Multi-QoS

Voice Over IP Plug-in Module for Surveyor
Providing QoS metrics on Multimedia IP Networks

Given the rapid acceptance of IP as the de facto network protocol, Quality of Service (QoS) has become one of the biggest challenges for network administrators. For voice and video applications that require real-time performance, elimination latency, jitter, and buffering in the network infrastructure is key. Policy-based systems, gateways, switches, and routers are often configured with a myriad of vendor and protocol combinations that must work in unison to provide priority for the real-time multi-media traffic. Multi-QoS proves the network is working as you have configured it.

Shomiti's Multi-QoS software plug-in to the Surveyor 3.X enables the capture, analysis, and summarization of a broad range of QoS factors associated with H.323 and related multimedia IP traffic (voice, video, data). Multi-QoS delivers an extremely rich set of reported and calculated data to validate QoS parameters presented by IP phones, PSTN / IP Gateways, IP switches, and IPBXs on a call-by-call, or channel-by channel basis.

Multi-QoS also supports SIP, Cisco's SSP, MGCP, and SGCP protocols in order to assist in the troubleshooting of complex VoIP network scenarios. Used with Surveyor 3.X, Multi-QoS detailed metrics and measurements also help the network technology professional clarify the capability of the network infrastructure, discover problems affecting user quality: delay, jitter, loss, and identify when to increase network capacity.

Product Features

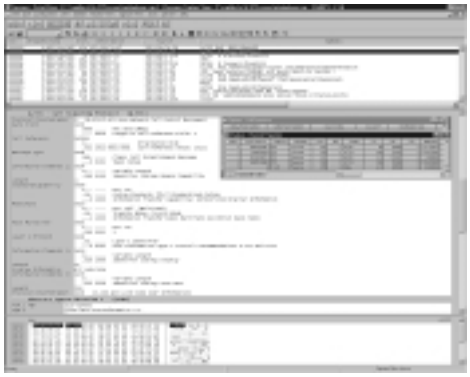
Provides very complete, detailed, and accurate decodes and summarization of the H.323 and related families of protocols and conversations including ASN.1, MGCP, SIP, Cisco SSP, SGCP, and most major codecs.

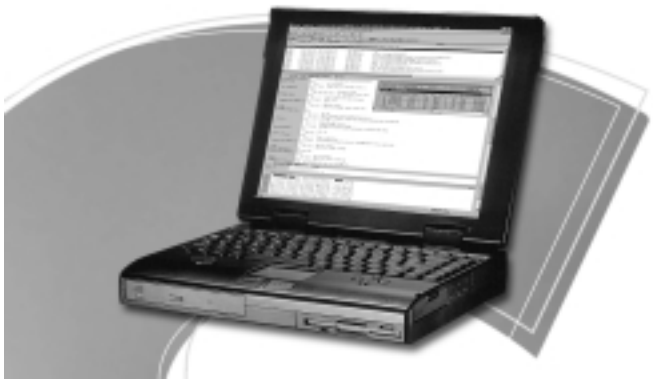
Calculates QoS metrics to validate reported RTCP packets from network infrastructure providers, such as Gateways and IPBXs. This comparison of QoS metrics can be used to determine the actual performance of the network.

Provides a rich set of information beyond typical CDR (Call Detail Records) in telephone PBXs to describe the end-points and QoS characteristics of each conversation.

Thresholds can be set so network engineers can quickly recognize calls that are out of acceptable QoS guidelines.

Information is displayed in three configurable views: Call View, Channel View, and Packet Decode. These views enable extensive drill down capabilities for troubleshooting the most difficult high-speed, multi-media network application.





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Technical Specifications

System Requirements

System	200MHz Pentium class
Memory	192MB minimum
Disk Space	20MB
OS	Windows 95/98/2K or NT 4.x
Display	800x600(SVGA)
Network Interface	10/100 Ethernet NDIS, 10/100 Ethernet Century Media Module 2, Gigabit Analysis Module, Explorer or Shomiti cardbus analyzer modules and/or Gigabit Explorer

Data/Metrics Provided in the H.323 Channel Table View

Index	Order in which channels were created
Protocol	Protocol RTP or T.120
Stream origination direction	Forward = stream originating at the caller. Reverse = stream originating at the callee.

Logical Channel Number
Session Identifer
Codec type

PC	Packet Count
BC	Byte Count
PD	Packets Dropped

Jitter calculated by Surveyor in milliseconds
Minimum Jitter calculated by Surveyor in msec
Maximum Jitter calculated by Surveyor in msec
Lowest & Highest RTP Sequence Number seen
Number of RTCP Sender Reports seen
Number of RTCP Receiver Reports seen
Number of RTCP Source Descriptions seen
Number of RTCP Goodbyes seen
RTCP Packet Data including
- RTCP Packet Count, Byte Count, Packets Dropped, Avg. RTCP interarrival jitter, Minimum RTCP interarrival jitter, Maximum RTCP interarrival jitter

Application Definition Count
Unknown Report Count
RTCP Canonical Name (RTCP Source Description, CNAME field)
RTCP Source Description information including
- NAME, EMAIL, PHONE, LOCATION, TOOL & NOTE fields.

Multi-QoS Supported Protocol Decodes

ITU H.323v2	IETF	Codec	Cisco
Q.931	SIP	G.711	SSP
H.245	MGCP	G.723	
T.120	SGCP	G.728	
H.225.0	RTP	G.729	
GK DISC	RTCP	H.261	
RAS		H.263	
ASN.1			

H.323 Call Table Data And Metrics

Phone number of the calling party
Phone number of the called party
Source & Destination

Aliases:	The first alias from the list of aliases for the source & destination (H.225.0)

Source IP Address
Destination IP Address

Connection Type:	F=Fast, N=Normal, U=Unknown
Start & End Time(s):	Times the setup message and complete message were received. (Q.931)
Set Up Time(s):	Time differential between when the Setup Message was received and the Alerting Message was received
Call State:	Setup=Setup Message received. Alerting=Alerting Message received. Active=Connect Message received. Released=Release Message received.
Call Description:	The cause for the Release Complete message. (Q.931)

Source Product H.323 Version, Protocol & Name
Destination Product H.323 Version, Protocol & Name
Number of Logical Channels (video, audio and data) composing the conversation.
Source & Destination Port

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