

Cisco Performance Monitoring and Mediatrace



Customer Need: Video Operations

Video is projected to quadruple IP traffic by 2014 to 767 exabytes. Organizations use video-based applications such as employee collaboration, training, and surveillance. Fundamentally, video traffic is different from data traffic. Video traffic is more dynamic and bandwidth intensive, and even small changes in delay or loss can cause visible disruptions to the user experience. Routinely, IT trouble tickets are opened by users who are faced with degraded experience. Since video is real time, any delay in troubleshooting could cause IT to miss the window to rectify the problem. For a firm with many locations and buildings, finding the problem area can be complex and time consuming without the right tools.



Technology Postcard

Feature Description: Performance Monitoring and Mediatrace

Cisco® Performance Monitoring and Mediatrace are Cisco IOS® Software features that are available on Cisco Catalyst® switches for video traffic troubleshooting.

Cisco Performance Monitoring allows IT administrators to set metrics on switches that correspond to high-quality video. If video quality deteriorates, the switch raises automatic alerts after comparing the actual metrics with expected metrics. The metrics can include acceptable round trip time, latency, and jitter.

Mediatrace allows IT administrators to trace the video hop by hop across the network to detect problems along its path. This can also be triggered. These tools can be run on demand or scheduled periodically to look for trends.

The Cisco Prime™ network management application provides powerful visualization capabilities for the results of Mediatrace. For example, it can pictorially show the hop-by-hop measurements of video traffic across the network.

The following two cases show the benefits of Cisco Performance Monitoring and Mediatrace.

Use Case 1: Cisco Performance Monitoring

- **Without Cisco Performance Monitoring:** A firm has video IP phones and telepresence collaboration service between three locations: San Francisco, London, and Beijing. During times of traffic congestion or failures, users notice the poor video quality and raise IT trouble tickets. IT then investigates and repairs the areas of the network. In this case, IT does not have the means to detect the problem before the trouble tickets are raised. In certain cases, the problem can persist for weeks if it occurs randomly.
- **With Cisco Performance Monitoring:** IT uses the Cisco Performance Monitoring tool to set acceptable quality metrics on the switches in the paths of the video between the three locations. If congestion or failure occurs, the switch in that path will notice the poor video quality by comparing the video metrics and automatically alert IT administrator through a page or text message. This happens even before the users realize the poor quality video, minimizing the number of IT trouble tickets and user dissatisfaction.

Use Case 2: Cisco Mediatrace

- **Without Cisco Mediatrace:** A firm has video IP phones and telepresence collaboration service between three locations: San Francisco, London, and Beijing. During a telepresence session, a fault in the core switch results in pixelated video for the users. An IT trouble ticket is raised. IT manually looks at the network configuration and logs into each switch/router in the path to discover the problem device. This is time consuming, and users experience poor-quality video for the entire duration of troubleshooting.
- **With Mediatrace:** When the IT trouble ticket is raised, IT uses the Cisco Mediatrace tool from the switch closest to the telepresence device. The tool traces the entire path of the video through the network, and IT discovers the problem switch in the core. The entire process is automatic, reducing the time to troubleshoot.

Benefits

1

Cisco Mediatrace can collect hop-by-hop detailed information such as processor utilization, memory, delay, and round trip video time.

2

Remote fault resolution: Cisco Performance Monitoring and Cisco Mediatrace can be used from a central location to analyze traffic flows between any two devices in the network. Troubleshooting a problem at a remote location is straightforward and cost effective since there is no travel or third-party cost.

3

Both tools can be used on demand or scheduled periodically to report trends.

Supported Catalyst Platforms

- Cisco Catalyst 6500
- Cisco Catalyst 4500E
- Cisco Catalyst 4500-X
- Cisco Catalyst 3750-X
- Cisco Catalyst 3560-X

For More Information

<http://www.cisco.com/go/medianet>