

IBM Tivoli Composite Application Manager for Microsoft
Applications: Microsoft Hyper-V Server Agent
6.3.1 Fix Pack 13

Troubleshooting Guide

IBM

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Note

Before using this information and the product it supports, read the information in "Notices" on page 47.

This edition applies to version 6.3.1.13 of IBM Tivoli Composite Application Manager for Microsoft Applications: Microsoft Hyper-V Server Agent (product number 5724-U17) and to all subsequent releases and modifications until otherwise indicated in new editions.

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Chapter 1. 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 Chapter 4, “Support information,” on page 37.

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 2
- “Consulting the lists of identified problems and workarounds” on page 2

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 1.

Table 1. 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 4 for lists of all trace log files and their locations. For general information about the IBM Tivoli Monitoring environment, see the <i>Tivoli Enterprise Portal User's Guide</i> .
Microsoft Hyper-V Server 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: <ul style="list-style-type: none">• IBM Tivoli Monitoring. Also provide the patch level, if available.• IBM Tivoli Composite Application Manager for Microsoft Applications: Microsoft Hyper-V Server Agent
Screen captures	Screen captures of incorrect output, if any

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_\(general\)](http://www.ibm.com/support/entry/portal/Open_service_request/Software/Software_support_(general))).

Using logging

Logging is the primary troubleshooting feature in the Microsoft Hyper-V Server agent. *Logging* refers to the text messages and trace data that is generated by the Microsoft Hyper-V Server 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 Chapter 2, “Trace logging,” on page 3 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 Chapter 3, “Problems and workarounds,” on page 15.

For general troubleshooting information, see the *IBM Tivoli Monitoring Troubleshooting Guide*.

Chapter 2. 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 4
- “Examples: Using trace logs” on page 6
- “RAS trace parameters” on page 7

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.

Using KHVEventReader to retrieve events

The Event Log attribute group is used by the KHVEventReader application to internally retrieve events that are specific to Microsoft Hyper-V Server.

The KHVEventReader application name and directory path are as follows:

File name

`KHVEventReader.exe`

Directory path

`install_dir\tmaitm6`

The KHVEventReader application is also used to generate a log file based on the values that you set for the KBB_RAS1 variable in the KHVENV file. The file name and directory path for the generated log file are as follows:

File name

`hostname_hv_KHVEventReader_timestamp.log`, where *timestamp* is the time stamp representing the time at which the KHVEventReader application started. The format for the *timestamp* is year (y), month (m), day (d), hour (h), and minute (m), as follows: `yyymmddhhmm`

Directory path

`installdir\TMAITM6\logs`

You can set the following values for the KBB_RAS1 variable in the KHVENV file:

- No error tracing: `KBB_RAS1 = -none-`
- General error tracing: `KBB_RAS1 = ERROR`
- Maximum error tracing: `KBB_RAS1 = ERROR (COMP:kqz ALL) (UNIT:kra ALL)`

Note: If the value of the trace level is other than `-none-`, `ERROR`, or `ERROR (COMP:kqz ALL) (UNIT:kra ALL)`, the default trace level is set to `ERROR`.

Overview of log file management

Knowing the naming conventions for log files helps you to find the files.

Agent log file naming conventions

Table 2 provides the names, locations, and descriptions of IBM Tivoli Monitoring general RAS1 log files. The log file names for the Microsoft Hyper-V Server agent adhere to the following naming convention:

Windows systems

hostname_productcode_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 Composite Application Manager for Microsoft Applications: Microsoft Hyper-V Server Agent, the product code is hv.

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

Table 2. Trace log files for troubleshooting agents

System where log is located	File name and path	Description
On the Tivoli Enterprise Monitoring Server	<ul style="list-style-type: none">• Windows: The IBM Tivoli Monitoring <i>timestamp.log</i> file in the <i>install_dir\InstallITM</i> path• UNIX: The <i>install_dir/logs</i> path• Linux: The <i>install_dir/logs</i> 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 <i>Warehouse_Configuration.log</i> file is in the following location on Windows systems: <i>install_dir\InstallITM</i>	Provides details about the configuration of data warehousing for historical reporting.

Table 2. Trace log files for troubleshooting agents (continued)

System where log is located	File name and path	Description
On the Tivoli Enterprise Monitoring Server	<p>The name of the RAS log file is as follows:</p> <ul style="list-style-type: none"> • Windows: <i>install_dir\logs\hostname_ms_timestamp-nn.log</i> • UNIX: <i>install_dir/logs/hostname_ms_timestamp-nn.log</i> • Linux: <i>install_dir/logs/hostname_ms_timestamp-nn.log</i> <p>Note: File names for RAS1 logs include a hexadecimal time stamp.</p> <p>Also on UNIX systems, a log with a decimal time stamp is provided: <i>hostname_hv_timestamp.log</i> and <i>hostname_hv_timestamp.pidnnnn</i> in the <i>install_dir/logs</i> path, where <i>nnnnn</i> is the process ID number.</p>	Traces activity on the monitoring server.
On the Tivoli Enterprise Portal Server	<p>The name of the RAS log file is as follows:</p> <ul style="list-style-type: none"> • Windows: <i>install_dir\logs\hostname_cq_HEXtimestamp-nn.log</i> • UNIX: <i>install_dir/logs/hostname_cq_HEXtimestamp-nn.log</i> • Linux: <i>install_dir /logs/hostname_cq_HEXtimestamp-nn.log</i> <p>Note: File names for RAS1 logs include a hexadecimal time stamp.</p> <p>Also on UNIX systems, a log with a decimal time stamp is provided: <i>hostname_hv_timestamp.log</i> and <i>hostname_hv_timestamp.pidnnnn</i> in the <i>install_dir/logs</i> path, where <i>nnnnn</i> is the process ID number.</p>	Traces activity on the portal server.
On the Tivoli Enterprise Portal Server	<p>The <i>teps_odbc.log</i> file is located in the following path:</p> <ul style="list-style-type: none"> • Windows: <i>install_dir\Install\ITM</i> • UNIX: <i>install_dir/logs</i> • Linux: <i>install_dir/logs</i> 	When you enable historical reporting, this log file traces the status of the warehouse proxy agent.
On the computer that hosts the monitoring agent	<p>The RAS1 log files are as follows:</p> <ul style="list-style-type: none"> • Windows: <i>hostname_hv_instance_name_khvagent_HEXtimestamp-nn.log</i> in the <i>install_dir\tmaitm6\logs</i> directory <p>These logs are in the following directories:</p> <ul style="list-style-type: none"> • Windows: <i>install_dir\tmaitm6\logs</i> 	Traces activity of the monitoring agent.

