



DVQattest®

Distributed Active Test Solution for Networks, Network Services/Applications, Voice and Video over IP

Test Drive Your Network

DVQattest® is a multifunction, high performance active test application for testing, troubleshooting, and monitoring the performance of IP and MPLS networks, network services and applications, and Voice over IP and videoconferencing services. DVQattest's highly scalable design comprises distributed software test agents for Windows, Linux, and Android and a central Java-based application for configuration, management, and real-time metrics reporting. DVQattest is based on Telchemy's widely used VQmon® performance analysis technology, which delivers accurate, consistent estimated perceptual quality scores and performance metrics for both active tests and live calls.

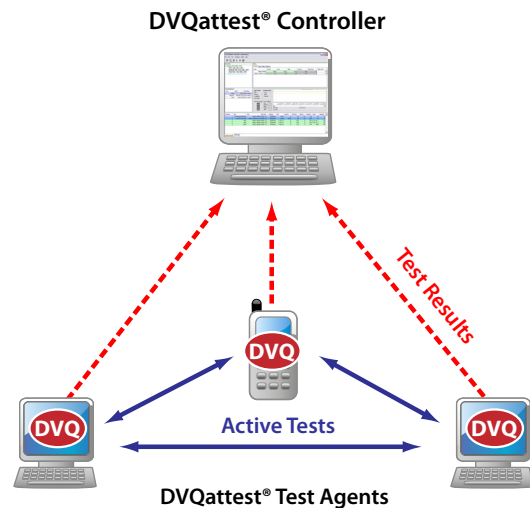
Key Features

- Distributed test solution for Linux, Windows, Android
- Network Transport, Service, and Application Testing:
 - Agent to Agent test quickly measures packet loss, jitter, bandwidth in each direction; measures round-trip delay and estimates one-way delay
 - Tests network services/applications with synthetic DHCP, DNS, HTTP, POP3, and SMTP transactions
 - Tests IP/TCP/UDP/MPLS performance with Ping, Trace Route, and Path Diagnosis to any IP/FQDN
- Voice over IP Active Testing:
 - Simulated VoIP calls between two test agents, or between a test agent and IP phone, ATA, or PBX
 - RFC3550-compliant RTP streams with SIP signaling and multiple voice codecs
 - Supports 100's of simultaneous test calls per agent
- IP Videoconferencing Active Testing:
 - Simulated videoconferencing sessions between two test agents, or a test agent and videoconferencing terminal
 - Generates up to multiple concurrent 1080p HD streams using multiple video/voice codecs
 - Selectable GoP structure

DVQattest's software test agents can be installed in key locations throughout the network on user PCs, mobile phones, servers, and routers. Each agent can generate a wide range of call and video session traffic for pre-deployment testing or SLA monitoring applications.

For pre-deployment testing, DVQattest simulates the high call volumes and traffic patterns expected from a real-world deployment of VoIP or videoconferencing service. This allows network managers to assess what performance level the network can sustain and what impact the new VoIP/IP video traffic will have on existing data applications.

In SLA monitoring applications, DVQattest agents in key locations make brief periodic test calls to other agents, IP phones/gateways, or videoconferencing terminals, providing continuous automated service level measurement with minimal impact to network resources.



► DVQattest Agents

DVQattest® Agents are small, powerful software applications that run in background mode as a Windows service or Linux daemon. Each agent can generate multiple test calls to other test agents, IP phones, VoIP gateways, PBXs, or videoconferencing terminals using SIP signaling. In addition, agents can perform a range of network diagnostic tests using another test agent, SIP device, DHCP/DNS/HTTP/POP3/SMTP server, or any IP address/FQDN as a test destination. Depending on the hardware platform and operating system of the host machine, agents can generate up to five hundred simultaneous VoIP calls.

► DVQattest Controller

The DVQattest Controller application provides a cross-platform Java UI for configuring DVQattest Agents, configuring and assigning test plans, and viewing test results. For larger-scale testing environments, or when passive monitoring of live calls is also required, Telchemy's SQmediator® Reporter application can be used as the configuration and reporting interface (SQmediator Controller application is also required).

