IBM Tivoli Composite Application Manager Agent for Lotus Domino

6.2.1 Fix Pack 2

Troubleshooting Guide

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Note
Before using this information and the product it supports, read the information in "Notices" on page 51.

This edition applies to version 6.2.1.2 of IBM Tivoli Composite Application Manager Agent for Lotus Domino (product number 5724-I45) and to all subsequent releases and modifications until otherwise indicated in new editions.

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Chapter 1. Troubleshooting basics

To troubleshoot a problem, gather information about the problem for IBM® Software Support, use logging data, and consult the lists of identified problems and workarounds.

For general troubleshooting information, see the *IBM Tivoli Monitoring Troubleshooting Guide*. For other problem-solving options, see Chapter 4, "Support information," on page 43.

You can resolve some problems by ensuring that your system matches the system requirements. The most up-to-date requirements are in the Software product compatibility reports (http://publib.boulder.ibm.com/infocenter/prodguid/v1r0/clarity/index.html).

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 7 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*.
Lotus Domino information	Version number and patch level
Operating system	Operating system version number and patch level
Messages	Messages and other information displayed on the screen

Table 1. Information to gather before contacting IBM Software Support (continued)

Information type	Description
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. • Lotus® Domino® agent To find these version and patch numbers, use the following steps depending on your operating system: • UNIX 1. On the command line, type *install_dir*/bin/cinfo 2. Type 1 to show the products installed and the versions. • Windows In Manage Tivoli Monitoring Services, click **Browse Settings**. –OR– Look in *install_dir*/InstallITM/kincinfo.
Screen captures	Screen captures of incorrect output, if any
(UNIX systems only) Core dump files	If the system stops on UNIX systems, collect the core dump file from the *install_dir*/bin directory, where *install_dir* is the directory where you installed the monitoring agent.

You can use the pdcollect tool to collect the most commonly used information from a system. This tool gathers log files, configuration information, version information, and other data. For more information about using this tool, see "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 monitoring agent. *Logging* refers to the text messages and trace data that is generated by the 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 5 for more information.

Consulting the lists of identified problems and workarounds

Known problems are organized into types such as those in the following list to make them easier to locate:

- Installation, configuration, uninstallation
- Remote deployment
- Agent
- Workspace

- Situation

See Chapter 3, “Problems and workarounds,” on page 19 for information about symptoms and detailed workarounds for these types of problems.

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

Chapter 2. Trace logging

Trace logs are used to capture information about the operating environment when component software fails to operate as designed.

The principal log type is the RAS (Reliability, Availability, and Serviceability) trace log. These logs are in the English language only. The RAS trace log mechanism is available for all components of IBM Tivoli Monitoring. Most logs are located in a logs subdirectory on the host computer. See the following information to learn how to configure and use trace logging:

- "Principal trace log files" on page 7
- "Examples: Using trace logs" on page 11
- "Setting RAS trace parameters by using the GUI" on page 12

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 7 provides the names, locations, and descriptions of IBM Tivoli Monitoring general RAS1 log files. The log file names for the Lotus Domino agent adhere to the following naming convention:

Windows systems

hostname_productcode_program_HEXtimestamp-nn.log

Linux and UNIX 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 Agent for Lotus Domino, the product code is gb.

program
Name of the program being run.

HEXtimestamp
Hexadecimal time stamp representing the time at which the program started.

nn Rolling log suffix.

Examples of trace logging

The Monitoring Agent for Lotus Domino is a multi-instance agent that has logs for the following files:

- kgbagent.exe
- kgbclient.exe
- kgbiwevent.exe
- kgbstart.sh (UNIX and Linux only)
- LG0

When you create an instance name on Windows operating systems, the kgbagent.exe is copied to create an instance-specific copy. If the instance name is amsc282c, then kgbagent.exe is copied to kgbagent_amsc282c.exe. The same thing happens for kgbclient.exe, which is copied to kgbclient_amsc282c.exe. On UNIX and Linux operating systems, when you create an instance, the files are not copied to a new name. Each instance has its own log.

For example, if a Lotus Domino agent is running on the Windows system "server01", the RAS log file for that agent might be named as follows:

server01_gb_kgbagent_437fc59-01.log

When a multi-instance agent such as the Monitoring Agent for Lotus Domino creates a log file, the file is named as follows: *hostname_pc_instance_name_kgbclient_instance_name_starttime-number*.log For example: AMSC282_gb_amsc282_KGBCLIENT_amsc282_451abecb-01.log

Often, the host name and the instance name are the same. Also, the client name might contain the instance name, which helps you differentiate among the many clients that might be running if many instances of the agent running. When you have multiple instances running, it looks like the same string is displayed in the log file name multiple times.

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

Each time a program is started, a new time stamp is assigned to maintain a short program history. For example, if the Lotus Domino agent is started twice, it might have log files as follows:

- kgbagent.exe
  - Windows systems

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

    For example:AMSC282_gb_amsc282c_kgbagent_45267ef7-01.log
  - UNIX or Linux systems

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

    For example:amsaix20_gb_aix20_kgbagent_45267ef7-01.log
- kgbclient.exe
  - Windows systems

    *hostname*_gb_*instance_name* _KGBCLIENT_*instance_name* _*timestamp-nn*.log

    For example:AMSC282_gb_amsc282c_KGBCLIENT_amsc282c_45267ef7-01.log
  - UNIX or Linux systems

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

    For example:amsaix20_gb_aix20_kgbclient_45267ef7-01.log
- kgbiwevent.exe
  - Windows systems

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

For example:AMSC282_gb_server1amsc282_kgbiwevent_4526ad8f-01.log

– UNIX or Linux systems

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

For example:amsaix20_gb_aix20_kgbDiwevent_aix20_45267ef7-01.log

- kgbstart.sh
  – UNIX or Linux only systems

  kgbstart_*instance_name*.log

  For example:kgbstart_pa2kk.log

Other logs, such as logs for Take Action command logs, have a similar syntax such as in the following Windows example: host_productcode_*takeactioncommand*.log. Only one log file is produced per Take Action command.

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

Principal trace log files

Trace log files are located on various systems.

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

Table 2. Trace log files for troubleshooting agents

System where log is located	File name and path	Description
On the Tivoli Enterprise Monitoring Server	• **Windows:** The IBM Tivoli Monitoring *timestamp*.log file in the *install_dir*\InstallITM path • **UNIX:** The candle_installation.log file in the *install_dir*/logs path • **Linux:** The candle_installation.log file in the *install_dir*/logs path	Provides details about products that are installed. **Note:** Trace logging is enabled by default. A configuration step is not required to enable this tracing.
On the Tivoli Enterprise Monitoring Server	The Warehouse_Configuration.log file is in the following location on Windows systems: *install_dir*\InstallITM	Provides details about the configuration of data warehousing for historical reporting.

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

System where log is located	File name and path	Description
On the Tivoli Enterprise Monitoring Server	The name of the RAS log file is as follows: • **Windows:** *install_dir*\logs\ *hostname*_ms_*timestamp-nn*.log • **UNIX:** *install_dir*/logs/ *hostname*_ms_*timestamp-nn*.log • **Linux:** *install_dir*/logs/ *hostname*_ms_*timestamp-nn*.log **Note:** File names for RAS1 logs include a hexadecimal time stamp. Also on UNIX systems, a log with a decimal time stamp is provided: *hostname*_gb_*timestamp*.log and *hostname*_gb_*timestamp*.pid*nnnnn* in the *install_dir*/logs path, where *nnnnn* is the process ID number.	Traces activity on the monitoring server.
On the Tivoli Enterprise Portal Server	The name of the RAS log file is as follows: • **Windows:** *install_dir*\logs\ *hostname*_cq_HEXtimestamp-nn.log • **UNIX:** *install_dir*/logs/ *hostname*_cq_HEXtimestamp-nn.log • **Linux:** *install_dir* /logs/ *hostname*_cq_HEXtimestamp-nn.log **Note:** File names for RAS1 logs include a hexadecimal time stamp. Also on UNIX systems, a log with a decimal time stamp is provided: *hostname*_gb_*timestamp*.log and *hostname*_gb_*timestamp*.pid*nnnnn* in the *install_dir*/logs path, where *nnnnn* is the process ID number.	Traces activity on the portal server.
On the Tivoli Enterprise Portal Server	The teps_odbc.log file is located in the following path: • **Windows:** *install_dir*\InstallITM • **UNIX:** *install_dir*/logs • **Linux:** *install_dir*/logs	When you enable historical reporting, this log file traces the status of the warehouse proxy agent.

