

CASE STUDY

Pennsylvania School District Consolidates on the Fortinet Security Fabric for Increased Visibility, Control, and Protection

Council Rock School District is in Southeastern Pennsylvania. Spread across 72 square miles, the district comprises 15 K-12 schools and one alternative high school, as well as two administrative buildings. The district's 1,300 teachers and support staff serve 11,000 students with a graduation rate of 98%.

Matthew Frederickson is director of IT for the Council Rock School District and an adjunct professor for Bucks County Community College. According to Frederickson, the K-12 educational environment presents a unique set of challenges: "Dealing with so many young people means that the insider threat in schools is often far greater than in businesses. Resources are also at more of a premium. There are just nine people in our IT team, and we are expected to support 13,000 users daily. Most days we only have time to 'fight fires' and that means that we need a dynamic environment."

Refreshing the Security Infrastructure

In 2016, the district's firewall had reached the end of its operational life, and Frederickson wanted to replace it with a next-generation firewall (NGFW). The system needed to save time for the team, which had no capacity to spend on additional management or monitoring. "I needed a robust and adaptable system that could automate as many processes as possible," says Frederickson.

The district was also looking to replace its legacy unified communications (UC) platform. The system had been in place for approximately 17 years and over that period had become complex to manage. Concurrently, prices had risen dramatically, and the system no longer represented good value for money. Frederickson wanted a UC platform that was enterprise-ready, able to function independently in each of the district's facilities, and which was cost-effective.

The Fortinet Security Fabric

Today, Council Rock School District's network is secured through a FortiGate NGFW. "A fellow security professional recommended I look into the FortiGate NGFW," says Frederickson, "saying that I would never regret it—and they were right. In the five years we have used the device, we have doubled the amount of technology in the district, and it is still performing exceptionally well. And of course, FortiGate was just the beginning of our partnership with Fortinet."

The district is in the middle of a broader transformation to rearchitect its network on the Fortinet Security Fabric. Already, the district has deployed FortiAPs (access points) for secure local area network (LAN) edge and Wi-Fi connectivity and soon it will have finished rollout of its FortiSwitches.



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Director of IT, Council Rock
School District

Details

Customer: Council Rock School District

Industry: Education

Location: Bucks County, PA

Endpoints: 5,500

Business Impact

- Increased visibility through unified security system and single-pane-of-glass view
- Granular control of network access to meet needs of a varied user base
- Two to three FTEs saved through automation and centralized device management
- Secure home schooling enabled for 11,000 students

Since the FortiGate deployment, the district has adopted FortiManager to centrally manage and configure its devices, as well as FortiSIEM (security information and event management) to collate security intelligence. The district has also deployed FortiEDR (endpoint detection and response) and FortiAuthenticator to further boost its perimeter defenses. Finally, the district has also adopted FortiVoice, Fortinet's integrated UC platform for voice, conferencing, chat, and fax.

A Security Ecosystem

For Frederickson, the standout benefit of Fortinet is that its Security Fabric provides an ecosystem of products built on the most robust levels of security. "As we deploy the FortiSwitches and FortiAPs we are seeing how it all ties together," says Frederickson. "It feels like every time we add a Fortinet device or product to the network, I get more actionable insights that allow me to do what matters: provide a secure and highly available network to teachers and students."

In addition to achieving greater visibility of the network, the district's IT team also benefits from greater control. Through the FortiGate, the district can segment network access between students and teachers, and by the grade year of students. Students and teachers can therefore access the materials they need, but no more. The level of granularity afforded by filtering means that the IT team can, for example, allow educational games to be accessed, while blocking all other online games. This, for example, is only possible with unification of security from users to apps with market-leading, integrated, and coordinated artificial intelligence (AI)/machine learning (ML)-powered FortiGuard Security Services.

The FortiGate filtering capabilities also boost security. "If I want to block traffic from a certain geography I can easily do so," says Frederickson. "Once the FortiGate was plugged in I was able to breathe a little easier knowing that hackers would not be able to get into our network through the firewall."

Time Savings

Another key benefit of the district's new security infrastructure is its usability. Through FortiManager, the IT team can easily manage its network security, while leveraging the automation enabled by Fortinet's products to reduce the need for manual interventions.

As Frederickson puts it: "FortiGate alone is like having another staff member on my team, because I do not have to sit and watch the NGFW—it automatically alerts me when there is something that needs attention. Then you add the FortiAPs and FortiSwitches and the proposition becomes better still. I can manage everything through a single pane of glass and combine all kinds of intelligence to extend the level of security found in the FortiGate to each individual port or switch. I have never experienced anything like that level of security in the past."

Thanks to the ease of use and the feature-rich, automated capabilities of the Fortinet Security Fabric, the district has been able to dramatically reduce the time spent on routine maintenance and monitoring. Already the team is spending much less time in closets manually testing switches and configuring devices, and by the end of the project Frederickson estimates the team will save two to three full-time equivalents (FTEs) and remove the need to hire additional network technicians.

"Much of that time will be saved through the 'plug and play' nature of the FortiSwitches," comments Frederickson. "We need only configure centrally for all devices, and then they are good to go as soon as they are connected to the network and switched on."

Solutions

- FortiGate Next-Generation Firewall
- FortiEDR
- FortiAP
- FortiAuthenticator
- FortiManager
- FortiSIEM
- FortiVoice

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Powerful Endpoint Security

Council Rock School District owns laptops that it loans to students who need them when working from home. For Frederickson and his team, securing these endpoints is a priority as they represent a significant part of the district's threat surface. The rise of home schooling during the COVID-19 pandemic, during which time every student was issued a laptop, underscored this priority.

Using FortiEDR to protect its 5,500 endpoints, the district has enabled secure home schooling at scale. "What I wanted was a security analyst sitting beside every student telling them when not to click on links and which downloads to avoid," says Frederickson. "FortiEDR gives me that capability. The tool captures threats big and small and feeds that intelligence back into the FortiSIEM."

Thanks to the FortiSIEM, Frederickson's team has a complete view of everything happening on the Fortinet Security Fabric. As soon as unusual activity occurs, the IT team is alerted. Frederickson adds, "I can see it all—what is going on in the network, where my users are, where they are sending data, and when they are logging on. That is all valuable data to map a baseline of normal activity and spot instances that fall outside that baseline."

High Performance, Low Cost, Exceptional Support

The district is also benefiting from its new UC system. The IT team found FortiVoice so easy to assemble that they needed no help implementing the system and were able to seamlessly integrate it with the district's paging platform. The cost points of FortiVoice proved highly competitive, and the district was won over by the fact that there is no additional cost for future releases, so it will be able to keep costs down long-term. "All of Fortinet's products are highly cost-effective delivering the best performance per price that I have seen on the market," says Frederickson.

Frederickson has also been impressed with Fortinet's approach to sales and support. He explains, "Fortinet focuses on our needs as an end-user, and to me that is the difference between a partner and a product vendor. Fortinet's systems never make me feel like I am giving up control, even as I consolidate onto the Security Fabric. Importantly, when I meet with the sales team, they are not immediately trying to upsell me. Their priority is to find out how things are with me and my team, and whether there is any way they can help. That level of support is rare."

Future Plans

Next, the district plans on strengthening its Security Fabric by integrating FortiNAC (network access control) and FortiMonitor, a SaaS-based digital experience and network performance monitoring solution. In addition to boosting security, these tools will improve the overall cohesiveness of the security infrastructure and drive network resource optimization and automation gains.

Frederickson concludes, "Judging by its products, Fortinet's goal seems to be to make life as easy as possible for network managers by providing a single, overarching infrastructure with automation at its heart."



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