_timestamp.log – *hostname*_v5_timestamp.pidnnnnn in the *install_dir*/logs path, where *nnnnn* is the process ID number	Traces activity of the monitoring agent.
On the computer that hosts the monitoring agent	The agent operations log files are as follows: *instance_hostname*V5.LG0 is the current log created when the agent was started. *instance_hostname*_V5.LG1 is the backup of the previous log. These logs are in the following directory depending on the operating system that you are using: • **Windows:** *install_dir*\tmaitm6\logs • **Linux:** *install_dir*/logs • **UNIX:** *install_dir*/logs	Shows whether the agent could 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 the .LG1 tag to learn the following details regarding the *previous* monitoring session: • Status of connectivity with the monitoring server • Situations that were running • The success or failure status of Take Action commands

Table 4. Trace log files for troubleshooting agents (continued)

System where log is located	File name and path	Description
Definitions of variables: • *timestamp* is a time stamp with a format that includes year (y), month (m), day (d), hour (h), and minute (m), as follows: **yyyymmdd hhmm** • *HEXtimestamp* is a hexadecimal representation of the time at which the process was started. • *install_dir* represents the directory path where you installed the IBM Tivoli Monitoring component. *install_dir* can represent a path on the computer that hosts the monitoring system, the monitoring agent, or the portal. • *instance* refers to the name of the database instance that you are monitoring. • *instance_name* refers to the name of the agent instance. • *hostname* refers to the name of the computer on which the IBM Tivoli Monitoringcomponent runs. • *nn* represents the circular sequence in which logs are rotated. this value includes a range from 1 - 5, by default. The first is always retained because it includes configuration parameters. • *productcode* specifies the product code, for example, um for Universal Agent or nt for Windows systems.		

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

Examples: Using trace logs

You can open trace logs in a text editor to learn some basic facts about your IBM Tivoli Monitoring environment.

IBM Software Support applies specialized knowledge to analyze trace logs to determine the source of problems. 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:V5 is ON-LINE.
. . .
(42C3079B.0000-6A4:kpxreqhb.cpp,644,"HeartbeatInserter") Remote node SERVER5B:V5 is OFF-LINE.
```

See the following key points about the preceding excerpts:

- The monitoring server appends the **V5** product code to the server name to form a unique name (SERVER5B:V5) for this instance of the IBM Tivoli Monitoring for Virtual Environments Agent for Citrix XenDesktop. By using this unique name, you can distinguish multiple monitoring products that might be running on **SERVER5B**.
- The log shows when the agent started (ON-LINE) and later stopped (OFF-LINE) in the environment.
- For the sake of brevity, an ellipsis (...) represents the series of trace log entries that were generated while the agent was running.
- Between the ON-LINE and OFF-LINE log entries, the agent was communicating with the monitoring server.

- The ON-LINE and OFF-LINE log entries are always available in the trace log. All trace levels that are described in "Setting RAS trace parameters by using the GUI" provide these entries.

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

1. In the Windows **Start** menu, click **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 click **Advanced** > **View Trace Log** in the menu. For example, if you want to view the trace log of the IBM Tivoli Monitoring for Virtual Environments Agent for Citrix XenDesktop, 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.

RAS trace parameters

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

See "Overview of log file management" on page 150 to ensure that you understand log rolling and can reference the correct log files when you manage log file generation.

Setting RAS trace parameters by using the GUI

On Windows systems, you can use the graphical user interface to set trace options.

About this task

The IBM Tivoli Monitoring for Virtual Environments Agent for Citrix XenDesktop uses RAS1 tracing and generates the logs described in Table 4 on page 151. The default RAS1 trace level is ERROR.

Procedure

1. Open the Manage Tivoli Enterprise Monitoring Services window.
2. Select **Advanced** > **Edit Trace Parms**. The Tivoli Enterprise Monitoring Server Trace Parameters window is displayed.
3. Select a new trace setting in the pull-down menu in the **Enter RAS1 Filters** field or type a valid string.
   - General error tracing. KBB_RAS1=ERROR
   - Intensive error tracing. KBB_RAS1=ERROR (UNIT:kv5 ALL)
   - Maximum error tracing. KBB_RAS1=ERROR (UNIT:kv5 ALL) (UNIT:kra ALL)

   Note: As this example shows, you can set multiple RAS tracing options in a single statement.
4. Modify the value for Maximum Log Size Per File (MB) to change the log file size (changes LIMIT value).
5. 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).
6. 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).
7. 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. The **KDC_DEBUG** setting and the **Maximum error tracing** setting can generate a large amount of trace logging. Use these settings only temporarily, while you are troubleshooting problems. Otherwise, the logs can occupy excessive amounts of hard disk space.

8. Click **OK**. You see a message reporting a restart of the monitoring agent so that your changes take effect.

What to do next

Monitor the size of the `logs` directory. Default behavior can generate a total of 45 - 60 MB for each agent that is running on a computer. For example, each database instance that you monitor can generate 45 - 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 4 on page 151 that include a process ID number (PID).

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

Note: The **KDC_DEBUG** setting and the **Maximum error tracing** setting can generate a large amount of trace logging. Use these settings only temporarily while you are troubleshooting problems. Otherwise, the logs can occupy excessive amounts of hard disk space.

Manually setting RAS trace parameters

You can manually edit the RAS1 trace logging parameters.

About this task

The Citrix XenDesktop agent uses RAS1 tracing and generates the logs described in Table 4 on page 151. The default RAS1 trace level is ERROR.

Procedure

1. Open the trace options file:
   - **Windows systems:**
     install_dir\tmaitm6\KV5ENV_*instance name*
   - **UNIX systems:**
     install_dir /config/v5_*instance name*.config
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:kv5 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 specific program. When this value is exceeded, the oldest log files are discarded. The default value is 9.
   - **LIMIT**: The maximum size, in megabytes (MB) of a RAS1 log file. The 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. The default is 3.
     – **PRESERVE**: The number of files that are not to be reused in the rolling cycle of one program startup. The default value is 1.

     Note: 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.

What to do next

Monitor the size of the `logs` directory. Default behavior can generate a total of 45 - 60 MB for each agent that is running on a computer. For example, each database instance that you monitor can generate 45 - 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 4 on page 151 that include a process ID number (PID).

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

Note: The **KDC_DEBUG** setting and the **Maximum error tracing** setting can generate a large amount of trace logging. Use these settings only temporarily while you are troubleshooting problems. Otherwise, the logs can occupy excessive amounts of hard disk space.

Dynamic modification of trace settings

You can dynamically modify the trace settings for an IBM Tivoli Monitoring component, such as, Tivoli Enterprise Monitoring Server, Tivoli Enterprise Portal Server, most monitoring agents, and other components. You can access these components, except for a few monitoring agents, from the tracing utility.

Dynamic modification of the trace settings is the most efficient method, because you can do it without restarting the component. Settings take effect immediately. Modifications by this method are not persistent.

Note: When the component is restarted, the trace settings are read again from the `.env` file. Dynamically modifying these settings does not change the settings in the `.env` files. To modify these trace settings permanently, modify them in the `.env` files.

ras1

Run this command to modify the trace settings for a Tivoli Monitoring component.

The syntax is as follows:

```
ras1 set|list (UNIT|COMP: class_name ANY|ALL|Detail|ERROR|Flow|INPUT|Metrics|OUTPUT|STATE)
{(UNIT|COMP: class_name ANY|ALL|Detail|ERROR|Flow|INPUT|Metrics|OUTPUT|STATE)}
```

You can specify more than one component class to which to apply the trace settings.

Command options

set
: Turns on or off tracing depending upon the value of its parameters. If the parameter is **ANY**, it turns it off. All other parameters turn on tracing based on the specified type or level.

list
: Displays the default level and type of tracing that is set by default.

Parameters

The parameters that determine the component classes to which to apply the trace settings are as follows:

COMP: *class_name*
: Modifies the trace setting for the name of the component class, as specified by *class_name* , for example, `COMP:KDH`. The output contains trace for the specified class.

UNIT: *class_name*
Modifies the trace setting for any unit that starts with the specified *class_name* value, for example, `UNIT: kra`. The output contains trace for any unit that begins with the specified filter pattern.

The parameters that determine the trace level and type are as follows:

ALL
Displays all trace levels, including every trace point defined for the component. This setting might result in a large amount of trace, so specify other parameters to exclude unwanted trace. You might require the **ALL** parameter to isolate a problem, which is the equivalent to setting "`Error Detail Flow State Input Output Metrics`".

ANY
Turns off tracing.

Detail
Displays detailed information about each function.

When entered with the `list` option, the trace is tagged with `Det`.

ERROR
Logs internal error conditions.

When entered with the `list` option, the trace is tagged with `ER`. The output can also be tagged with `EVERYE+EVERYU+ER`.

Flow
Displays control flow data for each function entry and exit.

When entered with the `list` option, the trace is tagged with `Fl`.

INPUT
Displays input data for each function.

When entered with the `list` option, the trace is tagged with `IN`.

Metrics
Displays metrics on each function.

When entered with the `list` option, the trace is tagged with `ME`.

OUTPUT
Displays output data for each function.

When entered with the `list` option, the trace is tagged with `OUT`.

State
Displays the status for each function.

When entered with the `list` option, the trace is tagged with `St`.

Example

If you enter `ras1 set (COMP:KDH ALL) (COMP:ACF1 ALL) (COMP:KDE ALL)`, the trace utility turns on all levels of tracing for all the files and functions for which `KDH`, `ACF1`, and `KDE` are the classes.