Table 2. 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	<p>The agent operations log files are as follows:</p> <p><i>instance_hostname_HV.LG0</i> is the current log created when the agent is started.</p> <p><i>instance_hostname_HV.LG1</i> is the backup of the previous log.</p> <p>These logs are in the following directory depending on the operating system that you are using:</p> <ul style="list-style-type: none"> • Windows: <i>install_dir\tmaitm6\logs</i> 	<p>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.</p> <p>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 <i>previous</i> monitoring session:</p> <ul style="list-style-type: none"> • Status of connectivity with the monitoring server • Situations that were running • The success or failure status of Take Action commands
On the computer that hosts the monitoring agent	<p>The name of the RAS1 log file created by the KHVEventReader application is as follows on a Windows system:</p> <p><i>hostname_hv_KHVEventReader_timestamp.log</i></p> <p>The log is in the following directory:</p> <p><i>install_dir\tmaitm6\logs</i></p>	<p>Traces the activity of the KHVEventReader application.</p>
<p>Definitions of variables:</p> <ul style="list-style-type: none"> • <i>timestamp</i> is a time stamp with a format that includes year (y), month (m), day (d), hour (h), and minute (m), as follows: yyyymmdd hhmm • <i>HEXtimestamp</i> is a hexadecimal representation of the time at which the process was started. • <i>install_dir</i> represents the directory path where you installed the IBM Tivoli Monitoring component. <i>install_dir</i> can represent a path on the computer that hosts the monitoring system, the monitoring agent, or the portal. • <i>instance</i> refers to the name of the database instance that you are monitoring. • <i>instance_name</i> refers to the name of the agent instance. • <i>hostname</i> refers to the name of the computer on which the IBM Tivoli Monitoring component runs. • <i>nm</i> 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. 		

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}kdc10cl.c,105,"KDC10_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:HV is ON-LINE.
.
.
(42C3079B.0000-6A4:kpxreqhb.cpp,644,"HeartbeatInserter") Remote node SERVER5B:HV is OFF-LINE.
```

See the following key points about the preceding excerpts:

- The monitoring server appends the **HV** product code to the server name to form a unique name (SERVER5B:HV) for this instance of the IBM Tivoli Composite Application Manager for Microsoft Applications: Microsoft Hyper-V Server Agent. By using this unique name, you can distinguish multiple monitoring products that might be running on **SERVER5B**.
- The log shows when the agent started (ON-LINE) and later stopped (OFF-LINE) in the environment.
- For the sake of brevity, an ellipsis (...) represents the series of trace log entries that were generated while the agent was running.
- Between the ON-LINE and OFF-LINE log entries, the agent was communicating with the monitoring server.
- The ON-LINE and OFF-LINE log entries are always available in the trace log. All trace levels that are described in "RAS trace parameters" provide these entries.

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

1. In the Windows **Start** menu, 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 Composite Application Manager for Microsoft Applications: Microsoft Hyper-V Server Agent, right-click the name of that agent in the window. You can also use the viewer to access remote logs.

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

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 4 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 Composite Application Manager for Microsoft Applications: Microsoft Hyper-V Server Agent uses RAS1 tracing and generates the logs described in Table 2 on page 4. The default RAS1 trace level is ERROR.

Procedure

1. Open the Manage Tivoli Enterprise Monitoring Services window.
2. Select **Advanced > Edit Trace Params**. 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:khv ALL)
 - Maximum error tracing. KBB_RAS1=ERROR (UNIT:khv 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 2 on page 4 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 Microsoft Hyper-V Server agent uses RAS1 tracing and generates the logs described in Table 2 on page 4. The default RAS1 trace level is ERROR.

Procedure

1. Open the trace options file:
 - **Windows systems:**
 - For the 32-bit agent:`install_dir\tmaitm6\HVENV`
 - For the 64-bit agent:`install_dir\tmaitm6_x64\HVENV`
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:khv 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 2 on page 4 that include a process ID (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 F1.

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
kbbacd1.c, 400, May 29 2007, 12:54:27, 1.2, ACF1
kbbacl.c.c, 400, May 29 2007, 12:54:27, 1.4, ACF1
kbbac1i.c, 400, May 29 2007, 12:54:28, 1.11, ACF1
vkdhscfn.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
kdhsgh.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 kbbcrd class of the Windows OS agent, the command is:

