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CASE STUDY

Securing the Technology That Shapes Young Minds at Grand Island Public Schools

Located in Grand Island, Nebraska, Grand Island Public Schools' 1,500 staff members work with over 10,000 students, from pre-kindergarten through grade 12. The district has been a longtime proponent of the importance of technology in the classroom to enhance teaching and learning. Chromebooks are provided to each pupil in grades two to 12.

To support the dramatic growth in network bandwidth commensurate with its increasing use of web-based resources in the classroom, the district embarked on a reevaluation of its infrastructure. Cory Gearhart, executive director of IT at Grand Island Public Schools, comments, "A lot of things happened simultaneously. Our legacy firewall was clearly struggling with the volume of network traffic, multiple maintenance contracts were coming up for renewal, and we were growing tired of having to use a variety of point solutions from different vendors just to see what was occurring on the network."

Starting Anew

Gearhart and his team took the opportunity to go back to first principles and to architect an infrastructure that could provide the necessary protection, scalability, and visibility the district needed. He recalls, "One of our partners recommended that we look at Fortinet, and the more research we did, the more we saw how everything fit together so well: the vision around the Fortinet Security Fabric, the broad set of integrated capabilities, the endpoint management roadmap, even down to the custom Fortinet ASICs [application-specific integrated circuits] being used."

He continues, "We engaged with the local Fortinet account team, and they did a really great job of understanding our needs and demonstrating how the Fortinet solutions addressed each requirement."

After conducting its due diligence and going through a formal bid process, the Grand Island Public Schools team decided on the proposal from Fortinet. Purchases were made through the district's long-time IT partner, Yellow Dog Networks, headquartered in Kansas City, Missouri.

Not a Second to Waste

The district's initial investment in Fortinet solutions was launched with the deployment of two FortiGate enterprise next-generation firewalls (NGFWs), configured as a high-availability pair. "Some people don't understand the need for redundancy in schools but we rely on technology so heavily that downtime is extremely disruptive," explains Gearhart. "We

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– *Cory Gearhart, Executive Director of IT, Grand Island Public Schools*

Details

Customer: Grand Island Public Schools

Industry: Education

Location: Grand Island, Nebraska

Partner: Yellow Dog Networks

Business Impact

- Visibility and protection across entire infrastructure, including Chromebook traffic

- Streamlined audit compliance

- Comprehensive endpoint protection for local and off-campus devices

- Minimized operational overhead

calculated that a single day offline would cost us up to $350,000 in lost productivity, staff salaries, energy bills, etc. However, having said that, dollars are just dollars. What it really comes down to is that we need to make sure we're able to use every possible moment to educate our children. That's what we're here for, and this is what we get from Fortinet."

Deep Visibility

Another attraction of the FortiGate NGFWs is their ability to perform SSL inspections. "CIPA [Children's Internet Protection Act] requires that we have visibility into network traffic. Being able to examine the data at a deep-packet level is a major factor in being compliant with the Act," confirms Gearhart. "The FortiGate NGFW also gives us additional functionality— like web-filtering, website blacklisting, data-loss prevention, and safe search enforcement— that also make big contributions to our ongoing CIPA compliance."

Gearhart supplemented his FortiGate pair with the Fortinet FortiAnalyzer centralized logging and reporting solution. He comments, "The FortiAnalyzer solution gives us many SIEM [security information and event management]-like capabilities and enables us to perform more granular forensic analysis when we see something unusual happening on our network."

The extensive analytics, logging, and archiving capabilities of the FortiAnalyzer software facilitate simplified auditing but also deliver valuable insights into network traffic. "We're able to see how the district's students and staff are using the available network-based resources. We are now able to use data to make informed decisions about which applications are being utilized the most and which ones are not worthy of continued investment," reflects Gearhart. "By collecting and applying the data that we have available, we can supplement the unique needs and deliver the individualized attention that each student requires. We are helping drive the curriculum in the right direction and are able to concentrate our resources in the right places."

Extended Protection

With many students across North America now taking their computers home, providing protection outside of the schools' physical boundaries can be a major challenge. To overcome the issue, the district implemented FortiClient for Chromebooks endpoint protection to provide extended CIPA compliance and unified endpoint protection, irrespective of the device's location. "We are helping students develop as digital citizens," Gearhart says. "Our goal is to create an environment that provides protection but also equips them with the understanding of how to make the right decisions and know what's real and what is not."

With a very modestly sized IT team, managing the district's extensive environment has the potential to be an insurmountable task if not approached correctly. Gearhart explains, "To handle the almost 13,000 endpoints and 20-plus locations, a comparable corporate IT team would be at least an order of magnitude larger than we are. To accomplish our goals, we implemented FortiClient Enterprise Management Server [EMS] to give us the ability to centrally deploy, register, manage, and monitor security across the entire infrastructure. It also enables us to remotely trigger AV scans and quarantine infected endpoints. Without it, we just couldn't consistently provide the levels of protection that are needed."

FortiAP access points are used to provide plug-and-play deployment in multiple facilities. The district has subsequently deployed multiple smaller FortiGate NGFWs at some of its lower headcount locations. "The wide range of Fortinet devices is perfect for us," Gearhart says. "As an example, we have a workforce preparatory academy that took over a vacant coffee shop to give our students hands-on retail experience. The smaller, SOHO-type FortiGate solution was a perfect fit and meant that we didn't have to run new fiber just for the few people who would be there. This type of flexibility enables us to accurately size everything without wasting money by over- or under-configuring each device."

Account support continues to be a major positive for Gearhart: "Our Fortinet team is phenomenally responsive and never hesitates to give me access to product specialists if the need arises," he says. "We found a glitch in a Chrome extension and collaborated directly with the internal subject-matter experts to get a fix in an amazingly short period of time. That's exactly what makes me love partnering with Fortinet."

Solutions

- FortiGate
- FortiAnalyzer
- FortiClient Enterprise Management Server
- FortiClient for Chromebook
- FortiAP

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Looking Ahead

Grand Island Public Schools is a model example of the power of the Fortinet Security Fabric. The Security Fabric provides the district with a unified view and protection across each network segment, endpoint, and appliance. A single console is utilized to manage the diverse range of security solutions owned by the district, irrespective of vendor or supplier.

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