



SUCCESS STORY: BERGEN CATHOLIC HIGH SCHOOL

NETWORK SECURITY THAT'S AT THE HEAD OF THE CLASS



At Bergen Catholic High School, technology has been a key component in the education of their 850 students. Bergen

Catholic had implemented an extensive IT infrastructure, including a 50-megabit/second fiber optic Internet connection, a Wi-Fi environment and teaching tools like interactive whiteboards. However, the biggest challenges for Bergen Catholic were the 850 student laptops and the need to enable reliable connectivity while not compromising the protection of the school's network from these partially controlled computers.

To that end, the school set out to increase the availability and reliability of its Wi-Fi network to take full advantage of their bandwidth and provide students with a more usable network. Aspire Technology Partners, a Cisco Premier certified partner, was chosen to deliver the new wireless network infrastructure, but with it, they delivered a secure wireless solution born of their years of experience in solving complex security challenges with effective and easy to administer solutions.

RECOGNIZING THE NEED AND IDENTIFYING THE SOLUTION

Since 2003, Bergen Catholic's one-to-one laptop program had put technology into the hands of its students, but early on, it was not generating the desired effects due to lackluster performance from its wireless LAN. Without reliability, their administrators feared that teachers wouldn't be able to conduct their planned lessons, let alone unlock the full productivity of the program. Plus, there was a steady stream of headaches from managing student computers.

As the network administrator, Cory DeRobertis knew the challenge of connecting and protecting 850 laptops first-hand. But he had also identified a technology solution that could be the answer: the Cisco Security Agent (CSA). To learn more, DeRobertis attended a seminar that Aspire was giving on CSA. "After listening to Randy [Wolford, Principal Consulting Engineer at Aspire], I also knew that the Network Admission Control (NAC) appliance would be a key piece in our network," said DeRobertis. "With Aspire, we finally had access to the expertise that could help us execute our vision of what Bergen Catholic's computing environment could be."

USING SECURITY TO BOOST RELIABILITY AND AVAILABILITY

For the IT administrators of Bergen Catholic like DeRobertis, the challenge of securing and connecting 850 laptops is made all the more difficult because the laptops leave the safety of the school's Wi-Fi network every day. Aspire's experience in creating secure wireless solutions



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– Cory DeRobertis
Network Administrator,
Bergen Catholic High School

using Cisco technology, like NAC and CSA, enabled them to build a solution that works across any network while providing functionality that includes:

- Centralized Management for Security Administration
- Identification & Automated Mitigation of Security Threats
- Worm/Virus & Zero-Day Prevention on all Student Laptops
- Enforcement of Usage & Security Policies on Student Laptops

NEW INSIGHTS INTO BUILDING SECURE WIRELESS NETWORKS

Even before Aspire began working on Bergen Catholic's solution, their IT leaders knew they had found a superior partner to work with. "Aspire looked at the problem from a completely different angle than other companies," said DeRobertis. "By looking at security first, they saw that the best way to keep students productive was to keep the network safe and secure instead of just adding access points."

THE RIGHT PARTNERS MAKE A REAL DIFFERENCE

Aspire began building out the Wi-Fi infrastructure using Cisco wireless technologies, and leveraged the two key technologies that DeRobertis had identified to construct the security solution: Cisco Security Agent (CSA) and the Cisco Network Admission Control (NAC) appliance. "Once we had uncovered all of the goals and requirements of the client," said Randy Wolford, project lead at Aspire, "we knew that we could utilize CSA and NAC to construct a policy-driven solution that would be optimal for all parties."

With the Aspire team's extensive background within Cisco and their depth of knowledge in security and networking, the customization of the solution to handle Bergen Catholic's unique situation was a familiar task. From a usability perspective, Aspire implemented two sets of rules for the CSA — one for on-campus use and one for off-campus use — to keep students productive at school, unencumbered at home and protected everywhere.

"From the first day of working with Aspire, we were impressed with the professionalism and their ability to introduce us to resources from Cisco that most people cannot. They have the mission and they have the people."

