

Customer Success Story

New Network Helps School District Integrate Academic and Career/Technology Tracks

Executive Summary

Customer Name
 North Point High School

- Charles County, Maryland
- 145 Employees

Industry
 Education

Business Challenge

- Sought to improve educational opportunities for both academic-oriented students and career/technology students
- Wanted to build a “21st century school” to attract businesses and families from nearby Washington, D.C., as well as to provide an important resource for the community and local businesses
- Needed to boost academic excellence and administrative efficiency by enhancing teaching resources and faculty communications

Network Solution

- Installed a Cisco converged IP network infrastructure to support new services
- Deployed IP Communications solutions to enable data, voice, and video communications across campus
- Implemented a wireless network for use by students, teachers, and administrative staff

Business Value

- Student performance is expected to improve as both academic and vocational students have access to rich multimedia content for more effective learning at each student’s individual pace
- Teachers and faculty can access educational resources, improve collaboration, and handle administrative tasks faster and more efficiently
- Community and businesses can use technology and facilities to offer continuing education to workers and other adults
- Automated building controls enable schools to manage energy use more efficiently and economically

North Point High School uses Cisco technology to provide a complete education for both college-bound and workforce-bound students.

Business Challenge

Located in Charles County, Maryland, some 30 miles south of Washington, D.C., North Point High School is one of six high schools in the Charles County Public School (CCPS) system. This district is comprised of 32 schools and has 3000 employees to serve the diverse education needs of its 26,000 students.

Like many districts, CCPS had a number of high-school students who took career and technology courses which required them to be transported to a separate facility. However, separating these students from their classmates took away their sense of belonging and identification with one school. It also gave the perception that career and technology offerings were at a lower level than other classes.

North Point High School



In 1997, the district sought to change this outdated model by reshaping the district’s networking capabilities to create “21st century schools.” CCPS officials began envisioning a single, integrated facility for both career/technology and academic students. “A ‘twenty-first century school’ elevates all areas,” says James Richmond, superintendent of CCPS. “We don’t believe everyone has to go to Harvard or Princeton. We value every occupation; each one is critical to the future of Charles County and this country.”

Over the next few years, the vision for North Point High School, which would become the district's showcase school, began to take shape. The school's new science/technology/industry center would have state-of-the-art labs connected to businesses and technology companies, who could eventually hire students when they graduated. "We'd have different industries supplying equipment and knowledge, which would keep those industries current to us," adds Richmond. "Of course, we also envisioned comprehensive classrooms, dealing with the academics, math, science, social studies, literature; all driven by technology at the fingertips of outstanding teachers."

CCPS then developed a plan to turn this vision into reality. With the help of the county commissioners, the state superintendent of schools, and even the governor, a \$50-million-dollar budget was approved to build a 311,000-square-foot building for some 1900 students.

"A 'twenty-first century school' elevates all areas [of education]. We value every occupation; each one is critical to the future of Charles County and this country."

– James Richmond, Superintendent of Charles County Public Schools

Network Solution

During this time, the district was dealing with a tremendous increase in population, brought on by the explosive growth of the nearby Washington, D.C. area. This influx contributed to a decline in test scores, which the district sought to reverse through changing the curricula and by integrating technology into the classroom. To help with the integration, CCPS deployed a converged IP network from Cisco Systems®.

"We started by retrofitting all existing buildings first, installing IP telephony, wireless, and servers," recalls Bijaya Devkota, the district's chief information officer. "Our goal was to make sure all the schools were up and running with Cisco® equipment before we went into North Point." This also taught the IT staff valuable lessons in large-scale-deployment issues before commencing work on the new facility.

