

CASE STUDY

Goodwill Central Texas Increases Network Resilience With Fortinet Secure SD-Branch

Goodwill Central Texas is part of Goodwill Industries International, a not-for-profit that transforms generations by empowering people through education, career training, and work. Headquartered in Austin, Goodwill Central Texas operates 37 thrift stores, boutiques, and outlets across the Central Texas region, as well as through an e-commerce operation. Profits from sales are channeled into providing education and job training programs, including adult high school diplomas, professional career certifications, and skilled trade certifications, as well as job readiness and placement services.

The company, which is independent of other Goodwill Industries International organizations, operates a network that spans its retail stores, its Austin headquarters, three warehouse facilities, and a co-located data center, which is soon to be migrated onto a cloud platform. Although the retail stores and outlets have broadly similar connectivity requirements, needs can vary widely between the warehouses and other elements of Goodwill Central Texas' operations.

Chris Dennick, IT Manager at Goodwill Central Texas, explains: "One of our warehouses is home to our e-commerce operation, so we need low latency and high availability for our listers to upload sale items easily. However, that same location also houses our Computer Works section where we refurbish devices for resale. Often, that team needs to download bandwidth-heavy resources, which can slow the network. In addition, some of our subdivisions carry out work at customer sites, so we need to ensure we have secure network coverage out to these places."

A Single Point of Failure

For Goodwill Central Texas, the resilience of its network is crucial. This is particularly true when it comes to its revenue-generating engine: its retail stores. However, the company's legacy approach to networking meant that it was vulnerable. "We were set up with a multiprotocol label switching [MPLS] network, where all traffic from our remote locations was channeled through corporate headquarters, up to and including server traffic from the data center, before going out to the internet," says Dennick. "That was a risk. If headquarters suffered an outage, then the entire network would go down."

Another challenge facing the firm was the cost of its MPLS network. As a not-for-profit, Goodwill Central Texas needs to minimize the cost of its operations to ensure as much money as possible goes to its training and education programs. The organization therefore launched a search to find a networking model that would build resilience and enable it to move to lower-priced broadband as its primary connectivity.



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Details

Customer: Goodwill Central Texas

Industry: Nonprofit Social Enterprise

Location: Austin, TX

Business Impact

- Improved network resilience increases business performance
- Centralized network management reduces cost and complexity
- Increased visibility of threats and reduced time to mitigation
- Increased internet capacity at half the cost of legacy connection

Given that the company's six-strong IT team needs to serve 1,100 end-users, the new networking solution would need to be simple to set up and manage and require as little training as possible. It would also need the highest levels of security. Goodwill Central Texas provides public Wi-Fi access at its stores, so that people can connect to find work or to access online learning materials. Maintaining this public access is important to the company's mission, but it also represents a significant network vulnerability.

Building Resilience With Fortinet Secure SD-Branch

During a Goodwill International conference, an IT leader from one of Goodwill Central Texas' sister organizations recommended that it try Fortinet as a replacement to its legacy network. That recommendation led to several proofs of concept. "We immediately saw the benefits of Fortinet," says Dennick. "The user interface is simplicity itself, as is the ease with which we can configure the devices. The proofs of concept also showed us the benefit of having a single pane of glass to manage all network devices through intuitive dashboards. It was an easy decision for us to move from the pilot stage to full deployment."

Today, Goodwill Central Texas has deployed a Fortinet Secure SD-Branch network across its stores, offices, and facilities. The network integrates FortiGate secure software-defined wide-area network (SD-WAN), FortiSwitches, and FortiAPs (access points) extending the benefits of the Fortinet Security Fabric to its distributed branches. The network is managed through a single integrated control panel delivered through FortiManager and optimized through insights derived from the FortiAnalyzer analytics engine.

With the Fortinet Secure SD-Branch in place, Goodwill Central Texas' remote facilities are now connected directly to the internet, with edge security enabled through the FortiGate Next-Generation Firewall (NGFW). Further levels of security and control are enabled through the FortiClient Enterprise Management Server (EMS), which replaced the organization's legacy antivirus, as well as through use of FortiAuthenticator, which ensures against unauthorized users accessing the network. The company has also ramped up protection against external threats with the deployment of FortiMail, which provides multilayer protection against email-borne threats.

