ECESSA™

Innovative Solutions. Trusted Performance. Intelligently Engineered.

Comparison of
SD—WAN Solutions

Technology Brief

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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 give 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. That said, the right solution needs to be chosen, and deployed correctly, to fully realize these benefits. It's our hope that the information that follows will help you find the best solution for your business.

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

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:

- Ability to obtain static IP addresses from the SD-WAN provider
- 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
- Limited routing and configuration options; not ideal for complex network environments

Premises 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 on the appliance or 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, cable, fiber, satellite or wireless.

Pros:

- Customer has total control over where network traffic flows; no subscription services required
- Premises appliance easily scales to meet the needs of small to larger offices; solutions up to 20Gbps
- Dedicated, low latency routes, are ideal for any type of traffic, inducing Voice, Video and VDI

Cons:

- Customer is responsible for procuring bandwidth
- 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	Premises 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
Do you need to procure static IP addresses for your hosted applications?	Maybe	Yes	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 (e.g., PCI, HIPPA, SOC 2)?	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
Do you want the ability to scale bandwidth between sites, without licensing constraints, up to and above 1Gbps?	Maybe	No	Yes

For more information, contact Ecessa at (800) 669-6242 or visit Ecessa.com.

SD-WAN Comparison

	ECESSA	CISCO	TALARI	velocloud	bigleaf networks	Aryaka
Solution Type: Ecessa offers a premises based solution which minimizes latency and aligns with industry security policy.	Premises	Premises	Premises	Cloud	Cloud	Cloud
Connectivity: Ecessa can integrate any data connection from any provider, including private MPLS, wireless 4G, even satellite.	Any	Any	Any	Limited	Broadband only	Private
Portfolio: Ecessa offers a full line of products from single site WAN failover to enterprise level SD-WAN.	3 Product families	3 Product lines	2 Product lines	1 Product line	1 Product line	1 Product line
Upgradeable: All Ecessa products are software upgradeable 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 150Mbps to 20Gbps.	6 Devices	4 Devices	4 Devices	2 Devices	1 Device	1 Device
Control: Ecessa is a premises based solution which means you control where your data goes; secure your data within your private network, the Cloud, or both with selective routing and Internet offloading.	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 without needing to surrender your IP addresses; no architectural changes or ripping out gear; proprietary routers, no problem.	Any network	Network controller needed	Network controller needed	Static IP addresses and Cloud service required	Static IP addresses and Cloud service required	Cloud service required
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	Failover only	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 (BW), 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, additional BW, IPs	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 reccurring	Up front	Up front	Reccurring	Reccurring	Reccurring