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

System where log is located	File name and path	Description
On the computer that hosts the monitoring agent	The RAS1 log files are as follows: • **Windows:** *hostname*_gb_*instance_name*_kgbagent_HEXtimestamp-nn.log in the *install_dir*\tmaitm6\logs directory • **Windows:** *hostname*_gb_instance_kgbagent_HEXtimestamp-nn.log in the *install_dir*\tmaitm6\logs directory • **UNIX:** *hostname*_gb_*instance_name*_kgbagent_HEXtimestamp-nn.log in the *install_dir*/logs directory • **Linux:** *hostname*_gb_*instance_name*_kgbagent_HEXtimestamp-nn.log in the *install_dir*/logs directory • **UNIX:** *hostname*_gb_instance_HEXtimestamp-nn.log in the *install_dir*/logs directory Also on UNIX, a log with a decimal time stamp is provided: *hostname_gb_timestamp*.log and *hostname_gb_timestamp*.pid *nnnnn* in the *install_dir*/logs path, where *nnnnn* is the process ID number. These logs are in the following directories: • **Windows:** *install_dir*\tmaitm6\logs • **UNIX:** *install_dir*/logs • **Linux:** *install_dir*/logs On Linux systems, the following additional logs are provided: – *hostname*_gb_timestamp.log – *hostname*_gb_timestamp.pidnnnnn in the *install_dir*/logs path, where *nnnnn* is the process ID number	Traces activity of the monitoring agent. See Table 2 on page 7 for the locations of the Lotus Domino agent logs.

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

System where log is located	File name and path	Description
On the computer that hosts the monitoring agent	The agent operations log files are as follows: *instance_hostname_GB*.LG0 is the current log created when the agent is started. *instance_hostname_GB*.LG1 is the backup of the previous log. These logs are in the following directory depending on the operating system that you are using: • **Windows:** *install_dir*\tmaitm6\logs • **Linux:** *install_dir*/logs • **UNIX:** *install_dir*/logs For the Lotus Domino agent: • **Windows:** *instance_name_hostname*_GB_.LG0 For example: amsc282B_AMSC282_GB.LG0 • **UNIX or Linux:** *instance_name*:*hostname*.*domain_name_depending_on_OS_settings*_.LG0 For example: aix20:amsaix20.tivlab.raleigh.ibm.com:GB.LG0 aix202:amsaix20.tivlab.raleigh.ibm.com:GB.LG0 aix202a:amsaix20.tivlab.raleigh.ibm.com:GB.LG0	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 If *instance_name:hostname.domain_name* is greater than 32 characters, the characters that are farthest to the right are truncated from the domain name.
On the computer that hosts the monitoring agent	The Take Action command log files are as follows: • *host*_gb_*instance_takeactioncommand*.log The logs are in the following directories: • **Windows:** *install_dir*\tmaitm6\logs • **UNIX:** *install_dir*/logs • **Linux:** *install_dir*/logs	Traces activity each time a Take Action command runs. For example, when a hypothetical **start_command** Take Action command runs, IBM Tivoli Monitoring generates a start_command.log file.

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

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

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

See the following key points about the preceding excerpts:

- The monitoring server appends the two-character product code to the server name to form a unique name (for example, SERVER5B:vm) for this instance of the 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" 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 for the 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 5 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 Agent for Lotus Domino uses RAS1 tracing and generates the logs described in Table 2 on page 7. 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:kgb ALL)
   - Maximum error tracing. KBB_RAS1=ERROR (UNIT:kgb ALL) (UNIT:kra ALL)

     Note: As this example shows, you can set multiple RAS tracing options in a single statement.

     To set tracing for the Monitoring Agent for Lotus Domino, use UNIT:kgb ALL
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 7 that include a process ID number (PID).

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

Note: The **KDC_DEBUG** setting and the **Maximum error tracing** setting can generate a large amount of trace logging. Use these settings only temporarily while you are troubleshooting problems. Otherwise, the logs can occupy excessive amounts of hard disk space.

Manually setting RAS trace parameters

You can manually edit the RAS1 trace logging parameters.

About this task

Agents use RAS1 tracing and generate the logs described in Table 2 on page 7. The default RAS1 trace level is ERROR.

Procedure

1. Open the trace options file:
   - **Windows systems:**

     install_dir\tmaitm6\KGBENV_*instance name*
   - **UNIX systems:**

     install_dir /config/gb_*instance name*.config
2. Edit the line that begins with **KBB_RAS1=** to set trace logging preferences. For example, if you want detailed trace logging, set the **Maximum Tracing** option: `KBB_RAS1=ERROR (UNIT:kgb ALL) (UNIT:kra ALL)`
3. Edit the line that begins with **KBB_RAS1_LOG=** to manage the generation of log files:
   - **MAXFILES**: The total number of files that are to be kept for all startups of a specific program. When this value is exceeded, the oldest log files are discarded. The default value is 9.
   - **LIMIT**: The maximum size, in megabytes (MB) of a RAS1 log file. The default value is 5.
   - IBM Software Support might guide you to modify the following parameters:
     - **COUNT**: The number of log files to keep in the rolling cycle of one program startup. The default is 3.
     - **PRESERVE**: The number of files that are not to be reused in the rolling cycle of one program startup. The default value is 1.

     Note: The **KBB_RAS1_LOG** parameter also provides for the specification of the log file directory, log file name, and the inventory control file directory and name. Do not modify these values or log information can be lost.

For the Monitoring Agent for Lotus Domino, each instance of the agent has unique trace settings on Windows systems, but the three executable files for one instance do not have unique trace settings. On UNIX and Linux, trace settings are global across the instances. No trace settings are available for the LG0 log for Windows, UNIX, or Linux systems.

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 7 that include a process ID number (PID).

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

Note: The **KDC_DEBUG** setting and the **Maximum error tracing** setting can generate a large amount of trace logging. Use these settings only temporarily while you are troubleshooting problems. Otherwise, the logs can occupy excessive amounts of hard disk space.

Dynamic modification of trace settings

You can dynamically modify the trace settings for an IBM Tivoli Monitoring component, such as, Tivoli Enterprise Monitoring Server, Tivoli Enterprise Portal Server, most monitoring agents, and other components. You can access these components, except for a few monitoring agents, from the tracing utility.

Dynamic modification of the trace settings is the most efficient method, because you can do it without restarting the component. Settings take effect immediately. Modifications by this method are not persistent.

Note: When the component is restarted, the trace settings are read again from the `.env` file. Dynamically modifying these settings does not change the settings in the `.env` files. To modify these trace settings permanently, modify them in the `.env` files.

ras1

Run this command to modify the trace settings for a Tivoli Monitoring component.

The syntax is as follows:

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

You can specify more than one component class to which to apply the trace settings.

Command options

set
Turns on or off tracing depending upon the value of its parameters. If the parameter is **ANY**, it turns it off. All other parameters turn on tracing based on the specified type or level.

list
Displays the default level and type of tracing that is set by default.

Parameters

The parameters that determine the component classes to which to apply the trace settings are as follows:

COMP: *class_name*
Modifies the trace setting for the name of the component class, as specified by *class_name* , for example, `COMP:KDH`. The output contains trace for the specified class.

UNIT: *class_name*
Modifies the trace setting for any unit that starts with the specified *class_name* value, for example, `UNIT: kra`. The output contains trace for any unit that begins with the specified filter pattern.

The parameters that determine the trace level and type are as follows:

ALL
Displays all trace levels, including every trace point defined for the component. This setting might result in a large amount of trace, so specify other parameters to exclude unwanted trace. You might require the **ALL** parameter to isolate a problem, which is the equivalent to setting "`Error Detail Flow State Input Output Metrics`".

ANY
Turns off tracing.

Detail
Displays detailed information about each function.

When entered with the `list` option, the trace is tagged with `Det`.

ERROR
Logs internal error conditions.

When entered with the `list` option, the trace is tagged with `ER`. The output can also be tagged with `EVERYE+EVERYU+ER`.

Flow
Displays control flow data for each function entry and exit.

When entered with the `list` option, the trace is tagged with `Fl`.

INPUT
Displays input data for each function.

When entered with the `list` option, the trace is tagged with `IN`.

Metrics
Displays metrics on each function.

When entered with the `list` option, the trace is tagged with `ME`.

OUTPUT
Displays output data for each function.

When entered with the `list` option, the trace is tagged with `OUT`.

State
Displays the status for each function.

When entered with the `list` option, the trace is tagged with `St`.

