





# Enabling Australia's Field Technicians to build, troubleshoot and maintain better communications networks.



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# **VolP Service Assurance** QT-50 Software Agent



#### Service Assurance Features

- Gain an understanding of the customer's VoIP service experience by generating test calls throughout the network, end-to-end
- Proactively identify potential degradations by creating meshes of synthetic VoIP calls and monitoring their performance
- Perform trend analysis, time of day analysis, and historical reporting
- Rapidly troubleshoot problems by quickly segmenting issues within the network, handoff points, or customer premises

Key Features

- Highly flexible lightweight software agent
  - Extends service performance visibility to the end user
  - Provides proactive quality of service (QoS) monitoring, analysis, and reporting
  - Segments network for rapid problem resolution
  - Allows seamless interoperability for active call testing with QT family of probes and NetComplete<sup>TM</sup> OSS infrastructure
  - Generates active calls, end-to-end, both on and off the network

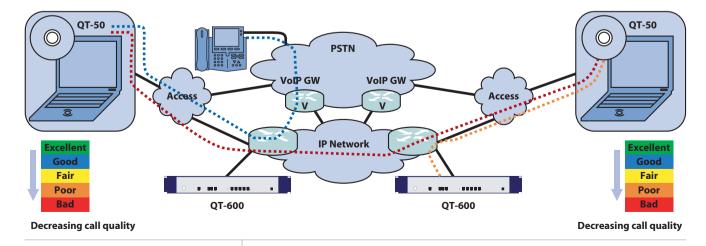
The QT-50 software agent is an integral part of JDSU NetComplete Service Assurance Solutions for VoIP Services.

# Highly flexible lightweight software agent

The JDSU QT-50 is a software agent that gives service providers the flexibility to monitor, and rapidly troubleshoot, business class VoIP 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, email, or 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

An integral part of the JDSU NetComplete Service Assurance VoIP portfolio, the QT-50 addresses 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 NetAnalyst<sup>™</sup> Test OSS, can place and receive active test calls between other QT software agents and 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 deviation reported for metrics

#### **VoIP Specifications**

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

#### **Minimum Configuration**

- 1GHz
- 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 agents or 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 are identified and resolved before being experienced by end-users. 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 agent 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 are also 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, further pinpointing the root cause of the problem.

### An integral part of the NetComplete Service Assurance Solution

The NetComplete portfolio provides the flexibility to manage and troubleshoot QoS in networks today. NetComplete also delivers a comprehensive end-to-end solution for service turn-up, fault isolation, problem detection, segmentation, and troubleshooting, active and passive performance management, and capacity planning across voice, video, and data services providing a far-reaching complete view into current and future network and service level performance.

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#### **Test & Measurement Regional Sales**

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