

IBM Tivoli Monitoring V6.2.3

Setting up trace level correctly for the VMWare VI agent



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IBM Tivoli® Monitoring V6.2.3, Setting up trace level correctly for the VMWare VI agent

Objectives

When you complete this module, you can perform these tasks:

- Describe the parts of the VMWare VI agent
- When support requests you to, set the trace level correctly
- Locate requested log files

This module contains the main steps to set a trace level and find the created logs of the VMWare VI agent.

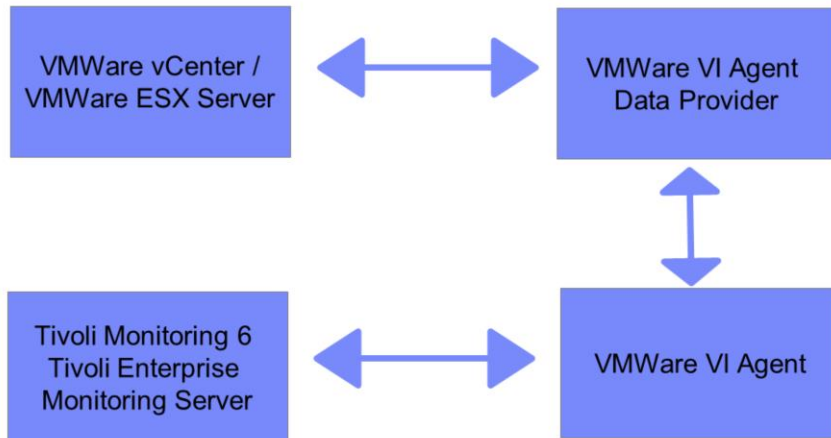
When you complete this module, you can perform these tasks:

- Describe the parts of the VMWare VI agent
- Set the trace level correctly when requested to by support
- Find the requested logs

VMWare VI agent processes

VMWare VI Agent consists of two parts:

- Data provider (Java based)
- Agent



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The VMWare VI agent consists of two parts: the data provider and the VMWare VI agent itself.

The data provider is a Java based process started automatically when starting the VMWare VI agent. It is responsible for connecting to the VMWare server and collects all the data from the VMWare servers. It returns this data to the VMWare VI agent.

The VMWare VI agent is connected to the monitoring server, and sends all the data that is being returned from the Data Collector to the IBM Tivoli Monitoring 6 environment. It is responsible for handling situations, collecting historical data, and passing data from the data provider to the monitoring server.

Debug guideline

Before setting up tracing, think about the process that needs to be traced:

- Data provider
 - No values are being returned from the VMWare server
 - The values from the VMWare server are incorrect
- Agent
 - The agent does not connect
 - The situations do not start or behave incorrectly
 - There are problems with historical data

Since the VMWare VI agent consists of two different parts or processes, you need to be clear which part of the agent needs to be investigated.

Since the data provider collects the data from the VMWare server, it needs to be investigated when the values being returned are incorrect or if no data is being returned.

The agent itself needs to be investigated if it is not being seen in the Tivoli Enterprise Portal console or not listed as a managed system. Also, if the distributed situations do not start or behave incorrectly, or if there is a problem with the historical data, then you should take a closer look at the agent.

Determining the IBM Tivoli Monitoring 6 installation directory

Before setting up tracing, you need to know where IBM Tivoli Monitoring 6 is installed:

– Windows®: `kincinfo -t`

- Check for the output “CandleHome :”, example
CandleHome : C:\IBM\ITM
- Check for the line “VM Monitoring Agent for VMware VI” in column PLAT in “PRODUCT DESC” section
→ WIX64 = 64bit
→ WINNT = 32bit

– Linux®: `cinfo -i`

Check for the output “CandleHome:”, example
CandleHome: /opt/IBM/ITM/

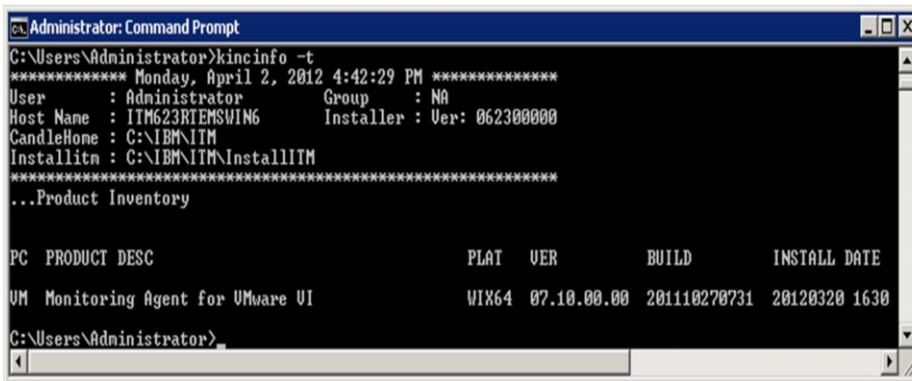
To set up the traces, first you need to know where IBM Tivoli Monitoring 6 is installed. If you already know, you can skip this step.

