Builders FirstSource

Building supply firm improves business efficiency and end-user quality of experience with Aruba EdgeConnect SD-WAN edge platform

Customer Profile

Builders FirstSource is the largest supplier in the U.S. of structural building products, value-added components, and services to the professional construction market. The company also manufactures roof and floor trusses, wall panels, stairs, vinyl windows, custom millwork and trim, and interior and exterior doors.

Vertical: Industrial & Manufacturing, Services

Location: Dallas, Texas, United States

Customer size: Approximately 26,000 employees across 550 locations in 42 states

Use Case

Simplify a legacy router-centric WAN to improve application performance, network reliability, and business efficiency.

Requirements

Support multiple interfaces with enterprise capabilities in a unified platform

Deliver the highest levels of network and application performance

Simplify operations with centralized management

Streamline WAN edge deployments with standardized configurations

Solution

Aruba EdgeConnect SD-WAN

Aruba Boost

Aruba Orchestrator

Outcomes

Increased available bandwidth from 1.5 Mbps to as much as 250 Mbps at some sites

Improved application performance, reducing latency by up to 90 percent

Reduced time to bring a new site online from a full day to 20 minutes

Enhanced quality of experience for end users, improving productivity

Improved visibility with more granular control of application traffic flow

Across the U.S., construction professionals know where to go for high-quality building products— Builders FirstSource, a leading national supplier and manufacturer of structural building materials for commercial and residential construction projects. But the company's WAN, built using traditional routers, was difficult to manage and could no longer keep up with business growth.

An aging patchwork of switches and routers forced remote sites to backhaul all traffic to one of two central data centers. For Senior Network Manager Greg Taylor, this complex network approach required a fresh look to not only simplify the WAN, but also improve efficiency and performance in the process. "To me, SD-WAN was the answer to our network issues," Taylor says.

An SD-WAN That Just Works

Doing his due diligence, Taylor evaluated several SD-WAN vendors, including Aruba (formerly Silver Peak), Cisco Viptela, Cisco Meraki, Riverbed, Citrix, and CloudGenix. Most offerings came up short for a variety of reasons—too convoluted, lack of enterprise capabilities, only worked with one type of interface, or a disjointed platform.

In contrast, the Aruba EdgeConnect SD-WAN platform, a self-driving SD-WAN by Aruba, a Hewlett Packard Enterprise company, stood out for its breadth of capabilities and ease-of-use. In fact, the Aruba Orchestrator management console was a key factor in choosing Aruba. Taylor explains, "We need an SD-WAN solution that delivers the highest levels of network and application performance, and also simplifies operations with centralized orchestration and management. We really liked Orchestrator because it's a lot easier to push out standardized configurations centrally, using a common set of templates, and know it's going to work."

Rapid Rollout of Advanced Network Capabilities

Taylor and his team are rolling out the EdgeConnect platform to all Builders FirstSource sites, having completed approximately 250 deployments to date, and adding a dozen or more sites to the SD-WAN each week.
At most sites, EdgeConnect connects to an existing MPLS circuit and a 100 Mbps broadband link. Where multiple internet service providers are available, Taylor is eliminating MPLS in favor of dual-broadband. Many sites also have a 4G LTE modem as backup.
By bonding two links at each site, enabling both links to be actively used simultaneously, and taking advantage of advanced capabilities such as path conditioning, quality of service (QoS), and dynamic path control on the platform, network uptime has improved dramatically. "We've had some sites lose their MPLS connection but not experience any WAN downtime," Taylor says.

Delivering the Highest Quality of Experience

"One of our objectives with SD-WAN was to increase available bandwidth for our remote sites," says Taylor. "We have some locations that went from 1.5 Mbps T1 lines to broadband links with 250 Mbps down and 100 Mbps up. Ridiculous speeds. Then applying QoS and traffic shaping, we've made our folks quite happy." The impact on quality of experience for end users is striking. For example, at one location downloading email previously took so long, people would walk away to get a cup of coffee.

After deploying EdgeConnect, Taylor says he was on the phone with someone at that location and asked him to check email while on the phone. "He said, 'wow, it just opened. That's never happened before.' So we know the SD-WAN is making a real difference in productivity."

WAN optimization speeds remote application access

Taylor and his team also added the optional Aruba Boost WAN optimization performance pack to the unified EdgeConnect platform to address latency issues at one of the company's remote locations in Alaska.
Connecting to the ERP system in Texas to run a print job back in Alaska was taking an inordinate amount of time. Using Boost provided a 90 percent improvement in effective latency so employees can complete print runs faster and move on with other tasks.
In the near future, Taylor also sees opportunities for leveraging the unified zone-based firewall within EdgeConnect to enable local internet breakout for trusted applications, as well as simplify LAN routing, at the remote sites.

" With EdgeConnect we have much more granularity in how we route traffic, which gives us the flexibility we need to enable the business to grow and adapt to new opportunities."

Greg Taylor, Senior Network Engineer, Builders FirstSource

Simplified Application Traffic Control

Taylor also appreciates the increased level of visibility and control over application traffic flows the EdgeConnect platform provides. Leveraging unified routing interoperability and using Orchestrator to create business intent overlays with specific QoS policies, Taylor says, "Traffic is automatically routed in the most efficient manner." Taylor has since been able to retire the old Cisco routers at most remote sites, simplifying the job of network management. For example, Taylor had some sites on the MPLS network connecting through the Texas data center to access the POS application running in California, which introduced latency. "Through Orchestrator we could easily change the routing to avoid that extra hop, mark that traffic with a QoS value, and everything just worked, Taylor notes. "That was fantastic in saving us time."

Streamlines Bringing New Sites Online

As the current SD-WAN rollout approaches completion, Builders FirstSource is now positioned to continue growing having gained the ability to open new facilities more quickly and efficiently. Taylor points out that once circuits are provisioned, he can simply plug in the EdgeConnect appliance and have it configured and fully operational in about 20 minutes. Bringing up a conventional router in that same scenario would take one of his network engineers an entire day. "I've been very happy with the EdgeConnect SD-WAN edge platform," Taylor reports. "It saves so much time and minimizes the likelihood of human error. With EdgeConnect we have much more granularity in how we route traffic, which gives us the flexibility we need to enable the business to grow and adapt to new opportunities.

www.arubanetworks.com

3333 Scott Blvd | Santa Clara, CA 95054 | T: 1.408.227.4500 | Fax: 1.408.752.0626