CHAPTER 5

Using the VCDS Application Monitoring Tool

This chapter describes how to use Cisco VQE Client Configuration Delivery Server (VCDS) Application Monitoring Tool (AMT). VCDS is a software component installed on each VQE Tools server, the Cisco CDE110 that also hosts VCPT. VCDS AMT is a web browser-based tool for displaying configuration, status, and statistics on the VCDS process and the VQE Tools server. The tasks that you can perform with VCDS AMT are listed in Table 5-1.

Table 5-1 VCDS AMT Tasks

VCDS AMT Task	Section Where Described
Log in to VCDS AMT	Logging in to and Navigating in VCDS AMT, page 5-1
Monitor the health of the VCDS process and VQE Tools Server	Monitoring the Health of the VCDS Process and VQE Tools Server, page 5-3
View configuration details and statistics for the VCDS	Viewing VCDS Configuration and Statistics, page 5-4
Configure VCDS logging levels	Configuring VCDS Logging, page 5-7
Configure VCDS debugging levels	Configuring VCDS Debugging, page 5-8

Note VCDS AMT supports configuration capabilities for logging levels and debugging options. However, the configured values do not persist when VCDS is restarted.

Logging in to and Navigating in VCDS AMT

Before logging into VCDS AMT, you need a valid Linux username and password on the Cisco CDE110 hosting VCDS AMT. The username does not have to belong to any special group. Creation of the username is the responsibility of the Cisco CDE110 system administrator.

VCDS AMT supports two web browsers: Microsoft Internet Explorer version 6.0 or later, and Mozilla Firefox version 2.0 or later. The minimum screen resolution required for VCDS AMT is 1024 x 768 pixels.

VCDS AMT uses secure HTTPS. Access by multiple simultaneous browsers is supported.

To login to VCDS AMT, follow these steps:

Step 1 Point your web browser to the Cisco CDE110 that hosts VCDS AMT using an IP address or fully qualified domain name:

`https://ip_address/vcds-amt`

or

`https://fully_qualified_domain_name/vcds-amt`

The VCDS AMT login dialog box is displayed.

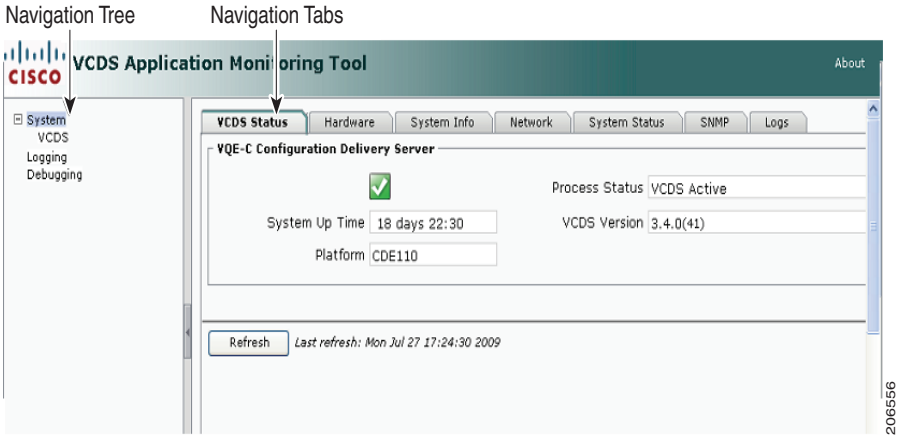
Step 2 Enter a Linux username and password.

Step 3 Click **OK**.

If the username and password are valid, the VCDS AMT Status window is displayed.

Figure 5-1 shows the VCDS AMT navigation controls and buttons.

Figure 5-1 VCDS AMT Navigation



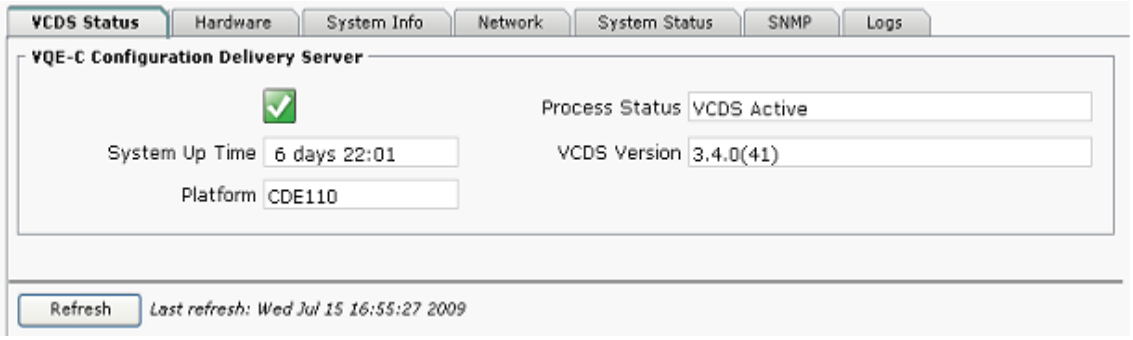
VCDS AMT (Figure 5-1) provides these controls and buttons for navigating and displaying VCDS data:

