Nutritional sciences company drives global business efficiency with a business-driven SD-WAN edge platform

USANA increased application performance fivefold and cut WAN costs by $30K/month by retiring branch routers and consolidating on Unity EdgeConnect

In a world where nearly everyone is moving fast, finding time (and energy) to keep up with proper nutrition is increasingly difficult. Even those who make the effort to prepare wholesome meals, eat their fruits and veggies, and drink plenty of water can still come up short on meeting all their daily dietary requirements. That's where USANA Health Sciences comes in.

USANA—a word with Latin roots meaning "true health"—formulates, manufactures, and sells a broad line of science-based vitamins and supplements, nutritional foods and drinks, and personal care products, sold around the world. The company operates from its headquarters in Salt Lake City, Utah and has major manufacturing hubs in the U.S. and China, numerous regional warehouses, and dozens of branch offices across 23 countries to support its global network of direct sales associates.

All 23 sites, including manufacturing operations, USANA-owned warehouses, and branch offices,

FIVEFOLD INCREASE IN APPLICATION PERFORMANCE

SAVED $138K BY CONSOLIDATING ON UNIFIED PLATFORM

REDUCED LATENCY BY 28 PERCENT FOR CRITICAL APPS

rely on a global wide-area network (WAN) to connect its users to applications in the Salt Lake City data center, including everything from using the phone system to processing orders, tracking shipments, and enrolling new sales associates. Most of USANA's applications are developed in-house and are very sensitive to latency. Even with a robust MPLS network the company experienced latency issues and application performance problems. Unreliable carrier service in some parts of the world simply made matters worse.

> **We wanted a single platform to consolidate our branch infrastructure. EdgeConnect offered the most mature and complete SD-WAN solution, including unified WAN optimization, in a single platform.**
>
> — Mark Taylor, Network Manager,
> USANA Health Sciences

Transforming the WAN edge with EdgeConnect

To address the performance and reliability problems, USANA's network manager, Mark Taylor, led a team to overhaul the company's core network, deploy a next-generation network security infrastructure, and build a software-defined WAN (SD-WAN). After researching SD-WAN vendors, Taylor and his team quickly narrowed the contenders to just four, including Silver Peak and Riverbed.

Taylor notes that the Silver Peak Unity EdgeConnect™ SD-WAN edge platform stood out from all the other solutions. "We wanted a single platform to consolidate our branch infrastructure. EdgeConnect offered the most mature and complete SD-WAN solution, including unified WAN optimization, in a single platform."

With the help of network solutions partner, Red Sky, (now owned by Presidio) Taylor and his team deployed the EdgeConnect SD-WAN platform at all 23 sites in 17 countries in just six weeks. EdgeConnect allows USANA to continue using its existing MPLS links while still under contract, and bonds the MPLS circuits with commercial broadband as a secondary link, along with 4G LTE as a tertiary connection in some especially challenging sites. Longer-term, Taylor anticipates being able to decommission MPLS and rely solely on broadband.

In addition to applying WAN-enhancing features such as path conditioning, quality of service, and dynamic path control, Taylor also configured the EdgeConnect platform with the optional Unity Boost™ WAN optimization performance pack to accelerate key applications such as online shopping, enrollment management for new sales associates, and order processing. The EdgeConnect platform is also service chained with Zscaler to connect users securely and directly to the internet, as well as Palo Alto Networks next generation firewalls at each of the company's sites. The entire SD-WAN is centrally managed through Unity Orchestrator™.

"Working with Red Sky, we were able to get the EdgeConnect appliances fully configured in their

facility, and then just ship them out to our sites," says Taylor. "It was easy to get a couple people at each site to swap out the old edge routers and switches with EdgeConnect and connect to the network. It's just plug and play. Because everything is managed through Orchestrator, we could then apply policies and routing overlays remotely. This approach saved us at least six weeks of project time."

