Transforming Networking for Modern Applications: The SD-WAN Solution from Dell EMC and VMware

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Challenges with Today’s Networks

The networking stack defined at the beginning of the client/server era underwent little change for 20+ years.

That stack is NOT READY for the cloud era.
Fighting Complexity and Lowering Costs at the Edge

Modernizing the WAN – fighting complexity and lowering costs with intelligent devices

**Simplify WAN complexity**
Easier management, configuration, and deployment of networks

Complex and inflexible legacy WAN hardware stack

Dell EMC SD-WAN Edge Appliance

**Aggregate & Lower Costs**
Serve traffic on cost-efficient broadband transports
Up to 85% cost reduction*

SD-WAN

MPLS

Broadband

Dell EMC SD-WAN Edge Appliance
From Edge to Core to Cloud: We’ve got you covered!

vmware
Leader in Software-Defined Networking Agility

DELL EMC
Leader in Open Networking Hardware Technology

EDGE  CORE  CLOUD
VMware: Visionary Leader in SD-WAN

Magic Quadrant

Figure 1. Magic Quadrant for WAN Edge Infrastructure
#1 NAS
#1 Open SAN
#1 Storage Software
#1 x86 Server Units
#1 x86 Server Revenue
#1 Converged Systems
#1 Hyperconverged Systems
#1 Purpose-Built Backup Appliance
#1 Public & Private Cloud IT Infrastructure
#1 All-Flash Arrays & Hybrid Flash Arrays
#1 Enterprise Storage for Private Cloud IT Infrastructure
#1 Certified Reference Systems & Integrated Infrastructure
#1 External Enterprise Storage Systems (Entry, Midrange and High End)
#1 Workstations
#1 Monitors
The Software-defined Wide Area Network

Why SD-WAN is the lead vehicle to replace legacy routers

- **MPLS only**
  - Private (MPLS) – 10 Mbps
  - Monthly Cost Per Site: ~$1,800/Month

- **SD-WAN + MPLS**
  - Broadband 50 Mbps
  - Monthly Cost Per Site: ~$900/Month
  - Private (MPLS) – 5 Mbps

- **Dual Broadband**
  - Monthly Cost Per Site: ~$200/Month
  - Broadband 50 Mbps

Up to 50% reduction in WAN costs

Up to 75% reduction in WAN costs

Source: TeleGeography
Dell EMC SD-WAN Solution powered by VMware - Products
Dell EMC SD-WAN powered by VMware: Key Solution Components

- Dell EMC SD-WAN Edge
  - Software for Branch and Datacenter combined with Dell EMC appliances for an all-in-one solution

- SD-WAN Orchestrator
  - Centralized Management and Orchestration from VMware, dedicated exclusively for Dell EMC customers and fully-managed by Dell EMC

- SD-WAN Gateway
  - A global network of secure, application-focused access gateways from VMware

- All three components come together in one simple, easy to deploy solution in Dell EMC SD-WAN Edge
- Dell EMC SD-WAN Edge includes hardware appliances AND software services from VMware
- Flexible Subscription tiers and configuration tiers, based on aggregate WAN throughput with Dynamic Multipath Optimization and VPN enabled
Cloud-Delivered SD-WAN, Managed by Dell EMC

VMware’s VeloCloud Network Service, Delivered with Dell EMC appliances

1. Dell EMC SD-WAN Edge Appliances
2. VeloCloud Gateway (VCG)
3. Dell EMC Orchestrator (VCO)
Dell EMC SD-WAN Solution powered by VMware

Eliminating difficulties in managing edge locations and enabling the best possible experience across branch offices

- Application bandwidth steering
- Ability to provision new sites in minutes
- Visibility and management across multiple locations
All-in-One Orchestration

Manage WAN resources via a centralized, cloud-based portal with powerful tools and alerting

- Zero touch provisioning
- Group business level policies
- Automatic link profiling
Modernizing the Edge
Dell EMC SD-WAN Edge powered by VMware

VMware: SD-WAN Software

Dell EMC: Edge Appliance Support
SD-WAN Orchestration and Management

Simplify and lower cost
Simple and Quick Deployment backed by Dell EMC

1. Create Config & Send Key
   IT Admin adds a new VeloCloud Edge in the customer account.
   IT Admin generates an activation key and emails it to the Installer.

2. Device Ships
   Dell EMC SD-WAN Edge appliance with pre-loaded config is shipped to site.
   Office Admin powers up the device and connects it to the Internet.

3. Install, Authenticate & Pull Config
   Office Admin plugs in the device and connects to the Internet through VeloCloud Edge WLAN/LAN.
   Office admin clicks on activation link in the email. Edge is activated.

