



## CHAPTER 4

# Troubleshooting with the Cisco Video Assurance Management Solution

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Troubleshooting with the Cisco Video Assurance Management Solution (Cisco VAMS) involves use of:

- Cisco ANA for basic troubleshooting
- Cisco Multicast Manager for advanced troubleshooting

This chapter contains:

- [Troubleshooting with Cisco ANA, page 4-2](#)
- [Advanced Troubleshooting with Cisco Multicast Manager, page 4-4](#)
- [Monitoring and Troubleshooting in the Wireline Network, page 4-5](#)
- [Monitoring and Troubleshooting in the Cable Network, page 4-5](#)

# Troubleshooting with Cisco ANA

Troubleshooting with Cisco ANA requires an understanding of the Cisco ANA fault-management system. You should also understand how to use ANA NetworkVision and ANA EventVision.

This section contains:

- [Fault Management, page 4-2](#)
- [ANA NetworkVision, page 4-3](#)
- [ANA EventVision, page 4-3](#)

## Fault Management

[Table 4-1](#) highlights important aspects of the fault management system in Cisco ANA.

**Table 4-1** *Cisco ANA Fault Management*

| Troubleshooting Area                          | Description and Reference                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Fault detection and isolation                 | <p>Describes:</p> <ul style="list-style-type: none"> <li>• How the various VNEs use reachability to check connectivity with the NEs.</li> <li>• Basic alarm sources that indicate problems in the network.</li> <li>• What happens when a VNE with associated open alarms shuts down.</li> <li>• The integrity service tests that run on the gateway and the units.</li> </ul> <p><a href="http://www.cisco.com/en/US/docs/net_mgmt/active_network_abstraction/3.6_sp2/fault/user/guide/chp1.html">http://www.cisco.com/en/US/docs/net_mgmt/active_network_abstraction/3.6_sp2/fault/user/guide/chp1.html</a></p> |
| Causality correlation and root cause analysis | <p>Describes:</p> <ul style="list-style-type: none"> <li>• Enabling or disabling port-down, port-up, link-down and link-up alarms.</li> <li>• The root-cause correlation concept.</li> <li>• The root-cause alarm and weights concepts.</li> <li>• Correlation by flow and correlation by key.</li> </ul> <p><a href="http://www.cisco.com/en/US/docs/net_mgmt/active_network_abstraction/3.6_sp2/fault/user/guide/chp2.html">http://www.cisco.com/en/US/docs/net_mgmt/active_network_abstraction/3.6_sp2/fault/user/guide/chp2.html</a></p>                                                                      |
| Advanced correlation scenarios                | <p>Describes alarms that use advanced correlation logic on top of the root cause analysis flow.</p> <p><a href="http://www.cisco.com/en/US/docs/net_mgmt/active_network_abstraction/3.6_sp2/fault/user/guide/chp4.html">http://www.cisco.com/en/US/docs/net_mgmt/active_network_abstraction/3.6_sp2/fault/user/guide/chp4.html</a></p>                                                                                                                                                                                                                                                                            |

## ANA NetworkVision

Network administrators use Cisco ANA NetworkVision to manage, fulfill, plan, and assure the integrity of network resources. Table 4-2 lists important aspects of using Cisco ANA NetworkVision for troubleshooting.

**Table 4-2** Cisco ANA NetworkVision

| Troubleshooting Area        | Description and Reference                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Working with ANA tickets    | <p>Cisco ANA NetworkVision:</p> <ul style="list-style-type: none"> <li>Correlates alarms, and enables you to view tickets and tickets properties, including correlated alarms, active alarms, and alarm history.</li> <li>Describes ticket management and the different ways in which a ticket is displayed in the ticket pane, depending on the status or severity of the alarm.</li> </ul> <p>For detailed information about working with tickets, see the <i>Cisco Active Network Abstraction NetworkVision User Guide 3.6 Service Pack 1</i>:</p> <p><a href="http://www.cisco.com/en/US/docs/net_mgmt/active_network_abstraction/3.6_sp2/networkvision/user/guide/8tickets.html">http://www.cisco.com/en/US/docs/net_mgmt/active_network_abstraction/3.6_sp2/networkvision/user/guide/8tickets.html</a></p> |
| Working with ANA PathTracer | <p>You use the Cisco ANA PathTracer to view a network path between two network objects in packet-switched networks such as Ethernet and IP.</p> <p>For detailed information about working with the ANA PathTracer, see the <i>Cisco Active Network Abstraction NetworkVision User Guide 3.6 Service Pack 1</i>:</p> <p><a href="http://www.cisco.com/en/US/docs/net_mgmt/active_network_abstraction/3.6_sp2/networkvision/user/guide/9ptracer.html">http://www.cisco.com/en/US/docs/net_mgmt/active_network_abstraction/3.6_sp2/networkvision/user/guide/9ptracer.html</a></p>                                                                                                                                                                                                                                   |

## ANA EventVision

You use Cisco ANA EventVision to view, filter, and display the properties of specific events. Table 4-3 lists important aspects of using Cisco ANA EventVision for troubleshooting.