Construction of North Point began in 2002 and was completed in August, 2005, under budget. When its doors opened for the first time at the beginning of the 2005/2006 school year, the students entered a fully integrated, two-story building that more closely resembled an ultramodern airport terminal than a typical school. From a technology standpoint, the new facility features:

- A converged IP network infrastructure
- IP-based environment controls (heating, ventilation, air conditioning, and lighting)
- A wireless network in all classrooms and offices
- IP phones in every classroom
- Wireless IP phones for administrators
- Liquid Crystal Display (LCD) projectors in each classroom
- 500 desktop PCs
- 300 laptop PCs on wireless carts
- Tablet PCs for teachers

Business Results

North Point High School is on its way to providing a rich multimedia-based education that enables its college-bound and its career-focused students to learn at their own paces. "We wanted to provide our kids with the latest and greatest in technology, whether it's biotechnology or using computers," says Devkota. Teaching and learning are made more effective through:

- **Education portals**, with online e-learning resources for teachers, students, and employees. “Students, if they’re behind, can access the curriculum any time, anywhere, and study when it works best for them,” explains Richmond. For example, a student who is having trouble with geometry can access the network through a laptop or PC and watch animations that show the relationships between angles, points, and lines.
- **Streaming video to the desktop**, which can also be sent to the LCD projector/monitor in every classroom. “Every morning, the principal makes daily announcements via video which is sent to all PCs, tablets, or desktops, and then to the projectors,” says Devkota. “Also, if a teacher is talking about the Cuban missile crisis, he or she could use multimedia to access archival news footage from 1962 on the network, and present it to the class on the LCD projector and through the laptops.”
- **Videoconferencing**, which enables distance learning and connects students to outside courses, professors, and subject-matter experts, while enabling teachers to access training and professional development courses without traveling.
- **A wireless network**, to give students, teachers, and administrators access to information any time, anywhere.
- **Digitized textbooks**, which correspond to the state curriculum, enabling teachers to develop compelling, memorable lesson plans in less time than normal.
- **Physical and campus security**, with IP cameras at critical locations, and all video stored centrally.

The new school is proving to be a valuable resource for the community and for local businesses as well. “The electrical union came in and provided the lab with all the equipment needed to teach electrical engineering,” says Chuck Wineland, assistant superintendent for Supporting Services. “Our programs help create a pool of potential employees, obviously, but at the end of the school day, we turn the lab over to the union, and allow its members to teach their apprentices right in our facility – at no charge.”

The new school also benefits from its new building automation system, which controls 10,000 set points for heating, ventilation, air conditioning, lighting levels, and more – all over the Internet. With this system, there is no need to pay a third-party vendor to manage everything, so the district saves money. It also enables the school to be more energy-efficient than ever, since lighting and temperatures can be adjusted based on the times that the school and its individual rooms are actually in use, which further reduces costs.

North Point High School is proof that a school district can improve the quality of education simply by having a vision of how it could be better – and then taking action to achieve it. “We tell each student all the time, ‘You’ve got to be an active player,’” says Richmond. “North Point is about giving you a role that, no matter where you go, you will be prepared, you will have the educational skills you need, and you will have the skills and the experience to compete in the 21st century.”

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To find out more about Cisco solutions and services, go to: <http://www.cisco.com>.

To find out more about Cisco Primary and Secondary Education Solutions, go to: <http://www.cisco.com/go/education>.

To find out more about Cisco Voice and IP Communications Solutions, go to: <http://www.cisco.com/go/voice>.

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Product List

Routing and Switching

- Cisco 3700 Series multiservice access routers
- Cisco Catalyst® 2950 Series switches
- Cisco Catalyst 3550 Series switches
- Cisco Catalyst 6500 Series switches

Security

- Cisco VPN 3000 Series concentrators
- Cisco Network Intrusion Detection

Voice

- Cisco Unity® Unified Messaging
- Cisco CallManager
- Cisco 7900 Series IP phones
- Cisco Wireless IP Phone 7920

Wireless/Mobility

- Cisco Aironet® 1200 Series Access Point

Network Management

- CiscoWorks LAN Management Solution

This customer story is based on information provided by North Point High School, and describes how that particular organization benefits from the deployment of Cisco products. Many factors may have contributed to the results and benefits described; Cisco does not guarantee comparable results elsewhere.

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