

Case Study: Holy Trinity Catholic School

Samsung Wi-Fi Solution Upgrade Enhances Internet Access and Information Security for Dallas School



Overview

About the Customer: Holy Trinity Catholic School

Educating Dallas-area children since 1914, Holy Trinity Catholic School provides high-quality Catholic education and after-school care at a reasonable cost for children from pre-kindergarten through eighth grade. It has a strong record of successfully preparing students for future academic achievement at the most prestigious high schools and colleges.

Located near downtown Dallas, Holy Trinity Catholic School accepts students of all faiths and has an enrollment of nearly 200 students. Cultural diversity is one of the school's greatest strengths with a student body consisting of children from all backgrounds.

The school strives to provide students a modern educational environment with access to technology and digital resources as part of its project-based approach to learning. However, its technology program is heavily reliant on donated equipment and was underserving students and staff.

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The Customer Need:

Lost in the Dark Ages: Why Holy Trinity Needed a New Wireless Network

Technology in the classroom isn't science fiction anymore. With 92% of teachers saying that the internet has a major impact on their ability to access content, resources and materials, having access to digital technology is no longer an option.

Holy Trinity Catholic School in Dallas, Texas, was lost in the digital dark ages. They had an antiquated wired infrastructure that jeopardized staff and student safety. Unmanaged switches allowed complete and total access to the network servers from any desktop on campus, including the ones in the student labs. This made the school vulnerable to internal and external attacks. In addition, the lack of a wireless network prevented guests from internet access, including parents and church members.

"We needed to upgrade our network and technology to protect our school and to meet the needs of both our teachers and our students," said Maria Farrell, Director of Communications at Holy Trinity.

To protect the school and provide a better experience for staff, students, teachers and guests, Holy Trinity desired a significant upgrade to school telecommunications and technology. The plan included a new wireless LAN infrastructure to bring Wi-Fi connectivity to campus and replacing old desktops with notebook PCs and other mobile devices for student use.

The Samsung Solution: Field Engineering in a Live Environment

Holy Trinity approached c2mtech, a leading Texas-based telecommunications and IT integrator, for advice on upgrading to a new wireless infrastructure throughout the school.

"We worked together to map out a plan that would provide state-of-the-art connectivity to students, staff and guests alike, while segregating the network to ensure confidential information was secured," said Casey Wedgeworth, President & CEO at c2mtech.

To manage the new wireless network, a Samsung WEC8050 Access Point Controller was installed in the school's back office. Designed with small- to medium-sized organizations in mind, the Samsung WEC8050 can manage

up to 75 access points and 1,500 client devices simultaneously.

Twenty-seven Samsung WEA302i 802.11n Access Points were deployed strategically throughout the building, enabling seamless access throughout every classroom and student lab, as well as the library and main lobby.

Taking maximum expected usage into consideration, the access points support an average of 25 users connected at the same time in classroom areas, while the library and student lab access points support 50-100 devices connected simultaneously.

Due to the limitations of the existing unmanaged wired network, Holy Trinity couldn't segregate access levels to network servers, creating security vulnerabilities. c2mtech and Samsung

devised a simple but perfect plan to prevent outside and student access to administrative information. If the system would not allow network segregation at the wired level, then the solution was to segment the network at the wireless level.

Staff, student and guests were put in their own Wi-Fi subnets. Notebooks in the student labs, an upgrade from the old desktops, connect to the network wirelessly and are only able to visit certain approved websites, preventing students from accessing inappropriate materials. Students were also given limited access to servers on the wired network to store school projects. Visitors and guests are on a separate subnet that provides full internet access, but is segmented from the administrative servers.



The Results: Engaging the Students: Secure Wireless Network Brings New Opportunities to Innovate

Holy Trinity's new wireless infrastructure provided a solution that was cost effective, high on performance and integrated with their unmanaged Layer 2 infrastructure.

"By segregating the network at the wireless level, we were able to address Holy Trinity's security vulnerabilities and ensure maximum access for guests," said Ben Brinkman, VP of Sales at c2mtech. "It has also allowed the school to put new policies in place where students, visitors and staff have their proper authentication access levels."

Providing a strong foundation for the school's transition to a digital curriculum, students and teachers can now access the Internet wirelessly on new notebook PCs from anywhere in the school.

"The new wireless notebooks have provided our students and teachers with a myriad of online resources," said Farrell. "This has allowed our teachers to engage their students in ways they could never do before."

Holy Trinity has addressed its urgent security concerns while building the appropriate wireless infrastructure that can scale cost-effectively into the future. With the intelligent use of Samsung's WLAN solutions together with its current infrastructure, the school is now able to empower staff, parents and students with mobile computing technology that drives new learning experiences.



Quick Profile:

SAMSUNG WEC8050 ACCESS POINT CONTROLLER (1)



- Specially optimized for small-medium sized organizations
- Cost effective and easy to deploy
- Accommodating up to 75 APs and 1,500 clients
- Built-in authentication server capable of accommodating 512 users
- Built-in stateful firewall

SAMSUNG WEA302I ACCESS POINTS (27)



- 802.11n with two spatial streams
- Delivering data rate of up to 300 Mbps
- Built-in security monitoring module
- Self-organizing network (SON) that allows high level of quality management and reduce design cost

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