IBM Tivoli Composite Application Manager for Microsoft Applications: Microsoft Lync Server Agent
Version 6.3.1 Fix Pack 13

Troubleshooting Guide

IBM

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Applications: Microsoft Lync Server Agent
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> **Note**
>
> Before using this information and the product it supports, read the information in "Notices" on page 59.

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

Contents

Tables

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 29.

You can resolve some problems by ensuring that your system matches the system requirements listed in the Lync Server agent prerequisites topic on the IBM Tivoli Monitoring for Microsoft Applications Information Center.

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 3 for lists of all trace log files and their locations. For general information about the IBM Tivoli Monitoring environment, see the *Tivoli Enterprise Portal User's Guide*.
Microsoft Lync 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: • IBM Tivoli Monitoring. Also provide the patch level, if available. • IBM Tivoli Composite Application Manager for Microsoft Applications: Microsoft Lync 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)).

Using logging

Logging is the primary troubleshooting feature in the Microsoft Lync Server agent. *Logging* refers to the text messages and trace data that is generated by the Microsoft Lync 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 have been 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 13.

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"
- "Examples: Using trace logs" on page 6
- "Setting RAS trace parameters by using the GUI" 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.

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 on page 4 provides the names, locations, and descriptions of IBM Tivoli Monitoring general RAS1 log files. The log file names for the Microsoft Lync 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 Lync Server Agent, the product code is ql.

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.

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

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

System where log is located	File name and path	Description
On the Tivoli Enterprise Portal Server	The `teps_odbc.log` file is located in the following path: • **Windows:** *install_dir*\InstallITM • **UNIX or Linux:** *install_dir*/logs	When you enable historical reporting, this log file traces the status of the warehouse proxy agent.
On the computer that hosts the monitoring agent	The RAS1 log files are as follows: • **Windows:** *hostname* _ql_kqlagent_ HEXtimestamp-nn.log These logs are in the following directories: • **32-bit agent:** *install_dir*\TMAITM6\ logs • **64-bit agent:** *install_dir*\ TMAITM6_x64\logs	Traces activity of the monitoring agent.
On the computer that hosts the monitoring agent	The agent operations log files are as follows: *hostname*_QL.LG0 is the current log created when the agent was started. *hostname*_QL.LG1 is the backup of the previous log. These logs are in the following directory depending on the bitness that you are using: • **32-bit agent:** *install_dir*\ TMAITM6\logs • **64-bit agent:** *install_dir*\ TMAITM6_x64\logs	Shows whether the agent could connect to the monitoring server. Shows which situations are started and stopped, and shows other events while the agent is running. A new version of this file is generated every time the agent is restarted. IBM Tivoli Monitoring generates one backup copy of the *.LG0 file with the tag .LG1. View the .LG1 tag to learn the following details regarding the *previous* monitoring session: • Status of connectivity with the monitoring server • Situations that were running • The success or failure status of Take Action commands

Definitions of variables:

• *timestamp* is a time stamp with a format that includes year (y), month (m), day (d), hour (h), and minute (m), as follows: **yyyymmdd hhmm**
• *HEXtimestamp* is a hexadecimal representation of the time at which the process was started.
• *install_dir* represents the directory path where you installed the IBM Tivoli Monitoring component. *install_dir* can represent a path on the computer that hosts the monitoring system, the monitoring agent, or the portal.
• *instance* refers to the name of the database instance that you are monitoring.
• *instance_name* refers to the name of the agent instance.
• *hostname* refers to the name of the computer on which the IBM Tivoli Monitoringcomponent runs.
• *nn* represents the circular sequence in which logs are rotated. this value includes a range from 1 - 5, by default. The first is always retained because it includes configuration parameters.
• *productcode* specifies the product code, for example, um for Universal Agent or nt for Windows systems.

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

Examples: Using trace logs

You can open trace logs in a text editor to learn some basic facts about your IBM Tivoli Monitoring environment.

IBM Software Support applies specialized knowledge to analyze trace logs to determine the source of problems. The following examples are from the Tivoli Enterprise Monitoring Server log.

Example one

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

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

Example two

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

```
(42C039F9.0000-6A4:kpxreqhb.cpp,649,"HeartbeatInserter") Remote node SERVER5B:QL is ON-LINE.
. . .
(42C3079B.0000-6A4:kpxreqhb.cpp,644,"HeartbeatInserter") Remote node SERVER5B:QL is OFF-LINE.
```

See the following key points about the preceding excerpts:

- The monitoring server appends the **QL** product code to the server name to form a unique name (SERVER5B:QL) for this instance of the IBM Tivoli Composite Application Manager for Microsoft Applications: Microsoft Lync 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 "Setting RAS trace parameters by using the GUI" on page 7 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 Lync 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 3 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 Lync 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 Parms**. The Tivoli Enterprise Monitoring Server Trace Parameters window is displayed.
3. Select a new trace setting in the pull-down menu in the **Enter RAS1 Filters** field or type a valid string.
   - General error tracing. KBB_RAS1=ERROR
   - Intensive error tracing. KBB_RAS1=ERROR (UNIT:kql ALL)
   - Maximum error tracing. KBB_RAS1=ERROR (UNIT:kql 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 (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 Lync Server agent uses RAS1 tracing and generates the logs described in Table 2 on page 4. The default RAS1 trace level is ERROR. The default RAS1 trace level is ERROR.

Procedure

1. Open the trace options file:
   - **32-bit agent:**

     install_dir\tmaitm6\KQLENV
   - **64-bit agent:**

     install_dir\tmaitm6_x64\KQLENV
2. Edit the line that begins with **KBB_RAS1=** to set trace logging preferences. For example, if you want detailed trace logging, set the `Maximum Tracing` option: KBB_RAS1=ERROR (UNIT:kqz ALL) (UNIT:kra ALL)
3. Edit the line that begins with **KBB_RAS1_LOG=** to manage the generation of log files:
   - `MAXFILES`: The total number of files that are to be kept for all startups of a given program. When this value is exceeded, the oldest log files are discarded. 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 `Fl`.

INPUT
> Displays input data for each function.
>
> When entered with the `list` option, the trace is tagged with `IN`.

Metrics
> Displays metrics on each function.
>
> When entered with the `list` option, the trace is tagged with `ME`.

OUTPUT
> Displays output data for each function.
>
> When entered with the `list` option, the trace is tagged with `OUT`.

State
> Displays the status for each function.
>
> When entered with the `list` option, the trace is tagged with `St`.

Example

If you enter `ras1 set (COMP:KDH ALL) (COMP:ACF1 ALL) (COMP:KDE ALL)`, the trace utility turns on all levels of tracing for all the files and functions for which KDH, ACF1, and KDE are the classes.

```
kbbcre1.c, 400, May 29 2007, 12:54:43, 1.1, *
kbbcrn1.c, 400, May 29 2007, 12:54:42, 1.1, *
kdhb1de.c, 400, May 29 2007, 12:59:34, 1.1, KDH
kdh0med.c, 400, May 29 2007, 12:59:24, 1.1, KDH
kdhsrej.c, 400, May 29 2007, 13:00:06, 1.5, KDH
kdhb1fh.c, 400, May 29 2007, 12:59:33, 1.1, KDH
kdhb1oe.c, 400, May 29 2007, 12:59:38, 1.2, KDH
kdhs1ns.c, 400, May 29 2007, 13:00:08, 1.3, KDH
kbbacd1.c, 400, May 29 2007, 12:54:27, 1.2, ACF1
kbbac1c.c, 400, May 29 2007, 12:54:27, 1.4, ACF1
kbbac1i.c, 400, May 29 2007, 12:54:28, 1.11, ACF1
vkdhsfcn.c, 400, May 29 2007, 13:00:11, 1.1, KDH
kdhserq.c, 400, May 29 2007, 12:59:53, 1.1, KDH
kdhb1pr.c, 400, May 29 2007, 12:59:39, 1.1, KDH
kdhsgnh.c, 400, May 29 2007, 12:59:49, 1.1, KDH
kdh0uts.c, 400, May 29 2007, 12:59:23, 1.1, KDH
kdhsrsp.c, 400, May 29 2007, 13:00:13, 1.2, KDH
kdhs1rp.c, 400, May 29 2007, 13:00:12, 1.1, KDH
kdhscsv.c, 400, May 29 2007, 12:59:58, 1.9, KDH
kdebbac.c, 400, May 29 2007, 12:56:50, 1.10, KDE
...
```

Turning on tracing

To use the tracing utility, you must use a local logon credential for the computer. This tracing method uses the IBM Tivoli Monitoring Service Console. Access the Service Console by using a web browser.

