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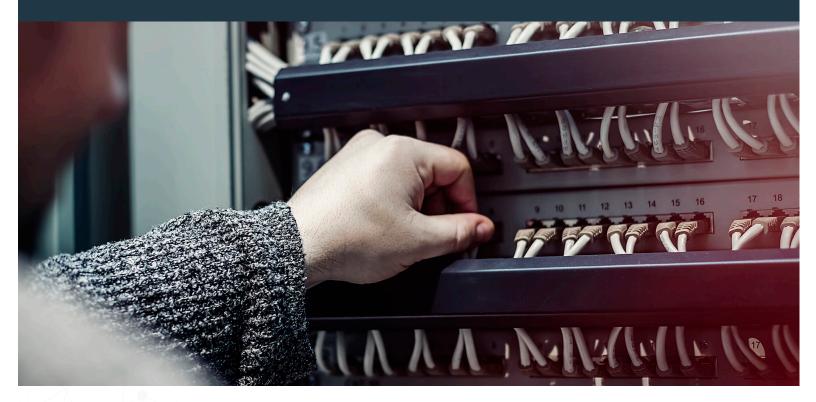
Innovative Solutions. Trusted Performance. Intelligently Engineered.

Comparison of
SD—WAN Solutions

Technology Brief

Comparison of SD–WAN Solutions

SD-WAN Overview

Software Defined Wide Area Networking (SD-WAN) is a broad term that is still being defined by the designers and the consumers of this emerging technology. That said, we wanted to provide an overview of the different technical approaches currently being offered as there are several, all with their own unique attributes.

The SD-WAN solutions being offered today gives end users, network administrators and Managed Service Providers (MSPs) the ability to adjust, optimize, automate and test their WAN connections through software controls. SD-WAN uses tools like encryption, Quality of Service (QoS), traffic shaping and alerts to make the most of the WAN connections. In addition to these core features, some solutions may also include functionality like firewalls, voice controllers and traffic optimization to get closer to a converged solution set.

The right SD-WAN solution makes your WAN work better, makes management easier, can save you the expense of downtime from unplanned carrier outages and the hassle of quality of service issues like jitter and latency. The right solution needs to be chosen, and deployed correctly, to fully realize these benefits.

Virtual Solutions

These solutions are targeted for large enterprises that have virtualized many of their network functions, considered part of the broader Software Defined Networking (SDN) or Network Functions Virtualization (NFV) adoption. Here, the tools needed to provide WAN control and optimization are provided in VMWare, Amazon AWS, Google Compute, KVM or other hypervisor environment.

Pros:

- Integrated into broader SDN toolsets
- Software only, easy to port from one place to another
- Scalable with license management

Cons:

- Extensive expertise required to deploy and manage
- Requires an established, mature virtualized network to build on
- Hardware not optimized for WAN management

"By the end of 2019, **30%** of enterprises will use SD-WAN products in all their branches, up from less than **1%** today."

- Gartner

"Software-defined Wide Area Networking is red hot. It is safe to assume that, going forward, every multi-location business will rely on SD-WAN for a cost-effective, high-quality, unified network solution"

- Network World

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Cloud Based Solutions

A hybrid solution that implements an edge hardware appliance in collaboration with a cloud based virtual appliance. These solutions function by routing the remote site, or edge, traffic through various WAN connections to a central cloud instance. The cloud instance is where the management software implements the features of SD-WAN. Those features are then communicated to the edge appliance via a web orchestrator or application that keeps the cloud and edge components of the solution in sync.

Pros:

- Lower cost with simple hardware at the edge and virtual cloud instance
- Easy to deploy with simplistic edge appliance controlled from cloud
- More control over cloud application performance with data center cohabitation

Cons:

- All network traffic goes to the cloud, then to your enterprise
- Bandwidth scalability at the edge is limited with simple hardware
- Outage risks, if the cloud goes down you go down

Premise Based Solutions

Solutions that leverage dedicated hardware appliances at the edge, data center, corporate headquarters and cloud to provide a scalable end-to-end solution. All traffic management features are located on the appliance with policies and configurations being managed through a web application. Routing and traffic shaping is done locally or globally within an existing corporate network; leveraging multiple WAN connections from any combination of technologies, including MPLS and wireless.