Example

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

```
kbbcre1.c, 400, May 29 2007, 12:54:43, 1.1, *
kbbcrn1.c, 400, May 29 2007, 12:54:42, 1.1, *
kdhb1de.c, 400, May 29 2007, 12:59:34, 1.1, KDH
kdh0med.c, 400, May 29 2007, 12:59:24, 1.1, KDH
kdhsrej.c, 400, May 29 2007, 13:00:06, 1.5, KDH
kdhb1fh.c, 400, May 29 2007, 12:59:33, 1.1, KDH
kdhb1oe.c, 400, May 29 2007, 12:59:38, 1.2, KDH
kdhs1ns.c, 400, May 29 2007, 13:00:08, 1.3, KDH
kbbacdl.c, 400, May 29 2007, 12:54:27, 1.2, ACF1
kbbaclc.c, 400, May 29 2007, 12:54:27, 1.4, ACF1
kbbac1i.c, 400, May 29 2007, 12:54:28, 1.11, ACF1
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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 an agent, for example installation and configuration problems and workspace problems.

You can resolve some problems by ensuring that your system matches system requirements. The most up-to-date requirements are in the Software product compatibility reports (http://publib.boulder.ibm.com/infocenter/prodguid/v1r0/clarity/index.html).

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 23 for information about these problems and solutions.

Table 3. Problems and solutions for installation and configuration

Problem	Solution
(*UNIX only*) During a command-line installation, you choose to install a component that is currently installed, and you see the following warning: `WARNING - you are about to install the SAME version of "component_name"` where *component_name* is the name of the component that you are attempting to install. **Note:** This problem affects UNIX command-line installations. If you monitor only Windows environments, you see this problem if you choose to install a product component (for example, a monitoring server) on a UNIX system.	You must exit and restart the installation process. You cannot return to the list where you selected components to install. When you run the installer again, do not attempt to install any component that is currently installed.
A problem can 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*.

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

Problem	Solution
Diagnosing problems with product browse settings (Windows systems only).	When you have problems with browse settings, complete the following steps: 1. Click **Start** > **Programs** > **IBM Tivoli Monitoring** > **Manage Tivoli Enterprise Monitoring Services**. The Manage Tivoli Enterprise Monitoring Services window is displayed. 2. Right-click the Windows agent and select **Browse Settings**. A text window is displayed. 3. Click **Save As** and save the information in the text file. If requested, you can forward this file to IBM Software Support for analysis.
A message similar to "`Unable to find running CMS on CT_CMSLIST`" in the log file is displayed.	If a message similar to "`Unable to find running CMS on CT_CMSLIST`" is displayed in the log file, the agent cannot connect to the monitoring server. Confirm the following points: • Do multiple network interface cards (NICs) exist on the system? • If multiple NICs exist on the system, find out which one is configured for the monitoring server. Ensure that you specify the correct host name and port settings for communication in the IBM Tivoli Monitoring environment.
The system is experiencing high CPU usage.	**Agent process:** View the memory usage of the KGBCMA 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.
After installing the Monitoring Agent for Lotus Domino on a Windows system, you receive a message that the Windows computer must be rebooted (KGB5039I). The environment variables are not available in the system environment.	Restart the system to make the system environment variables available.
The Monitoring Agent for Lotus Domino fails to start when installed on Solaris 10 with Upgrade 1.	A solution is not available for this problem.
When configuring the Monitoring Agent for Lotus Domino, you receive the following warning message: `An agent with that name exists.`	An instance name that is not valid might have been provided, for example, "`Agen</`". Provide an instance name that is valid.
When configuring the Monitoring Agent for Lotus Domino, you receive a Java™ exception.	Avoid using parameters such as question marks (?), slashes (/ and \), ampersand (&), and dollar signs ($) in the instance name, Domino Server name, or `notes.ini` file name.

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

Problem	Solution
Unable to install the agent on a UNIX or Linux operating system.	Add a NotesProgram entry to the `notes.ini` file. Issue **`kgbconfing.sh`** again and start the agent.
You receive the following error message when configuring an agent using **`itmcmd config -A -o xxxx gb`**: `This agent was previously configured using the Host Specific Configuration option (the -t option on the command line). To reconfigure, remember to select CREATE HOST SPECIFIC CONFIGURATION' (on the GUI) or use the command-line -t option.`	This message does not have an adverse impact on the instance configuration.
When installing locally (**`install.sh`**) to a UNIX or Linux operating system, you receive the following error string: `Initializing ... ./install.sh[24]: <vrmf>: syntax error awk: syntax error near line 1 awk: illegal statement near line 1 awk: syntax error near line 1 awk: illegal statement near line 1 Initializing ... chown: cannot access `.=\\265\\263.(': No such file or directory chmod: cannot access `.=\\265\\263.(': No such file or directory`	Ignore this error.
You want to install a 32-bit and 64-bit Lotus Domino agent on the same UNIX system.	The 32-bit and 64-bit installations must be in different directories. Both installations must not use the default `candlehome` directory of `/opt/IBM/ITM`.

You want to remotely deploy or locally install a 32-bit Monitoring Agent for Lotus Domino to a 64-bit AIX® system.	This function is currently not supported by IBM Tivoli Monitoring.
	
	Use the following steps to work around this problem:
	1. Run the local installation of the Monitoring Agent for Lotus Domino.
	2. Select the 32-bit version under “Product packages are available for the following operating systems and component support categories⌂?.
	3. After installation is complete, edit the `gbaix5x3.ver` in *`install`*`/registry`.
	After the last existing `runArch =` line, add the following lines starting in column 1:
	`runArch = aix516`
	`runArch = aix526`
	`runArch = aix536`
	4. Save the `gbaix5x3.ver` or file.

When installing the Agent for Lotus Domino, information about the "IBM JAVA information" and "Choose installation drive for JAVA" panels are corrupted.	This problem is a current limitation. Check future releases or service levels of IBM Tivoli Monitoring for this fix.
If you configure an instance of the agent for Lotus Domino on a UNIX or Linux system with the same name as the host name, other instances configured using the GUI cannot connect to the monitoring server.	Configure the instances using **`itmcmd config`** from the command line.

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

Problem	Solution
You have a 32-bit Microsoft BizTalk Server agent V6.2.2 installed on a 32-bit or a 64-bit operating system. When you configure the agent, if you specify false in the **Use Windows Authentication** field on the Configuration for the Application Status attribute group page, and you do not have the required privileges for the BizTalkMgmtDb database, no value is displayed for the attributes in the Tivoli Enterprise Portal.	You must either have server-wide privileges for the SQL Server or database-wide privileges for the BizTalkMgmtDb database. If you have server-wide privileges, you must have rights to the Public and Sysadmin server roles. If you have database-wide privileges, you must have rights to the db_owner and db_datareader database roles.
The user ID and password that you type to access the SQL server while configuring the Microsoft BizTalk Server agent V6.2.2 is not retained on the Tivoli Enterprise Portal Configuration panel when you reconfigure the agent. OR The user ID and password that you type in the Tivoli Enterprise Portal Configuration panel while configuring the Microsoft BizTalk Server agent V6.2.2 is not reflected on the Manage Tivoli Enterprise Monitoring Services Configuration panel.	You must add the BizTalk agent V6.2.2 that is included in the ITCAM for Microsoft Applications bundle to the depot where the Tivoli Enterprise Monitoring Server is located.
When you install an ITCAM for Microsoft Applications 32-bit agent on a computer that has a preinstalled 64-bit version of the same agent, the following situations occur: **Situation 1**: The 32-bit agent is not installed. However, when you run the **KinCinfo** command, the 32-bit agent is displayed in the list of installed components. **Situation 2**: The preinstalled 64-bit agent stops running.	**Situation 1**: No solution is available for this problem. **Situation 2**: Restart the 64-bit agent.
If you have installed a 64-bit agent for ITCAM for Microsoft Applications, information about the agent processes is not displayed in the Kinviewer window.	No solution is available for this problem at this time.
When you install a 32-bit agent for ITCAM for Microsoft Applications, the following message is displayed under the **Install the following features** list, : `Undefined GSK component:IBM GSKit Security Interface`	Ignore this message and proceed with the installation.
You have preinstalled agents of earlier versions of IBM Tivoli Monitoring for Microsoft Applications on your computer. When you run the ITCAM for Microsoft Applications installation wizard to upgrade the agent to V6.2.2, the Select Features window displays a list of all the agent features that you can install. The installed agents are selected by default. If you do not want to upgrade the installed features, you cannot clear the default selection.	Run the `setup.exe` file of the Windows OS agent V6.2.2 or later to install the Tivoli Enterprise Monitoring Agent Framework. Then, upgrade the preinstalled IBM Tivoli Monitoring for Microsoft Applications agents.