About this task

When you start the Service Console, information is displayed about the components that are currently running on that computer. For example, these components are listed as follows:
- Tivoli Enterprise Portal Server: `cnp`
- Monitoring Agent for Windows OS: `nt`
- Tivoli Enterprise Monitoring Server: `ms`

After you log on, you can type a question mark (?) to display a list of the supported commands. Use the **ras1** command to modify trace settings. If you type this command in the field provided in the Service Console window and click **Submit**, the help for this command is displayed.

Procedure

1. Open a web browser and enter the URL to access the Service Console.

   `http://`*hostname*`:1920`

   where *hostname* is the IP address or host name of the computer on which the IBM Tivoli Monitoring component is running.
2. Click the hyperlink associated with the component for which you want to modify its trace settings.

   Note: In the previous view, if you want to modify tracing for the Tivoli Enterprise Monitoring Server, select **IBM Tivoli Monitoring Service Console** under **Service Point: system.***your host name*_**ms**.
3. Enter a user ID and password to access the system. This ID is any valid user that has access to the system.
4. Enter the command to turn on the required level of trace for the specified component classes or units.

   ```
   ras1 set (UNIT|COMP: class_name ALL|Flow|ERROR|Detail|INPUT|Metrics|OUTPUT|STATE)
   {(UNIT|COMP: class_name ALL|Flow|ERROR|Detail|INPUT|Metrics|OUTPUT|STATE)}
   ```

   For example, to turn on the control flow trace for the KDE, the command is:

   ```
   ras1 (COMP:KDE Flow)
   ```

Turning off tracing

You can use the IBM Tivoli Monitoring Service Console to run the **ras1** command and dynamically turn off tracing.

Procedure

1. Open a web browser and enter the URL to access the Service Console.

   `http://`*hostname*`:1920`

   where *hostname* is the IP address or host name of the computer on which the IBM Tivoli Monitoring component is running.
2. Click the hyperlink associated with the component for which you want to modify its trace settings.
3. Enter a user ID and password to access the system. This ID is any valid user that has access to the system.
4. Enter the command to turn off the required level of trace for the specified component classes or units.

   ```
   ras1 set (UNIT|COMP: class_name ANY)
   {(UNIT|COMP: class_name ANY)}
   ```

   For example, to turn off tracing for the `kbbcrcd` class of the Windows OS agent, the command is:

   ```
   ras1 set (UNIT:kbbcrcd ANY)
   ```

Setting trace parameters for the Tivoli Enterprise Console server

In addition to the trace information captured by IBM Tivoli Monitoring, you can also collect additional trace information for the Tivoli Enterprise Console® components that gather event server metrics.

About this task

To collect this information, modify the `.tec_diag_config` file on the Tivoli Enterprise Console event server. Use the steps in the following procedure to modify the event server trace parameters.

Procedure

1. Open the `$BINDIR/TME/TEC/.tec_diag_config` file in an ASCII editor.
2. Locate the entries that configure trace logging for the agent components on the event server. Two entries are included, one for `tec_reception` and one for `tec_rule`:

```
# to debug Agent Utils
tec_reception Agent_Utils  error   /tmp/tec_reception
SP
# to debug Agent Utils
tec_rule Agent_Utils   error   /tmp/tec_rule
```

3. To gather additional trace information, modify these entries to specify a trace level of `trace2`:

```
# to debug Agent Utils
tec_reception Agent_Utils   trace2  /tmp/tec_reception
SP
# to debug Agent Utils
tec_rule Agent_Utils       trace2  /tmp/tec_rule
```

4. In addition, modify the `Highest_level` entries for `tec_rule` and `tec_reception`:

```
tec_reception Highest_level  trace2
SP
tec_rule Highest_level trace2
```

Chapter 3. Problems and workarounds

The known problems and workarounds are organized into types of problems that might occur with the Microsoft Lync 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 15 for information about these problems and solutions.

Table 3. Problems and solutions for installation and configuration

Problem	Solution
A problem can occur when you install and configure a new monitoring agent on a computer where other agents are running as described in this example: • Agents are running on a computer and communicating with a Tivoli Enterprise Monitoring Server, called **TEMS1**. • You install a new agent on the same computer and you want this agent to communicate with a different monitoring server, called **TEMS2**. • When you configure the new agent to communicate with **TEMS2**, all the existing agents are reconfigured to communicate with **TEMS2**.	You must reconfigure the previously existing agents to restore their communication connection with **TEMS1**. For example, you can right-click the row for a specific agent in the Manage Tivoli Enterprise Monitoring Services, and select **Reconfigure**. For more information about reconfiguration, see the *IBM Tivoli Monitoring Installation and Setup Guide*.
Diagnosing problems with product browse settings (Windows systems only).	When you have problems with browse settings, complete the following steps: 1. Click **Start** > **Programs** > **IBM Tivoli Monitoring** > **Manage Tivoli Enterprise Monitoring Services**. The Manage Tivoli Enterprise Monitoring Services window is displayed. 2. Right-click the Windows agent and select **Browse Settings**. A text window is displayed. 3. Click **Save As** and save the information in the text file. If requested, you can forward this file to IBM Software Support for analysis.

Table 3. Problems and solutions for installation and configuration (continued)

Problem	Solution
A message similar to "Unable to find running CMS on CT_CMSLIST" in the log file is displayed.	If a message similar to "Unable to find running CMS on CT_CMSLIST" is displayed in the log file, the agent cannot connect to the monitoring server. Confirm the following points: • Do multiple network interface cards (NICs) exist on the system? • If multiple NICs exist on the system, find out which one is configured for the monitoring server. Ensure that you specify the correct host name and port settings for communication in the IBM Tivoli Monitoring environment.
The system is experiencing high CPU usage.	**Agent process:** View the memory usage of the KQLCMA process. If CPU usage seems to be excessive, restart the monitoring agent. **Network cards:** The network card configurations can decrease the performance of a system. Each stream of packets that a network card receives (assuming that it is a broadcast or destined for the under-performing system) must generate a CPU interrupt and transfer the data through the I/O bus. If the network card in question is a bus-mastering card, work can be offloaded and a data transfer between memory and the network card can continue without using CPU processing power. Bus-mastering cards are 32-bit and are based on PCI or EISA bus architectures.
You have installed an agent of ITCAM for Microsoft Applications remotely from the Tivoli Enterprise Portal Client. On the **Agent** tab of the Managed System Configuration window, you selected the **Use this account** option, and typed the account information in the "user@domain.com" format (for example, administrator@itmagents.com). The Deployment Status Detail view shows the agent deployment status as failed; however, the agent is configured and installed with the LocalSystem account instead of the specified user account.	Specify the account information in the domain\user format.
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: 1. Click the **Enterprise** icon in the Navigator tree. 2. Right-click, and then click **Workspace** > **Managed System Status**. 3. Right-click the offline managed system, and select **Clear offline entry**. To uninstall the monitoring agent, use the procedure described in the *IBM Tivoli Monitoring Installation and Setup Guide*.

