SD-WAN: 3 Components To Efficiently Connect Users To Applications

While companies increase their reliance on technology, something ironic is happening. The size of the typical data center is shrinking. It wasn't long ago that best practice meant hosting everything users needed in a centralized on-prem data base. Today, it is all about the cloud, and that requires a whole new type of network architecture.

According to Gartner, 70% of enterprises will rely on the internet for branch and remote office internet connections to the head office by 2023.[2] You can also add in remote users that still require access to on-prem applications and resources. What makes this challenging for traditional networks, however, is the type of traffic that is occurring. Sixty-four percent expect to continue their reliance on video conferencing to communicate with their teams, customers, and partners.[3] On top of everything is the uphill challenge of cybersecurity. Attacks such as ransomware have increased 151% year over year.[4]

MPLS Hub-and-spoke Topology Is Obsolete

The traditional hub-and-spoke networks were all about control. That's why IT backhauled all internet destination traffic back to the data center. The problem now is that companies also value agility, flexibility, and scalability, which are hard to attain in highly controlled environments. Users also have higher expectations today when it comes to user desktop experiences and have no patience for discernable latency when it comes to their mission-critical SaaS applications. And finally, a hub and spoke topology makes little sense if a sizable number of your users are not working on-prem at any given time. The writing is on the wall: MPLS hub-and-spoke network design is outdated for today's digital world.

Basic SD-WAN Is No Longer Enough

The acceleration of migrating applications to the cloud in addition to leveraging cheaper and flexible internet alternatives such as 5G/LTE connections drove the need for SD-WAN technology. The principal purpose of initial SD-WAN implementations was to dynamically share bandwidth across an organization's multiple connection points. SD-WAN appliances were strategically placed at branch offices to enforce policy-based routing to steer traffic to the best available transport, whether it be MPLS, cable, xDSL or 4G/LTE. This provided connection redundancy and reduced latency and packet loss.

60%

of IT leaders report making operational and/or technology changes to support upcoming digital transformation efforts.[1]

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While the ability to route traffic over right-sized on ramps from remote offices delivered increased performance, the ability to secure workloads equally across all connections has become imperative for two reasons. One being a vastly increased and diverse threat landscape in recent years, and two, the proliferation of IoT devices that exist in nearly every branch location of an enterprise. Greater visibility and better security tools are needed to ensure the zero-trust network environment that companies desire. Additionally, hybrid networks have evolved far beyond the basic composition of a public cloud and on-prem environment. Today's SD-WAN solutions must accommodate multiple clouds in dynamic fashion.

The Advanced SD-WAN Solutions of Today

Today's advanced SD-WAN solutions such as Aruba EdgeConnect Enterprise are designed to create zero trust frameworks that assume no user or device is inherently trustworthy. They integrate dynamic segmentation strategies that separate your network into multiple zones to ensure that users and devices only connect with the destinations prescribed by their active role. Enforced automated segmentation can also contain any malicious code outbreak introduced to your network by a user or device. Today's advanced SD-WAN solution offerings can connect with a wide range of cloud security vendors to ensure a secure service edge across your entire IT estate.

Aruba EdgeConnect SD-WAN provides advanced SD-WAN capabilities including dynamic path selection, automated orchestration, and SaaS/WAN optimization capabilities. It natively integrates with industry leading SSE vendors including Zscaler, Netskope, and McAfee to implement a robust SASE architecture that boasts best-of-breed security capabilities regardless of office size. By integrating multiple cloud-based management tools, IT personnel can attain complete network visibility using a single pane of glass, improving visibility, and troubleshooting time resolution.

Breaking Down Aruba EdgeConnect Enterprise

Simply put, Aruba EdgeConnect Enterprise connects users to their applications as optimally and securely as possible regardless of where applications reside. Looking underneath the hood of this powerful platform unveils three main components:

- **Physical or Virtual SD-WAN Appliance**
  An Aruba Edge Connect Enterprise SD-WAN appliance is deployed at every branch location where users require broadband connections for a body of their workload traffic. Combined, these appliances form a virtual network overlay that allows organizations to leverage both MPLS and broadband connectivity simultaneously. This approach allows enterprises to transition to broadband WAN on a site-by-site basis at a comfortable pace.

