

# MULTI-QOS

## BENEFITS

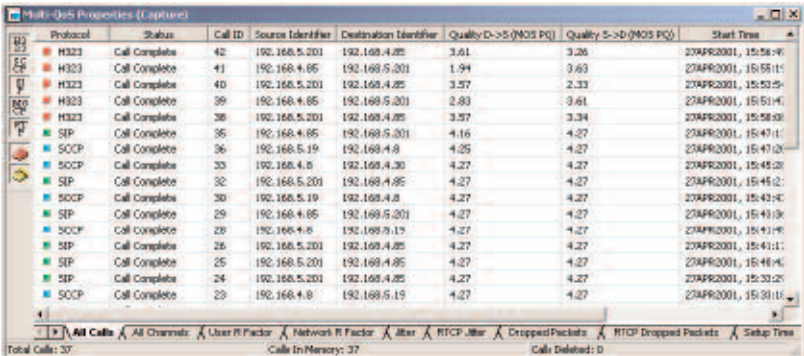
- Monitor, Analyze & Troubleshoot VoIP Networks with Just One Easy-to-Use Tool
- Real-Time Alarms and Triggers Help Isolate VoIP Network Problems
- ITU/ETSI Standard “R” Factor Passive QoS Test Provides Call-by-Call SLA and Call Quality Score Including Predicted MoS Score
- Supports a Wide Range of VoIP Protocols Including H.323, SIP, MGCP, and SCCP
- Hear Voice Quality with Audible Call Playback for each direction or both directions
- Time-based analysis charts for each channel and for entire network

A software plug-in to the Surveyor Network Monitoring and Analysis Console, Multi-QoS confirms “ear-to-ear” QoS and SLA (Service Level Agreement) quality levels.

Multi-QoS monitors critical quality metrics including jitter, drops and impairment burstiness, with consideration for codec and recentness of impairment. These factors are processed by the ITU standard “E Model”, which scores each call with a predicted MOS value, Network R value and User R value. Multi-QoS decodes all common VoIP protocols including H.323, SIP, Megaco, MGCP and Cisco Avvid SCCP.

Multi-QoS has features and capabilities that address the needs of Network Equipment Manufacturers, VoIP Service Providers, and Enterprise Network Managers of deployed VoIP systems. Multi-QoS provides an extremely rich set of reported and calculated data to independently validate QoS parameters presented by IP phones, PSTN/IP Gateways, IP switches, and IPBXs on a call-by-call, or channel-by-channel basis. Data from Multi-QoS helps the Network Manager to maintain QoS SLAs by clarifying the capability of the network infrastructure and identifying when to increase network capacity.

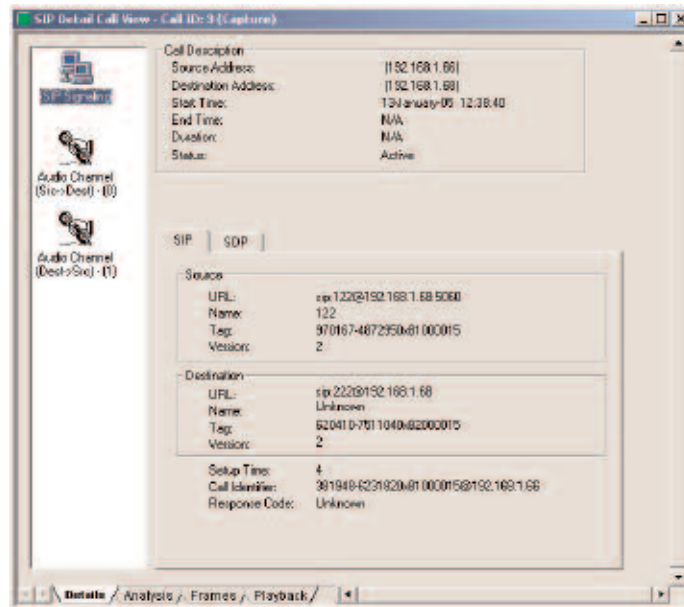
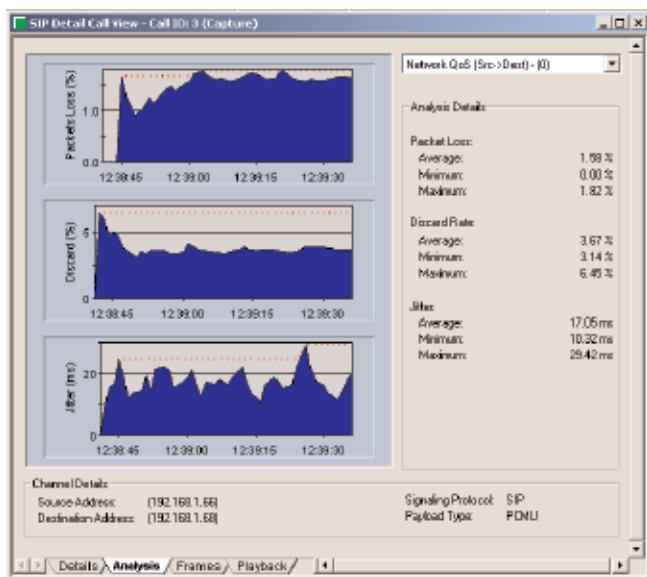
Multi-QoS allows a network engineer to monitor, measure, analyze and troubleshoot VoIP phones at the packet, channel and call level. Multi-QoS reports over 20 QoS metrics affecting user quality including estimated packets discarded, jitter, loss, call set-up, RTP packets, RTCP reports, and call teardown.



