

VeloCloud SD-WAN Subscription

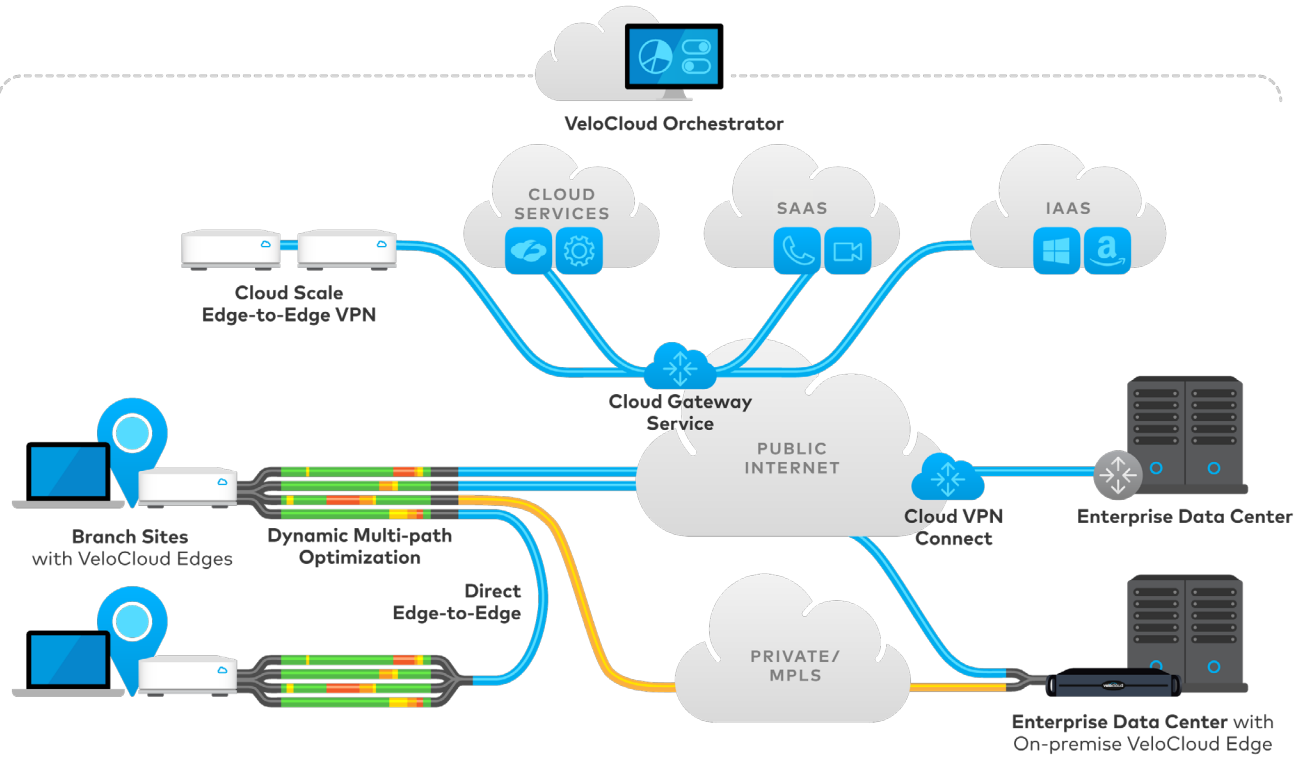
VeloCloud Cloud Delivered SD-WAN assures enterprise and cloud application performance over Internet and hybrid WAN while simplifying deployments and reducing costs.

Cloud-delivered SD-WAN from VeloCloud is offered as a subscription inclusive of all the solution components. Subscription tier is based on the aggregate WAN throughput with Dynamic multipath optimization and VPN enabled. Example: A branch with 2 WAN circuits each with 15Mbps downstream and 10Mbps upstream would require 25Mbps for each circuit or total of 50Mbps – so the 50Mbps tier is recommended to be able to handle the full capacity.