```
kbbcre1.c, 400, May 29 2007, 12:54:43, 1.1, *
kbbcrn1.c, 400, May 29 2007, 12:54:42, 1.1, *
kdhb1de.c, 400, May 29 2007, 12:59:34, 1.1, KDH
kdh0med.c, 400, May 29 2007, 12:59:24, 1.1, KDH
kdhsrej.c, 400, May 29 2007, 13:00:06, 1.5, KDH
kdhb1fh.c, 400, May 29 2007, 12:59:33, 1.1, KDH
kdhb1oe.c, 400, May 29 2007, 12:59:38, 1.2, KDH
kdhs1ns.c, 400, May 29 2007, 13:00:08, 1.3, KDH
kbbacdl.c, 400, May 29 2007, 12:54:27, 1.2, ACF1
kbbaclc.c, 400, May 29 2007, 12:54:27, 1.4, ACF1
```

```
kbbac1i.c, 400, May 29 2007, 12:54:28, 1.11, ACF1
vkdhsfcn.c, 400, May 29 2007, 13:00:11, 1.1, KDH
kdhserq.c, 400, May 29 2007, 12:59:53, 1.1, KDH
kdhb1pr.c, 400, May 29 2007, 12:59:39, 1.1, KDH
kdhsgnh.c, 400, May 29 2007, 12:59:49, 1.1, KDH
kdh0uts.c, 400, May 29 2007, 12:59:23, 1.1, KDH
kdhsrsp.c, 400, May 29 2007, 13:00:13, 1.2, KDH
kdhs1rp.c, 400, May 29 2007, 13:00:12, 1.1, KDH
kdhscsv.c, 400, May 29 2007, 12:59:58, 1.9, KDH
kdebbac.c, 400, May 29 2007, 12:56:50, 1.10, KDE
...
```

Turning on tracing

To use the tracing utility, you must use a local logon credential for the computer. This tracing method uses the IBM Tivoli Monitoring Service Console. Access the Service Console by using a web browser.

About this task

When you start the Service Console, information is displayed about the components that are currently running on that computer. For example, these components are listed as follows:

- Tivoli Enterprise Portal Server: `cnp`
- Monitoring Agent for Windows OS: `nt`
- Tivoli Enterprise Monitoring Server: `ms`

After you log on, you can type a question mark (?) to display a list of the supported commands. Use the **ras1** command to modify trace settings. If you type this command in the field provided in the Service Console window and click **Submit**, the help for this command is displayed.

Procedure

1. Open a web browser and enter the URL to access the Service Console.

   `http://`*`hostname`*`:1920`

   where *hostname* is the IP address or host name of the computer on which the IBM Tivoli Monitoring component is running.
2. Click the hyperlink associated with the component for which you want to modify its trace settings.

   Note: In the previous view, if you want to modify tracing for the Tivoli Enterprise Monitoring Server, select **IBM Tivoli Monitoring Service Console** under **Service Point: system.*your host name*_ms**.
3. Enter a user ID and password to access the system. This ID is any valid user that has access to the system.
4. Enter the command to turn on the required level of trace for the specified component classes or units.

   ```
   ras1 set (UNIT|COMP: class_name ALL|Flow|ERROR|Detail|INPUT|Metrics|OUTPUT|STATE)
   {(UNIT|COMP: class_name ALL|Flow|ERROR|Detail|INPUT|Metrics|OUTPUT|STATE)}
   ```

   For example, to turn on the control flow trace for the KDE, the command is:

   ```
   ras1 (COMP:KDE Flow)
   ```

Turning off tracing

You can use the IBM Tivoli Monitoring Service Console to run the **ras1** command and dynamically turn off tracing.

Procedure

1. Open a web browser and enter the URL to access the Service Console.

   `http://`*`hostname`*`:1920`

where *hostname* is the IP address or host name of the computer on which the IBM Tivoli Monitoring component is running.

2. Click the hyperlink associated with the component for which you want to modify its trace settings.
3. Enter a user ID and password to access the system. This ID is any valid user that has access to the system.
4. Enter the command to turn off the required level of trace for the specified component classes or units.

   ```
   ras1 set (UNIT|COMP: class_name ANY)
   {(UNIT|COMP: class_name ANY)}
   ```

   For example, to turn off tracing for the kbbcrcd class of the Windows OS agent, the command is:

   ```
   ras1 set (UNIT:kbbcrcd ANY)
   ```

Setting trace parameters for the Tivoli Enterprise Console server

In addition to the trace information captured by IBM Tivoli Monitoring, you can also collect additional trace information for the Tivoli Enterprise Console components that gather event server metrics.

About this task

To collect this information, modify the .tec_diag_config file on the Tivoli Enterprise Console event server. Use the steps in the following procedure to modify the event server trace parameters.

Procedure

1. Open the $BINDIR/TME/TEC/.tec_diag_config file in an ASCII editor.
2. Locate the entries that configure trace logging for the agent components on the event server. Two entries are included, one for tec_reception and one for tec_rule:

   ```
   # to debug Agent Utils
   tec_reception Agent_Utils  error   /tmp/tec_reception
   SP
   # to debug Agent Utils
   tec_rule Agent_Utils   error   /tmp/tec_rule
   ```

3. To gather additional trace information, modify these entries to specify a trace level of trace2:

   ```
   # to debug Agent Utils
   tec_reception Agent_Utils   trace2  /tmp/tec_reception
   SP
   # to debug Agent Utils
   tec_rule Agent_Utils       trace2  /tmp/tec_rule
   ```

4. In addition, modify the Highest_level entries for tec_rule and tec_reception:

   ```
   tec_reception Highest_level  trace2
   SP
   tec_rule Highest_level trace2
   ```

Problems and workarounds

The known problems and workarounds are organized into types of problems that might occur with the Citrix XenDesktop agent, for example installation and configuration problems and workspace problems.

Note: You can resolve some problems by ensuring that your system matches the system requirements listed in the Prerequisites topic for the agent in the IBM Tivoli Monitoring for Virtual Environments Information Center.

Note: You can resolve some problems by ensuring that your system matches the system requirements listed in Agent installation and configuration.

For general troubleshooting information, see the *IBM Tivoli Monitoring Troubleshooting Guide*.

Installation and configuration troubleshooting

Problems can occur during installation, configuration, and uninstallation of the agent.

The problems and solutions in Table 5 can occur during installation, configuration, and uninstallation of the agent.

Table 5. Problems and solutions for installation and configuration

Problem	Solution
(*UNIX only*) During a command-line installation, you choose to install a component that is currently installed, and you see the following warning: `WARNING - you are about to install the SAME version of "component_name"` where *component_name* is the name of the component that you are attempting to install. **Note:** This problem affects UNIX command-line installations. If you monitor only Windows environments, you see this problem if you choose to install a product component (for example, a monitoring server) on a UNIX system.	You must exit and restart the installation process. You cannot return to the list where you selected components to install. When you run the installer again, do not attempt to install any component that is currently installed.
Diagnosing problems with product browse settings (Windows systems only).	When you have problems with browse settings, complete the following steps: 1. Click **Start** > **Programs** > **IBM Tivoli Monitoring** > **Manage Tivoli Enterprise Monitoring Services**. The Manage Tivoli Enterprise Monitoring Services window is displayed. 2. Right-click the Windows agent and select **Browse Settings**. A text window is displayed. 3. Click **Save As** and save the information in the text file. If requested, you can forward this file to IBM Software Support for analysis.
A message similar to `"Unable to find running CMS on CT_CMSLIST"` in the log file is displayed.	If a message similar to `"Unable to find running CMS on CT_CMSLIST"` is displayed in the log file, the agent cannot connect to the monitoring server. Confirm the following points: • Do multiple network interface cards (NICs) exist on the system? • If multiple NICs exist on the system, find out which one is configured for the monitoring server. Ensure that you specify the correct host name and port settings for communication in the IBM Tivoli Monitoring environment.

Table 5. 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 KV5CMA process. If CPU usage seems to be excessive, restart the monitoring agent. **Network cards:** The network card configurations can decrease the performance of a system. Each stream of packets that a network card receives (assuming that it is a broadcast or destined for the under-performing system) must generate a CPU interrupt and transfer the data through the I/O bus. If the network card in question is a bus-mastering card, work can be offloaded and a data transfer between memory and the network card can continue without using CPU processing power. Bus-mastering cards are 32-bit and are based on PCI or EISA bus architectures.

Table 6. General problems and solutions for uninstallation

Problem	Solution
On Windows systems, 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 the monitoring agents first, as in the following examples: • Uninstall a single monitoring agent for a specific database. -OR- • Uninstall all instances of a monitoring product, such as IBM Tivoli Monitoring for Databases. 3. Uninstall IBM Tivoli Monitoring.
The way to remove inactive managed systems (systems whose status is OFFLINE) from the Navigator tree in the portal is not obvious.	Use the following steps to remove, but not uninstall, an offline managed system from the Navigator tree: 1. Click the **Enterprise** icon in the Navigator tree. 2. Right-click, and then click **Workspace** > **Managed System Status**. 3. Right-click the offline managed system, and select **Clear offline entry**. To uninstall the monitoring agent, use the procedure described in the *IBM Tivoli Monitoring Installation and Setup Guide*.

