



CASE STUDY

# School District Decreases Security Costs While Reducing Risk



The East Noble School Corporation dates back to the 1960s, when the state of Indiana passed legislation to consolidate rural public school districts across the state. Today, the district serves more than 3,700 students on eight campuses across the eastern third of Noble County—including a new, consolidated middle school.

Despite serving a rural area, East Noble has a long-held reputation for using cutting-edge technology. “When I started with the district in 1997, our buildings were already linked together with microwave wireless,” recalls Rick Williams, the network administrator for East Noble.

## Facing a Network Security Crossroads

In 2014, the district faced a decision regarding its network security deployment. Legacy firewall and web-filtering solutions were coming up for renewal, and the price was slated to increase substantially for the firewall in particular. “We came up with a solution that fit within our budget, but it wasn’t a great one,” Williams says. “We approached one of our partners, CDW-G, but they initially didn’t have anything better to propose. But a couple weeks later, they called back and said, ‘We want to talk to you about Fortinet.’”

CDW-G arranged for the three-person East Noble IT team to meet with Fortinet engineers to evaluate the FortiGate next-generation firewall (NGFW). “We were extremely impressed,” Williams recalls. “When we realized that we could use a FortiGate to replace both our firewall and our web filter, we knew it could work really well for us.”

Another benefit of FortiGate was its built-in application control. “All of our students have either an iPad or a Windows laptop, and the purpose of the device is education—not games or social media,” Williams relates. “Application control enables us to make sure the kids use the devices appropriately, and we are able to deploy granular controls according to the individual user.”

The team performed due diligence, contacting other firewall vendors to inquire about similar solutions. Unlike the FortiGate solution, all of them struggled to address a unique complication related to the geographic spread of East Noble’s campuses and limited internet bandwidth in the area. Specifically, to cover its 10 locations adequately, East Noble relied on three different internet service providers, and needed the ability to balance traffic between these access points.

East Noble considered other solutions but ultimately those didn’t meet the school district’s requirements. “The geographic distribution of our district, combined with our web-filtering volume, meant that we needed three separate appliances from one vendor,” Williams notes. “Being able to manage everything on one FortiGate NGFW was a huge plus.”

*“Because we now have a plug-and-play security architecture that evolves with our attack surface and integrates our different security elements into a single pane of glass, we have a much more proactive security approach.”*

– Rick Williams, Network Administrator, East Noble School Corporation

## Details

**Customer:** East Noble School Corporation

**Industry:** K-12 Education

**Location:** Kendallville, Indiana, USA

## Business Impact

- Realized \$45,000 reduction annually in network security license costs
- Avoided doubling network bandwidth costs
- Increased wireless bandwidth up to 1,000% at most locations
- Reduced wireless network costs by 35%
- Saved 30 hours/month in security monitoring, network traffic management, and resolving help-desk tickets

## Integrating Endpoint Security

Having concluded that Fortinet offered the best solution, East Noble bought a FortiGate 1000C in March 2014. “We deployed it districtwide that summer,” Williams recalls. “In the fall, we activated the FortiGate internal web filtering and application control.”

Once the FortiGate was in place, East Noble had the ability to deploy many other solutions through an integrated security architecture, managed through the same console. The team came to recognize the value of integrating additional security solutions via the Fortinet Security Fabric, with the FortiGate as the core foundation, whereby they could manage all of their security under a single pane of glass.

The opportunity for further integration beyond firewall and web-filtering capabilities arose in 2015 when the renewal of the school district’s endpoint security solution came up. “Our incumbent was increasing its price, and we had concluded that a different approach to protecting endpoints was needed,” Williams says. “We wanted to integrate endpoint protection into the Security Fabric, and FortiClient—which could be deployed via our FortiGate NGFW—fit that requirement. With FortiClient in place, we have a consolidated, transparent view of our endpoints within the same management console as our other security elements.”

In addition to reducing its endpoint protection costs by approximately 45%, FortiClient gives East Noble added protection. Application control per device is one area Williams cites as a key advantage. Specifically, East Noble uses FortiClient to place the devices students use into groups according to the access allowed for their grade level—and a more restricted group for students who have abused their internet privileges. “We can easily push out new policies, move students in and out of the restricted group, and promote them to new levels of access when they start a new grade,” Williams describes. Another advantage is FortiClient’s support for Chromebook devices, which the district plans to begin issuing to some students for the next school year.