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
While you are using the remote deployment feature to install the Microsoft Lync Server agent, an empty command window is displayed on the target computer. This problem occurs when the target of remote deployment is a Windows computer. (For more information about the remote deployment feature, see the *IBM Tivoli Monitoring Installation and Setup Guide*.)	Do not close or modify this window. It is part of the installation process and is dismissed automatically.
The removal of a monitoring agent fails when you use the remote removal process in the Tivoli Enterprise Portal desktop or browser.	This problem might occur when you attempt the remote removal process immediately after you restart the Tivoli Enterprise Monitoring Server. You must allow time for the monitoring agent to refresh its connection with the Tivoli Enterprise Monitoring Server before you begin the remote removal process.

Agent troubleshooting

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

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

Table 6. Agent problems and solutions

Problem	Solution
Log data accumulates too rapidly.	Check the RAS trace option settings, which are described in "Setting RAS trace parameters by using the GUI" on page 7. The trace option settings that you can set on the `KBB_RAS1=` and `KDC_DEBUG=` lines potentially generate large amounts of data.

Table 6. Agent problems and solutions (continued)

Problem	Solution
A configured and running instance of the monitoring agent is not displayed in the Tivoli Enterprise Portal, but other instances of the monitoring agent on the same system are displayed in the portal.	IBM Tivoli Monitoring products use Remote Procedure Call (RPC) to define and control product behavior. RPC is the mechanism that a client process uses to make a subroutine call (such as GetTimeOfDay or ShutdownServer) to a server process somewhere in the network. Tivoli processes can be configured to use TCP/UDP, TCP/IP, SNA, and SSL as the protocol (or delivery mechanism) for RPCs that you want. IP.PIPE is the name given to Tivoli TCP/IP protocol for RPCs. The RPCs are socket-based operations that use TCP/IP ports to form socket addresses. IP.PIPE implements virtual sockets and multiplexes all virtual socket traffic across a single physical TCP/IP port (visible from the **netstat** command). A Tivoli process derives the physical port for IP.PIPE communications based on the configured, well-known port for the hub Tivoli Enterprise Monitoring Server. (This well-known port or BASE_PORT is configured by using the 'PORT:' keyword on the **KDC_FAMILIES / KDE_TRANSPORT** environment variable and defaults to '1918'.) The physical port allocation method is defined as (BASE_PORT + 4096*N), where N=0 for a Tivoli Enterprise Monitoring Server process and N={1, 2, ..., 15} for another type of monitoring server process. Two architectural limits result as a consequence of the physical port allocation method: • No more than one Tivoli Enterprise Monitoring Server reporting to a specific Tivoli Enterprise Monitoring Server hub can be active on a system image. • No more than 15 IP.PIPE processes can be active on a single system image. A single system image can support any number of Tivoli Enterprise Monitoring Server processes (address spaces) if each Tivoli Enterprise Monitoring Server on that image reports to a different hub. By definition, one Tivoli Enterprise Monitoring Server hub is available per monitoring enterprise, so this architecture limit has been reduced to one Tivoli Enterprise Monitoring Server per system image. No more than 15 IP.PIPE processes or address spaces can be active on a single system image. With the first limit expressed earlier, this second limitation refers specifically to Tivoli Enterprise Monitoring Agent processes: no more than 15 agents per system image. Continued on next row.

Table 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.)
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: `The full name of the process including the path` 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.	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.
When you install a 64-bit OCS agent on a 64-bit computer that has OCS 2007 installed, the agent displays data only for the following attribute groups: • Availability • Performance Object Status • Event Log • Server	Install the 32-bit agent to monitor the 32-bit OCS 2007 application.
When you install a 32-bit Lync Server agent on a 64-bit computer that has or OCS 2007 R2 or Lync Server 2010, or later installed, the agent displays data only for the following attribute groups: • Availability • Performance Object Status • Event Log	Install the 64-bit agent to monitor the 64-bit OCS 2007 R2 or Lync Server 2010, or later application.

Table 6. Agent problems and solutions (continued)

Problem	Solution
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.	Recycle the Tivoli Enterprise Portal Server. Complete the following steps to recycle the Tivoli Enterprise Portal Server on Windows systems: 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. 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: • `./itmcmd agent stop cq` • `./itmcmd agent start cq`
When you upgrade the Microsoft OCS agent V6.2.3 to the Microsoft Lync Server agent V6.3, or later by using the Self Describing Agent (SDA) feature, the Navigator Physical view of the Tivoli Enterprise Portal Client displays the agent name as Microsoft OCS instead of Microsoft Lync Server.	Complete the following steps to correct the problem: 1. Click **Start > Programs > IBM Tivoli Monitoring > Manage Tivoli Enterprise Monitoring Services**. The Manage Tivoli Enterprise Monitoring Services window is displayed. 2. Right-click **Monitoring Agent for Microsoft Lync Server** and click **Stop**. 3. On the Tivoli Enterprise Portal Client, right-click the disabled Agent and click **Clear offline entry**. 4. In the Manage Tivoli Enterprise Monitoring Services window, right-click **Monitoring Agent for Microsoft Lync Server**, and then click **Start**. If the problem persists, recycle the agent by completing the following steps: 1. On the computer where you installed the Tivoli Enterprise Portal Server, click **Start > Programs > IBM Tivoli Monitoring > Manage Tivoli Enterprise Monitoring Services**. The Manage Tivoli Enterprise Monitoring Services window is displayed. 2. Right-click **Tivoli Enterprise Portal Server** and click **Recycle**.
In the EventLog workspace, the following characters might be appended at the end of the values in the EventCategory field: *** DO NOT LOCALIZE THIS STRING This issue is applicable to the following Microsoft OCS versions: • Office Communications Server 2007 • Office Communications Server 2007 R2	Ignore these characters. There is no solution to this problem.
If the agent runs with a non-admin user, then the agent does not display data for the Lync topology, Synthetic Transaction, Availability, and Server Usage Statistics attribute groups.	Start the agent with a user, who has at least local administrator rights. **Remember:** To collect data of the Status attribute in the Lync Topology attribute group, run the agent by using domain credentials (preferably domain administrator) with access to the remote servers.

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
The process application components are available, but the Availability status shows PROCESS_DATA_NOT_AVAILABLE.	This problem occurs because the PerfProc performance object is disabled. When this condition exists, IBM Tivoli Monitoring cannot collect performance data for this process. Use the following steps to confirm that this problem exists and to resolve it: 1. In the Windows **Start** menu, click **Run**. 2. Type perfmon.exe in the **Open** field of the Run window. The Performance window is displayed. 3. Click the plus sign (+) in the toolbar. The Add Counters window is displayed. 4. Look for **Process** in the **Performance object** menu. 5. Complete one of the following actions: • If you see **Process** in the menu, the PerfProc performance object is enabled and the problem is coming from a different source. You might need to contact IBM Software Support. • If you do not see **Process** in the menu, use the Microsoft utility from the Microsoft.com Operations website to enable the PerfProc performance object. The **Process** performance object becomes visible in the **Performance object** menu of the Add Counters windows, and IBM Tivoli Monitoring is able to detect Availability data. 6. Restart the monitoring agent.