Table 6. General problems and solutions for uninstallation (continued)

Problem	Solution
IBM Tivoli Monitoring might not be able to generate a unique name for monitoring components because of the truncation of names that the product automatically generates.	If the agent supports multiple instances, IBM Tivoli Monitoring automatically creates a name for each monitoring component by concatenating the subsystem name, host name, and product code separated by colons (*subsystem_name*:*hostname*:KV5). **Note:** When you monitor a multinode system, such as a database, IBM Tivoli Monitoring adds a subsystem name to the concatenated name, typically a database instance name. The length of the name that IBM Tivoli Monitoring generates is limited to 32 characters. Truncation can result in multiple components having the same 32-character name. If this problem happens, shorten the *hostname* portion of the name as follows: 1. Open the configuration file for the monitoring agent, which is located in the following path: • **On Windows:** *install_dir*\tmaitm6\K*product_code*CMA.INI. For example, the product code for the Monitoring Agent for Windows OS is NT. The file name is `KNTCMA.INI`. • **On UNIX and Linux:** `itm_home/config/product_code.ini` and `product_code.config`. For example, the file names for the Monitoring Agent for UNIX OS is `ux.ini` and `ux.config`. 2. Find the line that begins with `CTIRA_HOSTNAME=`. 3. Type a new name for host name that is a unique, shorter name for the host computer. The final concatenated name including the subsystem name, new host name, and KV5, cannot be longer than 32 characters. **Note:** You must ensure that the resulting name is unique with respect to any existing monitoring component that was previously registered with the Tivoli Enterprise Monitoring Server. 4. Save the file. 5. Restart the agent.
The software inventory tag for the agent on UNIX and Linux systems is not removed during uninstallation of the agent.	After uninstalling the agent, manually remove the file named *`full name of agent`*`.cmptag` from the `$CANDLEHOME/properties/version/` directory.

Table 6. General problems and solutions for uninstallation (continued)

Problem	Solution
When the agent is installed using group deployment, deploygroup was run multiple times. The group deployment starts and completes successfully, but there were multiple entries in the Deploy Status Summary workspace on the Tivoli Enterprise Portal. When the command tried to install multiple times, the additional installations were queued and then were in failed state though the agent was deployed successfully. **Note:** • When the bundle group contains a single bundle and the deployment group contains more than one member (managed system of the same type as AIX® or Linux), the deployment is successful on both systems. • When the bundle group contains more than one bundle and the deploy group contains single or multiple members, the deployment will be executed on each group member (managed system) depending on the members present in the bundle group and deploy group. • The command creates a transaction for each XX bundle for each target system; the bundle matching the operating system for the deployment member is processed successfully; and remaining transactions were in a queued or failed state.	There is no solution at this time.
The configuration panel is blank on 64-bit Windows systems where the Tivoli Enterprise Monitoring Agent Framework (component GL) is version 06.23.00.00 or 06.23.01.00.	Check the GL component version by running kincinfo -t GL from a Windows command line. Example: `%CANDLE_HOME%\InstallITM\kincinfo -t GL` If the GL component version is 06.23.00.00 or 06.23.01.00, take one of the following actions: • **Preferred action:** Upgrade the Windows OS Agent to Version 6.2.3 Fix Pack 2. • **Alternate action:** Install the Agent Compatibility (AC) component from the IBM Tivoli Monitoring V6.2.3 Fix Pack 1 media. See Installing the Agent Compatibility (AC) component (http://pic.dhe.ibm.com/infocenter/tivihelp/v15r1/topic/com.ibm.itm.doc_6.2.3fp1/itm623FP1_install199.htm#acpinstall).

Remote deployment troubleshooting

Problems can occur with remote deployment and removal of agent software using the Agent Remote Deploy process.

Table 7 on page 165 contains problems and solutions related to remote deployment.

Table 7. Remote deployment problems and solutions

Problem	Solution
While you are using the remote deployment feature to install the IBM Tivoli Monitoring for Virtual Environments Agent for Citrix XenDesktop, an empty command window is displayed on the target computer. This problem occurs when the target of remote deployment is a Windows computer. (For more information about the remote deployment feature, see the *IBM Tivoli Monitoring Installation and Setup Guide*.)	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 restart 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

A problem can occur with the agent after it has been installed.

Table 8 contains problems and solutions that can occur with the agent after it is installed.

Table 8. 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 by using the GUI" on page 155. The trace option settings that you can set on the `KBB_RAS1=` and `KDC_DEBUG=` lines potentially generate large amounts of data.
When using the **itmcmd agent** commands to start or stop this monitoring agent, you receive the following error message: `MKCIIN0201E Specified product is not configured.`	Include the command option **-o** to specify the instance to start or stop. The instance name must match the name used for configuring the agent. For example: `./itmcmd agent -o Test1 start v5` For more information about using the itmcmd commands, see the *IBM Tivoli Monitoring Command Reference*.

Table 8. 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 are displayed in the portal.	IBM Tivoli Monitoring products use Remote Procedure Call (RPC) to define and control product behavior. RPC is the mechanism that a client process uses to make a subroutine call (such as GetTimeOfDay or ShutdownServer) to a server process somewhere in the network. Tivoli processes can be configured to use TCP/UDP, TCP/IP, SNA, and SSL as the protocol (or delivery mechanism) for RPCs that you want. IP.PIPE is the name given to Tivoli TCP/IP protocol for RPCs. The RPCs are socket-based operations that use TCP/IP ports to form socket addresses. IP.PIPE implements virtual sockets and multiplexes all virtual socket traffic across a single physical TCP/IP port (visible from the **netstat** command). A Tivoli process derives the physical port for IP.PIPE communications based on the configured, well-known port for the hub Tivoli Enterprise Monitoring Server. (This well-known port or BASE_PORT is configured by using the 'PORT:' keyword on the **KDC_FAMILIES / KDE_TRANSPORT** environment variable and defaults to '1918'.) The physical port allocation method is defined as (BASE_PORT + 4096*N), where N=0 for a Tivoli Enterprise Monitoring Server process and N={1, 2, ..., 15} for another type of monitoring server process. Two architectural limits result as a consequence of the physical port allocation method: • No more than one Tivoli Enterprise Monitoring Server reporting to a specific Tivoli Enterprise Monitoring Server hub can be active on a system image. • No more than 15 IP.PIPE processes can be active on a single system image. A single system image can support any number of Tivoli Enterprise Monitoring Server processes (address spaces) if each Tivoli Enterprise Monitoring Server on that image reports to a different hub. By definition, one Tivoli Enterprise Monitoring Server hub is available per monitoring enterprise, so this architecture limit has been reduced to one Tivoli Enterprise Monitoring Server per system image. No more than 15 IP.PIPE processes or address spaces can be active on a single system image. With the first limit expressed earlier, this second limitation refers specifically to Tivoli Enterprise Monitoring Agent processes: no more than 15 agents per system image. Continued on next row.

Table 8. Agent problems and solutions (continued)

Problem	Solution
Continued from previous row.	This limitation can be circumvented (at current maintenance levels, IBM Tivoli Monitoring V6.1, Fix Pack 4 and later) if the Tivoli Enterprise Monitoring Agent process is configured to use the EPHEMERAL IP.PIPE process. (This process is IP.PIPE configured with the 'EPHEMERAL:Y' keyword in the **KDC_FAMILIES / KDE_TRANSPORT** environment variable). The number of ephemeral IP.PIPE connections per system image has no limitation. 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.)
When you uninstall the monitoring agent for Citrix XenDesktop from a computer that has one of the following operating systems, the log files are not removed: • Microsoft Windows • Red Hat Enterprise Linux 6 (RHEL) • SUSE Linux	You can delete the `.log` files that are generated in the agent installation directory when you configure the agent. The log files have the following format: **Windows operating system** `kv5_data_provider_`*`instancename_nn`*`.log` **Linux or UNIX operating system** `kv5_data_provider_`*`instancename_nn`*`.log` where: *instancename* Name of the monitoring agent instance. *nn* A number in the range 0 - 9. To delete the log files, complete the following steps: 1. Go to the agent installation directory, for example, *drivename*`:\IBM\ITM\TMAITM6\logs`. 2. Delete the `.log` files of the agent that you uninstalled.
When you remove an agent instance, the configuration details about the agent instance are not removed. When you configure a new agent instance and specify the name that was allocated to an agent instance that you removed, the configuration wizard retains the configuration details of the earlier agent instance that you removed.	You can delete the `.cfg` file that is generated in the agent installation directory when you configure the agent instance. The file has the following format: *`hostname`*`_v5_`*`instancename`*`.cfg` For example, a correctly formatted file name is `IBMESX2-V41_v5_citrix68.cfg`. The `.cfg` file contains the configuration details of a specific instance. To delete the `.cfg` file, complete the following steps: 1. Go to the agent installation directory, for example, *drivename*`:\IBM\ITM\TMAITM6`. 2. Delete the `.cfg` file, which contains the name of the agent instance that you removed.

Table 8. Agent problems and solutions (continued)

Problem	Solution
An agent instance cannot be renamed because the IBM Tivoli Monitoring Framework does not provide an option to rename an agent instance.	No solution is available for this problem.
The monitoring agent cannot collect data within 1 minute (60000 milliseconds) for certain attribute groups. Therefore, the WS-Management protocol generates the following error message in the log file: `The WS-Management service cannot complete the operation within the time specified in OperationTimeout.`	The WinRM 2.0 services on the computer that hosts the components of the Citrix XenDesktop controller implement the WS-Management protocol. The default value of the MaxTimeoutms parameter of the WS-Management protocol is 1 minute (60000 milliseconds). You must increase the default value. To edit the default value of the MaxTimeoutms parameter, complete the following steps: 1. Log on to the computer that hosts the components of the Citrix XenDesktop controller. 2. Click **Start** > **All Programs** > **Accessories** > **Windows PowerShell**. A command prompt opens. 3. At the command prompt, run these commands in the following order: a. **`cd wsman:`** b. **`Set-Item .\localhost\MaxTimeoutms`** *value* **Note:** The MaxTimeoutms value must be in the range 500 - 4294967295. 4. Restart WinRM.