While installing the ITCAM for Microsoft Applications agent, though the Tivoli Enterprise Monitoring Agent Framework is a mandatory feature, you can specify not to install the Tivoli Enterprise Monitoring Agent Framework. However, even if you specify not to install the Tivoli Enterprise Monitoring Agent Framework, the Tivoli Enterprise Monitoring Agent Framework is installed.	No solution is available for this problem at this time.

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

Problem	Solution
You have installed two 32-bit Microsoft Application agents and the 32/64-bit Agent Compatibility Package (ACP) from the ITCAM for Microsoft Applications 64-bit agent. You cannot install additional 32-bit Microsoft application agents on the same managed system.	Run the Windows OS agent V6.2.2, Fix Pack 2 `setup.exe` file to install the 32/64-bit Agent Compatibility Pack (ACP). You can also reinstall the ACP from the 64-bit agent ITCAM for Microsoft Applications V6.2.2 folder.
After you upgrade ITCAM for Microsoft Applications from an earlier version to V6.2.2, the following entries are created in the Add or Remove Programs window: • IBM Tivoli Monitoring for Microsoft Applications • IBM Tivoli Monitoring	Ignore **IBM Tivoli Monitoring for Microsoft Applications** in the Add or Remove Programs window. If you want to modify or remove the installed agents in IBM Tivoli Monitoring for Microsoft Applications, use **IBM Tivoli Monitoring** from the Add or Remove Programs window.
The configuration panel is blank on 64-bit Windows systems where the Tivoli Enterprise Monitoring Agent Framework (component GL) is version 06.23.00.00 or 06.23.01.00.	Check the GL component version by running kincinfo -t GL from a Windows command line. Example: `%CANDLE_HOME%\InstallITM\kincinfo -t GL` If the GL component version is 06.23.00.00 or 06.23.01.00, take one of the following actions: • **Preferred action:** Upgrade the Windows OS Agent to Version 6.2.3 Fix Pack 2. • **Alternate action:** Install the Agent Compatibility (AC) component from the IBM Tivoli Monitoring V6.2.3 Fix Pack 1 media. See Installing the Agent Compatibility (AC) component (http://pic.dhe.ibm.com/infocenter/tivihelp/v15r1/topic/com.ibm.itm.doc_6.2.3fp1/itm623FP1_install199.htm#acpinstall).

Table 4. General problems and solutions for uninstallation

Problem	Solution
On Windows systems, uninstallation of IBM Tivoli Monitoring fails to uninstall the entire environment.	Be sure that you follow the general uninstallation process described in the *IBM Tivoli Monitoring Installation and Setup Guide*: 1. Remove Tivoli Enterprise Monitoring Server Application support by completing the following steps: a. Use Manage Tivoli Enterprise Monitoring Services. b. Select **Tivoli Enterprise Monitoring Server**. c. Right-click and select **Advanced**. d. Select **Remove TEMS application support**. e. Select the agent to remove its application support. 2. Uninstall the monitoring agents first, as in the following examples: • Uninstall a single monitoring agent for a specific database. -OR- • Uninstall all instances of a monitoring product, such as IBM Tivoli Monitoring for Databases. 3. Uninstall IBM Tivoli Monitoring.

Table 4. General problems and solutions for uninstallation (continued)

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*.
IBM Tivoli Monitoring might not be able to generate a unique name for monitoring components because of the truncation of names that the product automatically generates.	If the agent supports multiple instances, IBM Tivoli Monitoring automatically creates a name for each monitoring component by concatenating the subsystem name, host name, and product code separated by colons (*subsystem_name*:*hostname*:KGB). **Note:** When you monitor a multinode system, such as a database, IBM Tivoli Monitoring adds a subsystem name to the concatenated name, typically a database instance name. The length of the name that IBM Tivoli Monitoring generates is limited to 32 characters. Truncation can result in multiple components having the same 32-character name. If this problem happens, shorten the *hostname* portion of the name as follows: 1. Open the configuration file for the monitoring agent, which is located in the following path: • **On Windows:** *install_dir*\tmaitm6\K*product_code*CMA.INI. For example, the product code for the Monitoring Agent for Windows OS is NT. The file name is `KNTCMA.INI`. • **On UNIX and Linux:** `itm_home/config/`*`product_code`*`.ini` and *`product_code`*`.config`. For example, the file names for the Monitoring Agent for UNIX OS is `ux.ini` and `ux.config`. 2. Find the line that begins with `CTIRA_HOSTNAME=`. 3. Type a new name for host name that is a unique, shorter name for the host computer. The final concatenated name including the subsystem name, new host name, and KGB, cannot be longer than 32 characters. **Note:** You must ensure that the resulting name is unique with respect to any existing monitoring component that was previously registered with the Tivoli Enterprise Monitoring Server. 4. Save the file. 5. Restart the agent.
An error message is displayed stating: `The agent action REMOVEINSTANCE failed with a return code of 3 for product QB`.	Do not manually remove the Microsoft BizTalk Server agent instance. Instead, uninstall the Microsoft BizTalk Server agent to remove the agent instance.
The software inventory tag for the agent on UNIX and Linux systems is not removed during uninstallation of the agent.	After uninstalling the agent, manually remove the file named *`full name of agent`*`.cmptag` from the `$CANDLEHOME/properties/version/` directory.

Table 4. General problems and solutions for uninstallation (continued)

Problem	Solution
You have installed the Windows OS agent V6.2.2 or later on your computer. The Windows OS agent does not start if you uninstall a 32-bit agent for ITCAM for Microsoft Applications by using the following methods: • The `silent_agent.txt` file • The command: `tacmd removeSystem -t` *`agentcode`* `-n` *`node`* For example, `tacmd removeSystem –t qp –n Primary:MachineName:NT` • The **Remove** option on the Tivoli Enterprise Portal. The following error message is displayed: `The service did not respond to the start or control request in a timely fashion. KCICF5100E: Unable to start, see Event Log for information.`	Use the following steps to resolve this problem: 1. In the `KGLWICMA.VER` and `KUIWICLI.VER` files in the `InstallITM/ver` directory, lower the current `VRMF` values. For example, if the current value is 06220000, change this value to 06210000. 2. Run the `setup.exe` file for the Windows OS agent to install the Tivoli Enterprise Monitoring Agent framework. 3. Start the Windows OS agent. **Note:** If **IBM Tivoli Monitoring** is not displayed in the Add or Remove Programs window, run the `setup.exe` file for ITCAM for Microsoft Applications to install the Tivoli Enterprise Monitoring Agent Framework. You can find the `setup.exe` file in the `Agent_64bit\WINDOWS` directory.
You have a 32-bit agent of ITCAM for Microsoft Applications installed on your computer. If you uninstall the 32-bit agent, two entries of IBM Tivoli Monitoring are created in the Add or Remove Programs window in the following situations: • With the 32-bit agent, you have Windows OS agent V6.2.2 or later installed on a managed system and you uninstall the 32-bit agent from the Tivoli Enterprise Portal or by using the command: `tacmd removeSystem -t <agentCode> -n <node>` • With the 32-bit agent, you have 64-bit agent of ITCAM for Microsoft Applications installed on a managed system and you uninstall the 32-bit agent using the `silent_agent.txt` file. In both the situations, when you uninstall the 32-bit agent, the preinstalled agent stops running.	Restart the preinstalled agent. Ignore the **IBM Tivoli Monitoring** entry for V6.2.1 in the Add or Remove Programs window. To modify or remove the installed agents, use the **IBM Tivoli Monitoring** entry for V6.2.2 in the Add or Remove Programs window.

Table 4. General problems and solutions for uninstallation (continued)

Problem	Solution
When the agent is installed using group deployment, deploygroup was run multiple times. The group deployment starts and completes successfully, but there were multiple entries in the Deploy Status Summary workspace on the Tivoli Enterprise Portal. When the command tried to install multiple times, the additional installations were queued and then were in failed state though the agent was deployed successfully. **Note:** • When the bundle group contains a single bundle and the deployment group contains more than one member (managed system of the same type as AIX or Linux), the deployment is successful on both systems. • When the bundle group contains more than one bundle and the deploy group contains single or multiple members, the deployment will be executed on each group member (managed system) depending on the members present in the bundle group and deploy group. • The command creates a transaction for each XX bundle for each target system; the bundle matching the operating system for the deployment member is processed successfully; and remaining transactions were in a queued or failed state.	There is no solution at this time.

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 IBM Tivoli Composite Application Manager Agent for Lotus Domino, 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.
The Domino Server name can be parsed incorrectly when remotely deploying the monitoring agent using the canonical server name.	Use the Domino Server shortname *xxx/yy* for the **config.KGB_SERVER** input parameter when using the **tacmd** command.

Table 5. Remote deployment problems and solutions (continued)

