

Prestigious K-12 Day School Breaks New Ground with Converged Technology

Episcopal Academy calls on Cisco to create a fully integrated network for its 21st century classrooms.

EXECUTIVE SUMMARY	
EPISCOPAL ACADEMY	<ul style="list-style-type: none"> • K-12 Education • Newtown Square, Pennsylvania, United States • 1200 students and 194 faculty members
CHALLENGE	<ul style="list-style-type: none"> • Moving to new campus • Growing from basic network to latest technologies • Determined to create fully integrated network
SOLUTION	<ul style="list-style-type: none"> • Create wireless network that is ubiquitous throughout campus • Fully enable everyone on campus to access Internet, data, audiovisual, and video • Help ensure new level of security for people, facilities, and network
RESULTS	<ul style="list-style-type: none"> • Advanced technologies and learning resources have potential to attract prospective students and teachers • Converged voice and data networks can be managed more effectively, and collaboration is greatly improved • Improved security and reduced HVAC operation costs through network enablement

Challenge

The Episcopal Academy was founded at Old Christ Church in Philadelphia in 1785. This celebrated school is now located on a 123-acre campus in Newtown Square, Pennsylvania, and offers unsurpassed opportunities for learning, athletics, and the arts for its 1200 Pre-K-12 students.

In 2002, the Episcopal Academy made the decision to move from its campus in Merion, Pennsylvania, to its current location in Newtown Square. According to Geoff Wagg, head of upper school, the change involved more than geography. “At the old campus, we had an aging infrastructure and a standard school network, nothing fancy, with a 10-year-old PBX [private branch exchange] and no real video delivery capabilities.” The school would be starting from scratch on a new campus with more than 365,000 square feet of facilities. Episcopal was looking to the future.

“Our mantra was, we’re building a school for the next hundred years. And our task was to move the school into the 21st century in terms of technology,” he says. “We were going to have a fully integrated network, and we knew the place to start was to engage in conversations with a company that does that better than anybody else, and that’s obviously Cisco.”

SOLUTION

The school’s initial contact with Cisco came in 2004. Mike McCafferty, the Cisco® account manager, listened to what the school was trying to achieve, and then made available the knowledge and experience base that Cisco has in education. McCafferty not only provided access to current technologies but provided experts and insights into what was coming down the road.

“Once we started these conversations, we felt very strongly that we wanted to base our network on Cisco equipment,” says Wagg.

From the outset, Wagg knew exactly what he wanted: if a service or device could be IP, he wanted it to be IP. And that became the Cisco mission.

As the planning phase continued, Episcopal also sought Cisco’s advice regarding resellers. This would be a crucial decision, because it was a complex project that required a partner with proven engineering expertise and specific experience in working with schools. Episcopal selected ePlus, a Gold Cisco Partner with corporate headquarters in Herndon, Virginia. Bala Consulting Engineers, Inc. was picked to design the mechanical, electrical, plumbing, fire protection, and voice/data engineering services for the facilities.

Wagg and the team set out to create a network that is ubiquitous throughout the 123-acre campus. The solution enables everyone on campus to access the data network, the Internet, and all video and audiovisual (AV) services through laptops that are provided by the school.



The new network includes phones, data traffic, security, and heating, ventilating, and air conditioning (HVAC) systems. And everything is network enabled, all the way down to the paging system. "We did that knowing that if it were IP, it would be easier for us to update. And, of course, more useful in the academic program, as well as for all of our administrative and safety functions," Wagg says.

Results

PRODUCT LIST

- Cisco Catalyst 6500 Series Wireless Services Module
- Cisco Catalyst 3750 Series Firewall Services Module
- Cisco ASA 5520 Adaptive Security Appliance
- Cisco NAC Appliance
- Cisco Security Monitoring, Analysis and Response System (MARS)
- Cisco Security Agent
- Cisco Secure Access Control Server
- Cisco Network Analysis Module
- Cisco Unified Communications Manager (CallManager)
- Cisco Unity
- Cisco Unified Workspace Licensing
- Cisco Unified MeetingPlace Web Conferencing
- Cisco Emergency Responder
- Cisco Aironet 1542 Series Access Point (802.11n)

Wagg is justifiably proud of what has been accomplished, starting with the campus-wide G-standard wireless network, which is accessible to students, faculties, and administrators.