```
ras1 set (UNIT:kbbcrd 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_Utills  error  /tmp/tec_reception
SP
# to debug Agent Utils
tec_rule Agent_Utills  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_Utills  trace2  /tmp/tec_reception
SP
# to debug Agent Utils
tec_rule Agent_Utills      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
```

Chapter 3. Problems and workarounds

The known problems and workarounds are organized into types of problems that might occur with the Microsoft Hyper-V Server 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 Composite Application Manager for Microsoft Applications Information Center.

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.

See Table 3 and Table 4 on page 16 for information about these problems and solutions.

Table 3. Problems and solutions for installation and configuration

Problem	Solution
Diagnosing problems with product browse settings (Windows systems only).	<p>When you have problems with browse settings, complete the following steps:</p> <ol style="list-style-type: none">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. <p>If requested, you can forward this file to IBM Software Support for analysis.</p>
A message similar to "Unable to find running CMS on CT_CMSLIST" in the log file is displayed.	<p>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:</p> <ul style="list-style-type: none">• 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 3. Problems and solutions for installation and configuration (continued)

Problem	Solution
If you upgrade the Microsoft Hyper-V Server agent for ITCAM for Microsoft Applications from V6.2.0 or V6.2.0.1 to V6.2.2, the IBM Systems Director Configuration window does not open.	After the agent is installed, configure the agent by completing the following steps: <ol style="list-style-type: none"> 1. Select Start > Program Files > IBM Tivoli Monitoring > Manage Tivoli Enterprise Monitoring Services. The Manage Tivoli Enterprise Monitoring Services window opens. 2. Right-click Monitoring Agent for Microsoft Hyper-V Server, and select Reconfigure. The Agent Advanced Configuration window opens. 3. Click OK. The IBM Systems Director Configuration window opens. 4. Enter the port number and the server host name for the IBM Systems Director. 5. Select the Authenticate using Tivoli Enterprise Portal credentials check box, and click OK.
If you have installed a 64-bit agent for ITCAM for Microsoft Applications, information about the agent processes is not displayed in the Kinviewer window.	No solution is available for this problem at this time.
You have preinstalled agents of earlier versions of IBM Tivoli Monitoring for Microsoft Applications on your computer. When you run the ITCAM for Microsoft Applications installation wizard to upgrade the agent to V6.2.2, the Select Features window displays a list of all the agent features that you can install. The installed agents are selected by default. If you do not want to upgrade the installed features, you cannot clear the default selection.	Run the setup.exe file of the Windows OS agent V6.2.2 or later to install the Tivoli Enterprise Monitoring Agent Framework. Then, upgrade the preinstalled IBM Tivoli Monitoring for Microsoft Applications agents.
When you use the Installation Launch Pad to install a 32-bit agent on a 32-bit computer, the following message is displayed: The following components cannot be installed because the installation action failed. IBM Tivoli Composite Application Manager for Microsoft Applications V6.2.3 for Windows on 64-bit AMD and Intel systems (x64)	No action is required. You can ignore this message and continue with the installation.

Table 4. General problems and solutions for uninstallation

Problem	Solution
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: <ol style="list-style-type: none"> 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. <p>To uninstall the monitoring agent, use the procedure described in the <i>IBM Tivoli Monitoring Installation and Setup Guide</i>.</p>

Remote deployment troubleshooting

Problems can occur with remote deployment and removal of agent software using the Agent Remote Deploy process.

Table 5 contains problems and solutions related to remote deployment.

Table 5. Remote deployment problems and solutions

Problem	Solution
KDY1008E error when using remote operations to remove the last instance of the agent.	There are two windows when removing an agent when it is the last instance. The first asks to remove the instance. The second asks to uninstall. If you say Yes to the first and No to the second for a single-instance agent, you always get the KDY1008E error. The workaround is to always say Yes in the second window to uninstall.
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.
What are the remote deploy CLI parameters for the agent?	<p>The IBM Tivoli Monitoring command line is documented in the <i>IBM Tivoli Monitoring Installation and Setup Guide</i>. Also, see the “Agent installation and configuration” chapter in the <i>IBM Tivoli Composite Application Manager for Microsoft Applications: Microsoft Hyper-V Server Agent Installation and Configuration Guide</i>.</p> <p>For the section name, CTIRA_HOSTNAME, the configuration parameter for remote deploy is as follows: section.configParameter</p> <p>For remote configuration of an active node where -m managed system name is that of the Microsoft Cluster Server agent the command line is as follows: tacmd configureSystem -m CTIRA_HOSTNAME:Q5 -p MSCS.CTIRA_HOSTNAME="new hostname" MSCS.CTIRA_HIST_DIR="new directory name"</p>
When you remotely deploy the Hyper-V Server agent from the Tivoli Enterprise Portal, on the Agent tab of the New Managed System Configuration window, if you specify the account in the <i>user@domain.com</i> format (for example, administrator@itmagents.com), the following error message is displayed: KDY1008E: The agent action SETCONFIG Failed with a return code of 10 for the product code HV. The command C:\IBM\ITM\TMAITM6_X64\kdy_xa.exe ?p ITMHV1:HV ?pc hv produced the following error text: Error line (1642): unable to set user to run service as. The specified return code was received from the two way translator.	<p>There are two possible solutions to this problem.</p> <p>Solution 1: Use the <i>ddomain\user</i> format to specify the account.</p> <p>Solution 2: Use the Use local system account option to remotely deploy the agent.</p>

Table 5. Remote deployment problems and solutions (continued)

Problem	Solution
<p>Remote installation (CLI and GUI) of Microsoft Hyper-V Server agent fails on IPv6 network. The agent gets installed on a computer but fails to configure and start. The agent appears offline on the Tivoli Enterprise Portal.</p> <p>Note: This problem occurs with IBM Tivoli Monitoring V6.3, Fix Pack 1, or earlier.</p>	<p>Reconfigure the Microsoft Hyper-V Server agent by completing the following steps:</p> <ol style="list-style-type: none"> 1. Open the Manage Tivoli Enterprise Monitoring Services window. 2. Right-click Microsoft Hyper-V Server agent that you want to configure with the IPv6 network and then, click Advanced. 3. Click Edit Variable. Following message appears: The service must be stopped before editing variables. Do you want to stop the service now? 4. Click Yes. The Edit Variable window appears. 5. Click Add. 6. Enter the following details in the respective fields: <ul style="list-style-type: none"> • Variable Name: CT_CMSLIST • Variable Value: IP6.PIPE:ITM-IPV6;IP6.PIPE:<IP of the TEMS machine>. For example: IP6.PIPE:ITM-IPV6;IP6.PIPE:FE80::215:5DFF:FE44:4012 7. Click Ok. 8. Right-click Microsoft Hyper-V Server agent and then click Start.

Agent troubleshooting

A problem can occur with the agent after it has been installed.

Table 6 contains problems and solutions that can occur with the agent after it is installed.

Table 6. Agent problems and solutions

Problem	Solution
<p>Log data accumulates too rapidly.</p>	<p>Check the RAS trace option settings, which are described in "Setting RAS trace parameters by using the GUI" on page 7. The trace option settings that you can set on the KBB_RAS1= and KDC_DEBUG= lines potentially generate large amounts of data.</p>