Table 7. Workspace problems and solutions (continued)

Problem	Solution

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.	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:
	
	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.
	
	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.
	
	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 *not* 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.
	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.

The name of the attribute does not display in a bar chart or graph view.	When a chart or graph view that includes the attribute is scaled to a small size, a blank space is displayed instead of a truncated name. To see the name of the attribute, expand the view of the chart until sufficient space is available to display all characters of the attribute name.

Table 7. Workspace problems and solutions (continued)

Problem	Solution
You start collection of historical data but the data cannot be seen.	Use the following managing options for historical data collection: • Basic historical data collection populates the Warehouse with raw data. This type of data collection is turned off by default. For information about managing this feature including how to set the interval at which data is collected, see *Managing historical data* in the *IBM Tivoli Monitoring Administrator's Guide*. By setting a more frequent interval for data collection, you reduce the load on the system incurred every time data is uploaded. • Use the Summarization and Pruning agent to collect specific amounts and types of historical data. Historical data is not displayed until the Summarization and Pruning monitoring agent begins collecting the data. By default, this agent begins collection at 2 a.m. daily. At that point, data is visible in the workspace view. For information about how to modify the default collection settings, see *Managing historical data* in the *IBM Tivoli Monitoring Administrator's Guide*.
Historical data collection is unavailable because of incorrect queries in the Tivoli Enterprise Portal.	The Sort By, Group By, and First/Last functions column are not compatible with the historical data collection feature. Use of these advanced functions makes a query ineligible for historical data collection. Even if data collection has started, you cannot use the time span feature if the query for the chart or table includes column functions or advanced query options (Sort By, Group By, First / Last). To ensure support of historical data collection, do not use the Sort By, Group By, or First/Last functions in your queries. For information about the historical data collection function, See *Managing historical data* in the *IBM Tivoli Monitoring Administrator's Guide* or the Tivoli Enterprise Portal online help .
When you use a long process name in the situation, the process name is truncated.	Truncation of process or service names for situations in the Availability table in the portal display is the expected behavior. The maximum name length is 100 bytes.
Regular (non-historical) monitoring data fails to be displayed.	Check the formation of the queries you use to gather data. For example, look for invalid SQL statements.
Navigator items and workspace titles are labeled with internal names such as Kxx:KXX0000 instead of the correct names (such as Disk), where XX and xx represent the two-character agent code.	Ensure that application support has been added on the monitoring server, portal server, and portal client. For more information about installing application support, see *Installing and enabling application support* in the *IBM Tivoli Monitoring Installation and Setup Guide*.

Table 7. Workspace problems and solutions (continued)

Problem	Solution
You have configured the Microsoft OCS agent V6.2.3 and have installed the support for the Microsoft Lync Server agent V6.3, or later. On the Tivoli Enterprise Portal, the line chart views in the SIP Peers Statistics and SIPEPS Transaction Statistics workspaces provide information about the _Total instance, instead of the top 3 instances.	There is no solution to this problem.
You have configured the Microsoft OCS agent V6.2.3 and have installed the support for the Microsoft Lync Server agent V6.3. On the Tivoli Enterprise Portal, you will see updated bar chart view name **Top 3 Dropped Flow Control Connections** under SIP Peers Statistics workspace and it is plotted based on dropped flow control connections.	There is no solution to this problem.
On the Tivoli Enterprise Portal,you can see multiple rows for a single instance of the OCS 2007 R2 Communicator Web Access (CWA) in the following workspace views: • User Sessions Summary view in the User Sessions Statistics workspace • User Sessions Message Summary view in the User Sessions IM Statistics workspace This problem occurs when you install the Lync Server agent on a computer where the OCS 2007 R2 Communicator Web Access is installed.	There is no solution to this problem.
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.	There is no solution to this problem.
The Event Category attribute in the Event Log workspace displays incorrect data.	There is no solution to this problem.

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 *IBM Tivoli Composite Application Manager for Microsoft Applications: Microsoft Lync Server Agent Installation and Configuration Guide* that describes the performance impact of specific attribute groups. If possible, decrease your use of the attribute groups that require greater system resources.

Table 8. Situation problems and solutions (continued)

Problem	Solution
A formula that uses mathematical operators appears to be incorrect. For example, if you were monitoring a Linux system, the formula that calculates when **Free Memory** falls under 10 percent of **Total Memory** does not work: LT #'Linux_VM_Stats.Total_Memory' / 10	This formula is incorrect because situation predicates support only logical operators. Your formulas cannot have mathematical operators. **Note:** The Situation Editor provides alternatives to math operators. In the example, you can select the **% Memory Free** attribute and avoid the need for math operators.
You want to change the appearance of situations when they are displayed in the navigation tree.	1. Right-click an item in the navigation tree. 2. Click **Situations** in the menu. The Situation Editor window is displayed. 3. Select the situation that you want to modify. 4. Use the **State** menu to set the status and appearance of the Situation when it triggers. **Note:** The **State** setting is not related to severity settings in the Tivoli Enterprise Console.
When a situation is triggered in the Event Log attribute group, it remains in the Situation Event Console as long as the event ID entry is present in the Event Log workspace. When this event ID entry is removed from the Event Log workspace on the Tivoli Enterprise Portal, the situation is also cleared even if the actual problem that caused the event is not resolved, and the event ID entry is also present in the Windows Event Viewer.	A timeout occurs on the cache of events for the NT Event Log group. Increase the cache time of Event Log collection to meet your requirements by adding the following variable and timeout value to the *Kpc*ENV file for the agent (where *pc* is the two-letter product code): CDP_NT_EVENT_LOG_CACHE_TIMEOUT=3600 This variable determines how long events from the NT Event Log are kept.
The situation for a specific agent is not visible in the Tivoli Enterprise Portal.	Open the Situation Editor. Access the All managed servers view. If the situation is not displayed, confirm that the monitoring server has been seeded for the agent. If not, seed the server, as described in the *IBM Tivoli Monitoring Installation and Setup Guide*.
The monitoring interval is too long.	Access the Situation Editor view for the situation that you want to modify. Check the **Sampling interval** area in the **Formula** tab. Adjust the time interval as required.
The situation did not activate at startup.	Manually recycle the situation as follows: 1. Right-click the situation and select **Stop Situation**. 2. Right-click the situation and select **Start Situation**. **Note:** You can permanently avoid this problem by selecting the **Run at Startup** check box of the Situation Editor view for a specific situation.
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
The situation does not fire.	This problem can be caused when incorrect predicates are present in the formula that defines the situation. For example, the managed object shows a state that normally triggers a monitoring event, but the situation is not true because the wrong attribute is specified in the formula. In the **Formula** tab, analyze predicates as follows: 1. Click the **fx** icon in the **Formula** area. The Show formula window is displayed. 　a. Confirm the following details in the **Formula** area of the window: 　　• The attributes that you intend to monitor are specified in the formula. 　　• The situations that you intend to monitor are specified in the formula. 　　• The logical operators in the formula match your monitoring goal. 　　• The numeric values in the formula match your monitoring goal. 　b. (Optional) Select the **Show detailed formula** check box to see the original names of attributes in the application or operating system that you are monitoring. 　c. Click **OK** to dismiss the Show formula window. 2. (Optional) In the **Formula** area of the **Formula** tab, temporarily assign numeric values that immediately trigger a monitoring event. The triggering of the event confirms that other predicates in the formula are valid. **Note:** After you complete this test, you must restore the numeric values to valid levels so that you do not generate excessive monitoring data based on your temporary settings. For additional information about situations that do not fire, see *Situations are not firing* in the *IBM Tivoli Monitoring Troubleshooting Guide*.
Situation events are not displayed in the Events Console view of the workspace.	Associate the situation with a Navigator item. **Note:** The situation does not need to be displayed in the workspace. It is sufficient that the situation is associated with any Navigator item.
You do not have access to a situation.	**Note:** You must have administrator privileges to complete these steps. 1. Click **Edit** > **Administer Users** to access the Administer Users window. 2. In the **Users** area, select the user whose privileges you want to modify. 3. In the **Permissions** tab, **Applications** tab, and **Navigator Views** tab, select the permissions or privileges that correspond to the user role. 4. Click **OK**.