Test plans define the scheduling of test calls by time of day, the number of calls to be established to each remote agent, and call characteristics—including codec type, call duration, and intervals between calls. For example, tests can be defined to generate periodic single calls to different locations for SLA monitoring, or a high volume of simultaneous calls to simulate typical load conditions for pre-deployment testing.

Testing for Enterprise VoIP and IP Videoconferencing

DVQattest supports pre-deployment testing, SLA monitoring, and advanced troubleshooting of VoIP and videoconferencing services in enterprise networks. Deployed at key points in the network, DVQattest's powerful software agents can make VoIP calls, simulated IP videoconferencing sessions, and specialized diagnostic test calls to other agents, SIP devices, and servers. Performance and diagnostic data is collected by each agent in real time and uploaded to the DVQattest Controller or SQmediator Controller/Reporter, both of which provide a graphical user interface for viewing reported metrics and configuring agents and test plans.

Testing for Mobile Data, VoIP, and Videoconferencing

DVQattest enables mobile phone vendors, mobile service providers, and content/application providers to measure the performance of services accessed through or carried over mobile data services. Typical applications include the measurement of VoIP or videoconferencing calls made between mobile handsets and the access time and delivery rates for web sites / web content accessed over mobile data networks from handsets.

Technical Specifications

VoIP Call Generation

- SIP Signaling (RFC 3216), Register, Invite, Bye
- RTP (RFC3550) with RTCP SR/RR
- RTCP XR (RFC3611) VoIP Metrics
- Multiple codecs supported
- Automatic variation of call duration, inter-call gap, codec & frame length

VoIP Quality Measurement

- VQmon[®] call quality analysis
- Extended ITU-T Recommendation G.107
- ETSI TS 101 3295- Annex E
- R-LQ, listening quality R factor
- R-CQ, conversational quality R factor
- MOS-LQ, listening quality score
- MOS-CQ, conversational quality score
- Jitter Buffer Emulator

IP Video Stream Generation

- Video from low bitrate (256K) up to multiple 1080p HD/Telepresence streams

- Selectable GoP structure
- Streaming or interactive video
- Selectable video codec

IP Video Quality Measurement

- VQmon[®] video quality measurement
- Video transmission quality - VSTQ
- MOS-V picture quality MOS score
- MOS-A audio quality MOS score
- MOS-AV multimedia quality MOS score

Software Environment

- DVQattest Agent - Windows 2000/XP/7, Red Hat Linux, Android
- DVQattest Controller - Java-compliant virtual machine (available on most computer platforms)

Performance

- Measured performance on Dual 3GHz Xeon server - 1000 simultaneous calls
- Expected performance on typical PC platforms - 100-500 simultaneous calls

Testing Applications

► Network Transport

DVQattest can be used to assess overall network health and troubleshoot network transport (IP/TCP/UDP/MPLS) performance with Ping, Trace Route, Agent-to-Agent test, and detailed Path Diagnosis tests using any test agent, SIP device, or IP address/FQDN as a test destination.

► Network Services and Applications

DVQattest agents can perform synthetic DNS, DHCP, HTTP, POP3, and SMTP transactions in order to test the performance of network applications. Any reachable DNS/DHCP/HTTP/POP3/SMTP server can be used as a test destination.

► Voice over IP

DVQattest generates "real" VoIP test calls using SIP signaling and industry-standard RTP and RTCP with voice payloads. Calls can be made from agent to agent or from agents to IP phones, ATAs, and PBXs. VoIP call quality is measured using VQmon, the most accurate and most widely used VoIP performance measurement technology.

► IP Videoconferencing

Simulated IP videoconferencing sessions can be exchanged between agents for Enterprise predeployment testing. Image size, frame rate, and video stream characteristics can be configured to simulate a wide range of IP videoconferencing types from low-bitrate streaming desktop applications to high quality telepresence systems.

For OEM and Private Label customers requiring more information, call **1-866-TELCHEMY** or email sales@telchemy.com



Telchemy, Incorporated
2905 Premiere Parkway
Suite 280
Duluth, GA 30097
USA

Main 866-TELCHEMY
Local 678-387-3000
Fax 678-387-3008

www.telchemy.com



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