



Leading civil engineering firm enables efficient, region-wide collaboration with reliable, secure SD-WAN

J-U-B ENGINEERS, Inc. gains tenfold increase in WAN performance, reduces WAN costs by nearly \$100,000 per year with Unity EdgeConnect

In the northwest or inter-mountain regions of the United States, if you happen to cross a modern bridge, navigate a roundabout in town, or enjoy a drink of clean city water, you're probably experiencing the work of J-U-B. Headquartered in Boise, Idaho, J-U-B is a leader in civil engineering, with a long list of successful projects in transportation, water resources, land

development, and other specialty areas that reach from Washington to Colorado. Additionally, subsidiary companies Gateway Mapping, Inc. and The Langdon Group supplement J-U-B's expertise with world-class Geographic Information Systems (GIS) services, and public involvement, facilitation, mediation, and conflict management, respectively.



DRAMATIC GAIN
IN APPLICATION
PERFORMANCE



NEARLY \$100,000
COST SAVINGS
PER YEAR



10X INCREASE
IN BANDWIDTH



One of the things I appreciate about EdgeConnect is that you don't have to be a rocket scientist to configure and operate it like a lot of competitive products. We run a lean IT organization and need solutions like EdgeConnect that reduce complexity, not add it.

— Tory Adams, Director of Information Technology, J-U-B ENGINEERS, Inc.

While engineering, GIS, and public involvement all require a team effort, J-U-B understands the importance of a healthy work-life balance. That's why it has 17 offices across the regions it serves, allowing employees to work where they live. However, this brings some significant technical challenges.

David Day, J-U-B's Director of Operations, explains, "We have 17 offices in five western states, which allows our employees to live and work in their own communities. This structure requires us to maximize efficiency in how our project teams communicate and collaborate. We call this the 'long hallway,' meaning our project teams in different geographical locations function as if they were sitting right down the hall. For this to work, we must have solid technology and a reliable underlying network."

Breaking free from the limitations of MPLS

J-U-B traditionally relied on private MPLS circuits to connect project teams to applications, but it was very expensive—\$244,000 per year for mere 6 – 10 Mbps links. This made up a significant portion of the firm's IT budget, and with such limited bandwidth, users struggled to access huge CAD files and GIS models. In some cases, it took upwards of 20 – 30 minutes to open a CAD file from a remote server.

J-U-B's Director of Information Technology, Tory Adams, knew there had to be a better way and started researching SD-WAN. "We saw SD-WAN as a way to reduce dependence on MPLS, gain more flexibility, and hopefully save a little money in the process."

Adams and J-U-B's entire IT team (consisting of five professionals) conducted an exhaustive evaluation of SD-WAN vendors. The team narrowed its choice to VeloCloud, Viptela, and Silver Peak. A top requirement in the final testing was that the SD-WAN solution had to support the existing MPLS mesh while the company transitioned over to a Direct Internet Access (DIA) and broadband

architecture. Most important, the solution had to improve performance and efficiency for the long hallway.

“Our team did a phenomenal job evaluating each option,” Adams recalls. “Ultimately, we selected Silver Peak Unity EdgeConnect™ for its ability to meet the unique requirements of our company.”

In less than two months, the IT team deployed [EdgeConnect](#) appliances in all 17 offices, and after about a year of operating in a hybrid environment with MPLS and broadband, J-U-B retired its MPLS circuits entirely, cutting its losses on any remaining open contracts. Today, each branch office is connected with a primary DIA link and a secondary commercial broadband link. Both links are bonded to maximize bandwidth utilization and network availability, and are enabled with broadband Quality of Service (QoS) to ensure performance. The EdgeConnect appliances are also service chained with [Zscaler](#) to secure internet traffic for the firm’s cloud-based VoIP phone system and Microsoft Office 365 applications. The integrated stateful firewall in EdgeConnect provides a secure local breakout for project teams to collaborate with clients using Bentley ProjectWise.

Simplified WAN edge with huge financial savings

With the EdgeConnect SD-WAN solution, J-U-B not only broke free from MPLS but also eliminated the need for separate routers at its branch offices. In combination with the lower cost of broadband, the firm enjoys a net savings of nearly \$100,000 per year while gaining more than a tenfold increase in available bandwidth and network performance having replaced 6 – 10 Mbps MPLS with bonded 100 Mbps DIA and 30 – 100 Mbps commercial broadband links. Application performance also increased dramatically: CAD files that once took up to 30 minutes to open remotely now open in seconds as if connected to a local server.

“The gain in application performance translates to a major time-saver for employees,” says Day. “User complaints have all but gone away. We can rely on the long hallway as it was intended, and our project teams don’t hesitate to do that because they trust that the technology will perform.”

Another big win for IT is greater visibility and control through [Unity Orchestrator™](#). “We can see how the network is performing, which gives us a lot more leverage when negotiating with providers,” Adams points out. “We can also prioritize traffic—that’s gigantic. We can give non-business streaming best effort, making sure critical traffic like voice and file services aren’t compromised. From an overall IT troubleshooting standpoint, that visibility and control is priceless.”

For more information on Silver Peak and our solutions, please visit: silver-peak.com



Customer

J-U-B is one of the leading consulting engineering firms in the Pacific Northwest and Intermountain West. With more than 350 employees in 17 offices, this employee-owned firm provides quality engineering and design services to federal, state, and local government agencies, as well as many leading industrial, commercial, and institutional organizations. Subsidiary companies Gateway Mapping and The Langdon Group enhance J-U-B's services with industry leading GIS and public involvement expertise, respectively.

Challenge

Enable reliable, high-quality communication and collaboration among project teams working remotely across a broad geographic region

Solution

Deploy EdgeConnect SD-WAN appliances at 17 branch offices, bonding DIA and commercial broadband links, applying QoS, and service chaining with Zscaler for secure internet breakout

Results

- Simplified WAN edge, retiring routers and consolidating on EdgeConnect appliances
- Increased bandwidth from 6 – 10 Mbps MPLS to 100 Mbps DIA bonded with 30 – 100 Mbps commercial broadband
- Reduced WAN costs, saving nearly \$100,000 per year
- Accelerated access to large engineering and GIS files from up to 30 minutes down to seconds
- Improved visibility and control for easier troubleshooting and greater leverage with providers



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