When you try to complete more than 15 concurrent transactions by using a single user name on a single broker controller, the WS-Management protocol generates the following error message in the log file: `The WS-Management service cannot process the request. This user is allowed a maximum number of 15 concurrent operations, which has been exceeded. Close existing operations for this user, or raise the quota for this user.`	By default, you can complete 15 transactions by using a single user name on a single broker controller. Complete one of the following steps to resolve this problem: • Run only one transaction instance on a single broker controller. • Increase the concurrent transaction limit. To increase the concurrent transaction limit, complete the following steps: 1. Log on to the computer that hosts the components of the Citrix XenDesktop controller. 2. Open a command prompt. 3. At the command prompt, run these commands in the following order: a. **`cd WSMan:\localhost\Service`** b. **`Set-Item .\MaxConcurrentOperations`** *value* **Note:** The MaxConcurrentOperations value must be in the range 1 - 4294967295. 4. Restart WinRM.

Table 8. Agent problems and solutions (continued)

Problem	Solution
When you try to connect to a single broker controller by using more than five user names, the WS-Management protocol generates the following error message in the log file: `The WS-Management service cannot process the request. This service is configured to allow a maximum of 5 concurrent shell users, which has been exceeded. Retry your request after sometime or raise the quota for concurrent shell users.`	Increase the default maximum user limit. The default limit is five. Complete the following steps: 1. Log on to the computer that hosts the components of the Citrix XenDesktop controller. 2. Open a command prompt. 3. At the command prompt, run these commands in the following order: a. **`cd WSMan:\localhost\Shell`** b. **`Set-Item .\MaxConcurrentUsers`** *value* **Note:** The MaxConcurrentUsers value must be in the range 1 - 100. 4. Restart WinRM.

When you try to connect the Citrix XenDesktop controller by using the Kerberos or Negotiate authentication, the following error messages are displayed in the agent log file if SPN (Service Principal Name) for WinRM service is not registered on the Citrix XenDesktop controller:
 	
`2012-11-09 13:37:29 10 SEVERE: CPCController.main: GSSException Minor Code0`
 	
`2012-11-09 13:37:29 10 SEVERE: CPCController.main: GSSException Minor String:Error: java.lang.Exception: Error: com.ibm.security.krb5.KrbException, status code: 7`
 	
`message: Server not found in Kerberos database`
 	
`2012-11-09 13:37:29 10 SEVERE: CPCController.main: org.ietf.jgss.GSSException, major code: 11, minor code: 0`
 	
`major string: General failure, unspecified at GSSAPI level`
 	
`minor string: Error: java.lang.Exception: Error: com.ibm.security.krb5.KrbException, status code: 7`
 	
`message: Server not found in Kerberos database`
 	
Note: The SPN gets automatically registered when the winrm service starts for the first time on any Citrix XenDesktop controller.
	To connect to the Citrix XenDesktop by using the Kerberos or Negotiate authentication, SPN for the WinRM service that is running on a Citrix XenDesktop controller must be registered.
	
	If it is not already registered, complete the following steps:
	1. Log on to the computer that hosts the components of the Citrix XenDesktop controller.
	2. Open a command prompt.
	3. At the command prompt, run the following command:
	`setspn –A` *SPN Name Citrix XenDesktop controller name*
	For example, **`setspn -A WSMAN/XD56DDC.ITMfVS.com XD56DDC`**
	Where:
	WSMAN/XD56DDC.ITMfVS.com: The SPN name.
	XD56DDC: Citrix XenDesktop controller name.
	
	You can verify whether the SPN is registered or not by running the following command:
	
	`setspn -L` *Citrix XenDesktop controller name*
	
	For example, **`setspn -L XD56DDC`**

When you try to connect the Citrix XenDesktop controller by using the Kerberos or Negotiate authentication, the following error message is displayed in the agent log file:`javax.security.auth.login.LoginException: Clock skew too great` The error message is displayed if the system time differs significantly (typically five minutes) on the Key Distribution Center (KDC) and the computer where the Citrix XenDesktop agent is installed.	To resolve this problem, you must complete any one of the following tasks: • Synchronize the clocks. • Increase the value of the **`clockskew`** parameter in the `krb5.ini` file. For example, **`clockskew`** = `900` The default value for clockskew is 300 seconds (five minutes).

Workspace troubleshooting

Problems can occur with general workspaces and agent-specific workspaces.

Table 9 contains problems and solutions related to workspaces.

Table 9. 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. Use the following steps to confirm that this problem exists and to resolve it: 1. In the Windows **Start** menu, click **Run**. 2. Type `perfmon.exe` in the **Open** field of the Run window. The Performance window is displayed. 3. Click the plus sign (+) in the toolbar. The Add Counters window is displayed. 4. Look for **Process** in the **Performance object** menu. 5. Complete one of the following actions: • If you see **Process** in the 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 menu, use the Microsoft utility from the Microsoft.com Operations website to enable the PerfProc performance object. The **Process** performance object becomes visible in the **Performance object** 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 sufficient space is available to display all characters of the attribute name.
At the end of each view, you see the following Historical workspace KFWITM220E error: `Request failed during execution`.	Ensure that you configure all groups that supply data to the view. In the Historical Configuration view, ensure that data collection is started for all groups that supply data to the view.

Table 9. Workspace problems and solutions (continued)

Problem	Solution
You start collection of historical data but the data cannot be seen.	Use the following 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. For information about managing this feature including how to set the interval at which data is collected, see *Managing historical data* in the *IBM Tivoli Monitoring Administrator's Guide*. By setting a more frequent interval for data collection, you reduce the load on the system incurred every time data is uploaded. • Use the Summarization and Pruning agent to collect specific amounts and types of historical data. Historical data is not displayed until the Summarization and Pruning monitoring agent begins collecting the data. By default, this agent begins collection at 2 a.m. daily. At that point, data is visible in the workspace view. For information about how to modify the default collection settings, see *Managing historical data* in the *IBM Tivoli Monitoring Administrator's Guide*.
Historical data collection is unavailable because of incorrect queries in the Tivoli Enterprise Portal.	The Sort By, Group By, and First/Last functions column 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 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. For information about the historical data collection function, See *Managing historical data* in the *IBM Tivoli Monitoring Administrator's Guide* or the Tivoli Enterprise Portal online help .
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. The maximum name length is 100 bytes.
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:KXX0000` instead of the correct names (such as Disk), where XX and xx represent the two-character agent code.	Ensure that application support has been added on the monitoring server, portal server, and portal client. For more information about installing application support, see *Installing and enabling application support* in the *IBM Tivoli Monitoring Installation and Setup Guide*.

Situation troubleshooting

Problems can occur with situations and situation configuration.

Table 10 contains problems and solutions for situations.

Table 10. 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 by using the GUI" on page 155. 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 111 describes the performance impact of specific attribute groups. If possible, decrease your use of the attribute groups that require greater system resources.
A formula that uses mathematical operators appears to be incorrect. For example, if you were monitoring a Linux system, the formula that calculates when **Free Memory** falls under 10 percent of **Total Memory** does not work: `LT #'Linux_VM_Stats.Total_Memory' / 10`	This formula is incorrect because situation predicates support only logical operators. Your formulas cannot have mathematical operators. **Note:** The Situation Editor provides alternatives to math operators. In the example, you can select the **% Memory Free** attribute and avoid the need for math operators.
You want to change the appearance of situations when they are displayed in the navigation tree.	1. Right-click an item in the navigation tree. 2. Click **Situations** in the menu. The Situation Editor window is displayed. 3. Select the situation that you want to modify. 4. Use the **State** menu to set the status and appearance of the Situation when it triggers. **Note:** The **State** setting is not related to severity settings in the Tivoli Enterprise Console.
When a situation is triggered in the Event Log attribute group, it remains in the Situation Event Console as long as the event ID entry is present in the Event Log workspace. When this event ID entry is removed from the Event Log workspace on the Tivoli Enterprise Portal, the situation is also cleared even if the actual problem that caused the event is not resolved, and the event ID entry is also present in the Windows Event Viewer.	A timeout occurs on the cache of events for the NT Event Log group. Increase the cache time of Event Log collection to meet your requirements by adding the following variable and timeout value to the K*pc*ENV file for the agent (where *pc* is the two-letter product code): `CDP_NT_EVENT_LOG_CACHE_TIMEOUT=3600` This variable determines how long events from the NT Event Log are kept.
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 not displayed, 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 required.
The situation did not activate at startup.	Manually recycle the situation as follows: 1. Right-click the situation and select **Stop Situation**. 2. Right-click the situation and select **Start Situation**. **Note:** You can permanently avoid this problem by selecting the **Run at Startup** check box of the Situation Editor view for a specific situation.

Table 10. Situation problems and solutions (continued)

Problem	Solution
The situation is not displayed.	Click the **Action** tab and check whether the situation has an automated corrective action. This action can occur directly or through a policy. The situation might be resolving so quickly that you do not see the event or the update in the graphical user interface.
An Alert event did not occur even though the predicate was correctly specified.	Check the logs, reports, and workspaces.
A situation fires on an unexpected managed object.	Confirm that you 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 **Formula** area. The Show formula window is displayed. a. Confirm the following details in the **Formula** area of the window: • The attributes that you intend to monitor are specified in the formula. • The situations that you intend to monitor are specified in the formula. • The logical operators in the formula match your monitoring goal. • The numeric values in the formula match your monitoring goal. b. (Optional) Select the **Show detailed formula** check box to see the original names of attributes in the application or operating system that you are monitoring. c. Click **OK** to dismiss the Show formula window. 2. (Optional) In the **Formula** area of the **Formula** tab, temporarily assign numeric values that immediately trigger a monitoring event. The triggering of the event confirms that other predicates in the formula are valid. **Note:** After you complete this test, you must restore the numeric values to valid levels so that you do not generate excessive monitoring data based on your temporary settings. For additional information about situations that do not fire, see *Situations are not firing* in the *IBM Tivoli Monitoring Troubleshooting Guide*.
Situation events are not displayed in the Events Console view of the workspace.	Associate the situation with a Navigator item. **Note:** The situation does not need to be displayed in the workspace. It is sufficient that the situation is associated with any Navigator item.

