

Driving Network Transformation for Carwash Technology Company

Designing a single software-defined wide-area network (SD-WAN) with complex network segmentation, PCI compliance, and single dashboard manageability

INDUSTRY: Software/Hardware Technology

COMPANY OVERVIEW AND SUMMARY:

A point-of-sale system for a growing software/hardware technology company, catering to car wash retailers, processes one million transactions a day. Its products provide data insights, commercializing unlimited car wash plans and enabling business optimization to integrate massive amounts of financial data from hundreds of clients nationwide — data that is all subject to PCI data security standards.

The technology company needed to connect and integrate its data center, headquarters, call center, and three field offices that were using a VPN-connected WAN with a firewall system designed for a 10- to 50-employee business. The company knew they needed a high-powered network security solution able to meet each location's unique needs without overburdening its small IT staff. For that, they turned to Black Box to help plan, design, and execute a unique SD-WAN rollout.

To ensure the network met the needs of each operational center, the Black Box team worked with representatives at each network location to define and custom design a full-stack Meraki SD-WAN. The start-to-finish plan included all design through deployment and execution up to and including day-three monitoring.

The technology company closed the security gaps in its disparate architectures. Its staff of four IT professionals can now fully manage permissions and network traffic for all network operations and make immediate security changes from central headquarters.

CHALLENGES

- Consolidate a highly complex network involving headquarters, data center, call center, and multiple branch offices into one centralized network with segmentation
- Ensure PCI compliance and scalable security at each location
- Create enterprise-wide network consistency and uniformity in hardware, software, and architecture
- Manage the network with limited IT resources
- Deploy and manage SD-WAN rollout across multiple locations

SOLUTION

- Create single Cisco Meraki SD-WAN with segmentation and policies designed to meet specific business operations and security needs of each operations center/site
- Segment and secure sensitive PCI data on one network and all other traffic on another
- Install consistent, next-generation security appliances and enabling the latest security features to ensure PCI compliance at all sites
- Design and implement enterprise-wide roll-out blueprint from planning to monitoring and including Day 2 support
- Develop complex network policies that can be managed via a single dashboard by a small, national IT team

RESULTS

- Mitigate untold risk in disparate architecture while still maintaining PCI compliance
- Consolidate network management into a single SD-WAN dashboard, providing increased agility and performance without increasing ongoing costs
- Guarantee 99.999% uptime and the ability to control traffic, manage role-based security, and push updates and patches in a few keystrokes

VALUE

- Save hundreds of thousands of dollars in PCI-noncompliance fees and the cost of a network security breach
- Enable scalable network growth that does not require additional staffing or incur additional security risks

CHALLENGE

Meet exacting security standards in a complex, segmented network with limited IT support

The company faced several daunting challenges in its network upgrade. But the sheer size and sensitive nature of the data moving across the network made securing and managing it extremely complex.

Complicating the planning were multiple sites, each with unique business and security requirements. The data center had different data needs than the headquarters, the call center, and the remote branch locations. The network had to be designed to support the distinct needs of each. The existing network was a combination of different architectures and security instances that couldn't be easily managed.

The software/hardware technology company itself relied on a small three- to four-person IT staff to manage everything. The company didn't have the budget to expand the staff, nor could it afford to fall short on PCI compliance. The first was a nice to have. The latter was a must-have that could result in hundreds of thousands of dollars in non-compliance fees.

Network planning had to be precise from high-level operations requirements down to the most detailed infrastructure upgrades at each location. In addition, it had to be non-intrusive. Shutting down the data center for any length of time was not an option.

The company required operations and data network segmentation and an advanced yet cost-effective, security solution. It needed to be scalable as the expanded the number of locations and amassed more credit card data in need of protection. Just as important was network manageability that could be handled by a small, centralized team.

SOLUTION

Create a custom network that provides security, simplicity, and segmentation

The growing software/hardware technology company turned to Black Box for an agile, scalable, customizable enterprise-wide solution that would solve multiple challenges. Experience in the manageability, flexibility, and consistency of SD-WAN led the Black Box team to recommend a Cisco Meraki solution. The company's IT team worked closely with the Black Box team, as well as Meraki-certified personnel, and business leaders at each location to understand specific needs and security challenges.

First and foremost, the new network solution solved the largest and most critical challenge: security. By segmenting financial data, using appliances in the same family, and employing the Cisco Meraki security features, the entire network met all security regulations.

The second challenge was network segmentation. Each business group had different and complex operational needs. Working closely with the client, the Black Box team created and set specific network policies tailored for each group. For example, the data center had one set of network policies while the call center had another.

With a limited staff and multiple network segments, ease of management was also critical. The SD-WAN solution offered single dashboard manageability. One IT administrator could assign, set, and control all functions and permissions from a central dashboard.

OUTCOMES

Revenue-growing, cost-saving enterprise network with low-risk, high-compliance security

Maintaining PCI-compliant network security is the lifeblood of a business built on delivering key data insights and managing point-of-sale transactions. Data management is this company's product. Being able to deliver more of that product securely without expanding IT staffing means revenue growth without growing ongoing costs.

With one strategic move to a centralized SD-WAN, the company solved multiple problems. Built-in security ensures PCI compliance eliminating the risk of data breaches and extremely costly non-compliance fees in the hundreds of thousands of dollars. Centralized network management enables a small IT team to effectively and efficiently control an enterprise network from a single dashboard alleviating stress on the team, improving efficiency, and responsiveness.

Most importantly, extensive planning enabled a seamless transition to the new network without disrupting services to company users or its clients.

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