

Digital Learning Delivers Academic Excellence at Springfield Public Schools with Assistance from JMA IT and Juniper Networks

Summary

Organization:

Springfield Public School (SPS) District

Industry:

Education

Business Challenge:

Build cutting-edge wired and wireless network to support digital learning needs today and in the future

Technology Solution:

- EX9208, EX4550, and EX3300 Ethernet Switches
- WLC2800 Wireless LAN Controller and WLA532 Wireless LAN Access Point

Business Results:

- Enabled BYOD in classrooms with high-capacity Wi-Fi
- Supported digital learning with high-performance wired network
- Future-proofed the network for 5-7 years

The Springfield Public School (SPS) system is the largest fully accredited school district in Missouri, educating more than 24,000 students per year. To maintain a high-quality, personalized learning environment, SPS recently invested \$156 million to improve educational facilities through renovation and new school construction.¹ SPS also invests in its people by hiring and retaining highly qualified teachers. The success is clear: SPS high school seniors consistently score above state and national averages on the ACT.²

Business Challenge

With a strong focus on academic excellence and a recognition of the correlation between educational technology and students' ability to learn successfully, SPS uses the latest digital learning methods for its students and teachers. This means that the district must anticipate technology advances to provide students with the best possible educational outcomes.

But the district's goals were being held back by scattered and unreliable wireless connectivity that didn't support the district's BYOD program, where students could use their own tablets and laptops in the classroom. The spotty wireless, along with an aging network infrastructure, prevented the SPS from providing consistent and secure connectivity to students and teachers.

SPS needed to increase the wired network capacity and Wi-Fi access in every classroom for its digital learning program. Springfield issued a bond and levy to fund upgrades to the district's network to provide increased wireless access and bandwidth for every classroom across all 50 high schools, middle schools, elementary schools, and alternative schools.

"With the support of the voters, we have been able to move away from a network that is like driving on a gravel road or two-lane highway to build a network that meets the demands of our 21st century learners."

Rick Green, Director of IT, Springfield Public Schools



¹Springfield Public Schools, www.springfieldpublicschools.mo.org/pages/SPSMO/DistrictInfo/Academics

²Ibid.

Selection Criteria

SPS turned to JMA IT, a solution provider based in Overland Park, Kansas, for its deep expertise in IT solutions for education.

During SPS' planning stages, JMA IT helped SPS by sharing the latest network industry information and solution knowledge. Once SPS identified its requirements, the district went to bid for a high-capacity, efficient, reliable wired and wireless network that would support the district's digital learning objectives. As the selection process narrowed, JMA IT successfully conducted onsite demonstrations and proof-of-concept testing. In the end, JMA IT's proposal prevailed with the highest composite score for supporting open standards, product features, performance, and support/maintenance costs. With the Board of Education's approval, JMA IT was given the go-ahead to build the new network.

"IT and services is a trust business," says Taylor Wiley, sales executive at JMA IT. "We believe that our people and our technology partnerships are JMA IT's greatest asset, as we bring our expertise to provide the best products and solutions to make customers like SPS successful while ensuring that their business and IT needs are met on time, on budget, and with extreme quality."

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Technology Solution

SPS chose Juniper Networks switching solutions for its data center and school sites as well as for Wi-Fi access. The data center network uses the Juniper Networks® EX9208 Ethernet Switch in the core and Juniper Networks EX4500 Ethernet Switch for economical, high-performance, power-efficient 10GbE connectivity to support digital learning applications and online assessments as well as administrative applications.

The EX9200 line of programmable Ethernet switches simplifies the deployment of cloud applications, server virtualization, and rich media collaboration tools for the district's IT staff. Fully configured, the EX9208 platform is an 8-slot modular chassis switch that supports up to 4.8 Tbps per chassis, delivering plenty of network power, no matter how digital learning evolves.

The Juniper Networks EX3300 Ethernet Switch was deployed at the school sites and administrative offices to provide flexible, cost-effective access that supports converged data, voice, and video.

The switches employ Juniper's Virtual Chassis technology, which enables multiple interconnected EX Series switches to operate as a single device, reducing operational and capital expenses for the district while simplifying management for the IT staff.

The Wi-Fi is speedy and reliable, even in classrooms filled with tablets, laptops, and other Wi-Fi devices, providing smooth access to educational curriculum and resilience during online assessments. Juniper Networks WLC Series Wireless LAN Controllers and WLA Series Wireless LAN Access Points provide the Wi-Fi infrastructure. SPS uses the WLC2800 to deliver and manage its WLAN with robust reliability, performance, security, and management. The WLC2800 also integrates the wireless LAN with the wired network. Multiple WLA532 Wireless LAN Access Points provide indoor and outdoor Wi-Fi access to students and teachers. Each access point can handle up to 60 connected devices, which is critical when more students are using multiple Wi-Fi devices at the same time.

Business Results

The taxpayers of Springfield can feel confident that students are excelling with a rigorous curriculum that is focused on critical thinking, collaboration, and communication. With access to 21st century digital learning tools and methods, students are more engaged and are better prepared for college and career.

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The network upgrade moved smoothly under a very aggressive project timeline, thanks to tight alignment with JMA IT. Sixty buildings were rewired and upgraded over 16 months without any disruption to classes or school operations during the day. The new network will support the district's network needs for the next five to seven years, even with the exploding use of tablets, netbooks, and laptops in the classroom, the embrace of interactive media, and the use of online assessments. SPS can deliver secure wireless connectivity to classrooms and other areas without having to worry about implementing updates or putting in new gear in the near future.

Next Steps

Teachers at SPS can focus on teaching while easily personalizing lessons to students' different learning styles, knowing that the network infrastructure will stay invisible as K-12 instruction evolves. JMA IT and Juniper Networks will be there to support the district and ensure that the network runs smoothly as new educational technologies emerge.

For More Information

To find out more about Juniper Networks products and solutions, please visit www.juniper.net.

About JMA IT

At JMA IT, our customers come first. The second thing you should know is: we are very successful at applying technology to business problems. We help you connect, communicate, and collaborate better. We do this by delivering solutions and services with amazing talent and a select group of manufacturers that save you money and help you make more money. Learn more at www.jmait.com.

About Juniper Networks

Juniper Networks is in the business of network innovation. From devices to data centers, from consumers to cloud providers, Juniper Networks delivers the software, silicon and systems that transform the experience and economics of networking. The company serves customers and partners worldwide. Additional information can be found at www.juniper.net.

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