## Adding More Capabilities with the Security Fabric

Over the next three years, East Noble steadily added more Fortinet solutions. In 2016, the team activated the virtual private network (VPN) capabilities built into FortiGate, which gives staff members remote access to on-site resources. “For example, security officers can view security camera footage if there is an incident, and teachers can access the grading system,” Williams explains.

That same year, East Noble purchased a FortiAP 320B wireless access point and deployed it at several smaller sites for testing. The team was impressed enough that they applied for a grant from the Universal Service Administrative Company’s (USAC) E-rate program, which provides support for internet access for rural communities and schools.

In late 2017, the district purchased FortiAuthenticator™ user identity management server, and has partially implemented it to date. “We’ve found that it is easier to authenticate who is on the network, but a huge additional benefit is the information we get from it about traffic and user behavior,” Williams observes. “We wanted to take Fortinet wireless access districtwide,” Williams relates.

## Plugging in Wireless Access Points

In early 2018, thanks to winning the E-rate grant, East Noble deployed more than 400 wireless access points by upgrading to FortiAP 421E. To power the solution, Williams and the team concurrently implemented around 80 FortiSwitch secure Ethernet switches. “We installed everything over the Presidents’ Day and Spring Break holidays,” Williams reports. Then, right after school let out in June, the team upgraded to a FortiGate 2500 to help protect this expanded infrastructure.

The combination of FortiAP and FortiSwitches made Fortinet superior to other wireless access solutions that East Noble investigated. When coupled with their integration into the Fortinet Security Fabric, the reasons became even more compelling.

“Because we have the ability to monitor and manage them centrally through the Security Fabric, we optimized our network traffic flows,” Williams says, who estimates the district would have needed to buy twice the amount of bandwidth without FortiSwitches. “We have a great price-performance ratio with FortiSwitch, and the features that come with them are amazing,” Williams reports. “We were very impressed with how easy they were to set up and deploy.”

### Business Impact (contd.)

- Achieved better security posture through more granular application control access
- Improved school safety through enhanced monitoring

### Solutions

- FortiGate
- FortiAnalyzer
- FortiAP
- FortiAuthenticator
- FortiCamera
- FortiClient
- FortiRecorder
- FortiSwitch

The Fortinet Secure Access solution also dramatically reduced the time Williams spends fielding help-desk issues submitted by end-users. He estimates Fortinet is saving him 10 hours each month in time spent resolving these help-desk tickets.

Another benefit of FortiSwitch is the ability for third parties to gain temporary access to the network. “We recently had a worker from an IT company who needed access because he was deploying a new HR system for the district,” Williams recalls. “With FortiGate and FortiSwitch, I was floored at how fast I could get him connected to everything he needed while also ensuring he didn’t have access to anything that he didn’t need.” Previously, it required substantial time to grant third parties access to the district’s network. Williams estimates he saves an average of two hours each month.

## Enhancing School Safety

The district is also testing and planning to deploy FortiRecorder to record and analyze footage from security cameras deployed systemwide. “We saw a demonstration at Fortinet’s Accelerate 2018 event and were very impressed about the potential,” Williams observes. “Our security officers are especially excited about its facial-recognition capabilities and the forthcoming weapons-detection technology.”

Other teams will benefit from FortiRecorder as well. “For example, the facilities team likes the ability to detect water leaks, which will enable them to remediate issues before they become much larger problems,” Williams says. Currently, Williams is assessing which of the district’s existing cameras are compatible with FortiRecorder, and which ones need to be replaced with FortiCamera cameras.

## Transparency, Effectiveness, and Business Outcomes

A practical benefit of the Fortinet Security Fabric is reduced cost and time spent managing disparate security elements. “We saved money every time we replaced a legacy product with Fortinet,” Williams asserts. “Overall, by migrating the different network security elements to Fortinet, we’re saving over \$45,000 annually, and we’re realizing upwards of 10 hours each month in time spent managing network security.”

Most importantly, East Noble has taken its security posture from reactive to proactive. “Because we now have a plug-and-play security architecture that evolves with our attack surface and integrates our different security elements into a single pane of glass, we have a much more proactive security approach,” Williams states. “We’re able to identify vulnerabilities and respond to intrusions and breaches much faster than before. We’re also able to better manage traffic. For the first time, we are able to see exactly what’s going on the network. This reduces the amount of time I have to spend managing and controlling traffic by eight hours each month.”