<p>Rollup Error messages in the agent log file.</p>	<p>Rollup error messages occur when a base WMI query fails and no source data is available to "roll up." Check the log for the initial WMI error to resolve. The rollup error disappears when the initial problem is corrected.</p>

Table 6. Agent problems and solutions (continued)

Problem	Solution
<p>WMI Error 0x80041006 There was not enough memory for the operation.</p> <p>—OR—</p> <p>WMIPrsve.exe memory increases to 135MB before recycling.</p>	<p>The issue is a known issue with the Microsoft WMI Cluster Association class provider, which IBM Software Support is working with Microsoft to resolve. Until a fix is available, the following workaround has been provided from Microsoft. It sets the Cluster WMI provider to run in a standalone WMIprvse.exe host. The script also lowers the cache timeout to 30 seconds. So, if the cluster provider is idle for more than 30 seconds, the hosting WMIprvse.exe process is recycled, minimizing the effect of the leak.</p> <ol style="list-style-type: none"> Copy and paste the following into a file and save with a .vbs extension (for example, wmi_fix.vbs). If the comments (lines beginning with ') cause problems, remove them. <pre data-bbox="868 682 1372 1207"> '===[Script start]===== ===== Set objLocator = CreateObject ("wbemscripting.swbemlocator") set WMIservices = objLocator.ConnectServer (".", "root") set cachecontrol = WMIservices.Get ("__ObjectProviderCacheControl=@") cachecontrol.ClearAfter = "00000000000025.000000:000" cachecontrol.Put_ set WMIservices = objLocator.ConnectServer(".", "root\MSCluster") set ClusProvReg = WMIservices.Get ("__Win32Provider.Name= "MS_CLUSTER_PROVIDER") ClusProvReg.HostingModel = "NetworkServicehost:ClusterProvider" ClusProvReg.Put_ '===[Script stop]===== ===== </pre> <ol style="list-style-type: none"> Run it on each computer where the agent is running. Restart the system. <p>If the problem persists (which typically happens if there are multiple objects querying WMI, such as a second agent), try reducing the cache time from 25 seconds to a lower value.</p>

Table 6. Agent problems and solutions (continued)

Problem	Solution
<p>Agent log files are not in the CANDLEHOME/tmaitm6/logs directory.</p>	<p>If you reset the logging level to "none," and then turn logging back on by setting the logging level to something other than "none," the Manage Tivoli Enterprise Monitoring Services utility automatically resets the log directory to CANDLEHOME/logs.</p> <p>Logging is not affected. Older logs remain in CANDLEHOME/TMAITM6/logs. New logs are placed in CANDLEHOME/logs.</p> <p>You can manually edit the ENV file using Manage Tivoli Enterprise Monitoring Services:</p> <ol style="list-style-type: none"> 1. Right-click the agent. Select Advanced > Edit ENV file. 2. Adjust the line prefixed by KBB_RAS1_LOG to the line in the example. You must substitute <i>ITM_HOME</i> with the path to your IBM Tivoli Monitoring installation directory. <p>-OR-</p> <p>You can also add "\\TMAITM6" before all "\\logs" in the KBB_RAS1_LOG line. Example: KBB_RAS1_LOG=<i>ITM_HOME</i>\TMAITM6\logs\ \$(computername)_q5_kq5agent_\$(sysutcstart)-.log INVENTORY=<i>ITM_HOME</i>\TMAITM6\logs\ \$(computername)_q5_kq5agent.inv COUNT=03 LIMIT=5 PRESERVE=1 MAXFILES=9</p>
<p>If you set the Notes attribute to have multiline text when setting the configuration for a virtual machine, the data row for that virtual machine is not visible in the Virtual Machine attribute group.</p>	<p>Start the Hyper-V Manager and use the following steps to change the Notes attribute value:</p> <ol style="list-style-type: none"> 1. In the Hyper-V Manager, select the Hyper-V host name to open the Virtual Machine list for the selected Hyper-V host name. 2. Right-click the required virtual machine, and click Settings. 3. Click Management > Name. 4. Enter only a single line of text in the Notes window.
<p>The Time Generated attribute in the Event Log attribute group does not show time according to the local time zone.</p>	<p>The Time Generated attribute displays the Greenwich Median Time (GMT). Based on the time difference in GMT and your local time, you can convert the time displayed by the Time Generated attribute to your local time.</p> <p>You can also see the value for the Timestamp attribute to see the local time at which the event is generated.</p>

Table 6. Agent problems and solutions (continued)

Problem	Solution
<p>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.</p>	<p>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.</p> <p>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).</p> <p>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'.)</p> <p>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:</p> <ul style="list-style-type: none"> • 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. <p>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.</p> <p>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.</p> <p>Continued on next row.</p>

Table 6. 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.)
If the Microsoft Hyper-V Server agent is installed on Windows Server 2008, Service Pack 2, a memory leak is observed.	Install the hot fix for Windows Server 2008, Service Pack 2 from Microsoft Support (http://support.microsoft.com/kb/970838).
On the Windows Server 2008 operating system, the Tivoli Enterprise Portal displays Value_Exceeds_Maximum for the GPA Pages attribute of the Hyper-V Hypervisor Partition attribute group.	There is no solution to this problem.
<p>For the following workspaces, data is displayed in the plot chart view only for the first instance and not for all instances:</p> <ul style="list-style-type: none"> • Virtual Network Adapter • Legacy Network Adapter • Virtual Switch Port • IDE Controller • Root Virtual Processor Load • VM Virtual Processor Load • Hyper-V Logical Processor Load 	<p>Use the following steps to change the properties of the plot chart view to view the graph for all instances:</p> <ol style="list-style-type: none"> 1. Right-click the plot chart view, and click Properties. The Properties window opens. 2. In the left pane, expand Views > Plot Chart Views, and click Bytes. The Preview pane opens. 3. Click the Style tab. The Style pane opens. 4. Click the plot chart. 5. In the Select Plot Points area, click Attribute(s) across multiple rows.

Table 6. Agent problems and solutions (continued)

Problem	Solution
<p>On Windows Server 2008, Service Pack 2 and Microsoft Hyper-V Server 2008 operating systems, the Tivoli Enterprise Portal displays an incorrect value randomly and sometimes displays VALUE_EXCEEDS_MAXIMUM for the following attributes:</p> <ul style="list-style-type: none"> • Hyper-V Hypervisor Logical Processor attribute group <ul style="list-style-type: none"> - Hardware Interrupts Per Sec - Inter Processor Interrupts Per Sec - Inter Processor Interrupts Sent Per Sec - Context Switches Per Sec - Scheduler Interrupts Per Sec - Timer Interrupts Per Sec - Total Interrupts Per Sec • Hyper-V Hypervisor Root Virtual Processor attribute group <ul style="list-style-type: none"> - Virtual Processor Hypercalls Per Sec - GPA Space Hypercall Per Sec - Page Fault Intercepts Per Sec - Guest Page Table Maps Per Sec - Virtual MMU Hypercalls Per Sec - Virtual Processor Hypercalls Per Sec - Total Messages Per Sec • Hyper-V Hypervisor Root Virtual Processor More attribute group <ul style="list-style-type: none"> - Synthetic Interrupts Per Sec - Synthetic Interrupts Hypercalls Per Sec - Page Table Write Intercepts Per Sec - Reflected Guest Page Faults Per Sec - Page Table Resets Per Sec - Local Flushed GVA Ranges Per Sec - Large Page TLB Fills Per Sec - Global GVA Range Flushes Per Sec - Address Space Switches Per Sec - APIC EOI Accesses Per Sec - APIC IPIs Sent Per Sec - APIC Self IPIs Sent Per Sec • Hyper-V Hypervisor Virtual Processor attribute group <ul style="list-style-type: none"> - Virtual Processor Hypercalls Per Sec - GPA Space Hypercall Per Sec - Page Fault Intercepts Per Sec - Guest Page Table Maps Per Sec - Virtual MMU Hypercalls Per Sec - Virtual Processor Hypercalls Per Sec - Total Messages Per Sec <p>(continued in the next row)</p>	<p>Install Windows Server 2008 R2.</p>

Table 6. Agent problems and solutions (continued)