If you are not sure, run the commands you can see here on the agent system. These commands help you to determine where IBM Tivoli Monitoring 6 is installed. The value behind CandleHome is the installation directory.

On Windows, you need to know if this is a 32bit or 64bit agent installation.

On the next two slides, you find example screen captures.

Example for Windows output



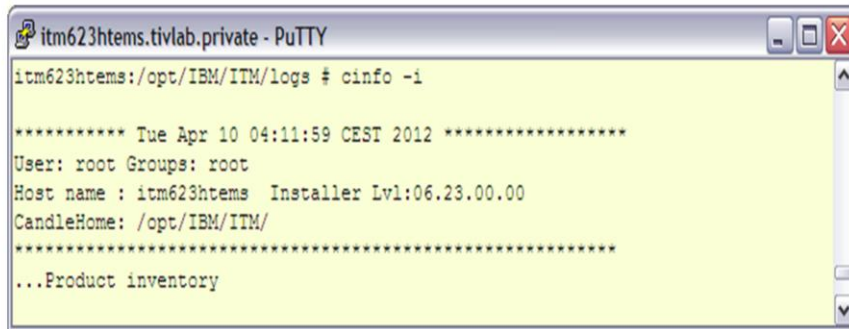
```
Administrator: Command Prompt
C:\Users\Administrator>kincinfo -t
***** Monday, April 2, 2012 4:42:29 PM *****
User       : Administrator      Group    : NA
Host Name  : ITM623RTEHSWIN6      Installer: Ver: 062300000
CandleHome : C:\IBM\ITM
InstallItm : C:\IBM\ITM\InstallITM
*****
...Product Inventory

PC  PRODUCT  DESC                                PLAT  VER      BUILD      INSTALL DATE
VM  Monitoring Agent for VMWare VI    WIN64  07.10.00.00  201110270731  20120320 1630

C:\Users\Administrator>
```

Here is an example of the **kincinfo** output on Windows. In this case, you have a VMWare VI agent version 7.1 installed in a Windows 64 bit system. The CandleHome directory is **C:\IBM\ITM**.

Example for Linux output



```
itm623htems.tivlab.private - PuTTY
itm623htems:/opt/IBM/ITM/logs # cinfo -i

***** Tue Apr 10 04:11:59 CEST 2012 *****
User: root Groups: root
Host name : itm623htems  Installer Lvl:06.23.00.00
CandleHome: /opt/IBM/ITM/
*****
...Product inventory
```

The slide shows an example of the **cinfo** output on Linux where you can see the CandleHome information. In this case, the CandleHome directory is **/opt/IBM/ITM**.

Setting the trace level for the data provider

- Find the file called **<hostname>_vm_<instance name>.cfg**.
Example: **itm623htems_vm_titanic.cfg**
- The file is in the following locations:
 - Windows 32bit agent: <ITM 6 install directory>\TMAITM6
 - Windows 64bit agent: <ITM 6 install directory>\TMAITM6_x64
 - Linux: <ITM 6 install directory>/config
- Look for the entry **KVM_LOG_LEVEL=xxx**.
- Replace xxx with the trace level, example FINER. The default is INFO.
- Restart the agent.

Setting the trace level is very simple.

First you locate the configuration file. For this you follow the steps from the previous slides.

The file itself is a simple ASCII file that can be edited with any text editor. Here you can see the naming convention of the configuration file and the locations where you can find the related log files, based on the operating system.

The default trace level value is set to **INFO**. This default value should only be changed when you are asked to by IBM support.

The next slide shows an example.

Setting the trace level for the data provider: Example

- Before editing the file:

```
INSTANCE=titanic [ SECTION=DATA_PROVIDER [ { KVM_LOG_FILE_MAX_COUNT=10 } {  
KVM_LOG_FILE_MAX_SIZE=5190 } { KVM_SSL_VALIDATE_CERTIFICATES=No } {  
KVM_LOG_LEVEL=INFO } ] SECTION=DIRECTOR [ { KVM_DIRECTOR_AUTHENTICATION=Yes } {  
KVM_DIRECTOR_PORT_NUMBER=8422 } ] SECTION=STORAGE_AGENT [ ]  
SECTION=DATASOURCE:titanic [ { HOST_ADDRESS=xxx } { PASSWORD={AES256:keyfile:xxx } {  
USERNAME=xxx } { USES_SSL=Yes } ] ]
```

- After editing the file:

```
INSTANCE=titanic [ SECTION=DATA_PROVIDER [ { KVM_LOG_FILE_MAX_COUNT=10 } {  
KVM_LOG_FILE_MAX_SIZE=5190 } { KVM_SSL_VALIDATE_CERTIFICATES=No } {  
KVM_LOG_LEVEL=FINER } ] SECTION=DIRECTOR [ { KVM_DIRECTOR_AUTHENTICATION=Yes } {  
KVM_DIRECTOR_PORT_NUMBER=8422 } ] SECTION=STORAGE_AGENT [ ]  
SECTION=DATASOURCE:titanic [ { HOST_ADDRESS=xxx } { PASSWORD={AES256:keyfile:xxx } {  
USERNAME=xxx } { USES_SSL=Yes } ] ]
```

Here is the example of the configuration file for the data provider. The changes that need to be made are marked in red. You must change the value for the **KVM_LOG_LEVEL** variable.