Table 10. Situation problems and solutions (continued)

Problem	Solution
You do not have access to a situation.	**Note:** You must have administrator privileges to complete these steps. 1. Click **Edit** > **Administer Users** to access the Administer Users window. 2. In the **Users** area, select the user whose privileges you want to modify. 3. In the **Permissions** tab, **Applications** tab, and **Navigator Views** tab, select the permissions or privileges that correspond to the user role. 4. Click **OK**.
A managed system seems to be offline.	1. Select **Physical View** and click the Enterprise Level of the navigator tree. 2. Click **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

Problems can occur with Take Action commands.

Table 11 contains problems and solutions that can occur with Take Action commands.

When each Take Action command runs, it generates a log file listed in Table 4 on page 151.

Table 11. Take Action commands problems and solutions

Problem	Solution
Take Action commands often require several minutes to complete.	Allow several minutes. If you do not see a message advising you of completion, try to run the command manually.
Situations fail to trigger Take Action commands.	Attempt to manually run the Take Action command in the Tivoli Enterprise Portal. If the Take Action command works, look for configuration problems in the situation. See "Situation troubleshooting" on page 172. If the Take Action command fails, for general information about troubleshooting Take Action commands, see the *IBM Tivoli Monitoring Troubleshooting Guide*.

Support information

If you have a problem with your IBM software, you want to resolve it quickly.

IBM provides the following ways for you to obtain the support you need:

Online

The following websites contain troubleshooting information:

- Go to the IBM Software Support website (http://www.ibm.com/support/entry/portal/software) and follow the instructions.
- Go to the Application Performance Management Wiki (http://www.ibm.com/developerworks/servicemanagement/apm/index.html). Feel free to contribute to this wiki.

IBM Support Assistant

The IBM Support Assistant (ISA) is a free local software serviceability workbench that helps you resolve questions and problems with IBM software products. The ISA provides quick access to support-related information and serviceability tools for problem determination. To install the ISA software, go to the IBM Support Assistant website (http://www.ibm.com/software/support/isa).

Informational, warning, and error messages overview

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 actions:

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

Message format

The message format contains a message ID and text, an explanation, and an operator response.

IBM Tivoli Monitoring for Virtual Environments Agent for Citrix XenDesktop 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 following components are used:

KV5 General Citrix XenDesktop agent messages

Number of the message

severity

Severity of the message. Three levels of severity are used:

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 the possible cause for 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 topic as symbols, such as "&1." Actual messages contain values for these variables.

Agent messages

The following messages apply to IBM Tivoli Monitoring for Virtual Environments Agent for Citrix XenDesktop.

KV51111E

`Windows Remote Management (WinRM) is not configured.`

Explanation:
None.

Operator response:
To configure WinRM, type winrm quickconfig at a command prompt. For detailed information about configuring WinRM, see Chapter 2, “Requirements and agent installation and configuration”.

KV51112E

`Please try after sometime.`

Explanation:
None.

Operator response:
None.

KV50000E

`The task was completed.`

Explanation:
None.

Operator response:
None.

KV50001E

`The argument for the BrokerMachineUID parameter is invalid.`

Explanation:
The parameter value cannot be blank or 'null'.

Operator response:
None.

KV50002E

`The argument for the BrokerMachineUID parameter is invalid.`

Explanation:
The integer value must be in the range 1 - 2147483647.

Operator response:
None.

KV50003E

`The argument for the DesktopGroupUID parameter is invalid.`

Explanation:
The parameter value cannot be blank or 'null'.

Operator response:
None.

KV50004E
`The argument for the DesktopGroupUID parameter is invalid.`

Explanation:
The integer value must be in the range 1 - 2147483647.

Operator response:
None.

KV50005E
`The integer value is either too large or too small.`

Explanation:
The integer value must be in the range 1 - 2147483647.

Operator response:
None.

KV50006E
`The desktop group does not exist.`

Explanation:
None.

Operator response:
None.

KV50007E
`The broker machine does not exist.`

Explanation:
None.

Operator response:
None.

KV50008E
`An unidentified error has occurred.`

Explanation:
None.

Operator response:
None.

KV50009E
`The object does not exist.`

Explanation:
None.

Operator response:
None.

KV50010E
`The Citrix XenDesktop version does not support the Take Action command.`

Explanation:
None.

Operator response:
None.

KV50101E
`The argument for the Catalog parameter is invalid.`

Explanation:
The parameter value cannot be blank or 'null'.

Operator response:
None.

KV50102E
`The unique ID of the catalog must be an integer.`

Explanation:
The integer value must be in the range 1 - 2147483647.

Operator response:
None.

KV50103E
`The argument for the COUNT parameter is invalid.`

Explanation:
The parameter value cannot be blank or 'null'.

Operator response:
None.

KV50104E
`The value of the COUNT parameter must be a positive integer.`

Explanation:
None.

Operator response:
None.

KV50105E
`No broker machines are available in the catalog.`

Explanation:
None.

Operator response:
None.

KV50106E
`The catalog does not contain the specified number of broker machines. However, the broker machines that are currently available in the catalog are added to the desktop group.`

Explanation:
None.

Operator response:
None.

KV50107E
`The broker machines are added to the desktop group.`

Explanation:
None.

Operator response:
None.

KV50108E
`The catalog does not exist.`

Explanation:
None.

Operator response:
None.

KV50109E
`The desktop group was not found.`

Explanation:
None.

Operator response:
None.

KV50114E
`The broker machine is not available in the desktop group.`

Explanation:
None.

Operator response:
None.

KV50116E
`The user session is active on the broker machine.`

Explanation:
None.

Operator response:
Disconnect the user session.

KV50121E
`The application display name already exists.`

Explanation:
None.

Operator response:
None.

KV50122E
`The argument for the DisplayName parameter is invalid.`

Explanation:
The parameter value cannot be blank or 'null'.

Operator response:
None.

KV50123E
`The argument for the CommandLineExecutable parameter is invalid.`

Explanation:
The parameter value cannot be blank or 'null'.

Operator response:
None.

KV50131E
`The application does not exist.`

Explanation:
None.

Operator response:
None.

KV50132E
`The application name is required.`

Explanation:
None.

Operator response:
None.

KV50133E
`The application name is invalid.`

Explanation:
None.

Operator response:
None.

KV50141E
`The argument for the PublishedName parameter is invalid.`

Explanation:
The parameter value cannot be blank or 'null'.

Operator response:
None.

KV50142E
`The argument for the Name parameter is invalid.`

Explanation:
The parameter value cannot be blank or 'null'.

Operator response:
None.

KV50143E
`The argument for the DesktopKind parameter is invalid.`

Explanation:
The parameter value cannot be blank or 'null'.

Operator response:
None.

KV50144E
`The desktop type is invalid.`

Explanation:
The valid values of the desktop type are Private, Shared, PrivateApp, and SharedApp.

Operator response:
None.

KV50145E
`The desktop group already exists.`

Explanation:
None.

Operator response:
None.

KV50161E
`The unique ID of the desktop cannot be blank.`

Explanation:
The unique ID of the desktop must be in the range 1 - 2147483647.

Operator response:
Enter a valid unique ID for the desktop.

KV50162E
`The unique ID of the desktop must be numeric.`

Explanation:
The unique ID of the desktop must be in the range 1 - 2147483647.

Operator response:
Enter a valid unique ID for the desktop.

KV50163E
`The desktop with the specified unique ID is not available.`

Explanation:
None.

Operator response:
None.

KV50171E
`The user name cannot be blank.`

Explanation:
None.

Operator response:
Enter a valid user name.

KV50172E
`The specified user name is not available.`

Explanation:
None.

Operator response:
Enter a valid user name.

KV50177E
`The broker session does not exist for a specific user.`

Explanation:
None.

Operator response:
None.

KV50181E
`The broker machine is already allocated.`

Explanation:
None.

Operator response:
None.

KV50182E
`The desktop group was not found.`

Explanation:
None.

Operator response:
None.

KV50183E
`The operation is not compatible with the desktop group.`

Explanation:
None.

Operator response:
None.

Appendix A. Event mapping

The Tivoli Event Integration Facility (EIF) interface is used to forward situation events to Tivoli Netcool/OMNIbus or Tivoli Enterprise Console.

EIF events specify an event class, and the event data is specified as name-value pairs that identify the name of an event slot and the value for the slot. An event class can have subclasses. IBM Tivoli Monitoring provides the base event class definitions and a set of base slots that are included in all monitoring events. Agents extend the base event classes to define subclasses that include agent-specific slots. For Citrix XenDesktop agent events, the event classes correspond to the agent attribute groups, and the agent-specific slots correspond to the attributes in the attribute group.

The situation editor in the Tivoli Enterprise Portal can be used to perform custom mapping of data to EIF slots instead of using the default mapping described in this topic. For more information about EIF slot customization, see the *Tivoli Enterprise Portal User's Guide*.

Tivoli Enterprise Console requires that event classes and their slots are defined in BAROC (Basic Recorder of Objects in C) files. Each agent provides a BAROC file that contains event class definitions for the agent and is installed on the Tivoli Enterprise Monitoring Server in the `TECLIB` directory (`install_dir/cms/TECLIB` for Windows systems and `install_dir/tables/TEMS_hostname/TECLIB` for UNIX systems) when application support for the agent is installed. The BAROC file for the agent and the base BAROC files provided with Tivoli Monitoring must also be installed onto the Tivoli Enterprise Console. For details, see "Setting up event forwarding to Tivoli Enterprise Console" in the *IBM Tivoli Monitoring Installation and Setup Guide*.

