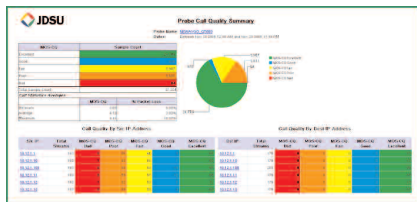


# QT-50 Software Probe—VoIP Service Assurance

## NetComplete™ Service Assurance Solutions Portfolio



### Key Features

- Creates meshes of synthetic VoIP calls and monitors their performance to proactively identify potential degradations
- Extends service performance visibility to the end user
- Performs trend analysis, time of day analysis, and historical reporting
- Quickly segments issues within the network, handoff points, or customer premises to rapidly troubleshoot problems
- Allows seamless interoperability for active call testing with QT family of probes and NetComplete OSS infrastructure
- Generates active calls, end to end, both on and off the network

The QT-50 software probe is an integral part of the JDSU NetComplete Service Assurance Solution Portfolio for VoIP services.

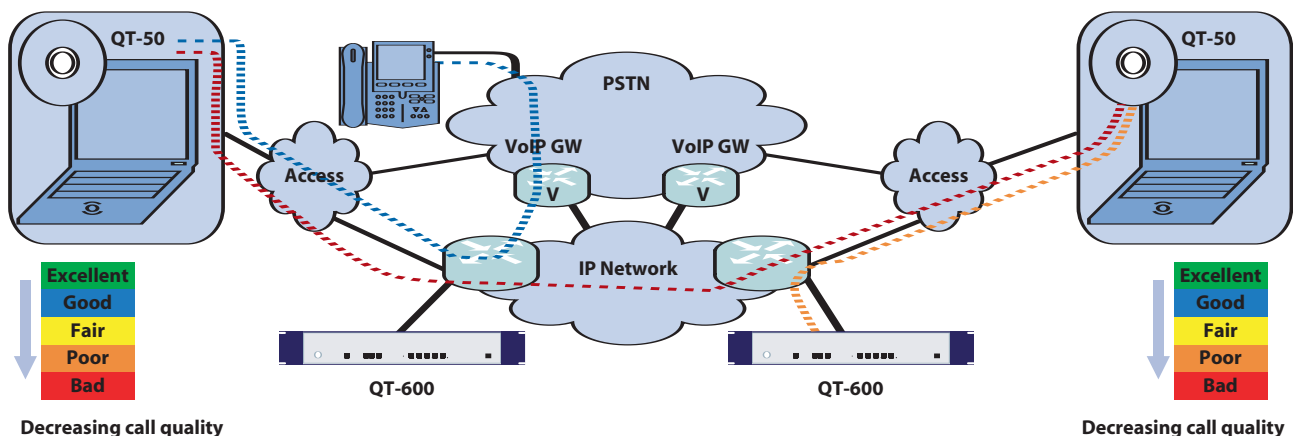


### Highly Flexible Lightweight Software Probe

The JDSU QT-50 is a software probe that gives service providers the flexibility to monitor, and rapidly troubleshoot business-class voice over Internet protocol (VoIP) quality of service (QoS) issues as experienced by their end customers. The QT-50 supports multiple deployment options including self-download to a PC and distribution via CD, e-mail, or file transfer protocol (FTP) from the service provider. The QT-50 can also permanently reside on a dedicated 1u high PC at the customer premises.

### Extends Service Performance Visibility to the End User

The QT-50 addresses a service provider's needs for proactive monitoring and troubleshooting QoS issues seen at the customer premises. As part of the QT-family, the QT-50 working together with a NetAnalyst™ Test OSS, can place and receive active test calls between other QT software probes and other test probes deployed across the network generating the same set of QoS metrics.



**VoIP QoS Analysis**

- MOS<sub>CQE, LQE, NPE</sub>
- R-factor<sub>CQE, LQE, NPE</sub>
- Jitter (instantaneous and standard)
- Clock skew
- Packet statistics
  - Loss
  - Dropped
  - Total
- Minimum, maximum, average, and standard deviations reported for metrics

**VoIP Specifications**

- Connectivity testing: ping and traceroute
- One- and two-way active call generation
- Automatic call completion
- SIP signaling
- Jitter buffer emulation
- Codecs: G.711 (μ-law and A-law) and G.729
- Standard versus reference tones
- Interoperability with other JDSU portables

**Minimum Configuration**

- 1 GHz
- 256 MB RAM
- 10/100 Ethernet interface
- Windows XP

**Proactive QoS Monitoring, Analysis, and Reporting**

The QT-50 initiates active synthetic VoIP calls to proactively monitor and ensure service availability across the network. This functionality allows QT-50s to originate and answer VoIP calls, at scheduled user-defined intervals, to other QT-50 software probes or other QT probes deployed across the network. Performance test results are consolidated and correlated in NetOptimize, the JDSU NetComplete performance management system. These results include full QoS analysis such as MOS, R-factor, jitter, packet loss, and packet statistics. With this proactive testing, problems can be identified and resolved before end users experience a loss in QoS. Once problems are encountered, the on-demand active testing features of NetAnalyst allow service providers to drill down, sectionalize the network, and rapidly isolate faults for troubleshooting. Service providers can also use this information proactively for trending and time-of-day analysis to identify areas of potential eminent degradation.

**Quickly Segment the Network for Rapid Problem Resolution**

The QT-50 software probe enables centralized remote fault isolation and segmentation of QoS issues. The QT-50 performs on-demand tests that emulate the end-user generating and receiving active test VoIP calls across the network. Ping and traceroute tests can also be run to verify connectivity throughout the network. By seamlessly internetworking with other QT-50s and QT probes, the service provider can initiate test calls to all points along the errored path to limit the scope of the issue to a particular network segment. NetOptimize further correlates this information with other network and service sources, to further pinpoint the root cause of the problem.

The JDSU NetComplete portfolio provides a comprehensive Service Assurance Solution—including industry-leading test probes, software, and systems—that supports worldwide communications providers delivering next-generation network and fixed mobile convergence (FMC) services. NetComplete provides best-in-class business solutions so service providers can effectively manage the entire lifecycle for quality voice, video, data, and wireless services.

**Test & Measurement Regional Sales**

<b>NORTH AMERICA</b> TEL: 1 866 228 3762 FAX: +1 301 353 9216	<b>LATIN AMERICA</b> TEL: +55 11 5503 3800 FAX: +55 11 5505 1598	<b>ASIA PACIFIC</b> TEL: +852 2892 0990 FAX: +852 2892 0770	<b>EMEA</b> TEL: +49 7121 86 2222 FAX: +49 7121 86 1222	<a href="http://www.jdsu.com/test">www.jdsu.com/test</a>
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