Pros:

- Customer has control over where network traffic flows
- Premise appliance easily scales to meet the needs of small to large offices
- Make the most of existing infrastructure while enhancing performance with any WAN connectivity
- Premise appliances support fiber, fail to wire, dual power supply and other traditional network requirements
- Fine tuning capabilities to optimize the solution for your business

Cons:

- Higher up-front cost due to dedicated hardware
- Deployment requires a process for customer or SD-WAN vendor to know your network
- Not optimized with cloud SaaS providers

Decision Matrix

So, how do you make a decision as to which solution is the best fit? Below is a matrix that includes some of the common questions that should point you in the right direction. And remember you can always leverage Ecessa's sales and technical teams to help you define the right solution for your needs.

	Virtual Solutions	Cloud Based Solutions	Premise Based Solutions
Are you looking to improve your WAN performance at more than one location?	Yes	Yes	Yes
Is your network already fully virtualized (e.g., using VMWare) for major routing functions?	Yes	Maybe	No
Are the majority of your software applications hosted in the public cloud (e.g., Office 365, Salesforce.com, AWS)?	No	Yes	Maybe
Are you hosting applications locally, in your corporate headquarters, data center, or co-lo?	Maybe	Maybe	Yes
Do you have specific security requirements that your business needs to comply with?	Maybe	Maybe	Yes
Do you locally host real-time traffic for daily business needs (e.g., Voice, Video, Virtual Desktop Infrastructure(VDI))?	Maybe	No	Yes
Do you want the ability to fine tune your WAN connections to optimize performance for your business?	No	No	Yes

SD-WAN Comparison

With a 90% growth rate expected in the next five years, there are many companies entering the SD-WAN market. This is your guide to the advantages you'll have using the experience and expertise of an Ecessa solution.

	ECESSA	CISCO	TALARI	velocloud	bigleaf networks	Aryaka
Solution Type: Ecessa offers a premise based solution which minimizes latency and aligns with industry security policy.	Premise	Premise	Premise	Cloud	Cloud	Cloud
Portfolio: Ecessa offers a full line of products from single site WAN fail-over to enterprise level SD-WAN.	4 Product Families	3 Product Lines	1 Product Line	1 Product Line	1 Product Line	1 Product Line
Upgradable: All Ecessa products are software upgradable to the SD-WAN feature set allowing customers to deploy a full or hybrid SD-WAN solution.	Software Upgrade	Software Upgrade	SD-WAN only	SD-WAN only	SD-WAN only	SD-WAN only
Scalability: Ecessa offers a variety of platforms to grow with your business needs; available from 50Mbps to 20Gbps.	6 devices	4 devices	3 devices	2 devices	1 device	1 device
Control: Ecessa is a premise based solution which means you control where your data goes; Secure your data within your private network, the Cloud, or both.	Data anywhere	Routing to controller	Routing to controller	Most data to Cloud	All data to Cloud	All data to Cloud
Flexibility: Ecessa solutions can bolt onto any network and route any traffic; no architectural changes or ripping out gear. "Knobs and dials" available to customize solution; proprietary routers, no problem.	Any network	Network controller needed	Network controller needed	Cloud routing required	Remote site only with Cloud backend	Remote site only with Cloud backend
Performance: Ecessa solutions are optimized for real-time traffic, providing the fewest hops and lowest latency for Voice, Video, and Virtual Desktop (VDI) users.	Dedicated, low latency routes	Limited route testing for UDP traffic	Low latency routes	Shared Cloud routing, Optional HQ device	Shared Cloud routing	Shared Cloud routing
Added Costs: Ecessa includes all software licenses in each device offering a lower Total Cost of Ownership (TCO); no incremental costs for bandwidth, connections, or features (Firewall, SIP, HA-pair features included).	None	Extra fees for BW, features, support	Extra fees for support	Extra fees for Firewall feature	Monthly usage fees based on BW: HA-pair extra	Monthly usage fees based on BW
Purchasing Options: Ecessa offers multiple pricing models designed to meet every business need.	Up front or reoccurring	Up front	Up front	Reoccurring	Reoccurring	Reoccurring

For more information, contact Ecessa at 800.669.6242 or visit www.ecessa.com.