Problem	Solution
Remotely configuring a Monitoring Agent for Lotus Domino instance overwrites an existing instance instead of providing a message that the instance exists	Use **tacmd listSystems** before running **itmcmd addSystem** before configuring a new instance.
On Windows systems, if the Agent for Lotus Domino is upgraded remotely, the agent instances configured before upgrading are lost.	Run `%CANDLE_HOME%\InstallITM\updategbinstance.bat` to restore and upgrade the instances.
Remote deployment might fail if the monitoring server support, portal server support, and the Agent for Lotus Domino support for the desktop and browser client are installed on the same computer.	Deploy the Agent for Lotus Domino to a computer without monitoring server support, portal server support, and Agent for Lotus Domino desktop and browser client support. After deploying without support, install the support if required.
If you remotely deploy the BizTalk Server agent V6.2.2 and ITCAM for Microsoft Applications on a computer, and log in as a user that does not have administrator privileges, the agent is not deployed. The following error message is displayed: `The property _WIN32_STARTUP_.LocalSystem is invalid for version 062200000 of the BizTalk agent.`	You must have administrator privileges on the computer where you are deploying the agent.
The IBM Tivoli Composite Application Manager for Microsoft Cluster Server Agent, V622 displays data for the attributes groups only on Windows Server 2008 R2 for the following attribute groups: • Clustered Shared Volume • Clustered Shared Volume IO • Global update messages • MRR Messages • Network Reconnections • Network Messages • Resource Control Manager • Resources Summary The agent does not display the data on Windows Server 2003 and Windows Server 2008 for the above mentioned attribute groups.	No solution is available for this problem at this time.
On zLinux servers, you cannot remotely configure the Agent for Lotus Domino instance through the portal client after upgrading to IBM Tivoli Monitoring V6.2.1, Interim Fix 2.	Add the following lines to `lz.ini` under `$CANDLEHOME/config`: • `CTIRA_HOSTNAME=$RUNNINGHOSTNAME$` • `CTIRA_SYSTEM_NAME=$RUNNINGHOSTNAME$` Then restart the operating system monitoring agent.

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 12. The trace option settings that you can set on the `KBB_RAS1=` and `KDC_DEBUG=` lines potentially generate large amounts of data.
The following attribute groups and situations based on these attribute groups are not supported on the BizTalk Server 2004 and BizTalk Server 2006: • BizTalk .NET Adapter for SAP • BizTalk .NET Adapter for Oracle DB • BizTalk .NET Adapter for Siebel • BizTalk .NET Adapter for Oracle E-Business Suite • BizTalk .NET Adapter for SQL	No solution is available for this problem at this time.
The attribute groups that belong to the Human Workflow Services Navigator item and situations based on these attribute groups are not supported on the BizTalk Server 2009. The BizTalk agent provides cross-link from the Human Workflow Services Navigator item to the Workflow Foundation workspace of the .NET Framework agent. The BizTalk Server 2009 uses Windows Workflow Foundation instead of using Human Workflow Services.	No solution is available for this problem at this time.
When using the F1 key or selecting **Help** > **Contents and Index**, you receive a message in your Microsoft Internet Explorer browser that states, "It seems javascript is disabled in your browser, please enable it and reload again, or click here to view without javascript." If you select 'here', the Tivoli Enterprise Portal V6.1 Help is displayed, but the agent help is not.	Ensure that the local site is added to the trusted site for the browser, and then enable the javascript.
The following error messages are displayed: • `Functionality Test: Server not Responding` • `In the ../logs/hostname_gb_xxxxxxxx.log: The ID file being used is: /local/notesdata/server.id Enter password (press the Esc key to abort):`	Follow the steps in "Clearing the Domino Server password" in the *IBM Tivoli Composite Application Manager Agent for Lotus Domino Installation and Configuration Guide* to clear the password on the Domino Server.
Historical data collection is not working on UNIX operating systems.	Starting the Monitoring Agent for Lotus Domino as root can prevent historical data collection from working. Check the permissions on the following directory: `$CANDLEHOME/`*`interp`*`/gb/hist/`*`instanceName`*. Use one of the following steps if this directory was created as root: • Change the ownership of this directory to the Domino user ID and group for the InstanceName —OR— • Delete the history data file and restart using the InstanceName Domino user ID, which recreates the directory with the correct ownership. Do not delete the directory.

Table 6. Agent problems and solutions (continued)

Problem	Solution
On UNIX or Linux systems, starting Manage Tivoli Enterprise Monitoring Services fails and you receive the following messages: `The file access permissions do not allow the specified action. install_Dir/bin/CandleManage: install_Dir/logs/CandleManage.log 0403-005 Cannot create the specified file. A problem occurred. See logs/CandleManage.log for details.`	Correct the permissions on the `CandleManage.log` file. The permissions default to RW R R, or 644. Only the owner has write access to this file unless you change the file permissions. The owner is the user ID that was the first user to start the window. You can change the permissions of the log file to 666 to allow anyone to write to the log. You can use the following command to change the permissions: `chmod 666 install_dir/logs/CandleManage.log` **Note:** Consult your system administrator before changing the file permissions.
When starting a Monitoring Agent for Lotus Domino instance using itmcmd agent -o start gb, you receive the following error: `itmcmd agent [-l] [ -h install_dir] [ -o option ] [ -p option ] [-c] start|stop pc  Use -c option to NOT regenerate config file.`	Include the **`(-o) instance`** option in the **`itmcmd agent`** command as shown in the following example, and rerun the command: `itmcmd agent -o` *`instance`* `start gb`
The **`kgbstart.sh`** script fails (kgbstart.sh <defunct> process and where logs indicate that a library failed to load).	The Notes® user must define the Notes group correctly.
The **`itmcmd manage`** command fails.	Using CandleManage, the Monitoring Agent for Lotus Domino (kgb) has to be stopped and started using a Notes ID. `CandleManage.log` on UNIX has permissions rwx rxx rxx (644). If root starts CandleManage the first time, when a non-root ID starts CandleManage the start fails because CandleManage cannot reallocate the log file. Change the log file permissions to rwx rwx rwx (666) so any user can start CandleManage. (The permissions on the executable are 777). When running the itmcmd manage command (previously known as the CandleManage command), the Monitoring Agent for Lotus Domino (kgb) must be stopped and restarted by using a Notes ID. The CandleManage.log file on UNIX systems has rwx rxx rxx (644) permissions. If a root user ID runs the itmcmd manage command the first time, when a non-root IDruns the itmcmd manage command, the start fails because the command cannot reallocate the log file. Change the log file permissions to rwx rwx rwx (666) so that any user can run the itmcmd manage command. (Set the permissions on the itmcmd manage command to 777).
In the Availability Workspace, the status of the Domino Server (using the NSPingServer API call) is not responding and the Domino Server is up.	Check the kgbclient log for the error message returned by the NSPingServer API call. For UNIX systems, the log is: *`hostname`*`_gb_`*`instance_name`*`_kgbclient_`*`timestamp-nn`*`.log` For Windows systems, the log is: *`hostname`*`_gb_`*`instance_name`*`_KGBCLIENT_`*`instance_name_timestamp-nn`*`.log`

Table 6. Agent problems and solutions (continued)

Problem	Solution
The kgbclient process exits and is not restarted. No data is returned to the workspaces. The Availability workspace shows that the Domino Server is shutting down.	When the Domino Server is shut down, the kgbclient data collection process for the Monitoring Agent for Lotus Domino must also be shut down and restarted after the Domino Server has stopped. If the Domino Server process fails to stop within a 5-minute time period, then the kgbclient process is not restarted. To correct this condition, the Monitoring Agent for Lotus Domino must be stopped and restarted manually. This action might require a forced shutdown of the Domino Server using the nsd script to clean up hung processes that were left behind by the incomplete shutdown of the Domino Server.
When using the **itmcmd agent** commands to start or stop this monitoring agent, you receive the following error message: `MKCIIN0201E Specified product is not configured.`	Include the command option **-o** to specify the instance to start or stop. The instance name must match the name used for configuring the agent. For example: `./itmcmd agent -o Test1 start` *`two-letter_product_code`* For more information about using the itmcmd commands, see the *IBM Tivoli Monitoring Command Reference*.
