



UK steel supplier rearchitects its WAN, enabling greater agility for a growing business while improving quality of service for critical VoIP system

Barrett Steel supports acquisition strategy, streamlining new site deployments with Unity EdgeConnect SD-WAN edge platform and Unity Orchestrator centralized management

From the local park bench and bicycle rack to the tallest skyscrapers and industrial complexes, steel is at the center of it all. From its founding in 1866, Barrett Steel has been a leading player, having grown to become the UK's largest independent steel stockholder.

In Barrett Steel's business, the vast majority of sales are transacted over the phone, making the company's voice over IP (VoIP) system mission-critical. As

Sam Ainscow, the company's head of IT operations and chief information security officer, puts it, "The crown jewel in IT operations is our voice system, which must always perform and be available."

However, Ainscow often received complaints about voice quality, especially if the company's primary MPLS circuit failed over to the backup internet link. VoIP calls weren't stable on the internet, and could even drop, creating a negative customer experience.



ASSURES CRITICAL
VOIP QUALITY



SIMPLIFIES WAN
MANAGEMENT



REDUCES WAN
COSTS BY 25%

What was worse, support from the company's managed MPLS provider was poor—and expensive.

Bringing network control and management in-house

Fed up with being at the mercy of an outside provider, Ainscow and his team decided to bring network management in-house, and began researching SD-WAN. “We decided that SD-WAN would allow us to be masters of our own destiny,” he says. “We wanted to introduce carrier diversity by moving away from MPLS to broadband and ultimately drive down cost for the business. That, and massively improve service quality and agility.”



Even though we brought work in-house, we don't have the same work effort that the managed provider had because so much is automated by Silver Peak. If I had tried to do this with a traditional WAN architecture, I'd have had to hire two or three more people. Once the SD-WAN is up and running with EdgeConnect and Orchestrator, it essentially manages itself.”

— Sam Ainscow, Head of IT Operations and Chief Information Security Officer, Barrett Steel

The team evaluated several SD-WAN vendors, narrowing the choice to Silver Peak and Citrix. What ultimately won them over with Silver Peak was the ease of centralized management through [Unity Orchestrator™](#).

Ainscow explains, “IT is a fabled single-pane-of-glass world, but Orchestrator really gives you that one place to do everything on the SD-WAN.”

According to Ainscow, the [Unity EdgeConnect™](#) SD-WAN edge platform also stood out for its technical capabilities such as [path conditioning](#), quality of service, and [dynamic path control](#), which could assure performance, uptime, and quality for the company's critical VoIP system. Ainscow remarks. “The fact that Silver Peak had reference customers in the real world using EdgeConnect to run voice over broadband gave us confidence that we could do the same.”



Enterprise-wide rollout in one week

Today, Barrett Steel has deployed the EdgeConnect platform at all of its 35 sites. After deploying at two test sites, Ainscow and his team completed the initial rollout in just one week—approximately 30 sites at that time. Recently acquired sites typically come online within a day.

“What made deploying EdgeConnect so easy were the templates,” Ainscow says. “At each site, all we had to do was plug in the EdgeConnect appliance and have someone back at the main office accept the new site and push the configuration template out through Orchestrator.”

All sites are terminated with dual links, and while some sites retain legacy MPLS circuits, all sites will

be migrated to pure internet provisions in 2020. The circuits are bonded so all network resources can be used together simultaneously.

To ensure each type of application receives the network priority and quality of service required for the business, Ainscow's team created a set of business intent overlays using Orchestrator. For example, voice is classified as "real time" with high quality of service to give it top priority on the network. Other on-premises applications such as enterprise resource planning (ERP), or SaaS applications like Microsoft Office 365, are classified as "critical" and "bulk" respectively.

Barrett Steel also takes advantage of the routing interoperability and stateful firewall within EdgeConnect to locally segment site-centric operational technology (OT) application traffic from business application traffic in the IT infrastructure. Branch routers have been retired. Ainscow notes, "Eliminating the need for separate routers at the edge was a key requirement for rearchitecting our WAN. And using the firewall in EdgeConnect saves us from deploying lots of small firewalls at each site to keep our data network separate from process control systems."

Delivers network efficiency and business agility

As Barrett Steel continues to expand by acquiring new locations around the world, Ainscow and his team are able to have them quickly online and ready to do business. The deployment model is based on one of the company's major acquisitions last year.

Ainscow explains, "We had acquired a site on the south coast of the UK with no broadband available.

Putting in a new circuit would have taken 60 to 90 days. So, we got it up and running on four 4G LTE modems. We had that site live by 10:30 in the morning on day one, able to run voice, network traffic, everything needed to have this multi-million-pound location in business and generating revenue. We now bring up all new sites this way until we can have a permanent circuit installed."

For all of Barrett Steel, the Silver Peak SD-WAN edge platform now ensures high quality of service for critical voice communication, and a higher quality of experience for employees and customers engaged in business transactions. Ainscow notes, "I haven't had a single complaint about voice quality since moving to the Silver Peak SD-WAN. I just don't have to worry about voice anymore."

In addition to the deployment agility and assured quality of application services, Ainscow also forecasts 25 percent cost savings by eliminating MPLS and moving connectivity over to DIA and broadband.

Ainscow and his team also achieved their other major objective of bringing WAN management in-house and simplifying it. "Silver Peak software does a lot of the hard work for us in the background," he says. "Even though we brought work in-house, we don't have the same work effort that the managed provider had because so much is automated by Silver Peak. If I had tried to do this with a traditional WAN architecture, I'd have had to hire two or three more people. Once the SD-WAN is up and running with EdgeConnect and Orchestrator, it essentially manages itself. That allows us to use our human talent much more efficiently."

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



Customer

From its founding in 1866 by Henry Barrett, [Barrett Steel Ltd.](#) has been at the forefront of the UK steel industry. With 35 sites worldwide, Barrett Steel is the UK's largest independent British steel stockholder, operating through four divisions: General Steels, Engineering Steels, Tubes, and International. The company provides its customers with access to over 100 kilotons of steel stock, an extensive range of processing services, a rapid delivery service using its own transport fleet, and a network of service centers spanning the UK and Ireland.

Challenge

Barrett Steel relied on a third-party provider for management of its MPLS-based WAN, but the quality of support was poor and the cost was high. In addition, quality of voice calls on the company's VoIP system—the most critical application in the business—was not consistent, especially when failing over to a backup internet link. The IT team wanted more control by bringing WAN management in-house, and more efficiency and agility by moving away from MPLS to broadband. However, this was only feasible if voice quality could be assured.

Solution

Convinced by strong customer references from Silver Peak, Barrett Steel deployed the Unity EdgeConnect SD-WAN edge platform at all 35 of its locations. The company has since moved most sites off MPLS

in favor of broadband and successfully runs voice, ERP, and SaaS applications with assured quality and performance on the EdgeConnect platform. Barrett Steel also retired traditional branch routers, using the routing interoperability and stateful firewall within EdgeConnect to locally segment IT and OT traffic at each site. The IT team now has full management control of the SD-WAN with minimal hands-on effort using the centralized Unity Orchestrator management interface.

Results

- Ensures high quality of service and reliability for critical VoIP system
- Assures network uptime with sub-millisecond circuit failover
- Improves quality of experience for employees accessing centralized business applications and SaaS
- Retired traditional branch routers, simplifying the WAN edge infrastructure
- Streamlined WAN management through automation
- Reduced dependence on MPLS, reducing costs by 25 percent
- Supports higher productivity and more responsive service to customers
- Accelerates time to bring up newly acquired sites on the SD-WAN from months to hours



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