Enterprise and Premium subscription tiers include the following:

	Enterprise Subscription	Premium Subscription
Edge Appliance	✓	✓
VeloCloud Orchestrator	✓	✓
VeloCloud Gateway Service for SaaS (e.g. Office 365)	✗	✓
VeloCloud Gateway Service for IaaS (e.g. AWS)	✗	✓
VeloCloud Gateway Service for Cloud Scale VPN	✗	✓
VeloCloud Gateway Service for Additional Cloud Services (e.g. Zscaler)	✗	✓
Gateway for Cloud VPN Connect	Available as Add-on	Available as Add-on
Software Upgrade	✓	✓
Hardware Warranty	✓	✓
Technical Support	✓	✓

Architecture for Enterprise/Premium Subscriptions



VeloCloud Enterprise/Premium Subscription Tiers

VeloCloud Edge Throughput Tier ¹	30Mbps	50Mbps	100Mbps	200Mbps	400Mbps	1Gbps	2Gbps
Standard Edge SKU	Edge 510	Edge 510	Edge 520	Edge 540	Edge 840	Edge 840	Edge 2000

1. VeloCloud reserves the right to provision the Edge appropriate to "VeloCloud Enterprise/Premium Subscription Tier" ordered by the customer, partner or associates.



Technical Specifications	Edge 510	Edge 520	Edge 540	Edge 840	Edge 2000
Maximum Throughput²	100 Mbps	100 Mbps	400 Mbps	1 Gbps	5 Gbps
Maximum Tunnel Scale	25	50	100	400	4000
Maximum VQM Capacity³	5 Mbps	10 Mbps	20 Mbps	20 Mbps	20 Mbps
Routed Ports	2-Port GE 2-USB (3G/4G)	2-Port GE 2-Port SFP 4-USB (3G/4G)	2-Port GE 2-Port SFP 4-USB (3G/4G)	4-Port GE 2-Port SFP+	4-Port GE 2-Port SFP+
Switched Ports	1-Port GE	8-Port GE Managed Switch	8-Port GE Managed Switch	1-Port GE	1-Port GE
Configurable Routed/Switched	1-Port GE	N/A	N/A	1-Port GE	1-Port GE

2. The throughput available on a platform is based on the license. Throughput is measured with Dynamic Multipath Optimization and VPN. Maximum throughput for given platform may improve as technology evolves.

3. The Voice Quality Monitoring (VQM) capacity available on a platform is based on the license.

Continues on next page



Technical Specifications	Edge 510	Edge 520	Edge 540	Edge 840	Edge 2000
Total GE Ports (Routed+ Switched)	4-Port GE	10-Port GE	10-Port GE	6-Port GE	6-Port GE
Default Memory DRAM	4 GB DDR3	4 GB DDR3	4 GB DDR3	8 GB DDR4	8 GB DDR3
Maximum Memory DRAM (Optional)⁴	4 GB DDR3	4 GB DDR3	8 GB DDR3	32 GB DDR4	32 GB DDR4
Flash Memory	8 GB	8 GB	8 GB	N/A	N/A
SATA/HDD	N/A	N/A	N/A	N/A	N/A
SATA/HDD (Optional)⁴	N/A	N/A	N/A	100 GB	100 GB
MTBF	6 Years	6 Years	6 Years	6 Years	6 Years
USB Ports Local Software Install	2 - USB 2.0	2 - USB 2.0 2 - USB 3.0	2 - USB 2.0 2 - USB 3.0	2 - USB 3.0	2 - USB 2.0 2 - USB 3.0
Console Port	N/A	N/A	N/A	RJ45 IPMI 1 - VGA	RJ45 IPMI 1 - VGA
High Availability	Yes	Yes	Yes	Yes	Yes
Wireless (Maximum Power Subject to Change by Channel/Region)	1 x 802.11a/b/g/n/ac (Single Radio Dual Band)	1 x 802.11a/b/g/n/ac (Single Radio Dual Band)	1 x 802.11a/b/g/n/ac (Single Radio Dual Band)	N/A	N/A
Capabilities/Antenna	2 x 2 MIMO 2 Internal Dual-Band Antennas	3 x 3 MIMO 3 Internal Dual-Band Antennas	3 x 3 MIMO 3 Internal Dual-Band Antennas	N/A	N/A
Radio Certifications	FCC (US) CE, RED (Europe) R-Mark (Japan) ⁵ SRRC (China) ⁵ EN320328 (Hong Kong) ⁵ KCC (Korea) ⁵ BSMI (Taiwan) ⁵ ACMA (Australia)	FCC (US) CE, RED (Europe) R-Mark (Japan) SRRC (China) EN320328 (Hong Kong) KCC (Korea) BSMI (Taiwan) ACMA (Australia)	FCC (US) CE, RED (Europe) R-Mark (Japan) SRRC (China) EN320328 (Hong Kong) KCC (Korea) BSMI (Taiwan) ACMA (Australia)	N/A	N/A

