



APP10™
APP50™
APP100™

APP10™, APP50™ and APP100™ are purpose-built network appliances that support active testing or passive quality monitoring in a wide range of network environments. The active test models (**APP-DVQ-10, APP-DVQ-50 and APP-DVQ-100**) test and troubleshoot VoIP, Videoconferencing, Web, Email, DNS and DHCP, and the passive monitoring models (**APP-SQP-10, APP-SQP-50 and APP-SQP-100**) analyze the quality of live VoIP and Videoconferencing calls in real time.

Active Testing for VoIP / Videoconferencing / Data

APP-DVQ-10, APP-DVQ-50 and APP-DVQ-100 provide a comprehensive solution for testing and troubleshooting a range of network data services and applications including VoIP and videoconferencing. APP-DVQ-10/50/100 can perform tests on other Telchemy appliances, network devices running a DVQattest software test agent, IP phones or videoconferencing endpoints, or network devices such as Web and email servers.

APP-DVQ-10/50/100 can generate multiple concurrent VoIP or videoconferencing test calls using a wide range of configurable codec and payload types while analyzing call quality in real time. APP-DVQ-10/50/100 tests network services and applications by performing synthetic transactions with DNS, DHCP, HTTP, POP3, and SMTP servers, and provides rapid diagnosis of routing problems using peer-to-peer probe tests and advanced per-hop IP path diagnosis. At the end of each test, APP-DVQ-10/50/100 generates a test record with detailed media, signaling, and network performance metrics—including perceptual quality scores (MOS) for voice and video tests—and a diagnosis of factors that may be impacting performance.

Passive Quality Monitoring for VoIP / Videoconferencing

For passive monitoring applications, APP-SQP-10, APP-SQP-50 or APP-SQP-100 automatically detects individual VoIP or Videoconferencing calls and monitors call quality and performance in real time. At the end of a call or at periodic intervals during calls, APP-SQP-10/50/100 generates a quality report with MOS scores, extensive transport and signaling metrics, and diagnostic data to assist in troubleshooting performance problems. APP-SQP-10/50/100 is a non-intrusive monitoring solution that provides real-time quality feedback without compromising bandwidth.

APP-SQP-10/50/100 provides real-time analysis of signaling associated with VoIP traffic, identifying calls by URI and detecting failed calls. Call flow and signaling performance metrics reported by APP-SQP-10/50/100 provide key information for troubleshooting VoIP calls affected by signaling problems.

Integrates Seamlessly with Telchemy SQmediator®

Active records from APP-DVQ-10/50/100 and passive records from APP-SQP-10/50/100 are sent to Telchemy's SQmediator® performance management application, which correlates and displays the quality metrics and diagnostic data in a dashboard-style web user interface with intuitive charts. SQmediator can also collect quality reports from other Telchemy appliances as well as directly from IP phones, handsets, tablets, gateways, videoconferencing systems, routers, and other devices with embedded reporting software such as Telchemy's VQmon® or SQlive™.



*APP10, APP50 or APP100 Network Appliance
(Front and Rear Panel View)*

Key Features

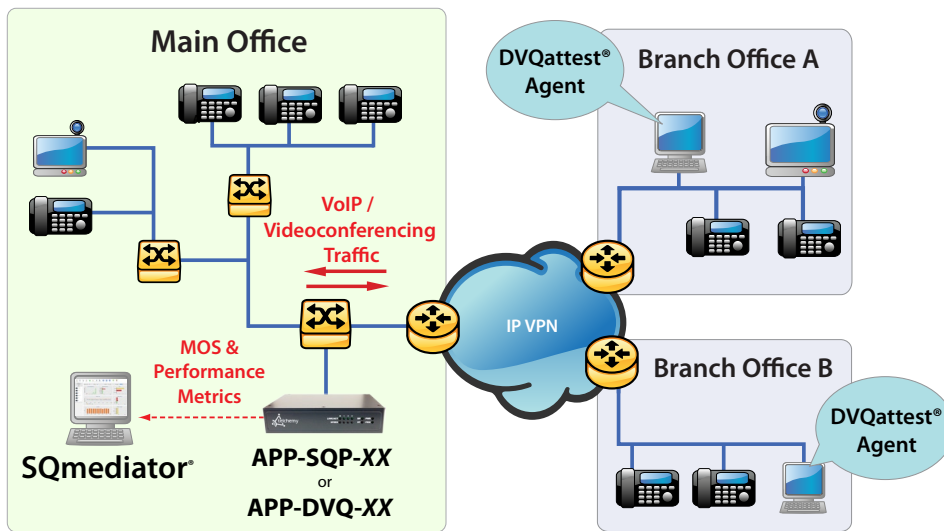
- Secure Linux OS
- Active testing or passive monitoring
- Bandwidth capacity of 10Mbps (APP10), 50Mbps (APP50) or 100Mbps (APP100)

