

School District Upgrades Network Infrastructure

The Enlarged City School District of Middletown overhauls communications infrastructure to help meet state and national accountability standards.

EXECUTIVE SUMMARY
<p>ENLARGED CITY SCHOOL DISTRICT OF MIDDLETOWN</p> <ul style="list-style-type: none"> • Pre thru K-12 Education • Orange County, New York, USA • 7208 Students
<p>BUSINESS CHALLENGE</p> <ul style="list-style-type: none"> • Aging voice and data networks, as well as low data storage bandwidth on outdated network infrastructure • Difficult for students, teachers, and faculty to process and circulate data • Need for major structural and educational improvements to better serve students, faculty, and staff
<p>NETWORK SOLUTION</p> <ul style="list-style-type: none"> • Advanced infrastructure capable of handling any application, including voice, video, and data • Advanced Unified Communications for increased productivity and lower costs
<p>BUSINESS RESULTS</p> <ul style="list-style-type: none"> • Removed district buildings and schools from state “watch list” where they were identified as “needing improvement” • Placed in the top one percent of public school districts in state • Increased productivity, bandwidth, and availability on the network while decreasing costs for network maintenance

Business Challenge

The Enlarged City School District of Middletown is located in Orange County, New York, approximately 58 miles northwest of New York City. This small city school district, which is made up of seven school buildings, consists of 72 percent “high-need” students and 20 percent students who speak English as their second language.

In 2005, all schools in the Middletown School District were listed on the New York State “watch list,” and were identified by the No Child Left Behind Act as “needing improvement” in 23 different areas. The district’s facilities did not perform up to state and federal accountability education standards. In addition, 262 of 443 students graduated from high school, and only a handful went on to attend a four-year college or university, further exposing the district as “underperforming.”

It was at this time that Dr. Kenneth Eastwood became the new superintendent of the Enlarged City School District of Middletown. Dr. Eastwood’s primary goal in his new position was to create a superior educational environment and equip students

with the necessary tools to succeed in the 21st century.

“My focus in life is to create an environment that produces the greatest change and improvement for young learners,” Dr. Eastwood says. “It was clear that we had to make major advancements in our district to build systems that would get us to a point where instructionally students were benefiting from their time in school.”

Dr. Eastwood conducted audits of all instructional programs and district technology, identifying severe curricular and programmatic gaps. For example, each classroom had one computer, no internal phone service, and no districtwide wireless infrastructure. Products were not standardized, which made network management extremely difficult. Additionally, school officials were unaware of the reality of the situation and deemed the district “high-tech.”

Based on a solid company reputation, trusted account team, and pre-existing relationship with the state chief information officer, Dr. Eastwood turned to Cisco to push Middletown and its students forward.

Network Solution

Dr. Eastwood and other district officials selected Cisco to overhaul the core and switching infrastructure throughout Middletown and create a unified communications platform that can support voice, video, and data applications. In collaboration with the upstate New York office of Core BTS Inc., a Cisco® Gold Partner, Cisco provided complete internet, data, and telephony infrastructures, as well as all necessary support products. The deployment included approximately 275 access points and 989 IP phones in every school and classroom. Today, the entire telephony service runs on Power Over Ethernet (POE) switch gear, creating a standardized management system that is both reliable and scalable.

Several of the school buildings received a 10 Gb Ethernet switch that allows for greater bandwidth and faster data transfers. “This increase in bandwidth and stable network will prepare our schools for future technologies, including voice, video, and surveillance,” Dr. Eastwood says. “With an increase in data traffic running in and out, we now have the network backbone to support it all.”

“Few companies today tap into the vision of creating a 21st century learning environment and actually turn that vision into a technological reality,” Dr. Eastwood says. “Cisco has helped the district modernize our schools and buildings for the technological advances of today and tomorrow.”

Business Results

In just five years, the Enlarged City School District of Middletown completely turned itself around. For the first time since the inception of No Child Left Behind (NCLB), the district achieved an accountability status of “Good Standing.” This is quite an accomplishment compared to 2005 when the district was identified in 23 of the 36 identified areas in need of improvement across the seven schools. Most of the schools in the district have been removed from the state’s “watch list” and currently meet the state accountability standard issued. Only two schools remain on the list with only two identified areas remaining; however, school officials anticipate that one school will come off the list and be in “good standing” and the other school will no longer be identified in any accountability areas next year.

“Attendance is up and above average, so the district is no longer in the bottom 10 percent statewide,” Dr. Eastwood says. “Approximately 406 of our students graduated from high school this year, and half of them went on to a four-year college or university. That is a major improvement from five years ago when I first came on board.”

Middletown officials are not only seeing improvements in their students, but the district has also gained business and public safety benefits. The Cisco wireless network and IP telephone system gives students, faculty and staff access to each other and the Internet at all times. There are

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— Dr. Kenneth Eastwood, Superintendent, Enlarged City School District of Middletown, NY

approximately 3500 laptop and desktop computers in the district; for every two students, there is one computer.

“The phone system is always working and the Internet is always up. Our Cisco servers and products are constantly running without any interruptions, so our students are able to focus on their studies and collaborate together, not on how long it will take to get online to watch an instructional video,” Dr. Eastwood says.

PRODUCT LIST

Routing and Switching

- Cisco Catalyst 3750 series Switches
- Cisco Catalyst 4500 Series Switches
- Cisco Catalyst 6500 Series Switches
- Cisco Catalyst 3560 series Switches

Voice and IP Communications

- Cisco Unified Messaging
- Cisco Call Manager 7.0

Additionally, the district has seen a large improvement in costs and phone service. With the IP phone system installed in every classroom, teachers are able to connect faster and more efficiently with each other, students, and parents in the event of a public safety emergency.

Every classroom PreK-8 is equipped with an interactive SMART Board. Approximately 325 teachers are now able to work on laptops while teaching, use LCD

projectors, and integrate various software programs into lessons. Teachers are able to work on their individual curriculums at home and save lesson plans onto the school's network system.

Students are also able to save work onto the network system from home.

“Any school district that needs to turn itself around has to believe in their kids and that they can do well,” Dr. Eastwood says. “They have to be willing to invest in products and programs that equip schools with state-of-the-art technology and learning tools for the future. Most

school systems are so far behind the technology movement it seems like they are consistently trying to catch up. The Enlarged City School District of Middletown is no longer one of those schools systems.”

Next Steps

The next challenge for Dr. Eastwood and his district is to open a new school building that is “ready for 2020.” Their vision for this school is one that dramatically improves the teaching and learning process through advanced technology such as unified communications, digital media services, distance learning, and video on demand.

For More Information

To find out more about the Cisco core products and solutions go to:

<http://www.cisco.com/en/US/products/hw/switches/index.html>



Figure 1. Excited Middletown students ready to use advanced products and programs in their classrooms.



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