- **Navigation tree**—Use the collapsible and expandable tree to display the VCDS AMT items that can be viewed or configured. The navigation tree can be hidden by clicking the < arrow in its right border.
  - The parent node (**System**) in the tree provides summary data.
  - Each child node in the tree (such as VCDS) provides data on the specific child node.
- **Navigation Tabs**—Click the tabs to display VCDS data for viewing. The VCDS node has two tabs: a Configuration tab and a Statistics tab.
- **Refresh** —Click to update the displayed data. VCDS AMT statistical data are not automatically updated when VCDS real-time counters are incremented. The Last refresh date-and-time information to the right of the **Refresh** button indicates when the last update of displayed data occurred.

Monitoring the Health of the VCDS Process and VQE Tools Server

When you click the **System** node in the navigation tree and the **VCDS Status** tab, VCDS AMT displays VCDS and VQE Tools Server status information (Figure 5-2).

Figure 5-2 VCDS Status Information



On the VCDS Status tab, a green icon with a checkmark indicates the VQE Tools server system is running and healthy. A red icon with an X indicates one or more problems with the VQE Tools server. A yellow icon with an exclamation mark (!) indicates that one or more of the following files are invalid:

- Channel configuration file
- Client database file
- Group attribute file

From the **VCDS Status** tab, you can view the following status information:

- System Up Time—Time that the Cisco CDE110 hosting VQE Tools has been running.
- Platform—Cisco CDE110 hardware platform that is hosting VQE Tools. Platform can be one of the following:
  - Cisco CDE110 (models CDE110-1-036TXA-K9 and CDE110-1-036TXD-K9)
  - Cisco CDE111 (models CDE111-2-146TXA-K9 and CDE111-2-146TXD-K9)
  - UNKNOWN if the hardware platform cannot be determined
- Process Status—One of the following status messages:
  - VCDS Active—VCDS is running.
  - VCDS Stopped—VCDS is not running
  - VCDS Inactive—A configuration file is not correct.
- VCDS Version—Current version of the VCDS software.

In addition to the VCDS Status tab, you can get information on VCDS and the VQE Tools server on the five other tabs. Table 5-2 lists the information that is available from each tab accessible from the System node.

Table 5-2 System Node Tabs

System Node Tab	Information Provided
Hardware	Processor and memory on the Cisco CDE110 that hosts VQE Tools. Each CDE110 has two physical processors and four virtual processors.
System Info	Hostname, operating system version, date and time, Network Time Protocol servers, Domain Name System servers, and **iptables** information.
Network	Output from the **ifconfig** command. • The configuration information displayed by **ifconfig** is for the four CDE110 Ethernet interfaces.
System Status	Detailed information on host uptime, currently running processes, and file system disk space.
SNMP	SNMP information on the VQE Tools server host taken from the snmpd.conf file.
Logs	Most recent 300 lines from the following VQE Tools Server log files are displayed: • VCDS log (/var/log/vqe/vqe.log) • System messages log (/var/log/messages) • HTTPD error log (/var/log/httpd/error_log) • SSL error log (/var/log/httpd/ssl_error_log) • Tomcat log (/usr/share/tomcat5/logs/catalina.out) • VCDS AMT log (/usr/share/tomcat5/logs/vcds.out)