Table 8. Situation problems and solutions (continued)

Problem	Solution
A managed system seems to be offline.	1. Select **Physical View** and click the Enterprise Level of the navigator tree. 2. Click **View** > **Workspace** > **Managed System Status** to see a list of managed systems and their status. 3. If a system is offline, check network connectivity and the status of the specific system or application.

Take Action commands troubleshooting

Problems can occur with Take Action commands.

Table 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 22. If the Take Action command fails, for general information about troubleshooting Take Action commands, see the *IBM Tivoli Monitoring Troubleshooting Guide*.

Tivoli Common Reporting troubleshooting

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

Table 10 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 TroubleshootingTivoli 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 Lync 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.

Problem	Solution

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:
	• 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:
	• 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:
	• 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.
Labels for some charts are displayed in the HTML output, but are not displayed in the PDF output.	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: 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.

Problem	Solution
Images are not displayed correctly when you run the reports in the Tivoli Common Reporting Server V3.1.	To view images, extract the report package and copy all the images in the package to the following locations: • `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` 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/ ttcr_copying_images.html).
The data model does not support the Call Park Service Hosting and Call Park Service Planning attribute groups that are related to the Call Park service.	No solution is available for this problem at this time.

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:
* 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 Lync 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 component is one of the following:

  KQL General Microsoft Lync Server agent messages

  #### Number of the message

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

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

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

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

The *Text* of the message provides a general statement regarding the problem or condition that occurred. The *Explanation* provides additional information about the message and 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 Lync Server Agent.

KQL0001I

The Application Host Service was started.

> **Explanation:**
>> The Application Host Service was started.

> **Operator response:**
>> None.

KQL0002I

The Application Host Service is already started.

> **Explanation:**
>> The Application Host Service is already started.

> **Operator response:**
>> None.

KQL0003E

Error starting the Application Host Service.

> **Explanation:**
>> Error starting the Application Host Service.

> **Operator response:**
>> Check the event log for more information.

KQL0004I

The Application Host Service was stopped.

> **Explanation:**
>> The Application Host Service was stopped.

> **Operator response:**
>> None.

KQL0005I

The Application Host Service is already stopped.

> **Explanation:**
>> The Application Host Service is already stopped.

> **Operator response:**
>> None.

KQL0006E

Error stopping the Application Host Service.

> **Explanation:**
>> Error stopping the Application Host Service.

> **Operator response:**
>> Check the event log for more information.

KQL0007I

The Application Sharing Service was started.

Explanation:

The Application Sharing Service was started.

Operator response:

None.

KQL0008I

The Application Sharing Service is already started.

Explanation:

The Application Sharing Service is already started.

Operator response:

None.

KQL0009E

Error starting the Application Sharing Service.

Explanation:

Error starting the Application Sharing Service.

Operator response:

Check the event log for more information.

KQL0010I

The Application Sharing Service was stopped.

Explanation:

The Application Sharing Service was stopped.

Operator response:

None.

KQL0011I

The Application Sharing Service is already stopped.

Explanation:

The Application Sharing Service is already stopped.

Operator response:

None.

KQL0012E

Error stopping the Application Sharing Service.

Explanation:

Error stopping the Application Sharing Service.

Operator response:

Check the event log for more information.

KQL0013I

The Audio Video Conferencing Service was started.

Explanation:

The Audio Video Conferencing Service was started.

Operator response:

None.

KQL0014I

The Audio Video Conferencing Service is already started.

Explanation:

The Audio Video Conferencing Service is already started.

Operator response:
>   None.

KQL0015E
>   Error starting the Audio Video Conferencing Service.

>   **Explanation:**
>   >   Error starting the Audio Video Conferencing Service.

>   **Operator response:**
>   >   Check the event log for more information.

KQL0016I
>   The Audio Video Conferencing Service was stopped.

>   **Explanation:**
>   >   The Audio Video Conferencing Service was stopped.

>   **Operator response:**
>   >   None.

KQL0017I
>   The Audio Video Conferencing Service is already stopped.

>   **Explanation:**
>   >   The Audio Video Conferencing Service is already stopped.

>   **Operator response:**
>   >   None.

KQL0018E
>   Error stopping the Audio Video Conferencing Service.

>   **Explanation:**
>   >   Error stopping the Audio Video Conferencing Service.

>   **Operator response:**
>   >   Check the event log for more information.

KQL0019I
>   The Conferencing Announcement Service was started.

>   **Explanation:**
>   >   The Conferencing Announcement Service was started.

>   **Operator response:**
>   >   None.

KQL0020I
>   The Conferencing Announcement Service is already started.

>   **Explanation:**
>   >   The Conferencing Announcement Service is already started.

>   **Operator response:**
>   >   None.

KQL0021E
>   Error starting the Conferencing Announcement Service.

>   **Explanation:**
>   >   Error starting the Conferencing Announcement Service.

>   **Operator response:**
>   >   Check the event log for more information.

KQL0022I

> The Conferencing Announcement Service was stopped.

> **Explanation:**
>> The Conferencing Announcement Service was stopped.

> **Operator response:**
>> None.

KQL0023I

> The Conferencing Announcement Service is already stopped.

> **Explanation:**
>> The Conferencing Announcement Service is already stopped.

> **Operator response:**
>> None.

KQL0024E

> Error stopping the Conferencing Announcement Service.

> **Explanation:**
>> Error stopping the Conferencing Announcement Service.

> **Operator response:**
>> Check the event log for more information.

KQL0025I

> The Conferencing Attendant Service was started.

> **Explanation:**
>> The Conferencing Attendant Service was started.

> **Operator response:**
>> None.

KQL0026I

> The Conferencing Attendant Service is already started.

> **Explanation:**
>> The Conferencing Attendant Service is already started.

> **Operator response:**
>> None.

KQL0027E

> Error starting the Conferencing Attendant Service.

> **Explanation:**
>> Error starting the Conferencing Attendant Service.

> **Operator response:**
>> Check the event log for more information.

KQL0028I

> The Conferencing Attendant Service was stopped.

> **Explanation:**
>> The Conferencing Attendant Service was stopped.

> **Operator response:**
>> None.

KQL0029I

> The Conferencing Attendant Service is already stopped.

Explanation:
>
> The Conferencing Attendant Service is already stopped.

Operator response:
>
> None.

KQL0030E
> Error stopping the Conferencing Attendant Service.

Explanation:
>
> Error stopping the Conferencing Attendant Service.

Operator response:
>
> Check the event log for more information.

KQL0031I
> The Front End Service was started.

Explanation:
>
> The Front End Service was started.

Operator response:
>
> None.

KQL0032I
> The Front End Service is already started.

Explanation:
>
> The Front End Service is already started.

Operator response:
>
> None.

KQL0033E
> Error starting the Front End Service.

Explanation:
>
> Error starting the Front End Service.

Operator response:
>
> Check the event log for more information.

KQL0034I
> The Front End Service was stopped.

Explanation:
>
> The Front End Service was stopped.

