Creating a Secure Digital Learning Environment

EXECUTIVE SUMMARY

Customer Name: Shawnee Mission School District

Size: 27,500 students and faculty

Industry: K-12 Education

Location: Kansas

"Security is no longer a second consideration for us... it's an assumed part of everything we do. This ELA is an integrated set of tools that allows my existing team to meet our larger mission: transformed digital learning."

Drew Lane
Executive Director of ICT, Shawnee Mission School District.

Shawnee Mission School District (SMSD) is one of the major school districts in the Kansas City metropolitan area. It is home to 27,500 students spread out among five high schools, one alternative high school, five middle schools, and 33 elementary schools. Its administration values modern education and has always focused on preparing its students for the future.

In 2014, the new district superintendent embarked on a 90-day listening tour to learn what teachers and parents wanted for their children's education. After receiving feedback and discovering that a change was due, SMSD determined that technology would be the key in helping students learn in a more productive way.

Later that year, the district officially launched a digital learning initiative that aimed to provide mobile devices for all students and teachers. Children in kindergarten through sixth grade received iPads, students in seventh through twelfth grade used MacBook Air computers, and teachers had both. While this transformation helped jumpstart digital education efforts, SMSD's existing security landscape was problematic.

"There were a lot of moving parts and different tools," recalls Drew Lane, Executive Director of ICT for SMSD. "It was very complex, and security was not an integral part of our previous strategy."

With several disparate systems in place, SMSD struggled to manage its 30,000 new devices and simultaneously ensure that they were operating in a secure environment. From an accessibility and malware protection standpoint, the district needed to better protect their systems from bad actors (cyber attackers) inside the firewall. At the same time, students and teachers needed to collaborate – something that was difficult to do with a disjointed system.

The district had made strides in creating a completely digitized learning environment, but its fragmented infrastructure hindered progress and presented a security risk. In order to provide its students with a truly modern education, SMSD knew it needed to invest in a comprehensive approach to security. It had to protect the new devices and make it possible for teachers and students to interact in a fundamentally different and more effective way.

With Cisco security solutions, SMSD can:

Decrease the number of malware incidents from three per day to one per month

Improve productivity and collaboration among students and teachers

On a Path to Digital Learning Transformation

SMSD evaluated several resources to foster a secure and engaging digital learning environment. There were a variety of systems that could conduct behind-the-scenes monitoring, but SMSD's Director of Network and Technical Services Bill Shaffer also wanted to explore technologies that would reduce complexity and simplify management for the IT staff.

Having been a previous Cisco customer, SMSD evaluated various alternatives and determined that an Enterprise License Agreement (ELA) with Cisco for both security and collaboration solutions offered the best approach. With both ELAs in place, SMSD could improve visibility and strengthen their security posture, while giving students the reliable digital learning environment they needed. In addition to delivering the security and collaboration capabilities required, the ELAs also helped the district demonstrate strong financial accountability, which was critical for federal reimbursement eligibility.

To support SMSD's collaboration needs, the Collaboration ELA was outfitted with Cisco® Cisco Webex Teams (formerly Cisco Spark), Cisco Webex, and Cisco Collaboration Meeting Rooms solutions. These three collaboration tools act as the building blocks that make it possible
for SMSD teachers and students to directly communicate with each other using voice, instant messaging, and video capabilities. SMSD is using its new and secure collaboration platform to meet its goal of transforming the way teachers and students interact.

With the collaboration platform in place, SMSD also moved full steam ahead in its security efforts. SMSD is the first school district in the country to purchase a Security ELA. It can now better identify and respond to attacks in real time, while also reducing the complexity and burden of managing products from multiple vendors. This provides a level of ease and comfort for the district IT team.

"Security is no longer a second consideration for us… it's an assumed part of everything we do," says Lane. "This ELA is an integrated set of tools that allows my existing team to meet our larger mission: transformed digital learning."