Each of the event classes is a child of KV5_Base and is defined in the `kv5.baroc` (version 7.2) file. The KV5_Base event class can be used for generic rules processing for any event from the IBM Tivoli Monitoring for Virtual Environments Agent for Citrix XenDesktop.

For events that are generated by situations in the Broker Application attribute group, events are sent by using the ITM_KV5_BROKER_APPLICATION event class. This event class contains the following slots:

- node: STRING
- timestamp: STRING
- applicationtype: STRING
- applicationtype_enum: STRING
- name: STRING
- name_enum: STRING
- cpuprioritylevel: STRING
- cpuprioritylevel_enum: STRING
- enabled: STRING
- enabled_enum: STRING
- visible: STRING
- visible_enum: STRING
- windowsize_type: STRING
- windowsize_type_enum: STRING
- windowwidth: STRING
- windowwidth_enum: STRING
- shortcutaddedtodesktop: STRING

- shortcutaddedtodesktop_enum: STRING
- no_of_instance: INTEGER
- no_of_instance_enum: STRING
- windowscale: STRING
- windowscale_enum: STRING
- windowheight: STRING
- windowheight_enum: STRING
- audiorequired: STRING
- audiorequired_enum: STRING
- audiotype: STRING
- audiotype_enum: STRING

For events that are generated by situations in the Broker Catalog attribute group, events are sent by using the ITM_KV5_BROKER_CATALOG event class. This event class contains the following slots:

- node: STRING
- timestamp: STRING
- uid: STRING
- uid_enum: STRING
- name: STRING
- name_enum: STRING
- allocation_type: STRING
- allocation_type_enum: STRING
- assignedusers: INTEGER
- assignedusers_enum: STRING
- availableassigned: INTEGER
- availableassigned_enum: STRING
- availablecount: INTEGER
- availablecount_enum: STRING
- availableunassignedcount: INTEGER
- availableunassignedcount_enum: STRING
- catalogkind: STRING
- catalogkind_enum: STRING
- unassignedcount: INTEGER
- unassignedcount_enum: STRING
- usedcount: INTEGER
- usedcount_enum: STRING
- pvsaddress: STRING
- pvsaddress_enum: STRING
- pvsdomain: STRING
- pvsdomain_enum: STRING

For events that are generated by situations in the Broker Controllers attribute group, events are sent by using the ITM_KV5_BROKER_CONTROLLERS event class. This event class contains the following slots:

- node: STRING
- timestamp: STRING
- controller_version: STRING

- controller_version_enum: STRING
- active_site_services: STRING
- active_site_services_enum: STRING
- desktops_registered: INTEGER
- desktops_registered_enum: STRING
- uid: STRING
- uid_enum: STRING
- os_type: STRING
- os_type_enum: STRING
- os_version: STRING
- os_version_enum: STRING
- dns_name: STRING
- dns_name_enum: STRING
- last_activity_time: STRING
- last_activity_time_enum: STRING
- last_start_time: STRING
- last_start_time_enum: STRING
- machine_name: STRING
- machine_name_enum: STRING
- state: STRING
- state_enum: STRING
- licensing_grace_period_active: STRING
- licensing_grace_period_active_enum: STRING

For events that are generated by situations in the Broker Machine attribute group, events are sent by using the ITM_KV5_BROKER_MACHINE event class. This event class contains the following slots:

- node: STRING
- timestamp: STRING
- uid: STRING
- uid_enum: STRING
- dns_name: STRING
- dns_name_enum: STRING
- hyp_connection_name: STRING
- hyp_connection_name_enum: STRING
- shutdown_after_use: STRING
- shutdown_after_use_enum: STRING
- power_state: STRING
- power_state_enum: STRING
- machine_name: STRING
- machine_name_enum: STRING
- catalog_kind: STRING
- catalog_kind_enum: STRING
- ostype: STRING
- ostype_enum: STRING
- ram: STRING

- ram_enum: STRING
- cataloguid: STRING
- cataloguid_enum: STRING
- desktopuid: STRING
- desktopuid_enum: STRING
- catalogname: STRING
- catalogname_enum: STRING
- hostedmachineid: STRING
- hostedmachineid_enum: STRING
- hostedmachinename: STRING
- hostedmachinename_enum: STRING
- isassigned: STRING
- isassigned_enum: STRING
- poweractionpending: STRING
- poweractionpending_enum: STRING
- registrationstate: STRING
- registrationstate_enum: STRING
- pvd_stage: STRING
- pvd_stage_enum: STRING

For events that are generated by situations in the Broker Machines Catalog attribute group, events are sent by using the ITM_KV5_BROKER_MACHINES_CATALOG event class. This event class contains the following slots:

- node: STRING
- timestamp: STRING
- catalog_kind: STRING
- catalog_kind_enum: STRING
- number_of_machines: INTEGER
- number_of_machines_enum: STRING

For events that are generated by situations in the Broker Machines OS Type attribute group, events are sent by using the ITM_KV5_BROKER_MACHINES_OS_TYPE event class. This event class contains the following slots:

- node: STRING
- timestamp: STRING
- name: STRING
- name_enum: STRING
- number_of_machines: INTEGER
- number_of_machines_enum: STRING

For events that are generated by situations in the Broker Machines Power State attribute group, events are sent by using the ITM_KV5_BROKER_MACHINES_POWER_STATE event class. This event class contains the following slots:

- node: STRING
- timestamp: STRING
- kv5_status: STRING
- kv5_status_enum: STRING

- number_of_machines: INTEGER
- number_of_machines_enum: STRING

For events that are generated by situations in the Broker Machines RAM attribute group, events are sent by using the ITM_KV5_BROKER_MACHINES_RAM event class. This event class contains the following slots:

- node: STRING
- timestamp: STRING
- size: INTEGER
- size_enum: STRING
- number_of_machines: INTEGER
- number_of_machines_enum: STRING

For events that are generated by situations in the Broker Machines Shutdown attribute group, events are sent by using the ITM_KV5_BROKER_MACHINES_SHUTDOWN event class. This event class contains the following slots:

- node: STRING
- timestamp: STRING
- kv5_status: STRING
- kv5_status_enum: STRING
- number_of_machines: INTEGER
- number_of_machines_enum: STRING

For events that are generated by situations in the Broker Session attribute group, events are sent by using the ITM_KV5_BROKER_SESSION event class. This event class contains the following slots:

- node: STRING
- timestamp: STRING
- autonomouslybrokered: STRING
- autonomouslybrokered_enum: STRING
- brokeringtime: STRING
- brokeringtime_enum: STRING
- brokeringusername: STRING
- brokeringusername_enum: STRING
- brokeringusersid: STRING
- brokeringusersid_enum: STRING
- clientaddress: STRING
- clientaddress_enum: STRING
- clientname: STRING
- clientname_enum: STRING
- clientversion: STRING
- clientversion_enum: STRING
- connectedviahostname: STRING
- connectedviahostname_enum: STRING
- connectedviaip: STRING
- connectedviaip_enum: STRING
- desktopsid: STRING
- desktopsid_enum: STRING

- desktopuid: STRING
- desktopuid_enum: STRING
- deviceid: STRING
- deviceid_enum: STRING
- hardwareid: STRING
- hardwareid_enum: STRING
- launchedviahostname: STRING
- launchedviahostname_enum: STRING
- launchedviaip: STRING
- launchedviaip_enum: STRING
- protocol: STRING
- protocol_enum: STRING
- secureicaactive: STRING
- secureicaactive_enum: STRING
- sessionid: STRING
- sessionid_enum: STRING
- sessionstate: STRING
- sessionstate_enum: STRING
- sessionstatechangetime: STRING
- sessionstatechangetime_enum: STRING
- smartaccesstags: STRING
- smartaccesstags_enum: STRING
- starttime: STRING
- starttime_enum: STRING
- uid: STRING
- uid_enum: STRING
- username: STRING
- username_enum: STRING
- usersid: STRING
- usersid_enum: STRING
- machinename: STRING
- machinename_enum: STRING

For events that are generated by situations in the Broker User attribute group, events are sent by using the ITM_KV5_BROKER_USER event class. This event class contains the following slots:

- node: STRING
- timestamp: STRING
- full_name: STRING
- full_name_enum: STRING
- user_name: STRING
- user_name_enum: STRING
- user_sid: STRING
- user_sid_enum: STRING

For events that are generated by situations in the Connection Log attribute group, events are sent by using the ITM_KV5_CONNECTION_LOG event class. This event class contains the following slots:

- node: STRING
- timestamp: STRING
- uid: INTEGER
- uid_enum: STRING
- machine_name: STRING
- machine_name_enum: STRING
- brokering_time: STRING
- brokering_time_enum: STRING
- brokering_user_name: STRING
- brokering_user_name_enum: STRING
- brokering_user_upn: STRING
- brokering_user_upn_enum: STRING
- connection_failure_reason: STRING
- connection_failure_reason_enum: STRING
- disconnected: STRING
- disconnected_enum: STRING
- end_time: STRING
- end_time_enum: STRING
- establishment_time: STRING
- establishment_time_enum: STRING
- machine_dns_name: STRING
- machine_dns_name_enum: STRING
- machine_uid: INTEGER
- machine_uid_enum: STRING

For events that are generated by situations in the Desktop Group Available attribute group, events are sent by using the ITM_KV5_DESKTOP_GROUPS_AVAILABLE event class. This event class contains the following slots:

- node: STRING
- timestamp: STRING
- dskavl_rang: STRING
- dskavl_rang_enum: STRING
- dskavl_value: INTEGER
- dskavl_value_enum: STRING

For events that are generated by situations in the Desktop Groups attribute group, events are sent by using the ITM_KV5_DESKTOP_GROUPS event class. This event class contains the following slots:

- node: STRING
- timestamp: STRING
- published_name: STRING
- published_name_enum: STRING
- desktop_kind: STRING
- desktop_kind_enum: STRING
- total_desktops: INTEGER