After restarting your computer containing the BizTalk Server and Microsoft BizTalk Server agent, the agent starts without loading certain Performance Counters. The following attribute groups might not show data: • All Adapters • Host Throttling • Messaging • Orchestrations	1. After the computer restarts, recycle the Microsoft BizTalk Server agent from the Manage Tivoli Enterprise Services window. It captures each counter and display data for each attribute group in the Tivoli Enterprise Portal Client. 2. Mark the Microsoft BizTalk Server agent, denoted as KQBCMA, as a dependent service for the BizTalk host instance service "BTSSvc $*host_instance_name*". The Microsoft BizTalk Server agent and BizTalk Server start successfully and show the necessary data for the attribute groups. **Note:** Using this solution has the following disadvantages: • For each host instance created, you must modify the monitoring agent service dependency each time. • If one of the BizTalk Host instance stops, the Microsoft BizTalk Server agent also stops. • If the Microsoft BizTalk Server agent contains multiple Host Instances and one of Host Instance services goes down, the Microsoft BizTalk Server agent service goes into a stopped state. 3. Define custom situations for the above attribute groups. After a situation is triggered, restart the BizTalk agent to capture all performance objects.
The Performance Object Status query has an incomplete description.	The query and Situation Editor windows can only display a maximum of 210 characters for the description. No solution is available for this problem at this time.

Table 6. Agent problems and solutions (continued)

Problem	Solution
Some of the performance counters are unavailable for BizTalk 2004. The following performance counters do not return any data: • MessageBox • File Adapter • FTP Adapter • SMTP Adapter • HTTP Adapter • SOAP Adapter • MSMQ Adapter • SQL Adapter	No solution is available for this problem at this time.
After creating subsequent, non-default Host Instances in the Microsoft BizTalk Server agent, you might not be able to see data rows for the newly created Host Instances. These Host Instances might not be seen in the following views: • Adapters • Host Throttling • Messaging • Orchestrations	After creating subsequent Host Instances for the Microsoft BizTalk Server agent, restart the Microsoft BizTalk Server agent service to view data for newly created Host Instances in the Tivoli Enterprise Portal.
The Tivoli Enterprise Portal unexpectedly displays negative values for the following attributes: • Batches being processed (TDDS attribute group) • Records being processed (TDDS attribute group) • Events being processed (TDDS attribute group) • Active Receive Locations (Messaging attribute group) • Active Send Messages (Messaging attribute group)	No solution is available for this problem at this time. **Note:** Other attributes can also display negative values unexpectedly.
After restarting the Agent for Lotus Domino, the status `Domino Agent is starting and initializing`, is displayed and does not change.	Restart the monitoring agent. If the problem continues, check the Agent for Lotus Domino log files for any errors.
On Windows systems, if you delete the Agent for Lotus Domino instance history directory `$CANDLEHOME\TMAITM6\logs\History\KGB\`*`instance_name`*, the agent can no longer create history files after you restart the agent. The Agent for Lotus Domino stops soon after.	Manually recreate the `$CANDLEHOME\TMAITM6\logs\History\KGB\`*`instance_name`* directory. Reconfigure the historical data collection, and then restart the agent.

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.)
When configuring an instance node using NLV characters, after clicking OK, the window is not displayed.	This problem is a current limitation. Check future releases or service levels of IBM Tivoli Monitoring for this fix.
No "space" between words is displayed for the strings in the drop-down list of Advanced Filters panel.	This problem is a current limitation. Check future releases or service levels of IBM Tivoli Monitoring for this fix.
Names are truncated on the Properties panel.	Reopening the Properties panel might display the names correctly. If this solution does not work, this problem is a current limitation with no solution. Check future releases or service levels of IBM Tivoli Monitoring for this fix.
Simplified Chinese uses Traditional Chinese font on the GUI.	This problem is a current limitation. Check future releases or service levels of IBM Tivoli Monitoring for this fix. All text strings use the Traditional Chinese font on the GUI; however, help accessed through F1 might appear in Simplified Chinese.

Table 6. Agent problems and solutions (continued)

Problem	Solution
On UNIX or Linux systems, if the notes.log monitoring does not work, and an error message is displayed similar to the following message in the hostname_gb_<*instance_name*>_kgbagent_timestamp-nn.log file: • (49E59AAB.0051-1:query.cpp,624,"load _agents") Starting IRA agent for attribute group Domino_Log_File<KGB> • (49E59AAB.0052-1:logmonitorqueryclass .cpp,403,"register Callbacks") Failed to load kump610 shared library	1. If you have no Universal Agent on the computer where the Agent for Lotus Domino resides, install the latest Universal Agent. If Universal Agent is installed, make sure that it is version 6.2.1 or higher. 2. Copy libkum0610.so, libkump610.so, and libkums1API.so files on the Universal Agent to the Agent for Lotus Domino private library path.: cp $CANDLEHOME/tmaitm6/<interp>/lib/ libkum0610.so $CANDLEHOME/<interp>/gb/lib cp $CANDLEHOME/tmaitm6/<interp>/lib/ libkump610.so $CANDLEHOME/<interp>/gb/lib cp $CANDLEHOME/tmaitm6/<interp>/lib/ libkums1API.so $CANDLEHOME/<interp>/gb/lib For example, if the platform is SuSE Linux x86-32, and CANDLEHOME is /opt/IBM/ITM, issue the following commands: cp /opt/IBM/ITM/tmaitm6/li6263/lib/libkum0610.so /opt/IBM/ITM/li6263/gb/lib cp /opt/IBM/ITM/tmaitm6/li6263/lib/libkump610.so /opt/IBM/ITM/li6263/gb/lib cp /opt/IBM/ITM/tmaitm6/li6263/lib/libkums1API.so /opt/IBM/ITM/li6263/gb/lib
You want to use a name for your collection that includes spaces in the path name.	The path name must be enclosed in quotation marks ("*example name*") as in the following examples: • $CANDLEHOME/bin/tacmd addSystem -t gb -n tivp6clp2:KUX -p INSTANCE="tivp6clp2" • config.KGB_CHECK_DB_INCLUDE_PATH="*" • config.KGB_IWHOSTNAME="none" • config.KGB_NOTESINIPATH="/opt/ibm/DD XH/lotus/notesdata" • config.KGB_CHECK_DB_VIEW_CONFIG_FILE="none" • config.KGB_LOG_EXCLUDE="none" • config.KGB_CHECK_DB_EXCLUDE_PATH="none" • config.KGB_LOG_INCLUDE="none" • config.KGB_LOGERROR="Log File is Full | Max Hop Count Exceeded" • config.KGB_SERVER="tivp6clp2/ibm" • config.KGB_CHECK_DB_INTERVAL="3600" • config.KGB_LOGFILE="none" • config.KGB_IWPORT="none"

Table 6. Agent problems and solutions (continued)

Problem	Solution
You have installed a 32-bit Windows OS agent and a 64-bit agent of ITCAM for Microsoft Applications on a 64-bit managed system. If the 64-bit agent abruptly stops running, the Agent Management Service (AMS) fails to restart the agent. The status of the agent in the Agents' Management Status view changes to Unmanaged.	There are two possible solutions to this problem: **Solution 1:** Restart the 64-bit agent and then use the following steps to restart the AMS: 1. Right-click the agent, which is in the unmanaged state, and click **Take Action > Select**. 2. From the **Name** list in the Action panel, select **AMS Start Management**. 3. In the Destination Systems panel, select the managed system node for the agent management that you want to start. 4. Click **OK**. **Solution 2:** Install the Windows OS agent V6.2.2, Fix Pack 2.

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
The name of the attribute does not display in a bar chart or graph view.	When a chart or graph view that includes the attribute is scaled to a small size, a blank space is displayed instead of a truncated name. To see the name of the attribute, expand the view of the chart until sufficient space is available to display all characters of the attribute name.
At the end of each view, you see the following Historical workspace KFWITM220E error: `Request failed during execution`.	Ensure that you configure all groups that supply data to the view. In the Historical Configuration view, ensure that data collection is started for all groups that supply data to the view.
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.
No IBM Tivoli IntelliWatch® data is displayed.	You must have IBM Tivoli IntelliWatch installed to see data about this application.

Table 7. Workspace problems and solutions (continued)

Problem	Solution
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*.
After restarting a system with the BizTalk Server and the Microsoft BizTalk Server agent both configured to autostart, the Microsoft BizTalk Server agent workspaces do not contain data.	Restart the Microsoft BizTalk Server agent manually.
If you install an earlier version of the .Microsoft Net Framework agent (V6.2.0 or earlier) on a workstation and select a cross-linked workspace related to the Microsoft .Net Framework agent, the following error message is displayed on the portal: `KFWITM081E: The link target cannot be found. The link definition might be incorrect or the target is unavailable.`	Install the latest version of the Microsoft .Net Framework agent that is available in the installation package.
The workspaces that are cross-linked with the Microsoft .NET Framework agent do not show a filtered view for the BizTalk-related instances.	Filter the BizTalk Server instances manually.
No predefined workspaces are available for attributes in the following attribute groups: • BizTalk .NET Adapter for SAP • BizTalk .NET Adapter for Oracle DB • BizTalk .NET Adapter for Siebel • BizTalk .NET Adapter for Oracle E-Business Suite • BizTalk .NET Adapter for SQL	You can create workspaces for attributes in these attribute groups.
Data collected from superseded attribute groups are not visible in a workspace.	Data is only collected every 30 seconds. If you change from the 64-bit version of the workspace to the 32-bit version of the workspace before 30 seconds, some of the data is returned blank.
