Did you know that according to Enterprise Management Associates (EMA)™ analysts, 95 percent of organizations have VoIP on their network – and more than half have deployed videoconferencing? IP videoconferencing has strong appeal to businesses through its promise of significant cost and time savings.

But how simple is the transition to video? For end users, video communications are expected to be smooth, seamless, and simple. For the network team, although there’s an expectation that video will be similar to VoIP, they need to be prepared for several challenges unique to video. This article explores key video requirements and monitoring strategies to ensure the technology meets end-user expectations.
MANAGING IN REAL TIME

The primary challenge that differentiates videoconferencing performance management from other applications is the real-time nature of the service. Even minimal quality issues can be incredibly disruptive.

As a result, every effort must be made to ensure the network is clean and ready to support live IP-communications sessions.

This requires a concerted effort by the network team to test, characterize, and pre-qualify the network as ready for videoconferencing. It also means finding ways to recognize problems as they happen. Efforts to identify and troubleshoot performance quality issues will also require the ability to reconstruct and study incidents in detail.
A significant difference between VoIP and videoconferencing is the amount of traffic generated. This means network Quality of Service (QoS) class definitions and bandwidth allocations must be reevaluated before deploying videoconferencing.

Organizations often find that setting aside 10 percent of bandwidth for VoIP is sufficient, but to accommodate even moderate rates of concurrent videoconferencing sessions will require 30 percent or more. The potential negative implications go well beyond bandwidth consumption – providing latency-sensitive video traffic with increased precedence raises the likelihood of contention among other applications for remaining network resources.
“With Observer, not only can I look at QoS Layers 2 and 3 to see that packets are being tagged correctly, but I can also look into the protocol to understand how the application interprets the information.”

Everett McArthur | Texas Tech University Health Sciences Center
Enterprise Network Engineer
CONFIGURING MONITORING METRICS

Key Performance Indicators (KPIs) for videoconferencing quality can be defined using metrics similar to those used in monitoring VoIP, plus a few that are different. IT teams typically rely on latency, packet loss, and jitter as indicators of the network’s ability to support quality video. Specific to videoconferencing are metrics designed to reflect aggregate audio/video experiential quality, such as Video MOS (V-MOS). While not based on an industry standard (as is MOS, used with VoIP monitoring), it can be of great value if applied consistently to video traffic.
KEYS TO VIDEO HEALTH MONITORING

When monitoring videoconferencing performance, there are several options – ranging from video-vendor provided tools to a comprehensive performance monitoring solution like the Observer® Platform. The following are 6 key attributes to help ensure your team is able to manage overall video health.
COMPREHENSIVE EXPERT VIDEO ANALYTICS

BENEFIT

Critical for immediate problem recognition and resolution. Provides fast and definitive views of VoIP and videoconferencing control protocols and session quality issues, plus IPTV analytics to quantify streaming video health.
MULTI-VENDOR SUPPORT

BENEFIT

While initial deployments are typically single vendor, long-term organizations tend to roll out a mix of vendor video solutions. Verify the monitoring system accommodates multiple manufacturers.
VIDEO TRAFFIC IN CONTEXT

BENEFIT

Viewing video traffic alongside all other IP traffic is key to assessing the impact of other applications and ensuring quick and accurate problem resolution.
LONG-TERM CAPTURE AND STORAGE

BENEFIT
Vital for reconstructing video sessions and reviewing problems in detail. Ensures that both communication control and content traffic can be inspected. Be sure the solution can capture up to 10 Gb network speeds, so you can count on having all the packets.
BENEFIT
Collect and correlate underlying videoconferencing system components alongside system health metrics. Ensure support for popular vendors including Microsoft®, Cisco®, and Avaya®.
AGGREGATED & IN-DEPTH REPORTING

BENEFIT

Measure, track, and generate reports on VoIP and video MOS to validate session quality, as well as in-context views to reveal environmental factors and application contention that may be causing problems.
CONCLUSION

By preparing the network environment, evaluating QoS policies, and having comprehensive videoconferencing monitoring solutions in place, you can feel confident in your ability to meet user expectations with smooth video calls.
ABOUT NETWORK INSTRUMENTS

Network Instruments, a JDSU Performance Management Solution is an industry leader in application and network management. It provides products that optimize performance and speed problem resolution, helping ensure delivery of critical applications for businesses worldwide. Network Instruments delivers these benefits through a seamlessly integrated line of precision-engineered software and hardware systems for exact network monitoring and analysis.

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