CHAPTER 20

Troubleshooting Voice/Video Delivery to a Branch Office

To successfully diagnose and resolve problems with application service delivery, network operators must be able to link user experiences of network services with the underlying hardware devices, interfaces, and device configurations that deliver these services. This is especially challenging with RTP-based services like voice and video, where service quality, rather than gross problems like outages, impose special requirements.

Cisco Prime Assurance makes this kind of troubleshooting easy. The following workflow is based on a typical scenario: A user complains to the network operations desk about poor voice quality or choppy video replay at his branch office. The operator first confirms that the user is indeed having a problem with jitter and packet loss that will affect his RTP application performance. He further confirms that other users at the same branch are also having the same problem,. The operator next confirms that there is congestion on the WAN interface on the edge router that connects the local branch to the central voice/video server in the main office. Further investigation reveals that an unknown HTTP application is using a high percentage of the WAN interface bandwidth and causing the dropouts. The operator can then change the unknown application's DSCP classification to prevent it from stealing bandwidth.

Step 1 Select **Operate > Details Dashboards > End User Experience**.

Step 2 Next to **Filters**, specify:

- The IP address of the **Client** machine of the user complaining about poor service.
- The **Time Frame** during which the problem occurred.
- The ID of the problem **Application**.

Click **Go** to filter the Detail Dashboard information using these parameters.

Step 3 Check **RTP Conversations Details** to see the Jitter and Packet Loss statistics for the client experiencing the problem .

Step 4 Check the **User Site Summary** to confirm that other users at the same site are experiencing the same issue with the same application.

Step 5 In the **User Site Summary**, under Device Reachability, hover the mouse over the branch's edge router. Prime Assurance displays a 360 View icon for the device under the Device IP column. Click on the icon to display the 360 View.

Step 6 In the 360 View, click the Alarms tab, to see alarms on the WAN interfaces, or on the Interfaces tab, to see congested WAN interfaces and the top applications running on them.