Problem	Solution
<p>(continued from previous row)</p> <p>On Windows Server 2008, Service Pack 2 and Microsoft Hyper-V Server 2008 operating systems, the Tivoli Enterprise Portal displays an incorrect value randomly and some times displays VALUE_EXCEEDS_MAXIMUM for the following attributes:</p> <ul style="list-style-type: none"> • Hyper-V Hypervisor Virtual Processor More attribute group <ul style="list-style-type: none"> – Synthetic Interrupts Per Sec – Synthetic Interrupts Hypercalls Per Sec – Page Table Write Intercepts Per Sec – Reflected Guest Page Faults Per Sec – Page Table Resets Per Sec – Local Flushed GVA Ranges Per Sec – Large Page TLB Fills Per Sec – Global GVA Range Flushes Per Sec – Address Space Switches Per Sec – APIC EOI Accesses Per Sec – APIC IPIs Sent Per Sec – APIC Self IPIs Sent Per Sec 	<p>Install Windows Server 2008 R2.</p>
<p>On the Tivoli Enterprise Portal, the hover help for the Full Name attribute in the Availability attribute group displays the following text for both services and processes:</p> <p>The full name of the process including the path</p> <p>This description is valid only when the attribute name refers to a process. The description is not valid for a service because a service name does not display a path.</p>	<p>This behavior is expected. The Tivoli Enterprise Portal is designed to display the same hover help for the Full name attribute, regardless of whether the attribute is a process or a service.</p>
<p>A problem can arise when trying to make local changes using Manage Tivoli Enterprise Monitoring Services that required the agent to be stopped while the agent cluster resource controlling the agent is online.</p>	<p>Some local changes might require the agent to be taken offline. In these cases, you receive a warning prompt that states the agent must be taken offline to make these changes. If the cluster resource is online the cluster server attempts to bring the agent back online, which interferes with this operation.</p> <p>Take the agent cluster resource offline during operations requiring the agent to be offline. When the operations are complete, bring the agent cluster resource back online.</p>

Table 6. Agent problems and solutions (continued)

Problem	Solution
<p>You have configured the monitoring agent version 6.3 on the Tivoli Enterprise Monitoring Server by using the self-describing agent feature. You are using IBM Tivoli Monitoring version 6.2.3 or version 6.2.3 Fix Pack 1. On the Tivoli Enterprise Portal, if you open a situation by using the Situation Editor and view the advance options for the situation, you can see <none selected> in the Display Item window.</p>	<p>Recycle the Tivoli Enterprise Portal Server.</p> <p>Complete the following steps to recycle the Tivoli Enterprise Portal Server on Windows systems:</p> <ol style="list-style-type: none"> 1. On the computer where the Tivoli Enterprise Portal Server is installed, click Start > Programs > Manage Tivoli Enterprise Monitoring Services. 2. Right-click the Tivoli Enterprise Portal Server service and click Recycle. <p>To recycle the Tivoli Enterprise Portal Server on UNIX systems, use the following commands from the bin directory of /opt/IBM/ITM (or where you have installed IBM Tivoli Monitoring) in the order shown below:</p> <ul style="list-style-type: none"> • <code>./itmcmd agent stop cq</code> • <code>./itmcmd agent start cq</code>
<p>You cannot log on to the IBM Systems Director version 6.3, or later by using the IBM Systems Director crosslink in the Virtual Machine workspace.</p> <p>This problem occurs when the following conditions exist:</p> <ul style="list-style-type: none"> • You have installed the Microsoft Hyper-V Server agent V6.3.1 and configured IBM Systems Director V6.3 on your computer. • You have configured the Authenticate using Tivoli Enterprise Portal credentials parameter as YES by using the monitoring agent. 	<p>There is no solution to this problem.</p>
<p>When you remotely install the monitoring agent, you cannot see the options to perform remote operations in the physical and logical views of a navigator item on the Tivoli Enterprise Portal. When you connect the Windows OS agent and the monitoring agent for the first time to Tivoli Enterprise Monitoring Server, the options to perform remote operations are available in the physical view. However, when you assign the logical view to the managed system and update the logical view, the options to perform remote operations disappear from the logical and physical views of a navigator item.</p>	<p>Complete one of the following tasks to resolve this problem:</p> <ul style="list-style-type: none"> • Use the command line interface to perform remote operations. • Complete the following steps to resolve this problem: <ol style="list-style-type: none"> 1. Stop the monitoring agent. 2. Remove the entries for the agent from the logical and physical views and update the navigator items. 3. Start the monitoring agent. • Restart Tivoli Enterprise Monitoring Agent or IBM Tivoli Monitoring environment.
<p>You have enabled the self-describing agent feature for the Tivoli Enterprise Portal Server. When you upgrade the Microsoft Hyper-V Server agent support for Tivoli Enterprise Portal Server to version 6.3, the support files are not automatically upgraded to version 6.3.</p>	<p>Upgrade the monitoring agent support manually to version 6.3 of Tivoli Enterprise Portal Server.</p>

Workspace troubleshooting

Problems can occur with general workspaces and agent-specific workspaces.

Table 7 contains problems and solutions related to workspaces.

Table 7. Workspace problems and solutions

Problem	Solution
<p>The process application components are available, but the Availability status shows PROCESS_DATA_NOT_AVAILABLE.</p>	<p>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:</p> <ol style="list-style-type: none"> 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: <ul style="list-style-type: none"> • 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.
<p>At the end of the historical view, you see the following error: KFWITM220E Request failed during execution.</p>	<p>Ensure that you configure History. In the Historical Configuration view, ensure that data collection is configured and started. It takes two collection intervals for the data to first appear. If you choose 5 minutes, the first point of data shows up after 5 minutes. On the Tivoli Enterprise Portal Server: Configuration</p> <ol style="list-style-type: none"> 1. Select Edit > History Configuration > Select A Product. 2. Select MS Cluster Server. 3. Select the Groups you want to monitor. 4. Set the Configuration Controls to the levels you want. 5. Click Configure Groups to complete the configuration. <p>To start the history collection:</p> <ol style="list-style-type: none"> 1. Select the Groups you want to monitor (repeat step 3 above). 2. Click Start Collection.

Table 7. Workspace problems and solutions (continued)

Problem	Solution
<p>Event Log workspace events are unfiltered, are not collected more than every 60 seconds, and are removed from the Event Log Views after 1 hour of being received.</p>	<p>All events currently in the Application Event Log are sent to the Tivoli Enterprise Monitoring Server when the agent starts. Environment variables that control the behavior of the Event Log Workspace are stored in the agent ENV file on the Tivoli Enterprise Monitoring Agent where the agent is running. These variables are stored:</p> <p>CDP_DP_CACHE_TTL This value is the minimum number of seconds before data (for a particular table) is collected again. By default this variable is present in the ENV file and the value is set to 60.</p> <p>CDP_NT_EVENT_LOG_GET_ALL_ENTRIES_FIRST_TIME This variable determines whether the agent sends all events currently in the Application Event Log to the Tivoli Enterprise Monitoring Server when the agent starts. Legal values are YES and NO. By default this variable is present in the ENV file and the value is set to NO.</p> <p>CDP_NT_EVENT_LOG_CACHE_TIMEOUT This variable determines how long in seconds that events are displayed in the Tivoli Enterprise Monitoring Server Event Log Views. By default, this variable is <i>not</i> present in the ENV file. A default value of 3600 (1 Hour) is used unless overridden by the presence of this variable in the agent ENV file. The minimum legal value is 300.</p> <p>To view or edit the agent ENV file on the Tivoli Enterprise Monitoring agent where the agent is installed, use Manage Tivoli Enterprise Monitoring Services to select the agent. Right-click and select Advanced - Edit ENV File. The agent must be restarted to implement changes.</p>