**Table 4-3** Cisco ANA EventVision

| Troubleshooting Area     | Description and Reference                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Viewing events           | <p>Events appear in different event categories in the ANA EventVision. For detailed information about displaying events, see the <i>Cisco Active Network Abstraction EventVision User Guide 3.6 Service Pack 1</i>:</p> <p><a href="http://www.cisco.com/en/US/docs/net_mgmt/active_network_abstraction/3.6_sp2/eventvision/user/guide/3viewevn.html">http://www.cisco.com/en/US/docs/net_mgmt/active_network_abstraction/3.6_sp2/eventvision/user/guide/3viewevn.html</a></p> |
| Working with EventVision | <p>For detailed information about working with EventVision, see the <i>Cisco Active Network Abstraction EventVision User Guide 3.6 Service Pack 1</i>:</p> <p><a href="http://www.cisco.com/en/US/docs/net_mgmt/active_network_abstraction/3.6_sp2/eventvision/user/guide/4workev.html">http://www.cisco.com/en/US/docs/net_mgmt/active_network_abstraction/3.6_sp2/eventvision/user/guide/4workev.html</a></p>                                                                |

# Advanced Troubleshooting with Cisco Multicast Manager

The Cisco Multicast Manager provides a diagnostics tool that gives you a global view and a router-specific view of your network. Table 4-4 lists important areas of the Cisco Multicast Manager that you can use to troubleshoot the Cisco VAMS:

**Table 4-4** *Cisco Multicast Manager*

| Troubleshooting Area            | Task and Reference                                                                                                                                                                                                                                                                                                                                                                                                  |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Viewing network status          | View the status of all devices in the current multicast domain. See:<br><a href="http://www.cisco.com/en/US/products/ps6337/products_user_guide_chapter09186a0080834d83.html#wp1130975">http://www.cisco.com/en/US/products/ps6337/products_user_guide_chapter09186a0080834d83.html#wp1130975</a>                                                                                                                   |
| Viewing RP status               | View all routers in the database, their RPs, and the active groups. See:<br><a href="http://www.cisco.com/en/US/products/ps6337/products_user_guide_chapter09186a0080834d83.html#wp1130983">http://www.cisco.com/en/US/products/ps6337/products_user_guide_chapter09186a0080834d83.html#wp1130983</a>                                                                                                               |
| IGMP diagnostics                | View the interfaces that have joined a particular group. See:<br><a href="http://www.cisco.com/en/US/products/ps6337/products_user_guide_chapter09186a0080834d83.html#wp1131002">http://www.cisco.com/en/US/products/ps6337/products_user_guide_chapter09186a0080834d83.html#wp1131002</a>                                                                                                                          |
| Layer 2 switches                | View Layer 2 multicast information and host IPs. The table that is generated, shows, from a Layer 2 perspective, which multicast groups are being forwarded out which interfaces. See:<br><a href="http://www.cisco.com/en/US/products/ps6337/products_user_guide_chapter09186a0080834d83.html#wp1131025">http://www.cisco.com/en/US/products/ps6337/products_user_guide_chapter09186a0080834d83.html#wp1131025</a> |
| Cisco 6500/7600 troubleshooting | Gather accurate packet-forwarding statistics and other information. See:<br><a href="http://www.cisco.com/en/US/products/ps6337/products_user_guide_chapter09186a0080834d83.html#wp1131042">http://www.cisco.com/en/US/products/ps6337/products_user_guide_chapter09186a0080834d83.html#wp1131042</a>                                                                                                               |
| Top-20 video flows              | View the top-20 video flows. The top-20 video flows are dynamically updated at every polling interval. See:<br><a href="http://www.cisco.com/en/US/products/ps6337/products_user_guide_chapter09186a0080834d83.html#wp1131050">http://www.cisco.com/en/US/products/ps6337/products_user_guide_chapter09186a0080834d83.html#wp1131050</a>                                                                            |
| Video probe status <sup>1</sup> | View diagnostic information about video probes and the flows that they are monitoring. See:<br><a href="http://www.cisco.com/en/US/products/ps6337/products_user_guide_chapter09186a0080834d83.html#wp1221364">http://www.cisco.com/en/US/products/ps6337/products_user_guide_chapter09186a0080834d83.html#wp1221364</a>                                                                                            |

1. Cisco Multicast Manager 2.4 supports only the Ineoquest video probe.

## Monitoring and Troubleshooting in the Wireline Network

The *Cisco Wireline Video/IPTV Solution Design and Implementation Guide, Release 1.1*, provides an introduction to monitoring and troubleshooting the Cisco Ethernet switches in the Cisco wireline-based IPTV solution. Troubleshooting areas include:

- Network Time Protocol (NTP)
- Syslog
- Quality of Service (QoS)
- Multicast

Monitoring and troubleshooting information is available here:

[http://www.cisco.com/en/US/products/ps6902/products\\_implementation\\_design\\_guide\\_chapter09186a00806ac2e0.html](http://www.cisco.com/en/US/products/ps6902/products_implementation_design_guide_chapter09186a00806ac2e0.html)

## Monitoring and Troubleshooting in the Cable Network

The *Cisco Gigabit-Ethernet Optimized Video Networking Solution for Cable Design and Implementation Guide, Release 3.0*, provides an introduction to monitoring and troubleshooting the Cisco Ethernet switches in the Cisco cable-based IPTV solution. Troubleshooting areas include:

- Troubleshooting multicast
- Show commands
- Debug commands
- Viewing hardware rate limiter (HWRL) counters

Monitoring and troubleshooting information is available here:

[http://www.cisco.com/en/US/products/ps6902/products\\_implementation\\_design\\_guide\\_chapter09186a0080645ae0.html](http://www.cisco.com/en/US/products/ps6902/products_implementation_design_guide_chapter09186a0080645ae0.html)