Viewing VCDS Configuration and Statistics

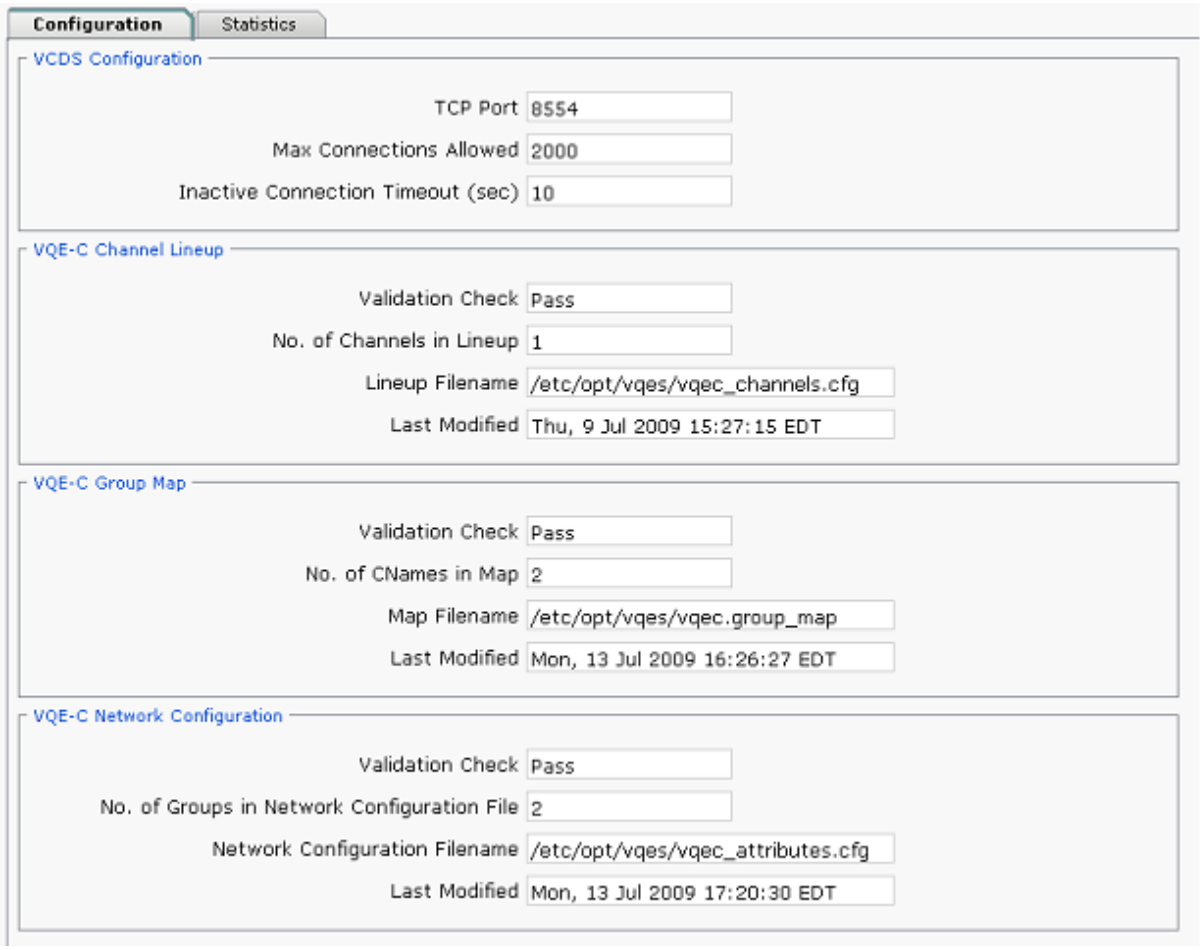
When you click the **VCDS** node in the navigation tree and click the **Configuration** tab, VCDS AMT displays information relating to VCDS configuration, to VQE Client (VQE-C) channel configuration, to the client database file, and to the group attribute file (Figure 5-3). For more information on the client database and the group attribute files, see "VQE-C System Configuration Provisioning Server Role" section on page 1-20.

Note In VCDS AMT, the group attribute file is referred to as the VQE-C network configuration file and the client database file is referred to as the the VQE-C group map file.

Viewing VCDS Configuration

When you click the **Configuration** tab, VCDS AMT displays the VCDS Configuration window (Figure 5-3).

Figure 5-3 VCDS Configuration Window



The Configuration window has the information listed in Table 5-3.

Table 5-3 VCDS Configuration

Field	Description
VCDS Configuration	
TCP Port	TCP port number on which the VCDS process listens.
Max Connections Allowed	Maximum number of clients allowed to connect to VCDS.
Inactive Connection Timeout (sec)	Number of seconds of inactivity that will be allowed to elapse before a client is disconnected from VCDS.
VQE-C Channel Lineup	