<p>The name of the attribute does not display in a bar chart or graph view.</p>	<p>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.</p>
<p>At the end of each view, you see the following Historical workspace KFWITM220E error: Request failed during execution.</p>	<p>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.</p>

Table 7. Workspace problems and solutions (continued)

Problem	Solution
<p>You start collection of historical data but the data cannot be seen.</p>	<p>Use the following managing options for historical data collection:</p> <ul style="list-style-type: none"> • 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 <i>Managing historical data</i> in the <i>IBM Tivoli Monitoring Administrator's Guide</i>. 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 <i>Managing historical data</i> in the <i>IBM Tivoli Monitoring Administrator's Guide</i>.
<p>Historical data collection is unavailable because of incorrect queries in the Tivoli Enterprise Portal.</p>	<p>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.</p> <p>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).</p> <p>To ensure support of historical data collection, do not use the Sort By, Group By, or First/Last functions in your queries.</p> <p>For information about the historical data collection function, See <i>Managing historical data</i> in the <i>IBM Tivoli Monitoring Administrator's Guide</i> or the Tivoli Enterprise Portal online help .</p>
<p>When you use a long process name in the situation, the process name is truncated.</p>	<p>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.</p>
<p>Regular (non-historical) monitoring data fails to be displayed.</p>	<p>Check the formation of the queries you use to gather data. For example, look for invalid SQL statements.</p>

Table 7. Workspace problems and solutions (continued)

Problem	Solution
<p>Historical data is unavailable.</p>	<ul style="list-style-type: none"> • Local time differences for the Tivoli Enterprise Portal, Tivoli Enterprise Monitoring Server, and the monitoring agent can affect history. History is stored at the monitoring agent. • Check that a directory is present on the shared disk and that all the agents are configured to use that directory. • Check for OpenHistoryFiles errors in the agent log to see if history files are created. • If no shared disk is provided for the agent, history must be stored at the Tivoli Enterprise Monitoring Server. Ensure that history is set up to be stored at Tivoli Enterprise Monitoring Server. • If you have a hub and a remote Tivoli Enterprise Monitoring Server, start historical data collection correctly on that Tivoli Enterprise Monitoring Server.
<p>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.</p>	<p>Ensure that application support has been added on the monitoring server, portal server, and portal client.</p> <p>For more information about installing application support, see <i>Installing and enabling application support</i> in the <i>IBM Tivoli Monitoring Installation and Setup Guide</i>.</p>
<p>The Event Log workspace events are removed from the Event Log view after every 100 data rows.</p>	<p>Environment variables that control the behavior of the Event Log workspace are stored in the agent ENV file on the Tivoli Enterprise Monitoring Agent where the agent is running. The <code>CDP_PURE_EVENT_CACHE_SIZE</code> variable in the agent ENV file controls the number of data rows that are cached. By default the value is set to 100.</p> <p>You can modify the value for the <code>CDP_PURE_EVENT_CACHE_SIZE</code> variable to include the number of data rows that you require.</p> <p>To view or edit the agent ENV file, on the Tivoli Enterprise Monitoring agent where the agent is installed, use Manage Tivoli Enterprise Monitoring Services to select the agent. Right-click the agent, click Advanced, and click Edit ENV File. Restart the agent to implement the changes.</p>
<p>On the Tivoli Enterprise Portal, in the Event Log workspace, an event message gets truncated if the length of the message is more than 2000 characters.</p>	<p>There is no solution to this problem.</p>

Situation troubleshooting

Problems can occur with situations and situation configuration.

Table 8 contains problems and solutions for situations.

Table 8. 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 7. For example, trace logs grow rapidly when you apply the ALL logging option.
Monitoring activity requires too many system resources.	See the “Disk capacity planning for historical data” topic in the <i>IBM Tivoli Composite Application Manager for Microsoft Applications: Microsoft Hyper-V Server Agent Installation and Configuration Guide</i> that describes the performance impact of specific attribute groups. If possible, decrease your use of the attribute groups that require greater system resources.
You want to change the appearance of situations when they are displayed in the navigation tree.	<ol style="list-style-type: none">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. <p>Note: The State setting is not related to severity settings in the Tivoli Enterprise Console.</p>

Table 8. Situation problems and solutions (continued)

Problem	Solution
<p>No event notification is given when a monitoring agent is down.</p>	<p>By default, agent status is available in the Enterprise System Status workspace. However, by default, an event is not generated for a status change. The following situation definition causes a situation to fire when any Microsoft Cluster Server agent being monitored goes offline. To enable the Agent Down situation, complete the following steps:</p> <ul style="list-style-type: none"> • Click Edit > Situation Editor > All Managed Systems > MS_Offline. • Right-click Create another. • Complete the following: <ul style="list-style-type: none"> – Name: KQ5_MSCS_Agent_Down – Description: The agent is not running. This can be either an agent or cluster failure. • Click OK. • Click Add conditions • Click Product. • Click OK. • For Product, enter ==Q5. • Click OK. • Right-click <i>Any managed system</i>] > Situations. • Click Set Situation filter criteria... • Select Eligible for association and Associated with Monitored Application. • Select All Managed Systems > KQ5_MSCS_Agent_Down. • Right-click KQ5_MSCS_Agent_Down > Associate. • Click Apply and then click OK.
<p>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.</p>	<p>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 <i>KpcENV</i> file for the agent (where <i>pc</i> is the two-letter product code): <code>CDP_NT_EVENT_LOG_CACHE_TIMEOUT=3600</code></p> <p>This variable determines how long events from the NT Event Log are kept.</p>
<p>If the Expert Advice for a situation contains a hyperlink to an external website (for example, a Microsoft TechNet website) and you click the hyperlink, the website opens in an external window. However, the external window stops responding.</p>	<p>The external window responds after you close the Preview window and Situation Editor window.</p>
<p>The situation for a specific agent is not visible in the Tivoli Enterprise Portal.</p>	<p>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 <i>IBM Tivoli Monitoring Installation and Setup Guide</i>.</p>
<p>The monitoring interval is too long.</p>	<p>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.</p>

Table 8. Situation problems and solutions (continued)

Problem	Solution
The situation did not activate at startup.	Manually recycle the situation as follows: <ol style="list-style-type: none"> 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.
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.

Table 8. Situation problems and solutions (continued)

Problem	Solution
