NetMRI™ Quality of Service (QoS) Technology Module
An Integral Analysis Engine for Critical Applications

A Better Way to Monitor Quality of Service Issues

The convergence of voice, video, and data networks has made it essential to prioritize network traffic in order to preserve quality of service (QoS) for all users across all types of applications. While maintaining QoS for all communications is important to ensure a quality of experience, QoS is especially critical for applications with time-sensitive traffic, such as voice over Internet protocol (VoIP) calls. Voice packets must, by policy, be forwarded ahead of normal data traffic and cannot suffer much loss or jitter without significant degradation of the call.

QoS is the net effect of a properly managed network and is the measure of how well the network is providing the necessary circuit-switched connectivity while simultaneously and seamlessly integrating other traffic types. The NetMRI QoS Technology Module monitors QoS throughout your network and detects packet losses and misuse of queues, letting you know whenever performance issues arise.

Dropped Packet Detection
The Packet Loss Factor

Packets are routinely dropped in an IP network as a means of managing congestion—it is a natural occurrence. As long as data is not time-sensitive, the dropping and re-transmitting of packets is usually not a problem. But today's expansive networks not only transmit data, but also handle

Features and Benefits

• Detects dropped packets— the most common problem with application traffic

• Streamlines the troubleshooting process

• Notifies you of all issues as they occur in any queue throughout the network

• Quickly identifies all queues where no activity is detected

• Proactively alerts you of QoS disruption, before problems occur

• Works with the IP Telephony Module to detect voice path issues, trace and analyze call detail records (CDRs), and evaluate and monitor queue performance

The NetMRI QoS Technology Module is designed to detect and notify you of all issues of packet drops anywhere on your network as they occur in queues throughout the system. A high-level scorecard and issues list, enabling you to drill down to detailed analysis, dramatically reduce mean time to repair (MTTR).

packets associated with voice and video applications, which place new demands on the network. For time-sensitive applications, such as VoIP or video, dropped or delayed packets can significantly reduce the quality of the transmission.

Dropped packets—and packets that arrive out of sequence or are delayed, a condition known as "jitter"—contribute to degradation in the voice signal. So detection of any dropped packets is a key troubleshooting tool for engineers responsible for ensuring the QoS for time-sensitive traffic on their networks.

Congestion and Performance Issues

Dropped packets are indicators that there's too much congestion on the network or there are performance issues, such as improper queuing or configuration errors—especially when the packet drops occur in high-priority queues. The result is a disruption in QoS that can lead to a breakdown of high-priority traffic applications such as VoIP service.

The NetMRI QoS Technology Module is specifically designed to detect and notify you of all issues of dropped packets anywhere on your network as they occur in the queues throughout the system.

Queue Analysis
Queue Activity Levels

When evaluating the operation and efficiency of queues, network engineers find it invaluable to quickly identify queues with no activity. The NetMRI QoS Technology Module contains a queue analysis feature that readily determines the activity levels of all queues and singles out those where no activity is detected.

Unused Queues

Two of the primary reasons why a queue may be unused indicate a network problem that must be addressed:

– An unused queue may be the result of an incorrect configuration, which leaves the queue unmatched across the network.
– A queue with no activity may be the result of improper marking at the access layer.

Either the unused queues are not needed or the configuration is incorrect. In either case, you must confront the situation.

Timely Intervention

Unlike other network management issues, restoration of QoS cannot be delayed or postponed. When QoS is interrupted, immediate reparation is imperative. The NetMRI QoS Technology Module is a critical tool that lets you know when packet drops are occurring and/or when queues are going unused.

An Essential VoIP & Video Adjunct

The NetMRI QoS Technology Module is helpful for ensuring end-to-end QoS across the network for all traffic, including data, voice, and video. For networks with VoIP service, the NetMRI QoS Technology Module is especially invaluable. The QoS Module works with the NetMRI IP Telephony Module to give you the insight to detect voice path issues, trace and analyze call detail records (CDRs), and evaluate and monitor device QoS configurations. Together, the two modules help NetMRI collect and analyze configuration data from the key infrastructure components of your network, including routers, switches, and all VoIP-enabled devices.

For more information on Netcordia and our full range of automated network management solutions, please call **410-266-6161** or visit **netcordia.com**

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