"A lot of schools have different elements of the components that we have, but I'm not sure that anybody has integrated as many of these components together in one place. From the Internet and Internet2, video on-demand, online curriculum materials, to the way we are controlling all AV devices, to all of the different services that we have from Cisco," Wagg says.

Richer Audiovisual Capabilities

All of the classrooms on the new Episcopal campus provide teachers and students with access to a rich array of resources as well as display capabilities. Teachers in any classroom can control audiovisual services from laptops. Using Web-based and IP-enabled software simplifies the training and flexibility considerably. This includes on-demand video using third-party software that not only delivers content,

but controls the TV and allows access to the cable channels. "We now have 12 satellite channels that are hooked into the system so people can watch different types of broadcasts from NASA to politics," Wagg says. "We can stream more than 9000 on-demand video titles to any desktop or to any display in any classroom."

Better Collaboration Tools

Everything in the school day runs more smoothly. "Teachers and administrators love having their voicemail messages end up in their mailbox," Wagg says. "For them not to have multiple places for documents and messages has turned out to be a real boon to efficiency." And then there is the capability for better communication between parents and teachers. "That's one of the great advantages of Cisco Unified Messaging," he says. Cisco MeetingPlace® is also being deployed. "We are using it now for curriculum conversations with teachers from other schools. In the future, we'll use it to videoconference with other schools that we have exchanges with in other countries," Wagg says. Episcopal already has exchange program with Australia and Europe, and the school is considering new relationships in China. "With Cisco MeetingPlace, we'll see greater collaboration with those schools," he says. When a freshmen boy was injured and required to remain in bed, the school used MeetingPlace® for two weeks to keep the student up-to-date. In fact, classmates carried a laptop from class to class and the boy attended class remotely.



Safer, More Secure Learning Environment

In terms of security, Episcopal has never been on more solid ground. Today, the school has 29 new surveillance cameras, two of which monitor campus traffic inbound and outbound, and the rest cover areas throughout the campus. "The cameras, security systems, and all the motion sensors operate over the data network, as well as our card access system," Wagg says.

Wagg also has a good word for the new Berbee InformaCast system, which comprises 400 IP-based speakers and speaker clocks for paging. "One of my pet peeves over the last 20 years I've been in schools is that clocks never seem to be in sync, and it can be really annoying, so all of our clocks are now digital IP clocks, so that they are always in sync," he says.

More importantly, there is the paging capability. In the event of an emergency, teachers can use a Cisco portable phone to begin a lockdown sequence. External doors will be locked, and authorized staff can easily launch a code-red drill to signal everyone that the campus is going into a lockdown.

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— Geoffrey Wagg, Head of Upper School, The Episcopal Academy

Greener and More Efficient Operations

Saving energy is also part of the solution. With the new network foundation, Episcopal Academy can centrally control all building services and dramatically improve the efficiency of operating and maintaining campus facilities.

“We have maintenance guys who use laptops to control building temperatures. In isolation that’s not such a big deal, but the ubiquity of the way we’ve designed it, they can do it from anywhere. And that’s huge,” Wagg says.

Adding It All Up

Can Wagg quantify the impact made by the new converged solutions? “The real million dollar question is, does all of this make a difference in student learning?” he says. “And the answer is, absolutely.”

Wagg muses about the things now possible at the Episcopal Academy: “The other day our Board of Trustees were here and were having a dinner in the Campus Center on the second floor. There are these big picture windows, and we were sitting around the table, and we looked across the Campus Green at our Science Building. On the second floor of the Science Building, there was that wonderful blue glow from a projector that had been left on in a classroom. And I just happened to remember what the classroom room number was, and so I pulled out my iPhone, launched my browser, got into the software, and actually hit the power button. We all watched the blue light go off and a display screen rise up into the ceiling. The trustees were very impressed.”

Next Steps

It’s a bright future for students at Episcopal. “It’s amazing what we are doing now, but we still have no clue what the true capabilities are, we haven’t even begun to scratch the surface,” says Wagg.

For More Information

To find out more about Cisco education solutions, visit <http://www.cisco.com/go/education>.

To learn more about The Episcopal Academy, visit: <http://www.episcopalacademy.org>.



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