<p>The situation does not fire.</p>	<p>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.</p> <p>In the Formula tab, analyze predicates as follows:</p> <ol style="list-style-type: none"> 1. Click the fx icon in the Formula area. The Show formula window is displayed. <ol style="list-style-type: none"> a. Confirm the following details in the Formula area of the window: <ul style="list-style-type: none"> • 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. <p>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.</p> <p>For additional information about situations that do not fire, see <i>Situations are not firing</i> in the <i>IBM Tivoli Monitoring Troubleshooting Guide</i>.</p>
<p>Situation events are not displayed in the Events Console view of the workspace.</p>	<p>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.</p>
<p>You do not have access to a situation.</p>	<p>Note: You must have administrator privileges to complete these steps.</p> <ol style="list-style-type: none"> 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.

Table 8. Situation problems and solutions (continued)

Problem	Solution
A managed system seems to be offline.	<ol style="list-style-type: none"> 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.
When using Manage Tivoli Enterprise Monitoring Services, a problem arises when trying to make local changes that require the agent to be stopped while the agent cluster resource controlling the agent is online.	Some local changes might require the agent to be taken offline. In these cases, you receive a warning prompt that states the agent must be taken offline to perform this operation. If the cluster resource is online the cluster server attempts to bring the agent back online, which interferes with this operation. Take the agent cluster resource offline while performing operations requiring the agent to be offline. When the operations are complete, bring the agent cluster resource back online.

Take Action commands troubleshooting

Problems can occur with Take Action commands.

Table 9 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 2 on page 4.

Table 9. 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 30. If the Take Action command fails, for general information about troubleshooting Take Action commands, see the <i>IBM Tivoli Monitoring Troubleshooting Guide</i> .

Tivoli Common Reporting troubleshooting

You can troubleshoot problems that occur with the Tivoli Common Reporting predefined reports for the Microsoft Hyper-V Server agent.

Table 10 on page 35 contains problems and solutions that can occur with the Tivoli Common Reporting predefined reports for the agent. For information about troubleshooting for the Tivoli Common Reporting tool, see *Troubleshooting Tivoli Common Reporting* (http://pic.dhe.ibm.com/infocenter/tivihelp/v3r1/topic/com.ibm.psc.doc_1.1.0.1/tshoot/tcr_c_tshoot.html).

Table 10. Tivoli Common Reporting for Microsoft Hyper-V Server agent problems and solutions

Problem	Solution
When you simultaneously query two tables in the Query Studio interface, no data is displayed. However, when you query the two tables separately, data is displayed.	This problem occurs when a relationship between the tables is not defined. To resolve this problem, ensure that all the ad hoc queries have at least one identifier.
When you create an ad hoc query by dragging some columns in the Query Studio interface, the following error message is displayed: RQP-DEF-0177 An error occurred while performing operation 'sqlPrepareWithOptions' status='-232'.	This is an SQL error related to arithmetic flow. This error is generated because the average or the sum for certain columns is more than the threshold size that is defined in the database. To resolve this error, use the limited columns and add a standard timestamp while creating an ad hoc query.
If a view or a table for the selected summarization type does not exist in the database for a report, the report does not open and the following error message is displayed: RQP-DEF-0177 An error occurred while performing operation 'sqlPrepareWithOptions' status='-56'.	To resolve this problem, complete the following tasks: <ul style="list-style-type: none"> • Verify that the summarization and pruning agent is working correctly. • Generate data for all the summarization types. • Verify that the warehouse is collecting historical data.
When you run a report, the report is not displayed in the correct format and the following error message is displayed: RQP-DEF-0177 An error occurred while performing operation 'sqlPrepareWithOptions' status='-16'.	This problem occurs due to incorrect data source. To resolve this problem, complete the following tasks: <ul style="list-style-type: none"> • Verify that the datasource configuration parameters are configured correctly. • Verify that the specified values for the parameters of the summarization and pruning agent such as database URL, driver user, and password match with the values of these parameters on the database.
If data is not available in the database for the selected parameters, the following error message is displayed after querying these parameters: Empty data set No data returned by query. Try another set of parameters.	To resolve this error, complete the following tasks: <ul style="list-style-type: none"> • Configure the summarization and pruning agent and verify that it is working correctly. • Generate data for all the summarization types in the database.
Reports are not generated correctly in the Microsoft Excel format.	There are some limitations to generate reports in the Microsoft Excel format. To view these limitations, see the IBM Cognos Business Intelligence Information Center (http://pic.dhe.ibm.com/infocenter/cx/v10r1m0/topic/com.ibm.swg.ba.cognos.ug_cr_rptstd.10.1.0.doc/c_excel_limitations.html)
When you view a report spanning multiple pages in the PDF format, the report parameters section is displayed at the top of each page.	No solution is available for this problem at this time.
Charts are not displayed correctly in Microsoft Excel 2007.	No solution is available for this problem at this time.

Table 10. Tivoli Common Reporting for Microsoft Hyper-V Server agent problems and solutions (continued)

Problem	Solution
<p>Labels for some charts are displayed in the HTML output, but are not displayed in the PDF output.</p>	<p>The font size is rendered differently in the HTML and the PDF output. In the PDF output, some fonts are not displayed because of the large font size. To resolve this issue, reduce the font size by completing the following steps:</p> <ol style="list-style-type: none"> 1. Open the report in Report Studio. 2. Click the chart. 3. In the chart properties, select Font. 4. Modify the font properties, such as family, size, weight, and style. 5. Save the settings, and run the report in the PDF format.
<p>Images are not displayed correctly when you run the reports in the Tivoli Common Reporting Server V3.1.</p>	<p>To view images, extract the report package and copy all the images in the package to the following locations:</p> <ul style="list-style-type: none"> • TCR Server Installation Drive\Program Files\IBM\JazzSM\profile\installedApps\JazzSMNode01Cell\IBM Cognos.ear\p2pd.war\tivoli\tcr_common\images • TCR Server Installation Drive\Program Files\IBM\JazzSM\reporting\cognos\webcontent\tivoli\tcr_common\images <p>For more information about copying images, see the “Copying report images to the server” topic in the IBM Tivoli Systems Management Information Center (http://pic.dhe.ibm.com/infocenter/tivihelp/v3r1/topic/com.ibm.psc.doc_1.1.0.1/tcr_original/tcr_copying_images.html).</p>

Chapter 4. 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>).

Chapter 5. 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 Composite Application Manager for Microsoft Applications: Microsoft Hyper-V Server Agent messages have the following format:

Message ID and text
Explanation
Operator Response

The message ID has the following format:

`CCC###severity`

where:

CCC Prefix that indicates the component to which the message applies. The following components are used:

KHV General Microsoft Hyper-V Server 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 Composite Application Manager for Microsoft Applications: Microsoft Hyper-V Server Agent.

KHV0001I

