A major Japanese manufacturer had long maintained multiple IT organizations to manage its information systems. Each organization maintained its own data center, networks, and security infrastructure. Taken individually, the IT organizations were well-managed. Still, executive leadership saw that the company as a whole could better serve its digital innovation initiatives if the IT teams, their data centers, and the associated networks were consolidated.

The IT leaders wanted to go beyond mere network interconnection between the organizations. As one senior IT manager states, “We needed to simplify the configuration and update it under a unified network policy for the company, while further improving fault tolerance and quality.”

The IT group also wanted to address growing concerns about network performance and user experience—which resulted from expanding internet traffic and cloud service adoption. Rather than perpetually increasing the speed of internet connections for the company’s remote sites, the IT leaders wanted to explore the use of software-defined wide-area networking (SD-WAN) to restructure the way their remote-site networks connected to the internet.

At the time, the remote sites accessed the internet through the corporate data centers. Their internet-bound traffic traversed the same WAN links that handled the internal site-to-site traffic. By contrast, SD-WAN would create a virtual WAN overlay in the remote-site routers, so that the internet-bound traffic could be broken out from the traffic headed for another corporate location, and conveyed directly to the internet. This would reduce latency for the remote users and eliminate the single points of failure in the corporate data center internet connections.

**The First Step: Router Consolidation**

If the company was going to upgrade its edge infrastructure with SD-WAN overlays, it didn’t make sense to maintain disparate, siloed routers. That would have conflicted with the company’s network simplification goals. The legacy routers were also among the more expensive options on the market, and the company’s increasing WAN capacity requirements would only multiply these costs in the future. It made sense to replace the legacy routers with a single, more cost-efficient networking technology.

Network security was another consideration. If the IT group continued using its legacy routers, it would have had to install a next-generation firewall (NGFW) in front of every internet-facing router to protect the remote-site networks, users, and data from internet-borne threats. That would add management complexity, as well as operational and capital expense. Moreover, if those firewalls were not integrated, IT managers would not have security visibility across the enterprise and would not be able to enforce security policies consistently.
All these factors pointed to the need for security to be an integral part of the new network architecture from its inception, ultimately leading the IT group to Fortinet Security-Driven Networking (SDN) solutions.

In the first phase of its network consolidation, the IT team is deploying FortiGate enterprise-grade NGFWs as routers, replacing the legacy devices. Like many organizations that leverage the FortiGate NGFWs in this capacity, the manufacturer’s IT organization will be able to benefit from advanced networking features, such as dynamic routing, IPv4/v6, and multicast support. “We decided to give FortiGate a try, based on its low price as well as its full range of functions,” says another senior IT manager. “The fact that FortiGate has a high reputation globally was also a factor in our decision.”

**FortiGate Provides a Path to Secure SD-WAN**

Once performance of the new routing architecture has been tested, the IT group will phase in SD-WAN functionality in the FortiGate firewalls, achieving the Fortinet Secure SD-WAN solution. This will enable the company to maintain high levels of network performance and robust security at the same time. Moreover, the IT staff will be able to monitor and manage the entire SD-WAN infrastructure from a single console, making it easy and cost-efficient to scale.

Indeed, the IT group considers the internet breakout project as a proof of concept for rolling out SD-WAN throughout the enterprise, and the consolidated IT team is optimistic about its success. “We will continue to provide services with Fortinet’s support,” another one of the IT leaders concludes. “We will continue to work with Fortinet to provide highly functional and effective proposals to our customers, while receiving support from Fortinet and working with the service team on evaluating new services, improving operational efficiency, and optimizing costs.”