Operator response:
>
> None.

KQL0035I
> The Front End Service is already stopped.

Explanation:
>
> The Front End Service is already stopped.

Operator response:
>
> None.

KQL0036E
> Error stopping the Front End Service.

Explanation:
>
> Error stopping the Front End Service.

Operator response:
>> Check the event log for more information.

KQL0037I
>> The IM Conferencing Service was started.

>> **Explanation:**
>>>> The IM Conferencing Service was started.

>> **Operator response:**
>>>> None.

KQL0038I
>> The IM Conferencing Service is already started.

>> **Explanation:**
>>>> The IM Conferencing Service is already started.

>> **Operator response:**
>>>> None.

KQL0039E
>> Error starting the IM Conferencing Service.

>> **Explanation:**
>>>> Error starting the IM Conferencing Service.

>> **Operator response:**
>>>> Check the event log for more information.

KQL0040I
>> The IM Conferencing Service was stopped.

>> **Explanation:**
>>>> The Front End Service was stopped.

>> **Operator response:**
>>>> None.

KQL0041I
>> The IM Conferencing Service is already stopped.

>> **Explanation:**
>>>> The IM Conferencing Service is already stopped.

>> **Operator response:**
>>>> None.

KQL0042E
>> Error stopping the IM Conferencing Service.

>> **Explanation:**
>>>> Error stopping the IM Conferencing Service.

>> **Operator response:**
>>>> Check the event log for more information.

KQL0043I
>> The Monitoring Agent Service was started.

>> **Explanation:**
>>>> The Monitoring Agent Service was started.

>> **Operator response:**
>>>> None.

KQL0044I

      `The Monitoring Agent Service is already started.`

      Explanation:

            The Monitoring Agent Service is already started.

      Operator response:

            None.

KQL0045E

      `Error starting the Monitoring Agent Service.`

      Explanation:

            Error starting the Monitoring Agent Service.

      Operator response:

            Check the event log for more information.

KQL0046I

      `The Monitoring Agent Service was stopped.`

      Explanation:

            The Front End Service was stopped.

      Operator response:

            None.

KQL0047I

      `The Monitoring Agent Service is already stopped.`

      Explanation:

            The Monitoring Agent Service is already stopped.

      Operator response:

            None.

KQL0048E

      `Error stopping the Monitoring Agent Service.`

      Explanation:

            Error stopping the Monitoring Agent Service.

      Operator response:

            Check the event log for more information.

KQL0049I

      `The Outside Voice Control Service was started.`

      Explanation:

            The Outside Voice Control Service was started.

      Operator response:

            None.

KQL0050I

      `The Outside Voice Control Service is already started.`

      Explanation:

            The Outside Voice Control Service is already started.

      Operator response:

            None.

KQL0051E

      `Error starting the Outside Voice Control Service.`

Explanation:

Error starting the Outside Voice Control Service.

Operator response:

Check the event log for more information.

KQL0052I

The Outside Voice Control Service was stopped.

Explanation:

The Front End Service was stopped.

Operator response:

None.

KQL0053I

The Outside Voice Control Service is already stopped.

Explanation:

The Outside Voice Control Service is already stopped.

Operator response:

None.

KQL0054E

Error stopping the Outside Voice Control Service.

Explanation:

Error stopping the Outside Voice Control Service.

Operator response:

Check the event log for more information.

KQL0055I

The Response Group Service was started.

Explanation:

The Response Group Service was started.

Operator response:

None.

KQL0056I

The Response Group Service is already started.

Explanation:

The Response Group Service is already started.

Operator response:

None.

KQL0057E

Error starting the Response Group Service.

Explanation:

Error starting the Response Group Service.

Operator response:

Check the event log for more information.

KQL0058I

The Response Group Service was stopped.

Explanation:

The Front End Service was stopped.

Operator response:
     None.

KQL0059I
    The Response Group Service is already stopped.

    Explanation:
     The Response Group Service is already stopped.

    Operator response:
     None.

KQL0060E
    Error stopping the Response Group Service.

    Explanation:
     Error stopping the Response Group Service.

    Operator response:
     Check the event log for more information.

KQL0061I
    The Telephony Conferencing Service was started.

    Explanation:
     The Telephony Conferencing Service was started.

    Operator response:
     None.

KQL0062I
    The Telephony Conferencing Service is already started.

    Explanation:
     The Telephony Conferencing Service is already started.

    Operator response:
     None.

KQL0063E
    Error starting the Telephony Conferencing Service.

    Explanation:
     Error starting the Telephony Conferencing Service.

    Operator response:
     Check the event log for more information.

KQL0064I
    The Telephony Conferencing Service was stopped.

    Explanation:
     The Front End Service was stopped.

    Operator response:
     None.

KQL0065I
    The Telephony Conferencing Service is already stopped.

    Explanation:
     The Telephony Conferencing Service is already stopped.

    Operator response:
     None.

KQL0066E
> Error stopping the Telephony Conferencing Service.
>
> **Explanation:**
>> Error stopping the Telephony Conferencing Service.
>
> **Operator response:**
>> Check the event log for more information.

KQL0067I
> The Web Conferencing Service was started.
>
> **Explanation:**
>> The Web Conferencing Service was started.
>
> **Operator response:**
>> None.

KQL0068I
> The Web Conferencing Service is already started.
>
> **Explanation:**
>> The Web Conferencing Service is already started.
>
> **Operator response:**
>> None.

KQL0069E
> Error starting the Web Conferencing Service.
>
> **Explanation:**
>> Error starting the Web Conferencing Service.
>
> **Operator response:**
>> Check the event log for more information.

KQL0070I
> The Web Conferencing Service was stopped.
>
> **Explanation:**
>> The Front End Service was stopped.
>
> **Operator response:**
>> None.

KQL0071I
> The Web Conferencing Service is already stopped.
>
> **Explanation:**
>> The Web Conferencing Service is already stopped.
>
> **Operator response:**
>> None.

KQL0072E
> Error stopping the Web Conferencing Service.
>
> **Explanation:**
>> Error stopping the Web Conferencing Service.
>
> **Operator response:**
>> Check the event log for more information.

KQL0073I
> The Archiving Service was started.

Explanation:

The Archiving Service was started.

Operator response:

None.

KQL0074I

The Archiving Service is already started.

Explanation:

The Archiving Service is already started.

Operator response:

None.

KQL0075E

Error starting the Archiving Service.

Explanation:

Error starting the Archiving Service.

Operator response:

Check the event log for more information.

KQL0076I

The Archiving Service was stopped.

Explanation:

The Front End Service was stopped.

Operator response:

None.

KQL0077I

The Archiving Service is already stopped.

Explanation:

The Archiving Service is already stopped.

Operator response:

None.

KQL0078E

Error stopping the Archiving Service.

Explanation:

Error stopping the Archiving Service.

Operator response:

Check the event log for more information.

KQL0079I

The Call Detail Recording Service was started.

Explanation:

The Call Detail Recording Service was started.

Operator response:

None.

KQL0080I

The Call Detail Recording Service is already started.

Explanation:

The Call Detail Recording Service is already started.

Operator response:
          None.

KQL0081E
          `Error starting the Call Detail Recording Service.`

          Explanation:
                    Error starting the Call Detail Recording Service.

          Operator response:
                    Check the event log for more information.

KQL0082I
          `The Call Detail Recording Service was stopped.`

          Explanation:
                    The Front End Service was stopped.

          Operator response:
                    None.

KQL0083I
          `The Call Detail Recording Service is already stopped.`

          Explanation:
                    The Call Detail Recording Service is already stopped.

