CHAPTER 3

Configuring the Components of the Cisco Video Assurance Management Solution

After you have completed the installation of the Cisco Video Assurance Management Solution (Cisco VAMS), you are ready to configure the components of the solution for operation.

The following summary procedure describes how to configure all the components of the Cisco VAMS. References to more detailed procedures and documentation are provided.

To configure the components of the Cisco VAMS:

Step 1 Ensure that you have met all prerequisites. (See "Before You Install" section on page 2-1.)

Note An important prerequisite is that all Cisco devices in the video transport network be loaded with IOS software that supports the Cisco VAMS.

Step 2 In Cisco ANA, create new virtual network elements (VNEs) for the Cisco VAMS components. See Create VNEs, page 3-2.

Step 3 Add the Cisco VAMS devices to the ANA network map. See Add Solution Components to ANA Network Map, page 3-4.

Step 4 Configure the Cisco Multicast Manager to set thresholds and forward notifications to Cisco ANA. See Configure the Cisco Multicast Manager, page 3-5.

Step 5 Configure the video probes to set thresholds and send events to Cisco ANA. See Configure Video Probes, page 3-6.

Note All components of the Cisco VAMS are now operational. The Cisco devices in the video transport network are forwarding notifications to the Cisco Multicast Manager, which forwards them to Cisco ANA. The video probes are forwarding notifications to Cisco ANA. The remaining steps of this procedure are optional.

Step 6 (Optional) To manually run the **Setup for IPTV** activation script, see Run the Setup for IPTV Script, page 3-7.

Note Step 6 is usually not required. The **Setup for IPTV** activation script runs automatically at installation time, hourly, and whenever a managed device reloads.

Step 7 (Optional) To manually run the **Cleanup from IPTV** activation script, see Run the Cleanup from IPTV Script, page 3-7.

Note Step 7 is typically performed when you want to remove a device from the Cisco VAMS. The **Cleanup from IPTV** activation script removes the IPTV extensions.

Create VNEs

Use this procedure to create a VNE for each component of the Cisco VAMS. Table 3-1 lists important values for the VNEs of the Cisco VAMS. You will need this information when you create VNEs for the Cisco VAMS.

Table 3-1 VNE Information for Cisco VAMS[1]

Name	Type	Scheme
Cisco 7600	Generic SNMP	default
Cisco CRS-1	Generic SNMP	IpCore
Cisco 4948	Generic SNMP	default
Cisco Multicast Manager	ICMP	default
Tektronics video probe	Generic SNMP	default
IneoQuest video probe	Generic SNMP	default
Mixed Signals video probe	ICMP	default

1. Column headings in this table are the names of fields in the New VNE window, under the General tab.

To create VNEs for the Cisco VAMS:

Step 1 Log in to ANA Manage.

Step 2 Click the **ANA Servers** item in the navigation tree (left pane).

Step 3 Click and expand the **ANA Gateway** item in the navigation tree.

Step 4 Create an Autonomous Virtual Machine (AVM) to contain the VNE objects for the Cisco VAMS.

a. Right-click the ANA Gateway in the left pane.

b. Choose **New AVM** from the drop-down menu.

c. Enter an ID number and key.

d. Check the **Activate on creation** check box and click **OK**.

Note You may create more than one AVM. For example, you could create one AVM for the Cisco devices and a different AVM for the video probes.

Step 5 Right-click the AVM that contains the IPTV devices.

Step 6 In the right-click menu, choose **New VNE**.

Step 7 Complete these fields in the New VNE window under the General tab:

- Name (as ANA identifies it)
- IP Address
- Type (see Table 3-1)
- Scheme (see Table 3-1)
- Initial State (Stop or Start)

Step 8 Under the SNMP tab, in the SNMP V1/V2 Settings pane, complete these fields:

- Community Read
- Community Write

Step 9 Enable Telnet or SSH under the Telnet/SSH tab. This information enables discovery of the device.

Step 10 If the VNE type is ICMP (see Table 3-1), enter a polling rate under the ICMP tab.

Step 11 If required, add the VNE to a polling group under the Polling tab.

Note The IPTV extensions of the Cisco VAMS provide two new polling groups: *30-minute config* and *60-minute config*. Depending on your polling requirements, choose one of these groups to obtain status, configuration, and system information.

Step 12 Enter any other required information in the remaining tabs of the New VNE window and click **OK**.

Step 13 Verify that the new VNE appears in the VNEs table in the right pane of the ANA Manage window.

Step 14 To start the new VNE, right-click it in the table and choose **Actions > Start**.

Step 15 To continue to add new VNEs, repeat this procedure from Step 5.

Add Solution Components to ANA Network Map

Use this procedure to add these components to the Cisco ANA Network Map:

- Cisco 7600
- Cisco CRS-1
- Cisco 4948
- Video probes:
  - Tektronics
  - IneoQuest
  - Mixed Signals
- Cisco Multicast Manager

To add the previous components:

Step 1 Log in to ANA NetworkVision.

Step 2 If not already done, create a new network map:

File > New Map

Step 3 To open the device list, choose **File > Add Device**.

Step 4 Choose the device that you want to add to the network map.

Step 5 Click **Add Device**.

Step 6 Verify that the device appears in the network map and links appear between connected devices.

Note If links do not appear, and the devices are connected, you can manually create the links as described in the *Release Notes for Cisco Active Network Abstraction 3.6 Service Pack 1*: http://www.cisco.com/en/US/docs/net_mgmt/active_network_abstraction/3.6_sp2/release_notes/rn36_sp2.html#wp39153 (see defect CSCsi50166).