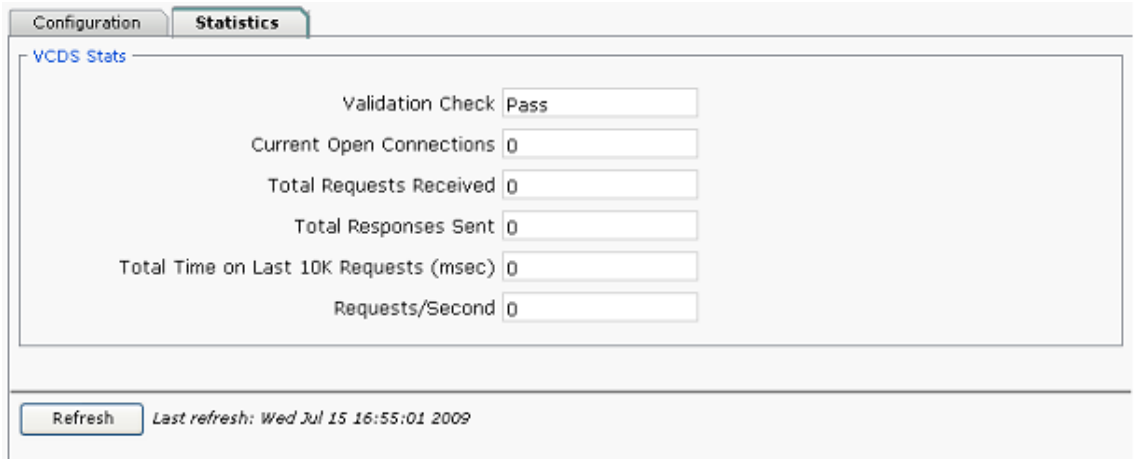
Table 5-3 VCDS Configuration (continued)

Field	Description
Validation Check	• Pass—Channel configuration file has passed a validation check performed by VCDS. • Fail—Channel configuration file has failed a validation check performed by VCDS. **Note** On receiving the contents of the channel configuration file from VQE Channel Provisioning Tool (VCPT), VCDS validates its contents based on SDP syntax.
No. of Channels in Lineup	Number of channels in the channel configuration file.
Lineup File name	Full pathname of the channel configuration file.
Last Modified	Date and time the channel configuration file was last modified.
VQE-C Group Map	
Validation Check	• Pass—Client database file has passed the validation check performed by VCDS. • Fail—Client database file has failed the validation check performed by VCDS. **Note** On receiving the client database file from the VQE-C system configuration provisioning server, VCDS validates its contents based on a Cisco-defined XML schema.
No. of CNames in Map	Number of customer names (CNames) in the client database file. A CName is a unique identifier for a VQE-C.
Map Filename	Full pathname of the client database file.
Last Modified	Date and time the client database file was last modified.
VQE-C Network Configuration	
Validation Check	• Pass—Group attribute file has passed the validation check performed by VCDS. • Fail—Group attribute file has failed the validation check performed by VCDS. **Note** On receiving the contents of the group attribute file from the VQE-C system configuration provisioning server, VCDS validates its contents based on a Cisco-defined XML schema.
No. of Groups in Network Configuration File	Number of attribute groups in the group attribute file. Each VQE Client is associated with at least one group of attributes. Each group of attributes can be associated with one or more VQE-Clients.
Network Configuration Filename	Full pathname of the group attribute file.
Last Modified	Date and time the group attribute file was last modified.

Viewing VCDS Statistics

When you click the **Statistics** tab, VCDS AMT displays the VCDS Statistics window (Figure 5-4).

Figure 5-4 VCDS Statistics Window



The VCDS Statistics window has the information listed in Table 5-4.

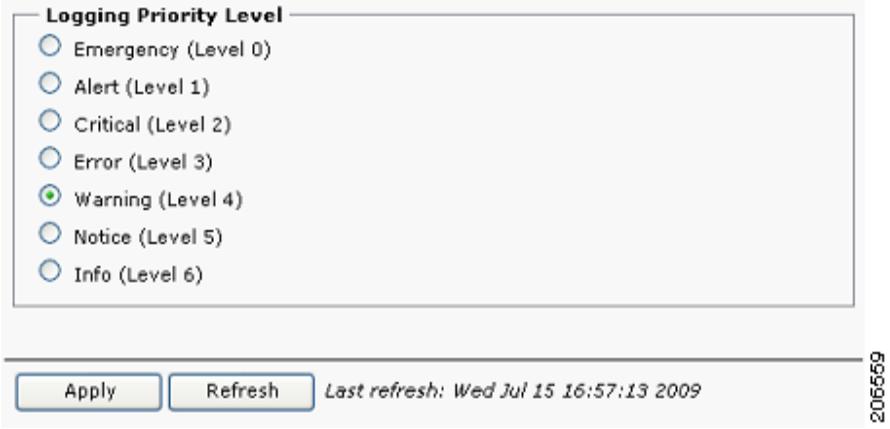
Table 5-4 VCDS Statistics

Field	Description
VCDS Stats	
Validation check	• Pass—The channel configuration, client database and group attribute files have all passed the validation check performed by VCDS. • Fail—One or more channel configuration, client database, or group attribute files have failed the validation check performed by VCDS.
Current Open Connections	Number of clients currently connected to VCDS.
Total Requests Received	Total number of Real Time Streaming Protocol (RTSP) requests received from STBs.
Total Responses Sent	Total number of RTSP responses sent to STBs.