          Operator response:
                    None.

KQL0084E
          `Error stopping the Call Detail Recording Service.`

          Explanation:
                    Error stopping the Call Detail Recording Service.

          Operator response:
                    Check the event log for more information.

KQL0085I
          `The QoE Monitoring Service was started.`

          Explanation:
                    The QoE Monitoring Service was started.

          Operator response:
                    None.

KQL0086I
          `The QoE Monitoring Service is already started.`

          Explanation:
                    The QoE Monitoring Service is already started.

          Operator response:
                    None.

KQL0087E
          `Error starting the QoE Monitoring Service.`

          Explanation:
                    Error starting the QoE Monitoring Service.

          Operator response:
                    Check the event log for more information.

KQL0088I

> The QoE Monitoring Service was stopped.

> **Explanation:**

>> The Front End Service was stopped.

> **Operator response:**

>> None.

KQL0089I

> The QoE Monitoring Service is already stopped.

> **Explanation:**

>> The QoE Monitoring Service is already stopped.

> **Operator response:**

>> None.

KQL0090E

> Error stopping the QoE Monitoring Service.

> **Explanation:**

>> Error stopping the QoE Monitoring Service.

> **Operator response:**

>> Check the event log for more information.

KQL0091I

> The Audio Test Service was started.

> **Explanation:**

>> The Audio Test Service was started.

> **Operator response:**

>> None.

KQL0092I

> The Audio Test Service is already started.

> **Explanation:**

>> The Audio Test Service is already started.

> **Operator response:**

>> None.

KQL0093E

> Error starting the Audio Test Service.

> **Explanation:**

>> Error starting the Audio Test Service.

> **Operator response:**

>> Check the event log for more information.

KQL0094I

> The Audio Test Service was stopped.

> **Explanation:**

>> The Front End Service was stopped.

> **Operator response:**

>> None.

KQL0095I

> The Audio Test Service is already stopped.

Explanation:

The Audio Test Service is already stopped.

Operator response:

None.

KQL0096E

```
Error stopping the Audio Test Service.
```

Explanation:

Error stopping the Audio Test Service.

Operator response:

Check the event log for more information.

KQL0097I

```
The File Transfer Agent Service was started.
```

Explanation:

The File Transfer Agent Service was started.

Operator response:

None.

KQL0098I

```
The File Transfer Agent Service is already started.
```

Explanation:

The File Transfer Agent Service is already started.

Operator response:

None.

KQL0099E

```
Error starting the File Transfer Agent Service.
```

Explanation:

Error starting the File Transfer Agent Service.

Operator response:

Check the event log for more information.

KQL0100I

```
The File Transfer Agent Service was stopped.
```

Explanation:

The Front End Service was stopped.

Operator response:

None.

KQL0101I

```
The File Transfer Agent Service is already stopped.
```

Explanation:

The File Transfer Agent Service is already stopped.

Operator response:

None.

KQL0102E

```
Error stopping the File Transfer Agent Service.
```

Explanation:

Error stopping the File Transfer Agent Service.

Operator response:
>Check the event log for more information.

KQL0103I
>`The Master Replicator Service was started.`

>**Explanation:**
>>The Master Replicator Service was started.

>**Operator response:**
>>None.

KQL0104I
>`The Master Replicator Service is already started.`

>**Explanation:**
>>The Master Replicator Service is already started.

>**Operator response:**
>>None.

KQL0105E
>`Error starting the Master Replicator Service.`

>**Explanation:**
>>Error starting the Master Replicator Service.

>**Operator response:**
>>Check the event log for more information.

KQL0106I
>`The Master Replicator Service was stopped.`

>**Explanation:**
>>The Front End Service was stopped.

>**Operator response:**
>>None.

KQL0107I
>`The Master Replicator Service is already stopped.`

>**Explanation:**
>>The Master Replicator Service is already stopped.

>**Operator response:**
>>None.

KQL0108E
>`Error stopping the Master Replicator Service.`

>**Explanation:**
>>Error stopping the Master Replicator Service.

>**Operator response:**
>>Check the event log for more information.

KQL0109I
>`The Replica Replicator Service was started.`

>**Explanation:**
>>The Replica Replicator Service was started.

>**Operator response:**
>>None.

KQL0110I

The Replica Replicator Service is already started.

Explanation:

The Replica Replicator Service is already started.

Operator response:

None.

KQL0111E

Error starting the Replica Replicator Service.

Explanation:

Error starting the Replica Replicator Service.

Operator response:

Check the event log for more information.

KQL0112I

The Replica Replicator Service was stopped.

Explanation:

The Front End Service was stopped.

Operator response:

None.

KQL0113I

The Replica Replicator Service is already stopped.

Explanation:

The Replica Replicator Service is already stopped.

Operator response:

None.

KQL0114E

Error stopping the Replica Replicator Service.

Explanation:

Error stopping the Replica Replicator Service.

Operator response:

Check the event log for more information.

KQL0115I

The Web Conferencing Compatibility Service was started.

Explanation:

The Web Conferencing Compatibility Service was started.

Operator response:

None.

KQL0116I

The Web Conferencing Compatibility Service is already started.

Explanation:

The Web Conferencing Compatibility Service is already started.

Operator response:

None.

KQL0117E

Error starting the Web Conferencing Compatibility Service.

Explanation:

  Error starting the Web Conferencing Compatibility Service.

Operator response:

  Check the event log for more information.

KQL0118I

 The Web Conferencing Compatibility Service was stopped.

 Explanation:

  The Front End Service was stopped.

 Operator response:

  None.

KQL0119I

 The Web Conferencing Compatibility Service is already stopped.

 Explanation:

  The Web Conferencing Compatibility Service is already stopped.

 Operator response:

  None.

KQL0120E

 Error stopping the Web Conferencing Compatibility Service.

 Explanation:

  Error stopping the Web Conferencing Compatibility Service.

 Operator response:

  Check the event log for more information.

KQL0121I

 The Call Park Service was started.

 Explanation:

  The Call Park Service was started.

 Operator response:

  None.

KQL0122I

 The Call Park Service is already started.

 Explanation:

  The Call Park Service is already started.

 Operator response:

  None.

KQL0123E

 Error starting the Call Park Service.

 Explanation:

  Error starting the Call Park Service.

 Operator response:

  Check the event log for more information.

KQL0124I

 The Call Park Service was stopped.

 Explanation:

  The Front End Service was stopped.

Operator response:
None.

KQL0125I
The Call Park Service is already stopped.

Explanation:
The Call Park Service is already stopped.

Operator response:
None.

KQL0126E
Error stopping the Call Park Service.

Explanation:
Error stopping the Call Park Service.

Operator response:
Check the event log for more information.

KQL0127I
The Response Group Service was started.

Explanation:
The Response Group Service was started.

Operator response:
None.

KQL0128I
The Response Group Service is already started.

Explanation:
The Response Group Service is already started.

Operator response:
None.

KQL0129E
Error starting the Response Group Service.

Explanation:
Error starting the Response Group Service.

Operator response:
Check the event log for more information.

KQL0130I
The Response Group Service was stopped.

Explanation:
The Front End Service was stopped.

Operator response:
None.

KQL0131I
The Response Group Service is already stopped.

Explanation:
The Response Group Service is already stopped.

Operator response:
None.

KQL0132E

Error stopping the Response Group Service.

Explanation:

Error stopping the Response Group Service.

Operator response:

Check the event log for more information.

KQL0133I

The Mediation Service was started.

Explanation:

The Mediation Service was started.

Operator response:

None.

KQL0134I

The Mediation Service is already started.