You have installed a 32-bit agent for ITCAM for Microsoft Applications on a computer where a 64-bit Windows OS agent V6.2.2, Fix Pack 1 is installed. On the Tivoli Enterprise Portal, when you expand the **Windows OS** node, and select the **Agent Management Services** navigator item, the installation path of the agent is not correctly displayed in the Agents' Management Definitions view. Also, no data is displayed for the agent version and the build number in the Agents' Management Status view.	Upgrade the Windows OS agent from V6.2.2, Fix Pack 1 to V6.2.2, Fix Pack 2.
If the 32-bit OS agent and a 64-bit Microsoft Application agent are installed on the same managed system, Agent Management Services data is not displayed in the Agent's Runtime Status view of the agent. The Agent's Runtime Status view is available in the Agent Management Services workspace.	No solution is available for this problem at this time.

Table 7. Workspace problems and solutions (continued)

Problem	Solution
You have installed the ITCAM for Microsoft Applications agent and the Windows OS agent in the IPV6 environment. In the Agent Management Services navigator, the IP address in the Agents' Runtime Status view is displayed in the IPV4 format instead of the IPV6 format.	No solution is available for this problem at this time.
You have installed the Tivoli Enterprise Monitoring Server on z/OS®. In the Configuration panel of the History Collection Configuration window, if you have selected **TEMS** from the **Collection Location** list, the Tivoli Enterprise Portal does not display historical data for the following attribute groups: • ASP NET Applications • Availability • Event Log • Performance Object Status • Search	Reconfigure the history collection, and set the collection location as TEMA for these attribute groups.

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 12. For example, trace logs grow rapidly when you apply the `ALL` logging option.
Monitoring activity requires too many system resources.	See the information about disk capacity planning for historical data in the User Interface Reference for the agent for a description of the performance impact of specific attribute groups. If possible, decrease your use of the attribute groups that require greater system resources.
A formula that uses mathematical operators appears to be incorrect. For example, if you were monitoring a Linux system, the formula that calculates when **Free Memory** falls under 10 percent of **Total Memory** does not work: `LT #'Linux_VM_Stats.Total_Memory' / 10`	This formula is incorrect because situation predicates support only logical operators. Your formulas cannot have mathematical operators. **Note:** The Situation Editor provides alternatives to math operators. In the example, you can select the **% Memory Free** attribute and avoid the need for math operators.
You want to change the appearance of situations when they are displayed in the navigation tree.	1. Right-click an item in the navigation tree. 2. Click **Situations** in the menu. The Situation Editor window is displayed. 3. Select the situation that you want to modify. 4. Use the **State** menu to set the status and appearance of the Situation when it triggers. **Note:** The **State** setting is not related to severity settings in the Tivoli Enterprise Console.

Table 8. Situation problems and solutions (continued)

Problem	Solution
When a situation is triggered in the Event Log attribute group, it remains in the Situation Event Console as long as the event ID entry is present in the Event Log workspace. When this event ID entry is removed from the Event Log workspace on the Tivoli Enterprise Portal, the situation is also cleared even if the actual problem that caused the event is not resolved, and the event ID entry is also present in the Windows Event Viewer.	A timeout occurs on the cache of events for the NT Event Log group. Increase the cache time of Event Log collection to meet your requirements by adding the following variable and timeout value to the K*pc*ENV file for the agent (where *pc* is the two-letter product code): `CDP_NT_EVENT_LOG_CACHE_TIMEOUT=3600` This variable determines how long events from the NT Event Log are kept.
Events cannot be displayed in the (Tivoli Enterprise Console) view when a situation name is longer than 31 bytes. The situation name might appear truncated in the message column.	The situation name must be no more than 31 bytes long and cannot contain the hyphen (-) character. Recreate the situation using the specifications described in the preceding row.
After changing a situation name, the TEC (Tivoli Enterprise Console) view displays the original situation name in the message column.	Use **Create Another** to create a new situation. –OR– Use `situation_fullname` in the Event Detail view to check the actual situation name. Complete the following steps to access the event detail view: 1. Select the event. 2. Click **Details**. 3. Select the **Attribute list** tab and scroll the attribute list panel to `situation_fullname`.
In the Situation Formula Editor, text strings overlap or are not displayed correctly.	This problem is a current limitation. Check future releases or service levels of IBM Tivoli Monitoring for this fix.
When the Agent for Lotus Domino is upgraded from version 6.1 to 6.2.1, the situation associations might be lost if the monitoring server and portal server are installed on Windows.	Reassociate the situation manually.
If the Expert Advice for a situation contains a hyperlink to an external website (for example, a Microsoft TechNet website) and you click the hyperlink, the website opens in an external window. However, the external window stops responding.	The external window responds after you close the Preview window and Situation Editor window.
The situation for a specific agent is not visible in the Tivoli Enterprise Portal.	Open the Situation Editor. Access the All managed servers view. If the situation is not displayed, confirm that the monitoring server has been seeded for the agent. If not, seed the server, as described in the *IBM Tivoli Monitoring Installation and Setup Guide*.
The monitoring interval is too long.	Access the Situation Editor view for the situation that you want to modify. Check the **Sampling interval** area in the **Formula** tab. Adjust the time interval as required.
The situation did not activate at startup.	Manually recycle the situation as follows: 1. Right-click the situation and select **Stop Situation**. 2. Right-click the situation and select **Start Situation**. **Note:** You can permanently avoid this problem by selecting the **Run at Startup** check box of the Situation Editor view for a specific situation.

Table 8. Situation problems and solutions (continued)

Problem	Solution
The situation is not displayed.	Click the **Action** tab and check whether the situation has an automated corrective action. This action can occur directly or through a policy. The situation might be resolving so quickly that you do not see the event or the update in the graphical user interface.
An Alert event did not occur even though the predicate was correctly specified.	Check the logs, reports, and workspaces.
A situation fires on an unexpected managed object.	Confirm that you distributed and started the situation on the correct managed system.
The product did not distribute the situation to a managed system.	Click the **Distribution** tab and check the distribution settings for the situation.
The situation does not fire.	This problem can be caused when incorrect predicates are present in the formula that defines the situation. For example, the managed object shows a state that normally triggers a monitoring event, but the situation is not true because the wrong attribute is specified in the formula. In the **Formula** tab, analyze predicates as follows: 1. Click the **fx** icon in the **Formula** area. The Show formula window is displayed. a. Confirm the following details in the **Formula** area of the window: • The attributes that you intend to monitor are specified in the formula. • The situations that you intend to monitor are specified in the formula. • The logical operators in the formula match your monitoring goal. • The numeric values in the formula match your monitoring goal. b. (Optional) Select the **Show detailed formula** check box to see the original names of attributes in the application or operating system that you are monitoring. c. Click **OK** to dismiss the Show formula window. 2. (Optional) In the **Formula** area of the **Formula** tab, temporarily assign numeric values that immediately trigger a monitoring event. The triggering of the event confirms that other predicates in the formula are valid. **Note:** After you complete this test, you must restore the numeric values to valid levels so that you do not generate excessive monitoring data based on your temporary settings. For additional information about situations that do not fire, see "Situations are not firing" in the *IBM Tivoli Monitoring Troubleshooting Guide*.
Situation events are not displayed in the Events Console view of the workspace.	Associate the situation with a Navigator item. **Note:** The situation does not need to be displayed in the workspace. It is sufficient that the situation is associated with any Navigator item.

Table 8. Situation problems and solutions (continued)

Problem	Solution
You do not have access to a situation.	**Note:** You must have administrator privileges to complete these steps. 1. Click **Edit** > **Administer Users** to access the Administer Users window. 2. In the **Users** area, select the user whose privileges you want to modify. 3. In the **Permissions** tab, **Applications** tab, and **Navigator Views** tab, select the permissions or privileges that correspond to the user role. 4. Click **OK**.
A managed system seems to be offline.	1. Select **Physical View** and click the Enterprise Level of the navigator tree. 2. Click **View** > **Workspace** > **Managed System Status** to see a list of managed systems and their status. 3. If a system is offline, check network connectivity and the status of the specific system or application.
