

Build a Better Telecommunications Network

Network Inadequacies Lead to Lost Revenue

BlueStar, Inc., located in Hebron, Kentucky, is one of the world's leading global RFID and point of sale distributors. Over the last several years, the company experienced a massive boom in business that led to the addition of branch and remote offices and the relocation of existing offices due to recent acquisitions in Europe. In total, BlueStar operates 12 offices globally, encompassing North America, Latin America, Spain, Germany and the U.K.

The company's rapid expansion and diversification into new geographies presented numerous telecommunications challenges, and bringing the newer offices onto the existing network proved difficult. Simply put, they were experiencing growing pains. A telecommunications and data network that was once sufficient became inadequate. To make matters worse, their carriers were responsible for creating sporadic private network outages that were costing the company up to \$120,000 an hour.

CASE IN POINT: **Sporadic Private Network Internet Outages Dent Sales**

BlueStar's director of IT, Jeff Straley, said the lost revenue from the outages was quickly starting to add up. "Some of the outages lasted for hours, which put a big dent in our sales, especially for folks sitting in our remote offices," Straley recounted. He knew the company needed a more dependable provider and a holistic network upgrade that could improve efficiencies immediately and give them the flexibility to grow with them in the future. He also knew where to turn for help — his trusted telecom management provider, Spectrum, Inc. To accomplish this, Straley and Spectrum sat down and together identified the following requirements to consider for their next generation, bulletproof network:

1) Establish redundancy — prevent lost revenue by eliminating single point of failure carrier outages at the primary branch locations

- 2) Provide disaster recovery — create a backup location to maintain business continuity in the event of primary network outage
- 3) Increase bandwidth — improve upon the company's 100 MB Internet bandwidth and 50 MB MPLS network
- 4) Ensure scalability — enable bandwidth to be increased quickly
- 5) Shorten setup time — allow domestic and international remote sites and new branches to be set up quickly
- 6) Improve international manageability — more effectively manage the services and costs for international offices
- 7) Minimize costs — deliver significant network upgrades without escalating costs

Bulletproof and a Gigabyte of Bandwidth

With the network parameters clearly defined, Spectrum's team set out to help BlueStar select the carriers needed to construct a telecommunications and data network that met all of BlueStar's criteria. Starting with the reliability problem, they sought a provider that could support dual POP (point of presence) and last mile access point redundancy for the HQ site, DR site, and each of the primary branch offices. In the event of an outage, the secondary access point could resume service without disruption to the network. And, to preserve business continuity in the case of a disaster and maintain the company's policy to limit outsourcing, Spectrum recommended an internal backup site to ensure that all essential systems and functions remained operational.

Next, Spectrum's team tackled Internet bandwidth, private data networking and telecommunication requirements. With 100 MB as the baseline for Internet speeds, the team delivered substantial gains with 1 GB of bandwidth. BlueStar manages hundreds of Web domains, and 100 MB was limiting the online users' access and download speeds. For the data and networking infrastructure, Spectrum upgraded their current MPLS T1 lines to dual 10 MB and 5 MB Ethernet access at all branch locations. BlueStar's headquarters and its disaster recovery site were upgraded to 1 GB and 500 MB Ethernet, respectively.

For telephony in all but the smallest remote offices, Spectrum recommended the use of session Internet protocol (SIP) trunk technology for its affordability, speed of deployment and ease of use for employees. One advantage of SIP that particularly appealed to Straley was the ability to troubleshoot outages to phone lines. "As an administrator, I can log in and switch the number myself, rather than having to hassle with the telco," he said.

Having established a common telecommunications footprint shared by branch offices around the globe — including Internet, MPLS and SIP trunks — Spectrum

was able to quickly set up and deploy this architecture as needed. BlueStar relied on this consistency to remedy network unreliability in their German branch, where Spectrum transitioned them to the new network in a little more than a month. And, since Internet, phones, and data are all centralized, Straley's IT department at BlueStar's corporate headquarters could more effectively manage the network across its many international branches.

Monumental Increase in Network Capacity and Return on Investment

At the end of the project, Spectrum had more than quadrupled BlueStar's telecommunications and data network and met each of the company's performance requirements. The only criterion that remained was the cost. With its expertise in high-performing networks and carrier contract negotiation, Spectrum was able to offer BlueStar these improvements for only an additional \$10,000 per month. Considering that one hour of outage can be the equivalent of roughly \$120,000 in lost revenue, a redundant and reliable network more than makes up for the additional investment. BlueStar's executive team was thrilled to have implemented such an ironclad network for less than the cost of one hour of lost revenue.

For Straley, the benefits of working with Spectrum come down to three things: support, cost and reliability. "Spectrum is phenomenal at what they do. Once I placed everything in their hands, I no longer had to worry about my telecommunications and data networks," he said. "From a cost, carrier and support perspective, I only need to make one call, and they handle the rest."

The network update project began in the third quarter of 2014 and will be completed in all BlueStar branches by the second quarter of 2015. "The speed of this deployment is a key factor to our success," said Straley. "With Spectrum's expertise, we are restoring network reliability across all our branch offices."