Lextron Builds Resilient WAN and Adds Bandwidth

with a Talari SD-WAN

Lextron, Inc. has grown to become one of the largest distributors of animal health products in the United States, with more than 55 offices operating in 19 states. Its leading division, Lextron Animal Health, is a distributor for all the major brand animal health products, as well as over 200 products distributed under the Aspen and Cooper's Best labels.

Executive Summary

Company
Lextron, Inc.

Location
Headquarted in Greeley, Colorado, with more than 55 offices

Key Applications
VoIP and video conferencing

Challenge
Increase bandwidth and network reliability at remote offices without increasing costs

Solution
Talari SD-WAN

Results
- Expanded bandwidth dramatically
- Cost-effective solution for improving reliability and performance predictability

Lextron has continually followed a path of IT innovation. The company received a PilotHouse Innovator Award in 2009 from Nemertes Research in the category of best innovator for Sustainable Data Center. Lextron was also the subject of a case study by IBM, recognizing the company for its implementation and integration of SAP ERP and IBM Db2.

Lextron's corporate IT infrastructure can best be described as private cloud computing, according to Tim Hays, Lextron's Director of IT. Most of the services that remote employees rely on for productivity, such as phone and email, as well as access to the ERP system and SharePoint, reside at the corporate data center in Greeley, Colorado. For this architecture to be viable, employees at remote sites need reliable connectivity to the data center to perform their jobs.

That connection to larger offices had been delivered through a 1.5 Mbps private line T1. To provide backup, Hays had implemented a routing scheme that directed traffic over the Internet through a DSL connection if the T1 should fail. Smaller offices with five or fewer employees typically relied on VPN alone.

Lextron's Challenge

New and expanding network services such as SharePoint and video conferencing, combined with a growing library of centrally hosted training and informational videos introduced over the past few years, were putting pressure on the available bandwidth. Hays could simply add expensive T1s, but that would double or triple the cost per site. With his current infrastructure, he needed to provide Internet

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connections as backup because of what Hays referred to as "cable-seeking backhoes." But he was not able to make use of that extra bandwidth when both the primary and back-up connections were working. A complete move to just Internet connectivity was never really considered viable because of issues such as oversubscription and packet loss.

"We never felt comfortable moving our network totally to just Internet connections," says Hays. What he needed was a solution that could offer more bandwidth at each remote location without a substantial increase in cost. He needed a solution that could also provide reliable and predictable disaster recovery and business continuity for remote site survivability should a connection go down.

Talari Solution

Hays evaluated a number of WAN optimization products and approaches, but the deduplication technology used in WAN optimization did little to accelerate much of Lextron's traffic such as VoIP and video conferencing. None of the products he looked at offered a simple, reliable, cost-effective solution—until he discovered Talari's SD-WAN solution. "That was an aha moment for me," says Hays. "Finally somebody gets it. Talari's SD-WAN technology allows us to route each packet over the best, most reliable

route, over multiple paths, whether those are private line, MPLS, DSL, cable modem, or whatever. It enables WAN virtualization by aggregating different types of connectivity transparently to create our own big, private tunnel across the Internet."

Talari aggregates two or more network connections at each site and continuously monitors performance of every network path between locations, providing the ability to use all of the bandwidth almost all of the time, even for just a single flow, in addition to that desired insurance against "cable-seeking backhoes". Measurements of loss, latency, and jitter are used to detect and respond in a sub-second timeframe to congestion, allowing the solution to make real-time traffic engineering decisions on a packet-by-packet basis.

All of the remote offices act as a distributed call center so real-time VoIP traffic is critically important. With Talari technology, these packets are always transmitted with the highest priority on the path with the best loss and jitter characteristics. To ensure the highest level of performance, high-priority packets are duplicated over diverse network paths whenever bandwidth is available. Lower priority traffic, such as Exchange mail and file transfers, are transmitted over the remaining available bandwidth.

Results

In the initial phase, Hays deployed two Talari appliances at the corporate data center in Greeley, a Talari appliance at the Manchester, Iowa sales office, and a Talari appliance at the Sioux Center, Iowa office. Rollout to the remaining locations will be completed in stages beginning with the larger sites and working down to the smallest. Each site equipped with a Talari appliance will gain a dramatic increase in bandwidth, reliability, and performance with minimal added cost. "Our goal is to have a Talari in every location with multiple connections to the Internet to provide a very resilient high-speed, high bandwidth WAN infrastructure," says Hays.

Hays credits Talari with reducing his cost structure for remote offices. Supporting a remote, five-person call center would typically require a T1 at a cost of $1000 a month, because of VoIP. With Talari, Hays can supply all the bandwidth needed with two Internet connections at a small fraction of the cost. Talari's Software Defined WAN also makes life easier for Hays' lean IT group when opening new offices. They simply ship a preconfigured Talari Appliance to the location, order a couple of inexpensive Internet connections, and ask the local office manager to plug in the box.

Private-line T1s will remain at larger Lextron sites for the immediate future. Hays plans to phase them out, however, as carriers begin to make high-speed Internet connections available in areas where Lextron has offices, allowing Hays to add bandwidth at lower incremental cost. "I don't want to be talking about 1.5 Mbps connections to our remote sites a year from now. I want to be talking about 10, 15, or 20 Mbps connections that are low cost and highly reliable."

"With our private cloud IT infrastructure we have simplified the management of our remote sites, but it means we have had to rely on expensive private WAN connections between locations," says Hays. "With Talari's SD-WAN, I can reduce my dependence on expensive bandwidth at existing sites by using more Internet connectivity and immediately bring up new locations at much lower cost."

About Talari Networks

Talari Networks, the trusted SD-WAN technology and market leader, engineers the internet and branch for maximum business impact, delivering superior application reliability and resiliency, while unlocking the benefits of branch consolidation. Incorporating years of innovation into five generations of product, Talari is deployed across thousands of sites in 40 countries.

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