Explanation:

The Mediation Service is already started.

Operator response:

None.

KQL0135E

Error starting the Mediation Service.

Explanation:

Error starting the Mediation Service.

Operator response:

Check the event log for more information.

KQL0136I

The Mediation Service was stopped.

Explanation:

The Front End Service was stopped.

Operator response:

None.

KQL0137I

The Mediation Service is already stopped.

Explanation:

The Mediation Service is already stopped.

Operator response:

None.

KQL0138E

Error stopping the Mediation Service.

Explanation:

Error stopping the Mediation Service.

Operator response:

Check the event log for more information.

KQL0139I

The Bandwidth Policy Service (Authentication) was started.

Explanation:
    The Bandwidth Policy Service (Authentication) was started.

Operator response:
    None.

KQL0140I
    The Bandwidth Policy Service (Authentication) is already started.

Explanation:
    The Bandwidth Policy Service (Authentication) is already started.

Operator response:
    None.

KQL0141E
    Error starting the Bandwidth Policy Service (Authentication).

Explanation:
    Error starting the Bandwidth Policy Service (Authentication).

Operator response:
    Check the event log for more information.

KQL0142I
    The Bandwidth Policy Service (Authentication) was stopped.

Explanation:
    The Bandwidth Policy Service (Authentication) Service was stopped.

Operator response:
    None.

KQL0143I
    The Bandwidth Policy Service (Authentication) is already stopped.

Explanation:
    The Bandwidth Policy Service (Authentication) is already stopped.

Operator response:
    None.

KQL0144E
    Error stopping the Bandwidth Policy Service (Authentication) Service.

Explanation:
    Error stopping the Bandwidth Policy Service (Authentication) Service.

Operator response:
    Check the event log for more information.

KQL0145I
    The Bandwidth Policy Service (Core) was started.

Explanation:
    The Bandwidth Policy Service (Core) was started.

Operator response:
    None.

KQL0146I
    The Bandwidth Policy Service (Core) is already started.

Explanation:
    The Bandwidth Policy Service (Core) is already started.

Operator response:
　　　None.

KQL0147E
　　　Error starting the Bandwidth Policy Service (Core).

　　　Explanation:
　　　　　Error starting the Bandwidth Policy Service (Core).

　　　Operator response:
　　　　　Check the event log for more information.

KQL0148I
　　　The Bandwidth Policy Service (Core) was stopped.

　　　Explanation:
　　　　　The Bandwidth Policy Service (Core) Service was stopped.

　　　Operator response:
　　　　　None.

KQL0149I
　　　The Bandwidth Policy Service (Core) is already stopped.

　　　Explanation:
　　　　　The Bandwidth Policy Service (Core) is already stopped.

　　　Operator response:
　　　　　None.

KQL0150E
　　　Error stopping the Bandwidth Policy Service (Core) Service.

　　　Explanation:
　　　　　Error stopping the Bandwidth Policy Service (Core) Service.

　　　Operator response:
　　　　　Check the event log for more information.

KQL0151I
　　　The Access Edge Service was started.

　　　Explanation:
　　　　　The Access Edge Service was started.

　　　Operator response:
　　　　　None.

KQL0152I
　　　The Access Edge Service is already started.

　　　Explanation:
　　　　　The Access Edge Service is already started.

　　　Operator response:
　　　　　None.

KQL0153E
　　　Error starting the Access Edge Service.

　　　Explanation:
　　　　　Error starting the Access Edge Service.

　　　Operator response:
　　　　　Check the event log for more information.

KQL0154I

> The Access Edge Service was stopped.
>
> **Explanation:**
>> The Access Edge Service was stopped.
>
> **Operator response:**
>> None.

KQL0155I

> The Access Edge Service is already stopped.
>
> **Explanation:**
>> The Access Edge Service is already stopped.
>
> **Operator response:**
>> None.

KQL0156E

> Error stopping the Access Edge Service.
>
> **Explanation:**
>> Error stopping the Access Edge Service.
>
> **Operator response:**
>> Check the event log for more information.

KQL0157I

> The Audio Video Authentication Service was started.
>
> **Explanation:**
>> The Audio Video Authentication Service was started.
>
> **Operator response:**
>> None.

KQL0158I

> The Audio Video Authentication Service is already started.
>
> **Explanation:**
>> The Audio Video Authentication Service is already started.
>
> **Operator response:**
>> None.

KQL0159E

> Error starting the Audio Video Authentication Service.
>
> **Explanation:**
>> Error starting the Audio Video Authentication Service.
>
> **Operator response:**
>> Check the event log for more information.

KQL0160I

> The Audio Video Authentication Service was stopped.
>
> **Explanation:**
>> The Audio Video Authentication Service was stopped.
>
> **Operator response:**
>> None.

KQL0161I

> The Audio Video Authentication Service is already stopped.

Explanation:
>The Audio Video Authentication Service is already stopped.

Operator response:
>None.

KQL0162E
>```
>Error stopping the Audio Video Authentication Service.
>```

Explanation:
>Error stopping the Audio Video Authentication Service.

Operator response:
>Check the event log for more information.

KQL0163I
>```
>The Audio Video Edge Service was started.
>```

Explanation:
>The Audio Video Edge Service was started.

Operator response:
>None.

KQL0164I
>```
>The Audio Video Edge Service is already started.
>```

Explanation:
>The Audio Video Edge Service is already started.

Operator response:
>None.

KQL0165E
>```
>Error starting the Audio Video Edge Service.
>```

Explanation:
>Error starting the Audio Video Edge Service.

Operator response:
>Check the event log for more information.

KQL0166I
>```
>The Audio Video Edge Service was stopped.
>```

Explanation:
>The Audio Video Edge Service Service was stopped.

Operator response:
>None.

KQL0167I
>```
>The Audio Video Edge Service is already stopped.
>```

Explanation:
>The Audio Video Edge Service is already stopped.

Operator response:
>None.

KQL0168E
>```
>Error stopping the Audio Video Edge Service.
>```

Explanation:
>Error stopping the Audio Video Edge Service.

Operator response:
> Check the event log for more information.

KQL0169I
> The Web Conferencing Edge Service was started.

> **Explanation:**
>> The Web Conferencing Edge Service was started.

> **Operator response:**
>> None.

KQL0170I
> The Web Conferencing Edge Service is already started.

> **Explanation:**
>> The Web Conferencing Edge Service is already started.

> **Operator response:**
>> None.

KQL0171E
> Error starting the Web Conferencing Edge Service.

> **Explanation:**
>> Error starting the Web Conferencing Edge Service.

> **Operator response:**
>> Check the event log for more information.

KQL0172I
> The Web Conferencing Edge Service was stopped.

> **Explanation:**
>> The Web Conferencing Edge Service Service was stopped.

> **Operator response:**
>> None.

KQL0173I
> The Web Conferencing Edge Service is already stopped.

> **Explanation:**
>> The Web Conferencing Edge Service is already stopped.

> **Operator response:**
>> None.

KQL0174E
> Error stopping the Web Conferencing Edge Service.

> **Explanation:**
>> Error stopping the Web Conferencing Edge Service.

> **Operator response:**
>> Check the event log for more information.

KQL0000S
> The service did not respond in a timely fashion.

> **Explanation:**
>> The service did not respond in a timely fashion.

> **Operator response:**
>> None.

KQL0300W

       `The service does not exist as an installed service.`

       Explanation:

              The service does not exist as an installed service.

       Operator response:

              None.

KQL0301I

       `The service is disabled and cannot be started.`

       Explanation:

              The service is disabled and cannot be started.

       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 knowledge centers provide useful information.

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