Step 7 To add other solution components to the network map, repeat this procedure from Step 3.

Configure the Cisco Multicast Manager

To enable notifications and set thresholds for multicast conditions, you must configure the Cisco Multicast Manager. Configuration tasks include:

- Adding devices for discovery.
- Device configuration of routers, Layer 2 switches, and video probes.
- Global configuration of polling intervals and run times for Layer 2 polling, Designated Router (DR) polling, and polling of Rendevouz Point (RP) status.
- Multicast threshold configuration for Layer 2 and router groups.

Note A summary procedure of configuration tasks follows. For complete details about these, and other configuration tasks, see the *User Guide for the Cisco Multicast Manager 2.4*:

http://www.cisco.com/en/US/products/ps6337/products_user_guide_book09186a008083390a.html

To configure the Cisco Multicast Manager for the Cisco VAMS:

Step 1 In a browser window, open and log in to the Cisco Multicast Manager.

Step 2 In the Tool drop-down menu, click **Administration**.

Step 3 To add users, choose **User Management > Manage Users**.

Step 4 To add the Cisco VAMS devices, choose **User Management > Manage Users**.

Step 5 To configure the devices, choose **User Management > Device Configuration**.

Step 6 To configure multicast thresholds, choose **User Management > Multicast Polling Configuration**. To activate your changes, click the **Start** button.

Step 7 To configure polling intervals and run times, choose **User Management > Global Polling Configuration**. To activate your changes, click the **Start** button.

Step 8 Forward notifications to Cisco ANA:

a. Choose **User Management > Global Polling Configuration**.

b. Click **Domain Trap/Email**.

c. In the right pane, enter the IP address of the ANA in the Add Trap Receiver field.

d. Click the **Add Trap Receiver** button. This action adds the ANA IP address to the Configured Trap Receivers drop-down list.

e. Choose a trap receiver from the Configured Trap Receivers drop-down list.

f. To activate your changes, click the **Start** button.

The Cisco Multicast Manager forwards notifications to Cisco ANA, the designated trap receiver.

Configure Video Probes

Each video probe in the Cisco VAMS monitors various parameters of the video flow through the network. For example, you might configure a video probe to monitor the amount of jitter or delay in a video stream.

For each video probe deployed in the network, you must configure the thresholds for the conditions that you want to monitor. You must also configure the video probes to forward traps to the Cisco ANA. (Refer to the probe documentation to add the ANA IP address and related SNMP information to the video probe settings.)

Once you configure the video probe, if a monitored condition exceeds a configured threshold, the probe sends a corresponding trap to Cisco ANA, which displays the event in the EventVision GUI.

IneoQuest Video Probe

To configure the IneoQuest video probe for operation in the video transport network, refer to the documentation that comes with the product. These documents assist the network planner to integrate IneoQuest video probes with the Cisco VAMS:

- *Hardware User's Guide*
- *IQMediaAnalyzer Application User's Guide*

Tektronics Video Probe

To configure the Tektronix video probe for operation in the video transport network, refer to the documentation that comes with the product. These documents assist the network planner to integrate Tektronix video probes with the Cisco VAMS.

Documents that are useful for configuring the Tektronics MTM400 video probe include these:

- *MTM400 MPEG Transport Stream Monitor User Manual*
- *MTM400 MPEG Transport Stream Monitor Technical Reference*
- *MTM400 MPEG Transport Stream Monitor Programmer Manual*

Mixed Signals Video Probe

To configure the Mixed Signals video probe for operation in the video transport network, refer to the documentation that comes with the product. These documents assist the network planner to integrate Mixed Signals video probes with the Cisco VAMS:

The *Mixed Signals Sentry Digital Content Monitor User Guide* is included with the video probe hardware and describes how to configure thresholds for events that you want to forward to the ANA.

Run the Setup for IPTV Script

The Setup for IPTV activation script sets up network configuration parameters for the Cisco devices in the Cisco VAMS. The script runs:

- ANA startup
- Every two hours
- Whenever the managed device reloads
- When you activate it in ANA NetworkVision (see procedure)

The hourly run checks the IPTV configuration of the managed VNEs. If a VNE does not have the expected IPTV configuration, the script applies the IPTV configuration parameters to the device.

Note Configure the supported devices and load them with IPTV-enabled IOS images. The IPTV script does not recognize the devices without IPTV-enabled IOS images. See Table 2-1 on page 2-1.

You can also manually run the Setup for IPTV script. To manually run the IPTV activation script:

Step 1 Log in to ANA NetworkVision.

Step 2 Right-click a VNE in the network map.

Step 3 In the right-click menu, choose **Management > Setup for IPTV**.

Step 4 In the Setup for IPTV window, click the **Execute** button.

The result of the script appears in the same window under the Result tab.

Note If the selected VNE already has its IPTV configuration, the result indicates *ALREADY CREATED*, and the script does not run.

Run the Cleanup from IPTV Script

You run the *Cleanup for IPTV* activation script when you want to remove the IPTV extensions from a VNE that is in the Cisco VAMS. When the extensions have been removed, the VNE will not be able to process IPTV requests.

To run the *Cleanup from IPTV* script:

Step 1 Log in to ANA NetworkVision.

Step 2 Right-click the VNE in the network map.

Step 3 In the right-click menu, choose **Management > Cleanup from IPTV**.

The *Cleanup from IPTV* script runs and removes the IPTV extensions from the selected VNE.