- **Aruba Orchestrator**
  You need visibility into your workloads to manage and secure them. Aruba Orchestrator provides complete visibility into both legacy and cloud application traffic so that you can apply centrally assigned policies that quickly analyze, filter, and direct them to their correct destination. Policy automation allows you to deploy policies to multiple branches to ensure consistent performance and security across your enterprise.

- **Aruba Boost**
  Aruba Boost is a WAN optimization tool for overcoming the latency that distance inflicts on application performance. It uses various WAN optimization technologies such as protocol acceleration and minimizes data transmission using data compression and deduplication to accelerate your latency sensitive and data intensive applications when needed. It is an optional pack that unifies your SD-WAN edges into a single platform.

The SD-WAN Certified Leader

It's considered an honor when Gartner lists your solution in their Magic Quadrant for your industry. Not only was Aruba Networks recognized as a Leader in the 2022 Gartner Magic Quadrant for SD-WAN, but it also was the fifth consecutive year for this recognition. In fact, Aruba is one of only two companies to be named a leader in the Gartner SD-WAN Magic Quadrant all five years.

The accolades for Aruba EdgeConnect Enterprise go beyond recognition. It was independently validated by ICSA Labs, making it the first SD-WAN platform to attain ICSA Secure SD-WAN certification. ICSA is a world-renowned third-party testing organization with more than 30 years of experience. ICSA certification gives enterprise customers confidence that they are implementing a validated best-of-breed SASE architecture that delivers both robust security and optimal user experiences.

Benefits of Aruba EdgeConnect Enterprise

Aruba EdgeConnect Enterprise ensures you scalability and consistency across your entire enterprise whether you have less than a hundred locations or more than ten thousand. Because you can't have your IT support personnel everywhere, Aruba delivers zero touch provisioning and automated onboarding so that new tools and components are implemented quickly. Other primary benefits of Aruba's advanced SD-WAN solution include:

- Elimination of dedicated firewalls and additional hardware that add cost and complexity.
- Automate connectivity for users and IoT to multi-cloud and SaaS offerings with policy driven, always-on security.
- Ensure the highest quality of user experience for all authorized users regardless of location.
- Reduce business risk with consistent network QoS and security policy enforcement.

Conclusion

Aruba EdgeConnect Enterprise can turn your enterprise into a self-driving platform that unifies SD-WAN, routing, firewall, segmentation, WAN optimization and application visibility into a single package that utilizes intelligence and automation. Networks have substantially evolved, but so has Aruba Networks in becoming a validated leader in Advanced SD-WAN technology. Contact a WEI SD-WAN specialist today to learn more.

Talk To WEI Today

SD-WAN with Aruba EdgeConnect Enterprise creates more effective networking solutions that can help accelerate the growth of any organization. If your enterprise would like to learn more about SD-WAN and how to meet the developing demands of digital transformation, contact WEI today to get started.

Sources:
1. Foundry research commissioned by WEI, January 2021.
2. Mobility Report, Nov. 2017
3. Zoom. How Virtual Do We Want Our Future to Be? https://explore.zoom.us/docs/en-us/future-of-video-conferencing.html. March 2021
4. SonicWall, via ThreatPost. "Ransomware Volumes Hit Record Highs as 2021 Wears On." https://threatpost.com/ransomware-volumes-record-highs-2021/168327/. August 2021

About WEI

WEI is an innovative, full service, customer centric IT solutions provider.

Why WEI? Because we care. We go further.

WEI is an expert in business technology improvement, helping clients optimize their technology environments and work efficiently. WEI works with clients to understand goals, integrate strategy with technology solutions, and leverage their current IT environment into one company-wide model to increase utilization and efficiencies around their unique business processes.