Power Specifications	Edge 510	Edge 520	Edge 540	Edge 840	Edge 2000
Power Supply	External: AC	External: AC	External: AC	Internal: AC	Internal: AC
Redundant Hot-Swappable Power Supply	N/A	N/A	N/A	N/A	YES Internal: AC
AC Input Voltage (VAC)	100 to 240 Autoranging	100 to 240 Autoranging	100 to 240 Autoranging	100 to 240 Autoranging	100 to 240 Autoranging
AC Input Frequency	50 to 60 Hz	50 to 60 Hz	50 to 60 Hz	50 to 60 Hz	50 to 60 Hz
Power Load (Typical/Max)	15W/40W	25W/45W	30W/50W	40W/70W	150W/200W

Sizes and Weights	Edge 510	Edge 520	Edge 540	Edge 840	Edge 2000
Dimensions (L x D x H)	206mm x 180mm x 39.7mm	206mm x 180mm x 51mm	206mm x 180mm x 51mm	437mm x 249mm x 43mm	650 mm x 437mm x 43 mm
External Power Supply Dimensions (H x W x D)	110mm x 50mm x 31mm	109mm x 62mm x 31mm	109mm x 62mm x 31mm	N/A	N/A

4. DRAM and SATA/HDD upgrade is based on the license.

5. Certification is in progress.



Sizes and Weights	Edge 510	Edge 520	Edge 540	Edge 840	Edge 2000
Mounting (Not Included)	Desk/Wall/19 inch 1-RU, except 2-RU rack mount shelf	Desk/Wall/19 inch 2-RU (2 units side-by side)	Desk/Wall/19 inch 2-RU (2 units side-by side)	19 inch 1-RU	19 inch 1-RU
Weight	2.0 lb	2.6 lb	2.6 lb	12 lb	23.5 lb

Environmental Specifications	Edge 510	Edge 520	Edge 540	Edge 840	Edge 2000
OPERATING CONDITIONS					
Temperature	32° to 104° F (0° to 40° C)	32° to 104° F (0° to 40° C)	32° to 104° F (0° to 40° C)	50° to 104° F (10° to 40° C)	50° to 95° F (10° to 35° C)
Relative Humidity	5% to 85%	5% to 85%	5% to 85%	5% to 85%	5% to 85%
Altitude	5,000m	5,000m	5,000m	5,000m	5,000m
NON-OPERATING CONDITIONS					
Temperature	-40° to 158° F (-40° to 70° C)	-40° to 158° F (-40° to 70° C)	-40° to 158° F (-40° to 70° C)	-40° to 158° F (-40° to 70° C)	-40° to 158° F (-40° to 70° C)
Relative Humidity	5% to 95%	5% to 95%	5% to 95%	5% to 95%	5% to 95%
Altitude	5,000m	5,000m	5,000m	5,000m	5,000m

Regulatory and Compliance	Edge 510	Edge 520	Edge 540	Edge 840	Edge 2000
SAFETY					
UL 60950-1	✓	✓	✓	✓	✓
CAN/CSA C22.2 No. 60950-1	✓	✓	✓	✓	✓
EN 60950-1	✓	✓	✓	✓	✓
AS/NZS 60950-1	✓	✓	✓	✓	✓
IEC 60950-1	✓	✓	✓	✓	✓
GB-4943	Pending	✓	✓	✓	✓
EMC					
47 CFR, Part 15	✓	✓	✓	✓	✓
ICES-003 Class A	✓	✓	✓	✓	✓
EN 55022 Class A	✓	✓	✓	✓	✓
CISPR 22 Class A	✓	✓	✓	✓	✓
AS/NZS 3548 Class A	✓	✓	✓	✓	✓
VCCI V-3	✓	✓	✓	✓	✓
CNS 13438	Pending	✓	✓	✓	✓
EN 300-386	✓	✓	✓	✓	✓
EN 61000 (Immunity)	✓	✓	✓	✓	✓
EN 55024	✓	✓	✓	✓	✓
CISPR 24	✓	✓	✓	✓	✓
EN 50082-1	✓	✓	✓	✓	✓