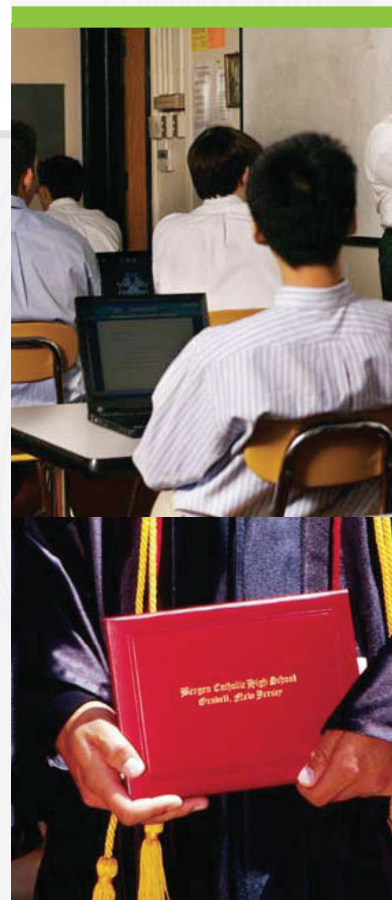
– Joseph Haemmerle
Assistant Principal of
Technology & Student Affairs,
Bergen Catholic High School

IMPROVING EDUCATION THROUGH TECHNOLOGY

Bergen Catholic is committed to infusing technology into its curriculum in order to create a learning environment that extends well beyond the walls of the Oradell campus. The entire facility provides its students and faculty with the state-of-the-art Wi-Fi environment from Aspire and Cisco.

Creating a 1:1 laptop program empowers educators like never before. Faculty members use a program called Discourse, which engages every student by creating a virtual link with them and their teacher. "We've seen that technology enables us to engage students fully in their education, rather than simply using the teacher or textbook as the center of all knowledge in a classroom," said Joseph Haemmerle, Assistant Principal of Technology & Student Affairs at Bergen Catholic.

"Students are information gatherers, analysts and synthesizers as opposed to scribes. These are thinking skills that will be invaluable to them in the global age they enter. Our faculty members now possess five years of experience teaching in a 1:1 computing environment. The entire process has challenged the faculty to model learning as they create a new learning environment in the school."



CREATING SMART, SECURE WIRELESS SOLUTIONS

For Aspire, the key to technologies like the Cisco Security Agent and Network Admission Control appliance is their ability to be adapted to best meet the client's needs. With CSA agents on every laptop, Bergen Catholic uses behavioral rules to protect, update and control applications and devices, including the blocking of potentially harmful programs, like IM or file sharing, while on the school's network.

However, because the students own the laptops they are able to run these programs and any others of their choosing while at home. When the student comes back on campus NAC has the ability to identify users, perform a posture assessment of the device, and even quarantine and remediate problems when users connect.

ABOUT ASPIRE

Aspire Technology Partners is a professional technology services firm specializing in the delivery of robust, secure business infrastructure and communication solutions designed specifically to support and achieve the business goals of our clients. Our solution designs are driven by an unwavering focus on transforming enterprise infrastructures into enablers of business value. Our dynamic team is comprised of seasoned business professional consultants and proven technology specialists. This powerful combination ensures the performance, availability and security of our clients' infrastructures and business-critical assets.

WORKING TOGETHER TO MEET UNIQUE NEEDS

Another benefit for Bergen Catholic was the ability to finance the solution through Cisco Capital. "As a private institution that derives funding for these types of expenditures from tuition, financing gave us the opportunity to roll out this solution in one phase," said Joseph Haemmerle, Assistant Principal of Technology & Student Affairs at Bergen Catholic. With a concurrent deployment of the CSA and NAC solutions, Bergen Catholic was able to receive the full protection and productivity from their multi-layered solution immediately rather than three years later.

PROTECTING & CONNECTING 850 SATISFIED CUSTOMERS

Since Aspire completed the installation in 2007, they've maintained an ongoing support relationship with Bergen Catholic, allowing them to see the results of their work first-hand including:

- Consistent performance and higher availability of the school's Wi-Fi network for students
- Increased protection of student laptops at all times

- Reduced support burdens for the IT staff during the school year
- Greater confidentiality and integrity of school data

For the person who had the vision for moving the Bergen Catholic network forward, the solution has been everything he had hoped for. "It's been rock solid with zero issues from day one," said DeRobertis. And for Haemmerle, he sees the effect that the new network infrastructure has in the classroom.

"Each of the 40 minutes per class is being used, so instead of technology getting in the way, it's the avenue to get us where we want to go," said Haemmerle. "Teachers have more confidence now, knowing that there won't be technology issues that take away from their time with the students."

"Aspire has given us the ability to connect our students with the world, every day, in every moment and in every class."