

Powerful Distributed Active Testing for IP Networks, Voice and Video

DVQattest® is a high performance distributed active test system for virtualized, cloud-based and traditional networks. Using compact software test agents deployed at key locations in an IP network, DVQattest can rapidly detect and diagnose a wide range of problems affecting traffic flow, Web and email server performance, VoIP, videoconferencing, and other mission-critical network applications and services.

Pure Software — DVQattest is an all-software solution that can be deployed on off-the-shelf hardware or in virtualized environments. DVQattest agents can run on Linux, Windows or Android systems, and are centrally controlled by Telchemy's **SQmediator®** performance management application.

Flexible Deployment — test agents can be installed on PCs/servers and mobile devices, deployed on VMs, or embedded into network equipment/CPE, for immediate accessibility wherever testing is needed.

Network Troubleshooting On the Fly — quickly isolate the root cause of poor network performance with advanced per-hop path testing that can identify many common problems including access link congestion and low bandwidth. Sophisticated HTTP, email, DNS and DHCP tests provide crucial insight into the health of network services and applications.

Real-time Quality Testing for Voice & Video — DVQattest can simulate a wide range of VoIP and video calls to other agents or SIP endpoints, using integrated **VQmon®** technology to analyze media and signaling performance in real time. Detailed diagnostic metrics for every test include accurate Mean Opinion Scores (MOS) for Voice, Video and Audio.

Right: DVQattest agents run on Linux and Windows-based VMs, servers, PCs, network appliances, Android mobile devices, and other systems as background tasks (service or daemon).

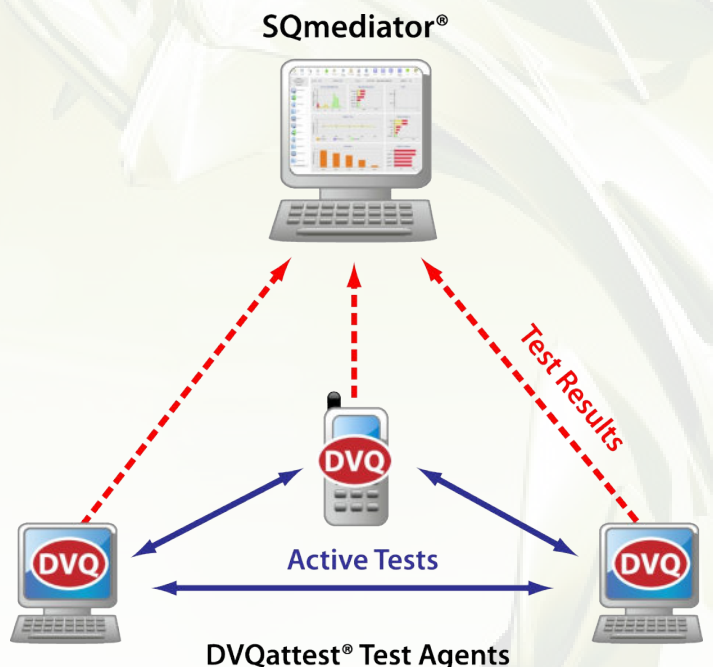
At the end of a test, each agent sends the test results to the SQmediator Controller. SQmediator is a software-based active/passive performance management system that provides DVQattest's detailed QoE scores, performance metrics and diagnostics.

KEY FEATURES

- Software test agents for Linux, Windows, Android
- Quickly detects IP path problems to another agent or any addressable device - packet loss, jitter, delay, low bandwidth...
- Server performance testing - HTTP, SMTP, POP3, DHCP, DNS
- VoIP test calls - RFC3550-compliant RTP streams with SIP signaling and the widest range of voice codecs
- Videoconferencing test calls with up to multiple concurrent 1080p video streams, selectable codecs and GoP structure
- Highly accurate, **VQmon®** powered QoE scores (MOS) for Voice, Video and Audio

KEY BENEFITS

- Affordable all-software test solution, runs on existing hardware
- Supports key emerging virtualization environments
- Distributed architecture scales easily from single sites to large service provider, enterprise, campus, government networks
- Place up to 100's of simultaneous VoIP or video calls per agent
- Multi-function tool for advanced troubleshooting, pre-deployment service testing, SLA monitoring
- Detect and diagnose problems remotely - fewer costly truck rolls



DVQattest® — State-of-the-Art Test System that Scales to Fit Any Network.

Testing for Enterprise VoIP and Videoconferencing — supports pre-deployment testing, SLA monitoring and advanced troubleshooting of voice, video and other applications and services in enterprise IP networks. DVQattest can simulate high call volumes for soak testing prior to deploying a new VoIP/videoconferencing service, and can make periodic automated test calls for continuous service level measurement with minimal impact to network resources.

Testing for Mobile Data, VoIP and Videoconferencing — enables mobile phone vendors, service providers and content/application providers to measure the performance of mobile data services. Easily measure call quality, access times and data delivery rates for web content accessed from handsets over mobile data networks.

SQmediator - Advanced Diagnostics — DVQattest agents are controlled by Telchemy's **SQmediator**® active/passive performance management system. SQmediator provides advanced diagnostics, expert analysis and detailed performance metrics for both active and passive calls, in an intuitive browser-based user interface with dynamic interactive charts.

The DVQattest® Advantage

DVQattest®	Conventional Hardware Test Appliances
Software-based solution can be deployed on a wide range of dedicated/shared platforms	Requires potentially expensive single-purpose hardware
Can be installed on mobile devices for accurate testing at each user handset	Can't deploy on mobile devices
Easily scale capacity by adding additional test agents	Need to replace hardware to scale capacity
Embeds directly into network equipment as either a VM-based or native application	Can't embed into network equipment

TECHNICAL SPECIFICATIONS

Software Environment (DVQattest Agent)

- Windows 7/8.x /10 (32/64-bit)
- Red Hat Enterprise Linux/CentOS 6.x/v7.x (32/64-bit)
- Android API level 16 (4.1.x) - 26 (8.0) for ARM platforms

Performance

- Measured performance on dual 3Ghz Xeon server - 1000 simultaneous test calls
- Expected performance on typical PC platforms - 100-500 simultaneous test calls

VoIP Call Generation

- SIP signaling (RFC 216), Register, Invite, Bye
- RTP (RFC3550) with RTCP SR/RR
- RTCP XR (RFC3611) VoIP metrics
- Automatic variation of call duration, inter-call gap, codec & frame length

Video Stream Generation

- Video from low bitrate (256k) up to multiple 1080p HD/Telepresence streams
- Selectable GoP structure, codec, streaming/interactive video

Quality Measurement

- VQmon® voice and video quality measurement
- QoE Mean Opinion Scores - MOS-LQ (listening quality audio), MOS-CQ (conversational quality audio), MOS-V (video), MOS-AV (audiovisual)
- Extended ITU-T Recommendation G.107
- ETSI TS 101 3295- Annex E



Telchemy, Incorporated

105 Nobel Ct
Suite 100
Alpharetta, GA 30005
USA

Email: info@telchemy.com

Web: www.telchemy.com

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