Software Features

The VeloCloud SD-WAN solution offers a wide range of capabilities that assures enterprise and cloud application performance over Internet and hybrid WAN while simplifying deployments and reducing costs. Key software capabilities of the VeloCloud SD-WAN solution are listed below.

Category	Features
AAA	RADIUS, Local authentication and authorization, Multitenant 3 Tier RBAC Architecture, Auditing, Roles and privileges
Availability	HA for Edge, Disaster Recovery for Orchestrator, Multi-Link for high availability of WAN. Edge Clustering
Configuration and Monitoring	REST API, SDK (Java and Python), Syslog, SNMP, NetFlow V10, Voice Quality Monitoring, 2500+ Applications/Categories, ANPM, Application Usage, Device identification, , Live Mode, Push and Pull Zero Touch Activation
Deployment Flexibility	Eliminate Pre-stage, No CLI, Group Policies, Consolidated ICOM and End customer dashboard, Virtual CPE (x86 Ready), Multi-tenant Stateless Headend, Transport group for Business Policy Abstraction, Application aware Service Insertion OnPrem or in Cloud, RMA Workflow, Customized Application Maps
Dynamic Multipath Optimization	Application and Network Condition aware sub-second steering, Jitter/Loss Correction, Fast Intelligent Routing, Intelligent Gateway Selection, Link Aggregation, TCP Flow Optimization, Uni-Directional Link measurements, Bandwidth Detection
Multi-tenancy	Controller, Gateway, Orchestrator and Edge
Network Services	IPv4, DNS, DHCP Client, DHCP Server, DHCP relay, NAT, IPAM
QOS	Shaping, Policing, Per-flow queueing, Tunnel Shaper, Multi-Source Inbound QoS, Rate-Limiter, COS Aware, Outer/Inner DSCP Tagging, Smart Defaults, MPLS COS
Remote Troubleshooting	Live Mode, Alerts, Events, Remote Diagnostics (examples - DNS Test, Ping Test, Flush active flows, List active flows, Paths, VPN Tests, Packet capture etc), PKI Infrastructure with Certificate Management workflows, Diagnostic Bundles
Routing	OSPF, BGP, Static, Connected, ICMP Probes/Responders, Overlay Flow Control, Per-Packet Application aware steering, Route filter
SaaS/laaS	Improved performance for cloud apps, supports well-known laaS (e.g. AWS, Azure), Cloud Web Security (e.g. Zscaler, Websense, OpenDNS),
Security	AES256/128, SHA1/SHA2, IKEv2, VPNC Compliant IPsec, PKI, Segmentation, TLS1.2, SCEP, 802.1x, Layer 7 Stateful Firewall, 1:1 NAT, Port Forwarding, Dynamic Branch to Branch, MAC Filtering, Firewall Logs, Policy Compliance Check
VLAN Tagging	802.1Q, 802.1ad, QinQ (0x8100), QinQ (0x9100), Native
WAN Overlay Support	Public/Private/Hybrid Transport, Cloud and On-Premise

For additional information about VeloCloud and how VeloCloud SD-WAN can transform your network, please contact sales@velocloud.net.



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. For more information, visit www.velocloud.com and follow the company on Twitter [@Velocloud](https://twitter.com/Velocloud).

VeloCloud Edge Port Views



VeloCloud Edge 510

SHIPPING NOW



VeloCloud Edge 520/540

SHIPPING NOW



VeloCloud Edge 840

SHIPPING NOW



VeloCloud Edge 1000

SHIPPING NOW



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.

© 2017 VELOCLOUD NETWORKS, INC. ALL RIGHTS RESERVED.