Associations of custom situations with navigator items break after upgrading the agent support.	Create the associations again by completing the following steps: 1. Right-click the navigator item, and then click **Situations**. A list of situations that are associated with the navigator item is displayed. **Note:** If the custom situation that you want to associate is available in the list, ignore remaining steps. 2. Click the **Set Situation filter criteria** icon. 3. Select the **Eligible for Association** check box, and then click **OK**. A list of situations is displayed. 4. Right-click the situation that you want to associate with the navigator item, and then click **Associate**. The situation is associated with the navigator item.

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 7.

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.

Table 9. Take Action commands problems and solutions (continued)

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

Chapter 4. Support information

If you have a problem with your IBM software, you want to resolve it quickly.

IBM provides the following ways for you to obtain the support you need:

Online

The following websites contain troubleshooting information:

- Go to the IBM Software Support website (http://www.ibm.com/support/entry/portal/software) and follow the instructions.
- Go to the Application Performance Management Wiki (http://www.ibm.com/developerworks/servicemanagement/apm/index.html). Feel free to contribute to this wiki.

IBM Support Assistant

The IBM Support Assistant (ISA) is a free local software serviceability workbench that helps you resolve questions and problems with IBM software products. The ISA provides quick access to support-related information and serviceability tools for problem determination. To install the ISA software, go to the IBM Support Assistant website (http://www.ibm.com/software/support/isa).

Chapter 5. Informational, warning, and error messages overview

Messages relay information about how the system or application is performing and can alert you to exceptional conditions when they occur.

Messages are sent to an output destination, such as a file, database, or console screen.

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

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

Message format

The message format contains a message ID and text, an explanation, and an operator response.

Agent messages have the following format:

Message ID and text
Explanation
Operator Response

The message ID has the following format:

`CCC####severity`

where:

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

K*XX* Three-character product code for the agent.

Number of the message

severity

Severity of the message. Three levels of severity are used:

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

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

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

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

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

Agent messages

The following messages apply to IBM Tivoli Composite Application Manager Agent for Lotus Domino.

KGB5023I

`The Domino Server service was started.`

Explanation:
The Domino Server service was started.

Operator response:
None.

KGB5024E

`The Domino Server service was not started.`

Explanation:
The Domino Server service was not started.

Operator response:
None.

KGB5031I

`Responding`

Explanation:
The Domino Server is responding.

Operator response:
None.

KGB5032I

`Not Responding`

Explanation:
The Domino Server is not responding.

Operator response:
None.

KGB5033I

`Responding`

Explanation:
At least one server in the cluster is responding.

Operator response:
None.

KGB5034I

`Not Responding`

Explanation:
All Domino Servers in the cluster are not responding.

Operator response:
None.

KGB5035I

`Does Not Exist`

Explanation:
The Domino Server is not in a cluster.

Operator response:
None.

KGB5036I
`Does Not Exist`

Explanation:
The notes.ini file was not found using the path specified.

Operator response:
Reconfigure the instance for the correct local full path to the notes.ini file.

KGB5037I
`kgbconfig.sh must be run on the Monitoring Agent for Lotus Domino`

Explanation:
The kgbconfig.sh shell script must be run on the Monitoring Agent for Lotus Domino prior to starting the first instance.

Operator response:
Login to the system where the Monitoring Agent for Lotus Domino is installed, and run the kgbconfig.sh shell script.

KGB5038I
`The Monitoring Agent for Lotus Domino must be started as the Domino user.`

Explanation:
When starting the Monitoring Agent for Lotus Domino, you must use the Domino User ID.

Operator response:
Switch to the Domino User ID prior to starting the Monitoring Agent for Lotus Domino.

KGB5039I
`The Windows computer must be rebooted.`

Explanation:
After installation of the Monitoring Agent for Lotus Domino on a Windows computer, the computer must be rebooted to pick up the new environment variables.

Operator response:
Reboot the Windows computer, and restart the Monitoring Agent for Lotus Domino.

KGB5040I
`Re-cycling Domino agent.`

Explanation:
The Domino Server is shutting down. The Monitoring Agent for Lotus Domino data collection and availability has stopped until the Domino Server has stopped. After the Domino Server has stopped completely, the monitoring agent data collection and availability restarts automatically.

Operator response:
None.

KGB5041I
`Domino agent is starting and initializing.`

Explanation:
The Monitoring Agent for Lotus Domino is in the process of starting. After the monitoring agent has started completely, the agent availability is initialized.

Operator response:
None.

KGB5042I
`Restricted.`

Explanation:
The Domino Server is RESTRICTED in the cluster.

Operator response:
None.

KGB5043I
`Some but not all other Domino servers responding in the cluster.`

Explanation:
Some Domino servers in the cluster are not available.

Operator response:
None.

KGB5044I
`Only one Domino server responding in the cluster.`

Explanation:
Only one Domino server in the cluster is available.

Operator response:
None.

KGB5050E
`intelliwatch/iwparam.nsf database not found or Domino Server is not responding.`

Explanation:
The attempt to open the intelliwatch/iwparam.nsf database failed, or the Domino Server is not responding.

Operator response:
Start the Domino Server and make sure the intelliwatch/iwparm.nsf database exists.

KGB5051E
`A failure occurred writing to the intelliwatch/iwparam.nsf database.`

Explanation:
The attempt to write to the intelliwatch/iwparam.nsf database failed.

Operator response:
Determine the error code from the logs written to the intelliwatch/iwparm.nsf database.

Appendix. ITCAM for Applications documentation library

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

For information about how to access and use the publications, see **Using the publications** (http://pic.dhe.ibm.com/infocenter/tivihelp/v61r1/topic/com.ibm.itm.doc_6.3/common/using_publications.htm).

To find publications from the previous version of a product, click **Previous versions** under the name of the product in the **Contents** pane.

Documentation for this product is in the ITCAM for Applications Information Center (http://publib.boulder.ibm.com/infocenter/tivihelp/v24r1/topic/com.ibm.itcama.doc_7.2.1/welcome_apps721.html):

- Quick Start Guide
- 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 Information Center (http://pic.dhe.ibm.com/infocenter/tivihelp/v61r1/index.jsp) to gain prerequisite knowledge:

- *IBM Tivoli Monitoring Administrator's Guide*
- *IBM Tivoli Monitoring Installation and Setup Guide*
- *IBM Tivoli Monitoring High Availability Guide for Distributed Systems*
- IBM Tivoli Monitoring: Installation and Configuration Guides for the following agents: Operating System agents and Warehouse agents
- IBM Tivoli Monitoring: User's Guides for the following agents: Agentless OS monitors, Log file agent, System p agents, Systems Director base agent
- *IBM Tivoli Monitoring Agent Builder User's Guide*
- *IBM Tivoli Monitoring Command Reference*
- *IBM Tivoli Monitoring: Messages*
- *IBM Tivoli Monitoring Troubleshooting Guide*
- IBM Tivoli Monitoring: References for the following agents: Operating System agents and Warehouse agents
- IBM Tivoli Monitoring: Troubleshooting Guides for the following agents: Operating System agents and Warehouse agents
- *Tivoli Enterprise Portal User's Guide*

Related publications

The publications in related information centers provide useful information.

See the following information centers, which you can find by accessing Tivoli Documentation Central (https://www.ibm.com/developerworks/community/wikis/home?lang=en#!/wiki/Tivoli%20Documentation%20Central):

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

Tivoli Monitoring Community on Service Management Connect

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

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

For information about Tivoli products, see the Application Performance Management community (http://www.ibm.com/developerworks/servicemanagement/apm/index.html).

Connect, learn, and share with Service Management professionals. Get access to developers and product support technical experts who provide their perspectives and expertise. You can use SMC for these purposes:

- Become involved with transparent development, an ongoing, open engagement between other users and IBM developers of Tivoli products. You can access early designs, sprint demonstrations, product roadmaps, and prerelease code.
- Connect one-on-one with the experts to collaborate and network about Tivoli and the (enter your community name here) 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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