

## Test Drive Your Network

DVQattest is a sophisticated, high performance active Voice and Video over IP test application for pre-deployment testing, SLA monitoring and troubleshooting. This powerful test tool comprises distributed software agents for Windows and Linux and a central application for configuration, management and real time performance reporting. DVQattest is based on Telchemy's widely used VQmon VoIP/IPTV performance analysis technology, which ensures that performance metrics will be accurate and consistent for both active tests and live calls.

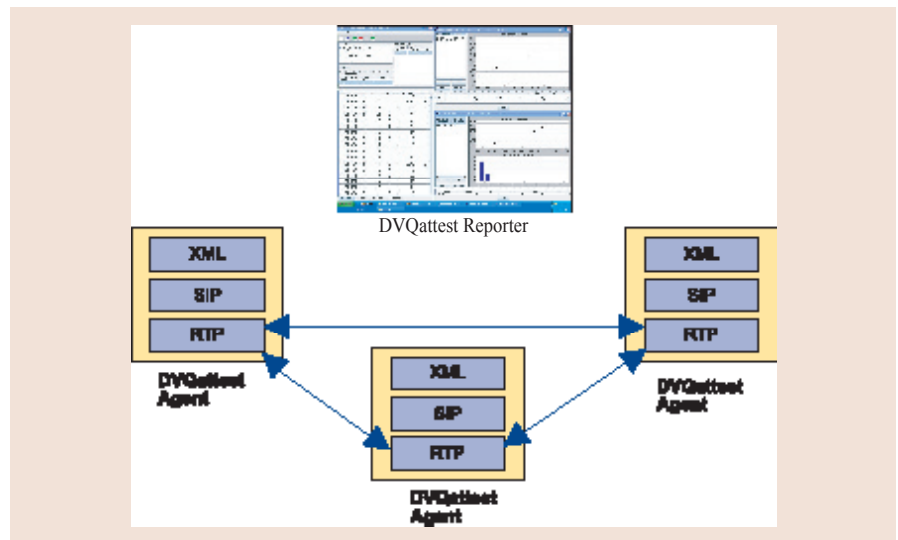
### Key Features

- Distributed software solution for Linux and Windows platforms
- SIP signaling
- Voice over IP Active Test
  - RFC3550 compliant RTP streams
  - Multiple codec types
  - Up to 500 simultaneous test calls per agent
- IP Video Active Test
  - Simulated IPTV and IP Videoconferencing
  - Video rates up to 6Mbits/sec
  - Selectable GoP structure

DVQattest agents can be deployed on every location running on either existing servers or user PC's, or on dedicated servers. Each agent can generate large volumes of calls to support pre-deployment testing or SLA monitoring.

In pre-deployment test applications, DVQattest can simulate the call volumes and traffic patterns that are expected in a VoIP or IPTV service to determine what performance level the network can sustain, and what impact VoIP/ IPTV traffic will have on existing data applications.

In SLA monitoring applications, DVQattest agents on each location make periodic test calls to other agents in order to measure service level, whilst minimally impacting other services. As DVQattest uses the same VoIP/IPTV quality measurement technology as most service providers (i.e. VQmon), results from DVQattest can be presented to service providers to enable comparison with SLA reports.



### DVQattest Agents

DVQattest Agents are small powerful software applications that run in background mode on Windows as a service or on Linux as a daemon. Each agent is able to set up multiple test calls to other agents or to regular IP phones or media gateways using SIP signaling. The capacity of each agent is limited by the hardware platform and operating system however can be up to five hundred simultaneous VoIP calls.

### DVQattest Reporter

The DVQattest Reporter application has an interactive graphical user interface that makes it easy to configure DVQattest agents, define and download test plans to each agent and retrieve and display results.

Test plans define scheduling of test calls by time of day, the number of calls to be established to each remote agent, the characteristics of calls, including type of codec, duration of call and intervals between calls. Tests could for example comprise periodic single calls to different locations, for SLA monitoring, or could comprise high volumes of calls to simulate typical load conditions for pre-deployment testing.

DVQattest/EN targets Enterprise pre-deployment testing, SLA monitoring and network troubleshooting. Powerful software agents are deployed at key points in the network - agents can make VoIP calls, simulated IP videoconferencing sessions and specialized network test calls to other agents. Performance and diagnostic data is collected by each agent and uploaded to the interactive DVQattest Reporter application. Agents can be configured in real time from the DVQattest Reporter user interface..

## VQattest/RE For Residential VoIP / IPTV and Hosted PBX services

DVQattest/RE gives residential service providers the tools they need to isolate performance problems with VoIP and IPTV customers. DVQattest/RE supports subscriber pre-signup testing, troubleshooting and detection of problems related to traffic prioritization. A DVQattest server is located on a public IP address in the service provider network, supporting up to 500 simultaneous test calls from agents located on the customer premise.. Pre-provisioned DVQattest agents are downloaded from a web server to

### Voice over IP

"Real" Voice over IP test calls with 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 and gateways. VoIP call quality is measured using VQmon, the most accurate and most widely used VoIP performance measurement technology.

### IPTV

Simulated IPTV streams with up to HDTV rates can be generated between agents. Configurable image size, video stream characteristics (e.g. GoP type and length) and frame rate allows common digital SDTV and HDTV streams to be simulated.

### IP Videoconferencing

Simulated IP videoconferencing sessions between agents to support Enterprise predeployment testing. Image size, stream characteristics and video stream characteristics can be configured to simulate a wide range of IP videoconferencing streams from low bit rate desktop to high quality room systems.

### Network Problem Identification

Network problems can be diagnosed using both standard and specialized network tests or from diagnostic data extracted from VoIP or IPTV active tests.

#### 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 and frame length

##### VoIP Quality Measurement

- VQmon/SA 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
- MOS-CQ, conversational quality
- Jitter Buffer Emulator

##### IP Video Stream Generation

- Video bit rates from 256k to 7Mbits/s

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

##### IP Video Quality Measurement

- VQmon/SA-VM 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, Windows XP, Red Hat Linux
- DVQattest manager - Java compliant virtual machine (available across most computer platforms).

##### Performance

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

#### Budgetary End User Pricing

DVQattest Reporter \$9,500  
DVQattest/EN  
DVQattest/200 Agent \$600  
DVQattest/50 Agent \$400  
DVQattest/10 Agent \$200  
DVQattest/RE  
Server \$12,000  
Agents \$500/server/month



www.netrsr.com