- total_desktops_enum: STRING
- desktops_available: INTEGER

- desktops_available_enum: STRING
- desktops_disconnected: INTEGER
- desktops_disconnected_enum: STRING
- desktops_in_use: INTEGER
- desktops_in_use_enum: STRING
- desktops_never_registered: INTEGER
- desktops_never_registered_enum: STRING
- desktops_unregistered: INTEGER
- desktops_unregistered_enum: STRING
- enabled: STRING
- enabled_enum: STRING
- desktop_group_uid: STRING
- desktop_group_uid_enum: STRING
- in_maintenance_mode: STRING
- in_maintenance_mode_enum: STRING
- shutdown_desktops_after_use: STRING
- shutdown_desktops_after_use_enum: STRING
- automatic_power_on_for_assigned: STRING
- automatic_power_on_for_assigned_enum: STRING
- desktops_preparing: INTEGER
- desktops_preparing_enum: STRING
- desktops_available_percent: INTEGER
- desktops_available_percent_enum: STRING

For events that are generated by situations in the Desktop Groups in Use attribute group, events are sent by using the ITM_KV5_DESKTOP_GROUPS_INUSE event class. This event class contains the following slots:

- node: STRING
- timestamp: STRING
- dskutl_rang: STRING
- dskutl_rang_enum: STRING
- dskutl_value: INTEGER
- dskutl_value_enum: STRING

For events that are generated by situations in the Desktop Pooled Non Pooled attribute group, events are sent by using the ITM_KV5_DESKTOP_POOLED_NON_POOLED event class. This event class contains the following slots:

- node: STRING
- timestamp: STRING
- dsk_pooled: INTEGER
- dsk_pooled_enum: STRING
- dsk_nonpooled: INTEGER
- dsk_nonpooled_enum: STRING

For events that are generated by situations in the Desktop Usage attribute group, events are sent by using the ITM_KV5_DESKTOP_USAGE event class. This event class contains the following slots:

- node: STRING

- timestamp: STRING
- desktop_group_uid: INTEGER
- desktop_group_uid_enum: STRING
- in_use: STRING
- in_use_enum: STRING
- dtimestamp: STRING
- dtimestamp_enum: STRING

For events that are generated by situations in the Desktops in Desktop Group attribute group, events are sent by using the ITM_KV5_DESKTOP_IN_GROUP event class. This event class contains the following slots:

- node: STRING
- timestamp: STRING
- uid: INTEGER
- uid_enum: STRING
- hosted_machine_name: STRING
- hosted_machine_name_enum: STRING
- device_id: STRING
- device_id_enum: STRING
- os_type: STRING
- os_type_enum: STRING
- power_state: STRING
- power_state_enum: STRING
- catalog_kind: STRING
- catalog_kind_enum: STRING
- dskgrp_uid: STRING
- dskgrp_uid_enum: STRING
- desktop_group: STRING
- desktop_group_enum: STRING
- registration_state: STRING
- registration_state_enum: STRING
- last_deregistration_reason: STRING
- last_deregistration_reason_enum: STRING
- last_connection_failure: STRING
- last_connection_failure_enum: STRING
- applications_in_use: STRING
- applications_in_use_enum: STRING
- associated_user_upn: STRING
- associated_user_upn_enum: STRING
- catalog_name: STRING
- catalog_name_enum: STRING
- dns_name: STRING
- dns_name_enum: STRING
- desktop_kind: STRING
- desktop_kind_enum: STRING
- controller_name: STRING

- controller_name_enum: STRING
- in_maintenance_mode: STRING
- in_maintenance_mode_enum: STRING
- isassigned: STRING
- isassigned_enum: STRING
- published_application: STRING
- published_application_enum: STRING
- session_username: STRING
- session_username_enum: STRING
- last_connection_time: STRING
- last_connection_time_enum: STRING
- last_connection_user: STRING
- last_connection_user_enum: STRING
- catalog_uid: INTEGER
- catalog_uid_enum: STRING
- session_uid: INTEGER
- session_uid_enum: STRING
- last_error_reason: STRING
- last_error_reason_enum: STRING
- last_error_time: STRING
- last_error_time_enum: STRING
- machine_internal_state: STRING
- machine_internal_state_enum: STRING
- dpvd_stage: STRING
- dpvd_stage_enum: STRING

For events that are generated by situations in the Event Log Details attribute group, events are sent by using the ITM_KV5_EVENT_LOG_DETAILS event class. This event class contains the following slots:

- node: STRING
- timestamp: STRING
- time: STRING
- time_enum: STRING
- entry_type: STRING
- entry_type_enum: STRING
- kv5_source: STRING
- kv5_source_enum: STRING
- message: STRING
- message_enum: STRING

For events that are generated by situations in the Hyp Alert Details attribute group, events are sent by using the ITM_KV5_HYP_ALERT_DETAILS event class. This event class contains the following slots:

- node: STRING
- timestamp: STRING
- kv5_severity: STRING
- kv5_severity_enum: STRING
- time: STRING

- time_enum: STRING
- hyp_conn_uid: STRING
- hyp_conn_uid_enum: STRING
- server_name: STRING
- server_name_enum: STRING
- metric: STRING
- metric_enum: STRING
- trigger_interval: STRING
- trigger_interval_enum: STRING
- trigger_level: STRING
- trigger_level_enum: STRING
- trigger_period: STRING
- trigger_period_enum: STRING

For events that are generated by situations in the License Usage attribute group, events are sent by using the ITM_KV5_LICENSE_USAGE event class. This event class contains the following slots:

- node: STRING
- timestamp: STRING
- license_product_name: STRING
- license_product_name_enum: STRING
- licenses_in_use: INTEGER
- licenses_in_use_enum: STRING
- licenses_available: INTEGER
- licenses_available_enum: STRING
- license_overdraft: INTEGER
- license_overdraft_enum: STRING
- licenses_in_use_percent: INTEGER
- licenses_in_use_percent_enum: STRING

For events that are generated by situations in the Performance Object Status attribute group, events are sent by using the ITM_KV5_PERFORMANCE_OBJECT_STATUS event class. This event 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
- last_collection_start: STRING
- last_collection_start_enum: STRING
- last_collection_finished: STRING
- last_collection_finished_enum: STRING

- last_collection_duration: REAL
- average_collection_duration: REAL
- average_collection_duration_enum: STRING
- refresh_interval: INTEGER
- number_of_collections: INTEGER
- cache_hits: INTEGER
- cache_misses: INTEGER
- cache_hit_percent: REAL
- intervals_skipped: INTEGER

For events that are generated by situations in the Thread Pool Status attribute group, events are sent by using the ITM_KV5_THREAD_POOL_STATUS event class. This event class contains the following slots:

- node: STRING
- timestamp: STRING
- thread_pool_size: INTEGER
- thread_pool_size_enum: STRING
- thread_pool_max_size: INTEGER
- thread_pool_max_size_enum: STRING
- thread_pool_active_threads: INTEGER
- thread_pool_active_threads_enum: STRING
- thread_pool_avg_active_threads: REAL
- thread_pool_avg_active_threads_enum: STRING
- thread_pool_min_active_threads: INTEGER
- thread_pool_min_active_threads_enum: STRING
- thread_pool_max_active_threads: INTEGER
- thread_pool_max_active_threads_enum: STRING
- thread_pool_queue_length: INTEGER
- thread_pool_queue_length_enum: STRING
- thread_pool_avg_queue_length: REAL
- thread_pool_avg_queue_length_enum: STRING
- thread_pool_min_queue_length: INTEGER
- thread_pool_min_queue_length_enum: STRING
- thread_pool_max_queue_length: INTEGER
- thread_pool_max_queue_length_enum: STRING
- thread_pool_avg_job_wait: REAL
- thread_pool_avg_job_wait_enum: STRING
- thread_pool_total_jobs: INTEGER
- thread_pool_total_jobs_enum: STRING

For events that are generated by situations in the XenDesktop 4 IMA Networking Service attribute group, events are sent by using the ITM_KV5_XD4_NETWORKING_SERVICE event class. This event class contains the following slots:

- node: STRING
- timestamp: STRING
- total_network_connections: REAL
- total_network_connections_enum: STRING

- bytes_sent_per_sec: REAL
- bytes_sent_per_sec_enum: STRING
- bytes_received_per_sec: REAL
- bytes_received_per_sec_enum: STRING

For events that are generated by situations in the XenDesktop 4 Licensing Service attribute group, events are sent by using the ITM_KV5_XD4_LICENSING_SERVICE event class. This event class contains the following slots:

- node: STRING
- timestamp: STRING
- average_license_check_in_response_time: REAL
- average_license_check_in_response_time_enum: STRING
- average_license_check_out_response_time: REAL
- average_license_check_out_response_time_enum: STRING
- last_recorded_license_check_in_response_time: REAL
- last_recorded_license_check_in_response_time_enum: STRING
- last_recorded_license_check_out_response_time: REAL
- last_recorded_license_check_out_response_time_enum: STRING
- license_server_connection_failure: REAL
- license_server_connection_failure_enum: STRING
- maximum_license_check_in_response_time: REAL
- maximum_license_check_in_response_time_enum: STRING
- maximum_license_check_out_response_time: REAL
- maximum_license_check_out_response_time_enum: STRING

For events that are generated by situations in the XenDesktop 4 MetaFrame Service attribute group, events are sent by using the ITM_KV5_XD4_METAFRAME_SERVICE event class. This event class contains the following slots:

- node: STRING
- timestamp: STRING
- app_resolutions_persec: REAL
- app_resolutions_persec_enum: STRING
- application_enumerations_persec: REAL
- application_enumerations_persec_enum: STRING
- filtered_app_enumerations_persec: REAL
- filtered_app_enumerations_persec_enum: STRING
- app_resolution_time: REAL
- app_resolution_time_enum: STRING
- datastore_bytes_read_persec: REAL
- datastore_bytes_read_persec_enum: STRING