APP-DVQ-10/50/100 Features

- Tests VoIP / Videoconferencing service performance using simulated test calls and real-time quality analysis
- Tests DNS, DHCP, HTTP, POP3, SMTP performance with synthetic server transactions
- Supports peer-to-peer probe tests and advanced IP path diagnosis Places test calls to other Telchemy appliances, DVQattest test agents, or SIP-capable devices
- Real-time quality analysis with detailed test records
- Listening & Conversational Quality MOS (VoIP) plus Video/Audio/ Audiovisual Quality MOS (Videoconferencing)

APP-SQP-10/50/100 Features

- Non-intrusively monitors voice and/or video call quality
- Real-time MOS for Voice, Video, Audio, Audiovisual
- Extensive media, signaling & network performance metrics
- Signaling, call outcome and call flow analysis
- Expert diagnosis identifies the source of quality problems



Example Application

The figure at left shows an example application of an APP10, APP50 or APP100 deployed for performance management of VoIP and videoconferencing services in an Enterprise network. The APP-SQP-10/50/100 can non-intrusively monitor the quality of voice and video calls as they traverse the network between the main office and branch offices. The APP-DVQ-10/50/100 can place test VoIP or video calls to other APP devices throughout the enterprise network, or to DVQattest test agents if they are installed on devices such as PCs, servers, or routers. Quality metrics from the APP-SQP-10/50/100 or APP-DVQ-10/50/100 are sent to the SQmediator application and can be viewed in the SQmediator Reporter web user interface.

Device Specifications

Form Factor	Desktop appliance [†]
Dimensions	6.3"(W) x 1.37"(H) x 4.1"(D) (160mm x 35mm x 104mm)
Environmental Requirements	Operation temperature: 32 °F ~ 104 °F (0 °C ~ 40 °C) Operation humidity: 10% ~80% relative humidity, non-condensing Storage temperature: -4 °F ~ 140 °F (-20 °C ~ 60 °C) Storage humidity: 10% ~80% @ 40C, non-condensing
Power	Power supply: 12V DC power in connector / 40W Power Adapter x 1 Power consumption: 14.5W, Intel® Celeron® J1900
Ports	Serial : RJ-45 Console x 1 Network : Gigabit Ethernet RJ-45 x 4
OS	Linux

[†] Mounting hardware options are available.
Contact Telchemy for more information.

Software Specifications

- VoIP call generation (*APP-DVQ-10/50/100*) - SIP Signaling (RFC 3216) Register, Invite, Bye; RTP (RFC3550) with RTCP SR/RR; RTCP XR (RFC3611) VoIP Metrics; Multiple codecs supported
- Videoconferencing stream generation (*APP-DVQ-10/50/100*) - from low bitrate to 1080p HD streams; selectable GoP structure/ codec
- Network service/application testing (*APP-DVQ-10/50/100*) - synthetic DHCP/DNS/HTTP/POP3/SMTP transactions
- Network tests (*APP-DVQ-10/50/100*) - ping, traceroute, IP path diagnosis, peer-to-peer probe tests
- VQmon call quality analysis (*APP-DVQ-10/50/100* or *APP-SQP-10/50/100*) - Extended ITU-T Recommendation G.107; ETSI TS 101 3295- Annex E; MOS-LQ, MOS-CQ, R-LQ, R-CQ scores
- VQmon video quality measurement (*APP-DVQ-10/50/100* or *APP-SQP-10/50/100*) - MOS-V, MOS-A, MOS-AV, VSTQ scores; levels of detail/motion/panning; identifies blank/frozen video

Application	Product Model	Bandwidth Capacity	Typical Call Capacity*
Active Testing	APP-DVQ-10	10 Mbps	10 concurrent test calls
	APP-DVQ-50	50 Mbps	50 concurrent test calls
	APP-DVQ-100	100 Mbps	100 concurrent test calls
Passive Monitoring	APP-SQP-10	10 Mbps	50 concurrent live calls (G.711)
	APP-SQP-50	50 Mbps	250 concurrent live calls (G.711)
	APP-SQP-100	100 Mbps	500 concurrent live calls (G.711)

* Actual number of concurrent calls supported is dependent on call codec and payload type.

Contact Telchemy for pricing information.



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