

## Kansas City School District Creates 24-Hour Network Access

Consolidated network, upgraded switches, and greater bandwidth equip Park Hill School District to improve learning outcomes.

### EXECUTIVE SUMMARY

#### PARK HILL SCHOOL DISTRICT

- K-12 Education
- Kansas City, MO
- Approximately 10,100 students; 1500 administrators, faculty, and staff

#### BUSINESS CHALLENGE

- Strained switching equipment and limited data storage, supporting over 20,000 users and 4,000 network devices
- Community desire for 24-hour access to network
- Separate network for storage platform making management difficult and complicated

#### NETWORK SOLUTION

- Installation of Cisco Catalyst 4500 Series Switches over IP network throughout 20 sites
- Implementation of Cisco Nexus 7000 platform to 21<sup>st</sup> century approach to data center concepts

#### BUSINESS RESULTS

- Consolidated network, upgraded switches, and greater storage bandwidth
- Ability to take 100 percent virtual courses online through the Park Hill's Virtual Academy
- Secure, 24-hour access to approximately 200 online applications from anywhere in the world

### Business Challenge

Park Hill School District is in the Northland region of the Kansas City Metropolitan Area. It consists of two high schools, three middle schools, nine elementary schools, a day school, and an early childhood facility. The district's population and commercial development have seen steady growth of one to two percent annually over the past ten years. This steady expansion forced district leaders to evaluate developments in technology and determine how to better meet constituent and student needs.

There are over 10,100 students, 20,000 users, and 4,000 network devices scattered across 20 different locations throughout the district, and legacy switching capabilities were strained. "The economy is tight and budgets are strained, but our main focus is to not allow outdated technology to become a barrier for our students," says Brad Sandt, director of technology for Park Hill School District. "We wanted to seize an opportunity to overhaul our switches and data centers, and reposition ourselves for future projects and steady growth."

Sandt and other district officials recognize the changing landscape of education. "We have seen a growing amount of students and teachers wanting network access 24/7," Sandt says. "While this is a common concept for higher educational institutions, this is relatively new for K-12 education. Our district community does not want to stop working at 3:00 p.m. when class ends; they want to continue working, learning, and collaborating at all hours of the day. We want to be able to securely provide this flexibility."

Based on the increasingly high volume of users and devices, the district's legacy storage platform had to live on a separate network, making management difficult and complicated. Park Hill District is not large enough to buy high-end storage switches, and entry level/mid-market switches do not meet their growing needs. As such, district officials turned to an industry leader to help overcome these technical challenges.

## Network Solution

Sandt looked to Cisco to install Cisco Catalyst® 4500 and 6500 Series Switches over an IP network in 2006. Since then, Park Hill had deployed approximately 1600 IP phones, video surveillance, and access control that ran over the system. Now, end users can connect to the network remotely.

“Cisco is a market leader in terms of network infrastructure,” says Sandt. “The account team understood the constraints and challenges we faced with our legacy data center and switches. They took a 21<sup>st</sup> century approach to developing our data center concepts and designs. We wanted virtualization and network infrastructure to go hand-in-hand, and Cisco helped us meet that goal.”

“We installed a redundancy system as part of the IP network to provide data and equipment backup in the event of a system failure,” Sandt says, “The district’s network had a single point of failure with the legacy switches. Now, the network has higher availability due to an off-site data center we replicate to.”

## Business Results

With a consolidated network, upgraded switches, and greater storage bandwidth, Park Hill School District can provide students and teachers with virtual learning tools. These tools enable students

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— Brad Sandt, Director of Technology, Park Hill School District

to connect with educators and other students in an unprecedented manner.

Coinciding with deployment, Park Hill established a Virtual Academy in the high schools. Students have the option to choose from approximately 10 online, 100 percent virtual courses for the last hour of school each day. “Students voiced their interest in a virtual learning program through their counselors and teachers. We were thrilled to finally have the technology in place that supports the Virtual Academy,” says Sandt. “Based on individual learning styles, this program helps students who thrive outside a traditional classroom environment. If desired, students can move at a more advanced pace, take more or less time on projects, or self-direct themselves. It also helps students who work after school and need flexibility in their schedules.”

“Very few K-12 districts are able to offer online applications anytime, anywhere,” continues Sandt, “We now offer 24/7 secure access to approximately 200 applications online from anywhere in the world. Our network platform extended the resource capabilities that are usually limited to a computer lab or media center, providing the necessary tools and flexibility to meet the needs of our students and teachers.”

The 15 schools that make up Park Hill School District are better equipped to blend learning techniques in each classroom. Teachers leverage online elements, such as discussion boards, blogs, and Wikis, into classes that still meet face-to-face. “Technology in the classroom creates a collaborative experience and improves learning outcomes for our K-12 students,” says Sandt.

### PRODUCT LIST

#### Routing and Switching

- Cisco Catalyst 4500 Series Switches
- Cisco Catalyst 6500 Series Switches
- Cisco Nexus 7000 Series Switches

“Students can log into the network and take quizzes after school hours if necessary.”

### Next Steps

The new switching and data center platform has given Park Hill plenty of growth potential. Officials are in the process of installing the Cisco® Nexus

7000 platform that will strategically consolidate existing infrastructures over time, such as Ethernet and Fibre Channel. “The flexibility, modularity, and growth capacity of the platform will provide investment production as new technology emerges in data centers,” Sandt says. In addition, the school is looking to move to a one-to-one computer environment for students.

Park Hill recently became the first school district in 17 years to receive the *Missouri Quality Award*. This statewide award recognizes an organization’s commitment to meeting the needs of its members and using the best-available processes for everything it does. “We take pride in our schools, our students, and our drive to invest in them. We will continue to do all we can in order to provide a 21<sup>st</sup> century learning environment,” Sandt says.

### For More Information

To find out more about Cisco education solutions, go to:

[http://www.cisco.com/web/strategy/education/us\\_education.html](http://www.cisco.com/web/strategy/education/us_education.html)



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