The Hyper-V Virtual Machine Management Service was started.

Explanation:

The Hyper-V Virtual Machine Management Service was started.

Operator response:

None.

KHV0002I

The Hyper-V Virtual Machine Management Service is already started.

Explanation:

The Hyper-V Virtual Machine Management Service is already started.

Operator response:

None.

KHV0003E

Error starting the Hyper-V Virtual Machine Management Service.

Explanation:

Error starting the Hyper-V Virtual Machine Management Service.

Operator response:

Check the event log for more information.

KHV0008I

The Hyper-V Image Management Service was started.

Explanation:

The Hyper-V Image Management Service was started.

Operator response:

None.

KHV0009I

The Hyper-V Image Management Service is already started.

Explanation:

The Hyper-V Image Management Service is already started.

Operator response:

None.

KHV0008E

Error starting the Hyper-V Image Management Service.

Explanation:

Error starting the Hyper-V Image Management Service.

Operator response:

Check the event log for more information.

KHV0015I

The Hyper-V Networking Management Service was started.

Explanation:
The Hyper-V Networking Management Service was started.

Operator response:
None.

KHV0016I

The Hyper-V Networking Management Service is already started.

Explanation:
The Hyper-V Networking Management Service is already started.

Operator response:
None.

KHV0017E

Error starting the Hyper-V Networking Management Service.

Explanation:
Error starting the Hyper-V Networking Management Service.

Operator response:
Check the event log for more information.

KHV0082I

The Hyper-V Virtual Machine Management Service was stopped.

Explanation:
The Hyper-V Virtual Machine Management Service was stopped.

Operator response:
None.

KHV0083I

The Hyper-V Virtual Machine Management Service is already stopped.

Explanation:
The Hyper-V Virtual Machine Management Service is already stopped.

Operator response:
None.

KHV0084E

Error stopping the Hyper-V Virtual Machine Management Service.

Explanation:
Error stopping the Hyper-V Virtual Machine Management Service.

Operator response:
Check the event log for more information.

KHV0108I

The Hyper-V Image Management Service was stopped.

Explanation:
The Hyper-V Image Management Service was stopped.

Operator response:
None.

KHV0102I

The Hyper-V Image Management Service is already stopped.

Explanation:
The Hyper-V Image Management Service is already stopped.

Operator response:

None.

KHV0103E

Error stopping the Hyper-V Image Management Service.

Explanation:

Error stopping the Hyper-V Image Management Service.

Operator response:

Check the event log for more information.

KHV0105I

The Hyper-V Networking Management Service was stopped.

Explanation:

The Hyper-V Networking Management Service was stopped.

Operator response:

None.

KHV0106I

The Hyper-V Networking Management Service is already stopped.

Explanation:

The Hyper-V Networking Management Service is already stopped.

Operator response:

None.

KHV0107E

Error stopping the Hyper-V Networking Management Service.

Explanation:

Error stopping the Hyper-V Networking Management Service.

Operator response:

Check the event log for more information.

KHV0100W

The service does not exist as an installed service.

Explanation:

The service does not exist as an installed service.

Operator response:

None.

KHV0101I

The service is disabled and cannot be started.

Explanation:

The service is disabled and cannot be started.

Operator response:

None.

KHV0104S

The virtual machine is successfully started.

Explanation:

The virtual machine is successfully started.

Operator response:

None.

KHV0104F

Error starting the virtual machine.

Explanation:

Error starting the virtual machine.

Operator response:

None.

KHV0105S

The virtual machine is successfully stopped.

Explanation:

The virtual machine is successfully stopped.

Operator response:

None.

KHV0105F

Error stopping the virtual machine.

Explanation:

Error stopping the virtual machine.

Operator response:

None.

KHV0105G

The Virtual Machine is already started.

Explanation:

The Virtual Machine is already started.

Operator response:

None.

KHV0105H

The Virtual Machine is already stopped.

Explanation:

The Virtual Machine is already stopped.

Operator response:

None.

KHV0105J

Resource Metering for all Virtual Machines enabled.

Explanation:

Resource Metering for all Virtual Machines enabled.

Operator response:

None.

KHV0105K

Resource Metering for Virtual Machines is not supported.

Explanation:

The Virtual Machine Resource Metering is not enabled. It is supported only on Windows Server 2012 Operating System.

Operator response:

None.

KHV0105I

No Virtual Machine available for enabling Resource Metering.

Explanation:

No Virtual Machine available for enabling Resource Metering.

Operator response:

None.

Appendix. ITCAM for Microsoft Applications documentation library

Various publications are relevant to the use of ITCAM for Microsoft Applications.

For information about how to access and use the publications, see *Using the publications* (http://www.ibm.com/support/knowledgecenter/SSTFXA_6.3.0.1/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.

Documentation for this product is in the ITCAM for Microsoft Applications Knowledge Center (http://www.ibm.com/support/knowledgecenter/SSDKXQ_6.3.1/com.ibm.itcamms.doc_6.3.1/welcome_msapps631.html)

- Quick Start Guides
- Offering Guide
- Download instructions
- Links to Prerequisites
- Installation and Configuration Guide for each agent
- Link to Reference information for each agent
- Link to Troubleshooting Guide for each agent

Prerequisite publications

To use the information about the agents effectively, you must have some prerequisite knowledge.

See the following information at the IBM Tivoli Monitoring Knowledge Center (http://www.ibm.com/support/knowledgecenter/SSTFXA_6.3.0.2/com.ibm.itm.doc_6.3fp2/welcome.htm) to gain prerequisite knowledge:

- *IBM Tivoli Monitoring Administrator's Guide*
- *IBM Tivoli Monitoring Installation and Setup Guide*
- *IBM Tivoli Monitoring High Availability Guide for Distributed Systems*
- IBM Tivoli Monitoring: Installation and Configuration Guides for the following agents: Operating System agents and Warehouse agents
- IBM Tivoli Monitoring: User's Guides for the following agents: Agentless OS monitors, Log file agent, System p agents, Systems Director base agent
- *IBM Tivoli Monitoring Agent Builder User's Guide*
- *IBM Tivoli Monitoring Command Reference*
- *IBM Tivoli Monitoring: Messages*
- *IBM Tivoli Monitoring Troubleshooting Guide*
- IBM Tivoli Monitoring: References for the following agents: Operating System agents and Warehouse agents
- IBM Tivoli Monitoring: Troubleshooting Guides for the following agents: Operating System agents and Warehouse agents
- *Tivoli Enterprise Portal 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 (<https://www.ibm.com/developerworks/community/wikis/home?lang=en#!/wiki/Tivoli%20Documentation%20Central>):

- Tivoli Monitoring
- Tivoli Application Dependency Discovery Manager
- Tivoli Business Service Manager
- Tivoli Common Reporting
- Tivoli Enterprise Console
- Tivoli Netcool/OMNIBus

Tivoli Monitoring Community on Service Management Connect

Service Management Connect (SMC) is a repository of technical information that is organized by communities.

Access Service Management Connect at <https://www.ibm.com/developerworks/servicemanagement>.

For information about Tivoli products, see the Application Performance Management community (<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 other users and IBM developers of Tivoli products. You can access early designs, sprint demonstrations, product roadmaps, and prerelease code.
- Connect one-on-one with the experts to collaborate and network about Tivoli and the Application Performance Management community.
- Read blogs to benefit from the expertise and experience of others.
- Use wikis and forums to collaborate with the broader user community.

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:

- 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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