Checking the trace level of the data provider

- The file is called **kvm_data_provider_<instance name>_<number>.log**.
Example: `kvm_data_provider_titanic_0.log`
- The location is determined by operating system:
 - Windows 32bit agent: `<ITM 6 install directory>\TMAITM6\logs`
 - Windows 64bit agent: `<ITM 6 install directory>\TMAITM6_x64\logs`
 - Linux: `<ITM 6 install directory>/logs`
- The log header looks similar to this text:

```
2012-04-03 11:14:18 0 CONFIG: Data Provider Build: 20111027-073047
2012-04-03 11:14:18 0 CONFIG: ITM Home: C:\IBM\ITM
2012-04-03 11:14:18 0 CONFIG: Operating System: Windows Server 2008 6.0 build 6002 Service Pack 2
(amd64)
2012-04-03 11:14:19 0 CONFIG: Process ID: 13628
2012-04-03 11:14:19 0 CONFIG: Java Runtime: IBM Corporation JRE 1.6.0 (IBM J9 VM 2.4)
2012-04-03 11:14:19 0 CONFIG: Java Home: C:\IBM\ITM\j6_x64\java\jre
2012-04-03 11:14:19 0 CONFIG: Log Level: FINER
```

After setting the trace level, it is good to check if it was set correctly.

If IBM support asks for logs at a certain level, and logs are sent with an incorrect trace level, it cost additional time to recreate and resend the logs.

Here you can see the naming convention of the logs for the data provider and the path where you can find the logs, based on the operating system.

The number in the log file name starts with 0, and the highest number is 9. They are given in a round robin procedure. Starting with 0, the number is increased by 1. After it reaches 9, it jumps back to 0, and the log file with number 0 is overwritten.

The default size of a log file is 5 MB. This value can be changed if support asks for that action to happen.

Setting the trace level for the agent

- Windows:
 - The file is called **KVMENV_<instance name>**.
 - Example: **KVMENV_titanic**
 - Windows 32bit agent: **<ITM 6 install directory>\TMA\ITM6**
 - Windows 64bit agent: **<ITM 6 install directory>\TMA\ITM6_x64**
- Linux:
 - The file is called **vm_<instance name>.config**.
 - Example: **vm_titanic.config**
- Look for entry **KBB_RAS1=xxx**.
- Replace **xxx** with trace level; the default is **ERROR**.
- Restart the agent.

Setting the trace level for the agent is very simple.

First, you locate the configuration file. For this you need to follow the steps from the previous slides.

The file itself is a simple ASCII file that can be edited with any text editor. It is named **KMVENV_<instance name of your agent>** in a Windows environment and, **vm_<instance name of your agent>** in a Linux environment.

The default value for the trace level is set to **ERROR**. This default value should only be changed when asked to by IBM support.

Checking the trace level of an agent

- The file is called **<hostname>_vm_<instance name>_kvmagent_<timestamp>-<number>.log**.
Example: **itm623htems_vm_titanic_kvmagent_4f839124-01.log**
- Location:
 - Windows 32bit agent: **<ITM 6 install directory>\TMAITM6\logs**
 - Windows 64bit agent: **<ITM 6 install directory>\TMAITM6_x64\logs**
 - Linux: **<ITM 6 install directory>/logs**
- The log header looks similar to this text:
!4F839124.0000!=====> IBM Tivoli RAS1 Service Log <=====
+4F839124.0000 System Name: itm623htems Process ID: 29726
...
+4F839124.0000 KBB_RAS1: ERROR
+4F839124.0000 KBB_RAS1_LOG: xxx
+4F839124.0000 KBB_ENVPATH:
+4F839124.0000=====

After setting the trace level, it is good to check to see if it was correctly set.

If IBM support asks for logs at a certain level, and logs are sent with a incorrect trace level, it costs additional time to recreate and resend the logs.

Here you can see the naming convention of the logs for the agent and the path where you can find the logs, based on the operating system.

The number in the log file name starts with 1, and per default, the highest number is 3. They are given in a round robin procedure. Starting with 1 the number is increased by one. After it reaches 3, it jumps back to 2 and the log file with number 2 is overwritten. The file with number 1 is preserved by default.

The default size of a log file is 5 megabytes.

The number of log files and the size values can be changed when asked to by support.

Here you can see the header of the log file, and here you can check the value associated to the KBB_RAS1 variable, which represents the trace level.

Summary

Now that you have completed this module, you can perform these tasks:

- Describe the parts of the VMWare VI agent
- When support requests you to, set the trace level correctly
- Locate the requested log files

Now you have completed this module, you understand the two parts of the VMWare VI agent, know how to set up the trace levels correctly, and know how to find the corresponding logs.

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