Fivefold application performance boost with lower WAN costs

By retiring conventional routers and switches at its branches and other remote sites, USANA was able to consolidate and simplify its WAN edge with a single, unified EdgeConnect platform. Taylor estimates this will save the company $138K per year by having fewer devices to maintain and upgrade.

Taylor reports that with the EdgeConnect SD-WAN edge platform, USANA also saw an immediate improvement in application performance. "The second we bring up the EdgeConnect platform, people at sites that traditionally had performance problems are just amazed at the speed of their applications. In many cases we're seeing a fivefold improvement in application performance."

With all connections coming back to the Salt Lake City data center, latency is also now as much as 28 percent lower since deploying the EdgeConnect platform. This improved responsiveness for critical applications, including USANA's home grown shopping cart and enrollment applications. "Where it used to take forever for a page to load, now it pops up instantly, so people can get their orders in more quickly and be much happier with the whole experience."

Improved reliability is another important result of having the EdgeConnect platform with its ability to automatically failover from one circuit to another in under a millisecond. In some regions of the world, carrier service can be down periodically, which used to cause a panic among branch staff and IT alike. Now, a circuit failure or brownout has zero negative impact on the business.

"We've had many circuit outages and nobody notices anything," says Taylor. "Carriers no longer rule my world. EdgeConnect automatically finds the best available path to keep us operating, and we have the leverage to hold carriers accountable for their service levels. It's been outstanding."

Vision of future possibilities at the WAN edge

As Taylor looks out into the future, he sees even greater possibilities for leveraging the reliability and versatility of the EdgeConnect platform.

"We'd like to eventually use EdgeConnect as a network function virtualization platform to unify all branch network functions, coordinated through Orchestrator. That's the perfect world I envision for our WAN edge, and Silver Peak is a great partner to help us realize this vision," says Taylor.

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

Customer

USANA is a U.S.-based nutritional company that develops and manufactures high-quality nutritional supplements, healthy foods, and personal care products in its FDA-Registered Drug Establishment in Salt Lake City, Utah. USANA products are sold directly to a global network of associates and preferred customers throughout the United States, Canada, Australia, New Zealand, Hong Kong, China, Japan, Taiwan, South Korea, Singapore, Mexico, Malaysia, the Philippines, the Netherlands, the United Kingdom, Thailand, France, Belgium, Colombia, Indonesia, Germany, Spain, Romania, and Italy. Established in 1992 and publicly traded on the New York Stock Exchange, USANA projects net sales of $1.2 billion for fiscal year 2018.
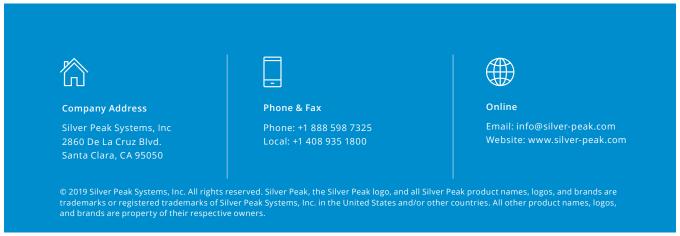
Challenge

Enable direct sales associates and preferred customers located around the world to access critical business applications and services running in USANA's Salt Lake City data center with greater WAN reliability and application performance

Solution

Deploy the EdgeConnect SD-WAN edge platform as a unified branch edge, retiring branch routers and switches, enabling USANA to bond existing MPLS circuits with commercial broadband and LTE links, and applying path conditioning, quality of service, dynamic path control, and the optional Boost performance pack to optimize WAN reliability and application performance across 23 sites

Results

> Enabled USANA to enhance 23 sites in 17 countries with SD-WAN in just six weeks

> Consolidated multiple edge devices onto one unified platform, saving $138,000 per year

> Delivered a fivefold increase in application performance

> Reduced latency by 28% for critical applications, improving end user productivity and satisfaction

> Assured WAN availability during circuit outages with zero negative impact on the business

> Established a foundation for unifying all network functions at the WAN edge

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