FORTINET

Inherently Secure Switching Provides Relief for Lean IT Team

A Fortune 500 company, Fortinet is an industry leader in network security. Its share value has grown 1,244% since its initial public offering (IPO) in 2009—nearly triple that of its closest competitor.[1] As a result, the company's facilities and the networks that support them have expanded as well. Fortinet recently broke ground on a second 172,000-square-foot building near its headquarters in Sunnyvale, California, nearly doubling its footprint there. At the same time, it is ramping up operations at its state-of-the-art data center in Burnaby, Canada, as well as a new office in Valbonne, France.

As a security technology leader, Fortinet recognized that the way it managed and protected its enterprise network would be a source of inspiration for others. For Fortinet, security-driven networking is the guiding principle. By providing network connectivity within a secure framework, Fortinet is able to support the organization's evolving business needs without compromising security.

Maintaining Performance Without the Complexity

When FortiSwitch secure access switches became available about four years ago, Senior Director of IT Rick Huang was eager to use them to replace the company's legacy switches. "We had to dedicate a lot of staff hours to managing the legacy switches and everything attached to them," Huang says. "FortiSwitch has significantly reduced that complexity."

Fortinet deployed FortiSwitch data center switches at its network core and FortiSwitch secure access switches at the network edges to provide access to desktops as well as wireless devices. Power-over-Ethernet (PoE) ports on the FortiSwitch appliances provide network connectivity and power to FortiAP wireless access points (APs), which support the smartphones, tablets, and laptops of Fortinet's highly mobile workforce. PoE ports also connect a constellation of FortiCamera security cameras deployed throughout the company's facilities. These deliver continuous and motion-activated video feeds into FortiRecorder video security appliances. One of Huang's team members, Senior IT Manager George Zeng, took care to distribute the AP and camera port connections over the entire FortiSwitch installed base to ensure maximum availability.

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>   *Fortinet*

Details

Customer: Fortinet

Industry: Technology

Location: Sunnyvale, CA

Solutions

- FortiSwitch
- FortiGate
- FortiManager

A Single Pane of Glass for Secure Access

What makes the Fortinet FortiSwitch architecture inherently secure is the fact that Zeng deployed the switches through the FortiGate next-generation firewall (NGFW) using the FortiLink mode. FortiLink defines the management interface and the remote management protocol between the FortiGate and FortiSwitch, so that network security policies and access layer functions can be managed through a single console.

According to Zeng, the difference between the deployments of the new and old switches was significant. "I needed an hour to deploy each legacy switch," he says. "With the FortiLink technology, I deployed 50 FortiSwitch devices in five hours. Now that we have completed that initial major deployment, we will probably deploy one or two new switches a month, and the FortiLink technology makes that easy." This adds up to 45 hours in total staff time saved on the initial deployment, as well as another estimated 15 hours annually in ongoing savings. And when Zeng and the team get ready to deploy switches in the new facility, they anticipate upwards of 15 hours in time savings and an aggregate of 5 hours in annual recaptured time.

Zeng now manages the entire switched infrastructure at the Sunnyvale campus from a single pane of glass. "The FortiGate GUI makes it very easy for me to see everything connected to each port—for example, I know if it is equipment in the demo lab, a camera, or the CEO's laptop," Zeng says. "Plus, I can drill down to troubleshoot any issue that comes up."

A typical issue, such as looped ports on the switches, can now be resolved quickly. "It used to take me two hours to detect a loop on the legacy switches," Zeng says. "And I would have to do this a couple of times a month. It takes me about half that time now." When this is totaled across all of the company's 26 different locations serving nearly 6,000 employees, this adds up to a time reduction of more than 144 hours in a year, leading to an annual cost savings of around $10,000.[2]

As a dedicated Fortinet employee for nearly two decades, Huang can be expected to reach for his own company's technology to solve these secure networking problems. But he has talked to enough colleagues in the industry to recognize that the pains his team has experienced are hardly unique. "Just the ability to have all the switching centralized in the secure arena of the firewall, and having those policies automatically applied without actually having to mess with it, takes a lot of load off of overburdened teams like ours," Huang concludes.

Business Impact

- 90% reduction in switch deployment time

- Up to 50% reduction in time to troubleshoot network issues, leading to annual savings of around $10,000

- Inherently secure switching, with consistent policy management

- Easy scalability to support high throughput for both internal and cloud-based applications

- Ability to centrally manage globally dispersed access switches

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[1] Stock performance as of March 31, 2019, posted on the Fortinet website.

[2] 144 hours saved/2,080 hours per year × $142,530 median annual salary = $9,867. Salary data retrieved from U.S. Bureau of Labor Statistics website, accessed November 15, 2019.

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