With the ELA, SMSD was able to cut costs, make security easier to manage, and provide better security knowing that all of their Cisco solutions were continuously updated with threat intelligence from Cisco Talos.

"It takes a huge load off of us knowing that Talos is constantly monitoring the latest threats and updating our Cisco security solutions," said Lane.

Security is no longer an afterthought for SMSD. With the ELA in place, they've deployed multiple solutions, including Cisco Firepower 9300 Security Appliance (NGFW) and Advanced Malware Protection (AMP), and security is now fully integrated into the district's standard operating procedure.

The district also has also deployed Cisco Identity Services Engine (ISE), a next-generation identity and access control policy platform. It's also in the process of rolling out Cisco Web Security Appliances, secure web gateways that combine leading protections to help secure and control web traffic.

Safer, More Effective Student and Teacher Engagement

SMSD has already experienced a number of benefits since it deployed its latest Cisco security solutions. When the district first launched its digital learning initiative in 2014, roughly three devices were reimaged every day due to malware or some other sort of interference. Now, SMSD receives about one report a month indicating a device that requires attention.

For any report that SMSD receives, the IT team can easily evaluate the threat and detect the source of malware thanks to the continuous and retrospective analysis provided by Advanced Malware Protection. With its drastically improved network visibility, SMSD is seamlessly navigating its network and combating potential security threats more efficiently than ever before.

With protection provided by Cisco Web Security Appliances, SMSD empowers students and teachers with access to a variety of educational resources, and they know they are being protected against both potential online threats and access to inappropriate content. Having stronger content security in place also helps reduce the number of technical interruptions in the classroom. Students and teachers can use their devices more reliably for collaborative project- and group-based learning.

While the technical benefits have been significant for SMSD, the district has also noticed a positive shift in students' performance. School administration has recorded an increase in attendance since the one-to-one digital learning initiative deployed. Since then, teachers have reported that the quantity and severity of poor-behavior incidents have lessened. By providing new tools and offering ways for teachers to engage more effectively, the overall student body is more productive and truly invested in their education.

Before Cisco, SMSD had a decent security posture.

"But now," says Lane, "we are leaps and bounds ahead of where we were six months ago. With a single pane of glass, we can monitor and act instantaneously to transform the way we educate."

Using both the Collaboration and Security ELAs, SMSD's infrastructure has become navigable, secure, and reliable to better prepare students for the future.

A Future that Engages Parents Too

SMSD is always focused on improving academic performance and implementing tools to help students' future careers. Although SMSD has taken important steps in transforming its digital learning environment, it continues to look for ways to improve. Now that students and teachers are on board with mobile devices, SMSD wants to get parents more involved. For instance, the district's IT team has already begun to translate resources so that parents can check on their children during school.

Increase student attendance and reduce behavior problems through better engagement

Product List

Security and VPN

- Cisco Security Enterprise License Agreement
- Cisco Firepower 9300 Security Appliance
- Cisco Advanced Malware Protection for Endpoints
- Cisco Web Security Appliance
- Cisco Identity Services Engine

Routing and Switching

- Cisco Nexus® 9000 Series Switches

Video

- Cisco Webex
- Cisco Collaboration Meeting Rooms
- Cisco Cisco Webex Teams (formerly Cisco Spark)

With tools like Cisco Webex, parents can also encourage their children to bring school with them on the road. For example, if a child has a medical situation and has to travel to a larger city, like St. Louis, for treatment, he or she can connect to the classroom using Cisco Webex. Missing out on class time isn't an issue. This mobility stems from SMSD's confidence in its security solution, knowing that its device and student are well-protected, even outside of the school firewall.

"Digital learning creates a very dynamic environment, and you never know what's ahead," adds Lane. "But with Cisco as a partner, we have confidence we have access to what we need for a secure and productive future."

For More Information

To find out more about Cisco Security, go to: http://www.cisco.com/go/security.