The FortiGate devices provide dual connectivity in a single device, so Goodwill Central Texas can connect both to its primary broadband network and its 4G LTE backup network without the need for additional firewalls. The one exception to this approach is the warehouse that hosts the company's e-commerce and Computer Works divisions, requiring low latency for the former and high bandwidth for the latter. This building uses a fiber connection for its primary internet service, and broadband as backup.

A Seamless Security Fabric

Having started the rollout with Fortinet in January 2020, Goodwill Central Texas is now experiencing significant benefits from its new network. One standout advantage is the Security Fabric enabled through the consolidation of branch services for local-area network (LAN) edge. Dennick explains: "With our legacy network, you could only make changes to a router, switch, or firewall if you were logged in to that specific device. With Fortinet, I can access everything over the FortiGates and make changes to all devices from a single interface. That level of integration makes network management much easier; I need to only write a script once to immediately update all our firewalls, switches, and access points right across our locations."

Solutions

- Fortinet Secure SD-Branch
- FortiAP
- FortiSwitch
- FortiManager
- FortiAnalyzer
- FortiAuthenticator
- FortiClient EMS
- FortiMail

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- Chris Dennick, IT Manager, Goodwill Central Texas

The Security Fabric also makes things easier when it comes to support. Goodwill Central Texas turns to Fortinet to solve any issues with its network, and its help can extend to wherever is required. “Having everything under one umbrella is great. If I have an issue, Fortinet will be able to solve it on their own. What is more, the team there is very proactive and work as true partners in helping to ensure our network runs optimally.”

Increased Network Visibility

Another advantage of the Fortinet Security Fabric is that Dennick and his team have much greater visibility into the network, which increases network security. Already, the company has identified and shut down a denial-of-service (DoS) attack thanks to the network view provided by the FortiGate and FortiAnalyzer devices. “Fortinet made it exponentially easier for me to identify what was going on and take action. This is important because the attack was slowing down operations at our e-commerce site, which impacts our ability to generate the money needed to help our constituents.”

Another security benefit of the Fortinet Secure SD-Branch is that it enables Goodwill Central Texas to segment its Wi-Fi network and view activity logs to see who and what is connecting to the network. Previously, private Wi-Fi across all of its locations operated as a universal network because of how it was configured through the LAN controller. Likewise, the public Wi-Fi subnet operated the same way. With the Fortinet solution, each location is isolated and has its own local Wi-Fi subnet for private and public Wi-Fi.

Employees authenticate on private Wi-Fi through certificates and the FortiAuthenticator, so once they log into Windows via Active Directory, it recognizes them and logs them in to Wi-Fi.

A Lower-Cost Network

Importantly for Goodwill Central Texas, the Fortinet Secure SD-Branch solution enables it to migrate from its expensive legacy MPLS connection to broadband, which is more cost-effective. The company now runs significantly more broadband capacity for around half the cost of its legacy MPLS. And with the broadband WAN links, Goodwill Central Texas effectively has individual egress points at every location, removing the threat of a single point of failure.

During the migration phase, Goodwill Central Texas discovered that its legacy backup to MPLS, a dynamic multipoint virtual private network (DMVPN) connection, was not fit for purpose. As MPLS was switched off at each location, the DMVPN became for a short time the primary internet connection. “Wherever we switched to DMVPN, our speeds were throttled to just 35 Mbps,” says Dennick. “This happened around the time of the outbreak of COVID-19 and the move to virtual working and it was therefore a big problem for us. We could not resolve the issue, but thankfully once the migration to Fortinet was complete and we had shifted onto the broadband connections, we were able to get back to full network performance.”

A Better Network—For Goodwill and the People It Helps

By removing the single point of failure, improving the backup network, converging security, WAN, and LAN, and ramping up broadband capacity, Fortinet Secure SD-Branch greatly increases resilience for Goodwill Central Texas. Ultimately, that is good news for the people it aims to help. Dennick concludes: “The better our network performance, the more time we are able to spend making money. And the more money we make, the better able we are to support our projects. Resilience for us is absolutely central to meeting our mission.”



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