Configuring VCDS Logging

When you click **Logging** in the navigation tree, VCDS AMT displays the logging priority levels (Figure 5-5) for VCDS. The priority levels allow you to control the logging level for system messages for the VCDS process. All VCDS system messages are written to the file /var/log/vqe/vqe.log.

Figure 5-5 Logging Priority Levels



To configure a VCDS logging priority level, click the button next to the level you want and click **Apply**.

In VCDS AMT, the logging priority levels are listed from least verbose to most verbose. The Emergency level generates the smallest number of messages, and the Info level generates the greatest number of messages. The default value is Warning.

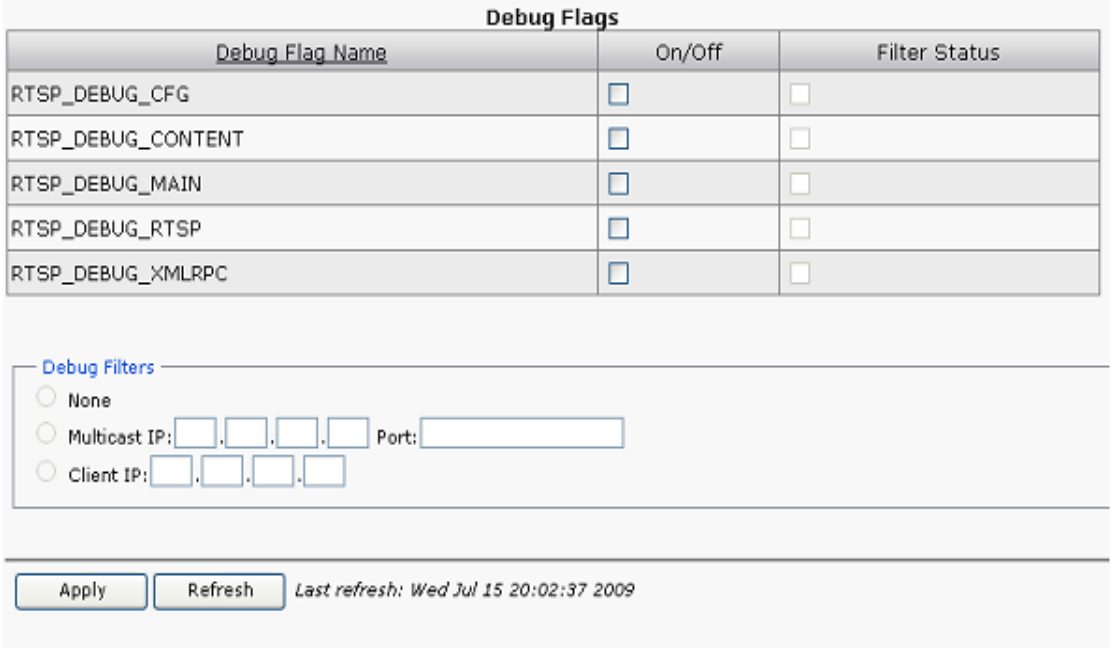
When you select a logging level, log messages are generated for the levels below that level. For example, when the level is set to Error, messages are generated for Emergency, Alert, Critical, and Error.

The selected logging priority level does not persist when the VCDS service is stopped. When VCDS restarts, the logging priority level goes back to the default (Warning).

Configuring VCDS Debugging

When you click **Debugging** in the navigation tree, the debugging options for VCDS are displayed. Figure 5-6 shows the debug options. The options allow you to control the types of debugging messages that are written to the syslog file. Debug messages are written to the file /var/log/vqe/vqe.log.

Figure 5-6 Debug Components



To configure VQE-S debugging, follow these steps:

Step 1 In the VCDS AMT navigation tree, click **Debugging**.

The debug flags for VCDS are displayed.

Step 2 To enable a debugging flag, click the check box in the On/Off column, or to disable an enabled flag click the check box to uncheck it.

Step 3 Click **Apply**.

The selected debugging options are enabled.

Note The selected debugging options do not persist when the VCDS service is stopped. When VCDS restarts, debugging goes back to the default—no options are enabled. Debug filters are always disabled.