- ✔️ No IT visit required
- ✔️ No pre-staging, nor security risk if device lost
- ✔️ No site by site link knowledge required
- ✔️ No tracking by S/N required
## Introducing Dell EMC SD-WAN Edge Appliances

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<th>Dell EMC SD-WAN Edge 600 Series</th>
<th>Dell EMC SD-WAN Edge 3000 Series</th>
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<td><img src="image1" alt="Dell EM SDF Wan Edge 600 Series" /></td>
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<td>Intel Processors</td>
<td>8 and 16 Core Intel Processor Options</td>
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<td>4GB RAM, 16GB eMMC</td>
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## The Right Support for Your Needs Delivered by Dell EMC

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<th>Feature</th>
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<tr>
<td>Remote technical support</td>
<td>9x5</td>
<td>24x7</td>
<td>24x7</td>
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<td>Covered products</td>
<td>Hardware</td>
<td>Hardware Software</td>
<td>Hardware Software</td>
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<tr>
<td>Onsite hardware support</td>
<td>Next business day</td>
<td>Next business day or 4hr mission critical</td>
<td>Next business day or 4 hr mission critical</td>
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<tr>
<td>Automated issue detection &amp; proactive case creation</td>
<td>●</td>
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<td>Self-service case initiation and management</td>
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<td>Access to software updates</td>
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<td>Priority access to specialized support experts</td>
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<td>3rd party software support</td>
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<td>Assigned Technology Service Manager</td>
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<td>Personalized assessments and recommendations</td>
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<td>Semiannual systems maintenance</td>
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Availability and terms of Dell Technologies services vary by region and by product. For more information, please view our Service Descriptions available on Dell.com.
Dell EMC SD-WAN powered by VMware
Software-defined simplicity delivered by best-in-class Dell EMC appliances

All-in-One Simplicity
VMware software and cloud-based SD-WAN service plus Dell EMC appliances, combined in one simple SD-WAN solution

Maximum Efficiency
Rapidly modernize your network without the need for disruptive and costly upgrades

One-Call Support
Back your modernization with 24x7x365 ProSupport and an unmatched global supply chain from Dell EMC
Customer Success Stories

• Dell EMC SD-WAN Edge: Simplifying and modernizing wide-area networks across multiple verticals
Customer Success Story – Café Rio

**Objective**
Modernize business technologies with new omnichannel experiences

**Challenges**
Café Rio needed to elevate their customer service by introducing a complete omnichannel experience in each of its restaurants—enabling ordering through its mobile app and online ordering website and in-store kiosks for self-ordering.

**Solution – Dell EMC SD-WAN Edge powered by VMware**
- **Orchestrator** for centralized management and control
- **Gateways** for comprehensive connections and cloud access
- **Edge** at each restaurant location

**Business Results**
- Increased bandwidth by 25X
- Future savings of over $200,000 per year on communications costs by moving from a traditional phone system to a VoIP-based platform
- Reduced initial Capital Expenses for new restaurants by almost $10,000 each
Customer Success Story – Café Rio

**Objective**
Simplify network, provide increased bandwidth to all employees and edge locations

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**Challenges**
With over 1,800 local services and 35K employees in over 70 countries, Rentokil Initial needed a solution that would simplify its network, enable access to cloud services, streamline processes, and provide increased bandwidth.

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**Solution – Dell EMC SD-WAN Edge powered by Vmware**
- **Orchestrator** for centralized management and control
- **Gateways** for comprehensive connections and cloud access
- **Edge** at each restaurant location

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**Business Results**
- Centralize visibility and management of global network
- Enable future initiatives with a dynamic and scalable network
- Increased bandwidth without additional cost
- Avoid additional Firewall costs with VeloCloud Edges at the branch perimeter for firewalls and web security
Customer Success Story – Mission Australia

**Objective**
Modernize network experience between siloed edge locations

**Challenges**
Needed a new, dynamic, and robust network that could provide all users across 210 sites with a standard, high-quality user experience when accessing cloud applications.

**Solution – Dell EMC SD-WAN Edge powered by VMware**
- **Orchestrator** for centralized management and control
- **Gateways** for comprehensive connections and cloud access
- **Edge at each restaurant location**

**Business Results**
- 30% savings in transport costs
- 5 times increase in bandwidth across the network
- Expanded availability of cloud services to all sites
Evolution to Virtual Edge

- Virtual Edge hosts various NW and Edge Services in VM Form Factor driving consolidation, simplicity, ease of operation and cost savings.
uCPE Provides Disaggregation

Dell is uniquely positioned to align with industry requirements

Proprietary

- Firmware/Embedded Software
- ASIC/FPGA

Grey Box

- Firmware/Embedded Software
- ASIC/FPGA
- 3rd Party VNF

COTS H/W

- Opensource / Agnostic
- VNF / Container

- The “Grey Box” approach
- Let’s in 3rd Party
- Rigid closed system, vendor driven.
- Lock-in, vendor ecosystem

- The “White Box” approach
- Open vendor agnostic
- Mix and match to meet specific needs
- Full solution integration control

- The proprietary “Black Box”
- One size fits all, rigid closed system, vendor centric GTM
- Lock-in, vendor ecosystem
uCPE – Customer use case examples

- SD-WAN
- Security
- Router

- Adva
- Dell EMC VEP

- SD-WAN
- Security
- Router

- OneAccess/Eknops
- Dell EMC VEP

- SD-WAN
- Enterprise App

- ESXi
- Dell EMC VEP