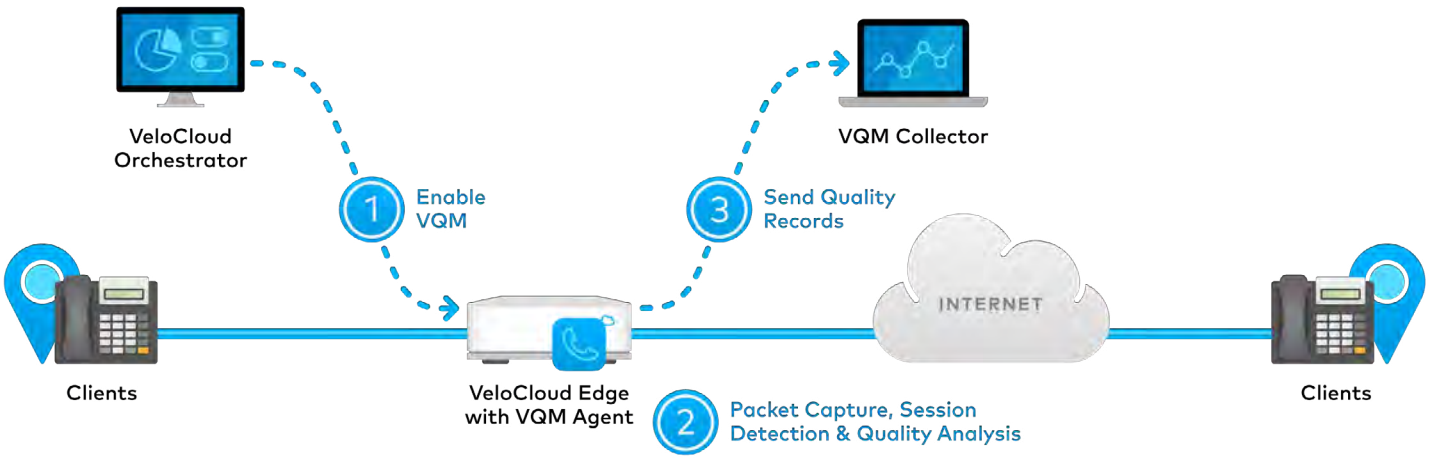
VeloCloud Voice Quality Monitoring (VQM)

VeloCloud VQM enables Service Providers and Enterprises to monitor, diagnose and proactively troubleshoot network issues impacting business critical voice communications.

VeloCloud VQM comprises a passive agent, on the VeloCloud Edge, which continuously monitors voice calls to proactively identify any performance issues on Enterprise and Service Providers' networks. This VoIP performance management software supports 80+ voice codecs and provides listening and conversational call quality metrics in both R-Factor and MOS (mean opinion score) formats as well as detailed diagnostic information, giving network managers both high level metrics and the ability to drill down to identify specific problems.

VeloCloud VQM delivers significant benefits to Enterprises and Service Providers including fast installation, continuous monitoring and preemptive identification and resolution of network issues even before a customer becomes aware or is impacted, leading to higher levels of customer satisfaction. VeloCloud VQM reduces the branch office footprint and continues to build on the benefits of the VeloCloud Cloud-Delivered SD-WAN architecture by delivering support for on-premises or in the cloud voice services.

The VeloCloud VQM passive agent can pass the voice quality metric reports to a RFC 6035 compliant VQM collector (e.g. Oracle Palladion, Telchemy, etc.) in the infrastructure, which can provide a high-level health overview for the network as well as a drill down view of each call session.



The VeloCloud VQM is offered as an optional subscription based on maximum concurrent VQM capacity. Example: 5 Mbps maximum concurrent VQM capacity would imply approximately 25 two-way g.711 calls. VQM SKU does not include the VQM collector and customers can use VQM collector of choice. The table below shows the optional VQM SKUs available to VeloCloud service throughput tiers.

VeloCloud Service Throughput Tier and VQM SKU Mapping

VeloCloud Service Throughput Tier	Maximum VQM Capacity (Annual Subscription)
50 Mbps	VC-0005-VQM (Concurrent VQM Capacity of 5 Mbps)
100 Mbps	VC-0010-VQM (Concurrent VQM Capacity of 10 Mbps)
200 Mbps	VC-0010-VQM (Concurrent VQM Capacity of 10 Mbps)
400 Mbps	VC-0020-VQM (Concurrent VQM Capacity of 20 Mbps)
1000 Mbps	VC-0020-VQM (Concurrent VQM Capacity of 20 Mbps)

Supported RFC 6035 Report Metrics

Category	RFC 6035 Metrics
Call and User Info	LocalGroup, RemoteGroup, CallID, LocalID, RemoteID, OrigID, LocalAddr, RemoteAddr
Call Config Info	PayloadType, SampleRate, PacketLossConcealment, JitterBufferNominal, JitterBufferMax, JitterBufferAdaptive, SampleRate
Listening Quality	MOS-LQ, ListeningQualityR, SignalLevel, NoiseLevel
Conversational Quality	MOS-CQ, ConversationalQualityR, ResidualEchoReturnLoss
IP Network Health	NetworkPacketLoss, JitterBufferDiscardRate, InterarrivalJitter, MeanAbsoluteJitter, BurstLossDensity, BurstDuration, GapLossDensity, GapDuration

Refer to RFC 6035 for detailed description of the Metrics.

Supported VoIP Codecs

G.711 A-law / μ-law, G.723.1, G.723.1 Annex C, G.728, G.729, G.729A/AB, G.729E, G.726, G.722, G.719, MS RTAudio, IS-54, iLBC, Broadvoice16, Broadvoice32, AMBE2Plus, GSM 06.10/06.20/06.30, QCELP8K, QCELP13K, EVRC-A, EVRC-B, AMR-NB, AMR-WB/G.722.2, AMR-WB+, SMV, Siren7/G.722.1, Siren14/G.722.1C, Siren14/G.722.1C with LPR, Siren22 (32, 48 and 64 kbit/s), Siren22 with LPR, G.729 + GIPS NetEQ, iLBC + GIPS NetEQ, GIPS Enhanced G.711 μ-law, GIPS Enhanced G.711 A-law, GIPS iPCM-WB, Speex Narrowband, Speex Wideband, Lucent/elemedia SX7300, Lucent/elemedia SX9600, Japanese PDC, EVS Narrowband/Wideband/Super Wideband/Fullband, L16 Narrowband/Wideband/Super Wideband/Fullband

velocloud™

VeloCloud Networks, Inc., the Cloud-Delivered SD-WAN™ company, Gartner Cool Vendor 2016 and a winner of Best Startup of Interop, simplifies branch WAN networking by automating deployment and improving performance over private, broadband Internet and LTE links for today's increasingly distributed enterprises.

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