INDUSTRY

Retail

CHALLENGES

- A lean and consolidated IT stack in every store

- Simplify the IT hardware and software footprint in store locations

- Integrated network services—routing, switching, security, micro data center, WiFi—on a uCPE

- Streamline network manageability

- VM-based environment, hosted on a uCPE platform

- Provide network services as well as Windows services to eliminate the need for additional server hardware in each store

- Consolidate security and network services and phases out dedicated single-purpose security devices

- Multicloud integration connecting to multiple cloud providers' infrastructure

RESULTS

- Cost savings

- Automation

- Flexibility

- Multi-cloud simplicity

- Analytics support for management

- Service provider integration

Global Retailer Case Study

Multicloud; multi-tenant; single-stack; simplification

Company Profile

One of the top global retailers in the world operates over 600 store locations as well as multiple other corporate sites such as offices and factories. The company employs over 100,000 people and operates world-wide in four global regions.

Challenges

One major driving force for the company is to have, as much as possible, a "lean and consolidated IT stack" in every store. This along other drivers motivated the company to deploy SD-WAN infrastructure to:

- **Simplify the IT hardware and software footprint in store locations:** Integrated network services—routing, switching, security, micro data center, WiFi—on a uCPE (universal Customer Premises Equipment) platform to provide a much slimmer solution than the legacy infrastructure.

- **Streamline network manageability**: : The company envisions a VM-based environment, hosted on a uCPE platform, to provide network services as well as Windows services to eliminate the need for additional server hardware in each store. Consolidating security and network services simplifies multi-vendor management, and phases out dedicated single-purpose security devices.

- **Multicloud integration:** Simplify, and automate, the network design and provisioning of connecting to multiple cloud providers' infrastructure.

Solution Highlights: Versa Secure SD-WAN

The Versa integrated software stack provides all networking services—with specific focus on embedded security—in a single software stack that significantly reduces the in-store footprint, the number of devices in the network, and the range of vendors and software images to be managed and tracked.

The Versa SD-WAN deployed by the company has the following salient characteristics:

- **Regional hub-and-spoke design:** The network spans four geographic regions: two in the EU, and one each in APAC and the Americas. Each region is designed in a hub-and-spoke topology, with inter-region communication via the hubs. Versa's advanced routing stack was instrumental in crafting the fine-grained routing policies necessary to implement this topology.

- **Mitigating poor quality links:** The APAC region uses several lossy and overly congested internet links. Versa's traffic conditioning capabilities, such as Forward Error Correction (FEC), enable usable real-time voice and video traffic over these links.

- **Multi-tenancy:** The corporate part of the company offers provider-like SDWAN services to various entities within the group such as stores, offices, and factories. The multi-tenant design allows the company to separate and secure each entity's network from the others.

- **HA:** Store locations are provisioned with dual HA links, using a combination of MPLS and broadband internet links, with LTE as cold-standby backup connectivity.

- **Multi-cloud networking:** All cloud workloads connect via the Versa SD-WAN fabric, simplifying the network design by eliminating the need for expensive private connections to cloud providers or IPSec backhaul configurations from individual sites. Azure public VNETs are connected to the Versa SDWAN fabric using Azure vWAN, and AWS Transit Gateway connects AWS VPCs.

- **Simplified management:** The Versa stack runs on a uCPE platform, sharing a VM environment running Windows-based store services such as printing. This simplifies network management by avoiding a separate server device per location. The built-in security in the Versa solution obviates the need for a separate security device or vendor.

Key drivers in the company's decision to implement a Versa Secure SD-WAN include:

- Demonstrated technical prowess and a strong routing stack
- An advanced traffic steering engine
- Multi-cloud automation
- Powerful analytics
- Feature-rich orchestration platform

The company also evaluated a Cisco Viptela solution.

Results

The company realized the following benefits from their Versa SD-WAN choice:

- **Cost savings:** Less dependence on MPLS technology to connect their sites.

- **Automation:** Using the Versa framework with templates and APIs reduced operation and management overhead.

- **Flexibility:** Multi-tenancy allows each individual entity within the corporation to securely build, operate and manage its own network and services.

- **Multi-cloud simplicity:** Each cloud deployment seamlessly connects into the Versa SDWAN network fabric.

- **Analytics support for management:** Versa Analytics provides powerful insights into network capacity planning, analysis and significantly simplifies troubleshooting of network problems. the company's AI engine collects and processes data from Versa Analytics.

- **Service provider integration:** Versa's close integration with providers resulted in the company benefiting from the best of both worlds. For example, the ability to deploy and manage sites on a global scale using Verizon capabilities coupled with Versa technology.