- localhostcache_bytes_read_persec: REAL
- localhostcache_bytes_read_persec_enum: STRING
- dynamicstore_bytes_read_persec: REAL
- dynamicstore_bytes_read_persec_enum: STRING
- datastore_bytes_written_persec: REAL
- datastore_bytes_written_persec_enum: STRING

- localhostcachebytes_written_persec: REAL
- localhostcachebytes_written_persec_enum: STRING
- dynamicstore_bytes_written_persec: REAL
- dynamicstore_bytes_written_persec_enum: STRING
- datastore_reads_persec: REAL
- datastore_reads_persec_enum: STRING
- localhostcache_reads_persec: REAL
- localhostcache_reads_persec_enum: STRING
- dynamic_reads_persec: REAL
- dynamic_reads_persec_enum: STRING
- datastore_writes_persec: REAL
- datastore_writes_persec_enum: STRING
- localhostcache_writes_persec: REAL
- localhostcache_writes_persec_enum: STRING
- dynamicstore_writes_persec: REAL
- dynamicstore_writes_persec_enum: STRING
- zone_elections_won: REAL
- zone_elections_won_enum: STRING
- zone_elections: REAL
- zone_elections_enum: STRING
- data_store_connection_failure: REAL
- data_store_connection_failure_enum: STRING
- dynamicstore_update_bytes_received: REAL
- dynamicstore_update_bytes_received_enum: STRING
- dynamicstore_update_response_bytes_sent: REAL
- dynamicstore_update_response_bytes_sent_enum: STRING
- dynamicstore_update_packets_received: REAL
- dynamicstore_update_packets_received_enum: STRING
- dynamicstore_query_request_and_bytes_received: REAL
- dynamicstore_query_request_and_bytes_received_enum: STRING
- dynamicstore_query_responseand_bytes_sent: REAL
- dynamicstore_query_responseand_bytes_sent_enum: STRING
- dynamicstore_query_count: REAL
- dynamicstore_query_count_enum: STRING
- dynamicstore_gateway_updateand_bytes_sent: REAL
- dynamicstore_gateway_updateand_bytes_sent_enum: STRING
- dynamicstore_gateway_update_count: REAL
- dynamicstore_gateway_update_count_enum: STRING
- workitem_queue_executing_count: REAL
- workitem_queue_executing_count_enum: STRING
- workitem_queue_ready_count: REAL
- workitem_queue_ready_count_enum: STRING
- workitem_queue_pending_count: REAL
- workitem_queue_pending_count_enum: STRING
- datastore_bytes_read: REAL

- datastore_bytes_read_enum: STRING
- datastore_reads: REAL
- datastore_reads_enum: STRING
- resolution_workitem_queue_executing_count: REAL
- resolution_workitem_queue_executing_count_enum: STRING
- resolution_workitem_queue_ready_count: REAL
- resolution_workitem_queue_ready_count_enum: STRING
- application_resolutions_failed_persec: REAL
- application_resolutions_failed_persec_enum: STRING
- number_of_xml_threads: REAL
- number_of_xml_threads_enum: STRING
- maximum_number_of_xml_threads: REAL
- maximum_number_of_xml_threads_enum: STRING
- number_of_busy_xml_threads: REAL
- number_of_busy_xml_threads_enum: STRING

For events that are generated by situations in the XenDesktop Service Instances attribute group, events are sent by using the ITM_KV5_XD5_SERVICE_INSTANCES event class. This event class contains the following slots:

- node: STRING
- timestamp: STRING
- servicegroupuid: STRING
- servicegroupuid_enum: STRING
- servicegroupname: STRING
- servicegroupname_enum: STRING
- service_uid: STRING
- service_uid_enum: STRING
- service_type: STRING
- service_type_enum: STRING
- address: STRING
- address_enum: STRING
- binding: STRING
- binding_enum: STRING
- version: STRING
- version_enum: STRING
- service_account: STRING
- service_account_enum: STRING
- service_account_sid: STRING
- service_account_sid_enum: STRING
- interface_type: STRING
- interface_type_enum: STRING

For events that are generated by situations in the XenDesktop Services attribute group, events are sent by using the ITM_KV5_XENDESKTOP5_SERVICES event class. This event class contains the following slots:

- node: STRING
- timestamp: STRING

- servicename: STRING
- servicename_enum: STRING
- dbconnected: INTEGER
- dbconnected_enum: STRING
- dbtrans_per_sec: REAL
- dbtrans_per_sec_enum: STRING
- avgdbtranspersec: REAL
- avgdbtranspersec_enum: STRING
- reg_avg_req_time: REAL
- reg_avg_req_time_enum: STRING
- reg_req_per_sec: REAL
- reg_req_per_sec_enum: STRING
- reg_req_rejects_per_sec: REAL
- reg_req_rejects_per_sec_enum: STRING

For events that are generated by situations in the XenDesktop XML Service attribute group, events are sent by using the ITM_KV5_XD5_XML_SERVICE event class. This event class contains the following slots:

- node: STRING
- timestamp: STRING
- transaction_name: STRING
- transaction_name_enum: STRING
- average_transaction_time: REAL
- average_transaction_time_enum: STRING
- concurrent_transactions: REAL
- concurrent_transactions_enum: STRING
- transactions_per_sec: REAL
- transactions_per_sec_enum: STRING

Appendix B. Documentation library

Various publications are relevant to the use of the IBM Tivoli Monitoring for Virtual Environments Agent for Citrix XenDesktop.

For information about how to access and use the publications, see *Using the publications* (http://pic.dhe.ibm.com/infocenter/tivihelp/v61r1/topic/com.ibm.itm.doc_6.3/common/using_publications.htm).

To find publications from the previous version of a product, click **Previous versions** under the name of the product in the **Contents** pane.

IBM Tivoli Monitoring for Virtual Environments Agent for Citrix XenDesktop library

The documentation for this agent and other product components is in the IBM Tivoli Monitoring for Virtual Environments Information Center (http://pic.dhe.ibm.com/infocenter/tivihelp/v61r1/topic/com.ibm.tivoli.itmvs.doc_7.2/welcome_ve72.htm).

One document is specific to the Citrix XenDesktop agent. The IBM Tivoli Monitoring for Virtual Environments Agent for Citrix XenDesktop User's Guide provides agent-specific information for configuring, using, and troubleshooting the Citrix XenDesktop agent.

The **Prerequisites** topic in the information center contains information about the prerequisites for each component.

Use the information in the user's guide for the agent with the *Tivoli Enterprise Portal User's Guide* to monitor Citrix XenDesktop resources.

Prerequisite publications

To use the information in this publication effectively, you must have some prerequisite knowledge.

See the following publications to gain the required prerequisite knowledge:

- *IBM Tivoli Monitoring Administrator's Guide*
- *IBM Tivoli Monitoring Agent Builder User's Guide*
- *IBM Tivoli Monitoring Command Reference*
- *IBM Tivoli Monitoring Installation and Setup Guide*
- *IBM Tivoli Monitoring High Availability Guide for Distributed Systems*
- *IBM Tivoli Monitoring: Messages*
- *IBM Tivoli Monitoring Troubleshooting Guide*
- *IBM Tivoli Monitoring: IBM i OS Agent User's Guide*
- *IBM Tivoli Monitoring: Linux OS Agent User's Guide*
- *IBM Tivoli Monitoring: UNIX OS Agent User's Guide*
- *IBM Tivoli Monitoring: Windows OS Agent User's Guide*
- *Tivoli Enterprise Portal User's Guide*
- *IBM Tivoli Performance Analyzer User's Guide*
- *IBM Tivoli Warehouse Proxy Agent User's Guide*
- *IBM Tivoli Warehouse Summarization and Pruning Agent User's Guide*

Related publications

The publications in related information centers provide useful information.

See the following information centers, which you can find by accessing Tivoli Documentation Central (http://www.ibm.com/tivoli/documentation):

- Tivoli Monitoring
- Tivoli Application Dependency Discovery Manager
- Tivoli Business Service Manager
- Tivoli Enterprise Console

Other sources of documentation

You can obtain additional technical documentation about monitoring products from other sources.

See the following sources of technical documentation about monitoring products:

- Service Management Connect (SMC)

  For introductory information about SMC, see IBM Service Management Connect (http://www.ibm.com/developerworks/servicemanagement/).

  For information about Tivoli products, see the Application Performance Management community on SMC (http://www.ibm.com/developerworks/servicemanagement/apm/index.html).

  Connect, learn, and share with Service Management professionals. Get access to developers and product support technical experts who provide their perspectives and expertise. You can use SMC for these purposes:

  – Become involved with transparent development, an ongoing, open engagement between external users and developers of Tivoli products where you can access early designs, sprint demos, product roadmaps, and pre-release code.
  – Connect one-on-one with the experts to collaborate and network about Tivoli and Integrated Service Management.
  – Benefit from the expertise and experience of others using blogs.
  – Collaborate with the broader user community using wikis and forums.
- IBM Integrated Service Management Library (http://www.ibm.com/software/brandcatalog/ismlibrary/) is an online catalog that contains integration documentation as well as other downloadable product extensions.
- IBM Redbook publications (http://www.redbooks.ibm.com/) include Redbooks® publications, Redpapers, and Redbooks technotes that provide information about products from platform and solution perspectives.
- Technotes (http://www.ibm.com/support/entry/portal/software), which are found through the IBM Software Support website, provide the latest information about known product limitations and workarounds.

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