Protocol	Status	Call ID	Source Identifier	Destination Identifier	Quality D->S (MOS PQ)	Quality S->D (MOS PQ)	Start Time
H323	Call Complete	42	192.168.5.201	192.168.4.25	3.61	3.26	23APR2001, 15:58:46
H323	Call Complete	41	192.168.4.85	192.168.5.201	1.94	3.63	23APR2001, 15:58:11
H323	Call Complete	40	192.168.5.201	192.168.4.25	3.57	2.33	23APR2001, 15:53:59
H323	Call Complete	39	192.168.4.85	192.168.5.201	2.83	3.61	23APR2001, 15:51:41
H323	Call Complete	38	192.168.5.201	192.168.4.25	3.57	3.34	23APR2001, 15:58:58
SIP	Call Complete	35	192.168.4.85	192.168.5.201	4.16	4.27	23APR2001, 15:41:11
SCCP	Call Complete	36	192.168.5.19	192.168.4.8	4.25	4.27	23APR2001, 15:47:28
SCCP	Call Complete	33	192.168.4.8	192.168.4.30	4.27	4.27	23APR2001, 15:45:28
SIP	Call Complete	32	192.168.5.201	192.168.4.85	4.27	4.27	23APR2001, 15:45:21
SCCP	Call Complete	30	192.168.5.19	192.168.4.8	4.27	4.27	23APR2001, 15:43:41
SIP	Call Complete	29	192.168.4.85	192.168.5.201	4.27	4.27	23APR2001, 15:43:38
SCCP	Call Complete	28	192.168.4.8	192.168.5.19	4.27	4.27	23APR2001, 15:41:48
SIP	Call Complete	26	192.168.5.201	192.168.4.25	4.27	4.27	23APR2001, 15:41:11
SIP	Call Complete	25	192.168.5.201	192.168.4.85	4.27	4.27	23APR2001, 15:40:41
SIP	Call Complete	24	192.168.5.201	192.168.4.25	4.27	4.27	23APR2001, 15:33:25
SCCP	Call Complete	23	192.168.4.8	192.168.5.19	4.27	4.27	23APR2001, 15:33:11

Total Calls: 37  
Calls In Memory: 37  
Calls Deleted: 0

Real-Time Triggers and Alarms on impairment events provide early warning of developing trouble to help prevent major problems 24x7. Triggered action options include email, pager or SNMP trap notification, event logging, start a capture, and execution of a script.



Multi-QoS features an audio call play-back capability that allows the user to hear selected channels and calls in order to assess the level of impairment caused by faults or mis-configurations of the network.

## TECHNICAL SPECIFICATIONS

### System

- 1Ghz Pentium class recommended

### Memory

- 1GB recommended; 256 MB minimum

### Disk Space

- 20MB

### OS

- Windows® 2000, Windows XP, Windows 2003

### Display

- 800x600 SVGA

### Surveyor Requirement

- Surveyor 7.0

## SUPPORTED PROTOCOL DECODES

### ITU H.323

- ASN.1 notation, H.248 (Megaco), RASH, GK DISC, Q.921, T.38 (fax over IP), H.225, Q.93, 1T.120, H.245, H.450.1

### IETF

- MGCP, RTP, SGCP, RTCP (v2), SDP, SIP (v2)

### Codec (ITU)

- G.711, G.729, CELL-B, G.721, H.261, MPEG (v1, v2), G.722, H.263, JPEG, G.723, G.728

### Cisco AVVID

- SCCP, RUDP



1389 Moffett Park Drive  
Sunnyvale, CA 94089  
Phone (US Toll Free): 888.746.6484  
Phone Intl: 408.400.1000  
Email: [networktools-sales@finisar.com](mailto:networktools-sales@finisar.com)  
[www.finisar.com](http://www.finisar.com)

