Colegio Cristóbal Colón

Large School in Mexico Leads the Way for Controller-Less Wi-Fi and Digital Learning

Challenges

- Implement network solution to handle a large number of devices across a large school campus
- Allow staff and students to access proprietary apps and use iPads on mobile carts and in student laboratories
- Expand digital learning across all grade levels
- Provide support and expertise for numerous phases of implementation, from building infrastructure challenges to network management

Results

- Deployed comprehensive Wi-Fi across entire school campus in over 75 classrooms
- Allowed centralized management and control of wireless network
- Provided enterprise-class features to manage Apple devices and to maximize network throughput
- Enabled students, staff and parents to use Wi-Fi for school learning, academic functions and administration

About Colegio Cristóbal Colón

Colegio Cristóbal Colón (CCC) is located in Lomas Verdes, a suburb of Mexico City in the district of Naucalpan, serving 3,000 students from preschool through grade 12. The private school is the largest school of its kind in Mexico, and is part of the De La Salle Christian Brothers, the largest group of religious laymen in the Catholic Church dedicated to the ministry of education in schools and universities around the world. Founded in 1963, the school employs over 300 teachers and staff and is situated on a large campus, with over 75 classrooms.

CCC is not only viewed as one of the leading La Salle schools in Mexico, but also as a technology leader of the West within its network of global schools due to the work and programs it has

implemented at the school over the last several years. The school has one of the largest WLANs north of Mexico City and is undoubtedly considered a leader in digital learning and educational technology.

Challenge

CCC decided several years ago to look at a comprehensive wireless solution for its large school campus. The school had a small deployment in a few places on campus, but it needed an overall plan for its wireless and communications infrastructure. It needed to evaluate all levels, including fiber optic cabling, and determine the best wireless solution partner. There are challenges in Mexico to setting up a robust WLAN and the school needed to overcome many obstacles, from infrastructure to establishing a reliable local Internet provider.

The school looked to network technology and, in particular, Wi-Fi to turn its campus into a center of learning that could expand outside the classroom and turn the school, in the words of José Francísco Flores Gamio, Dean of School, into a 'world of knowledge' and take CCC to the next level of education.

In order to achieve this dream, the school needed to choose the right wireless solution that could handle a large number of devices and be managed centrally. "We knew technology would help us achieve many of our goals and Aerohive deeply understood how to address the specific challenges for educators and schools. We were not

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> **—Alejandro Zepeda**
> Chief Information Officer, Colegio Cristóbal Colón

simply adding Wi-Fi to our campus, but recognized that Aerohive's solution would enable us to plan for future development and growth as a leading academic institution," explains Gamio.

CCC had projects underway to equip academic staff with iPads, as well as use iPads and SmartBoards in classrooms for digital learning. The school also uses a proprietary app that it wanted all staff, faculty, students and parents to access wirelessly. In addition, the school mandated a solution that could manage a large number of Apple devices used on campus, including Apple TVs in a majority of classrooms.

The Solution

The school turned to IT services provider Soluciones Exa for expertise and consultation for its wireless architecture. The Aerohive reseller has deep experience with education solutions, as well as managing Apple products. CCC evaluated Cisco and Ruckus before choosing Aerohive for a comprehensive campus solution across its entire school.

The school deployed AP121 and AP330 access points in classrooms, computer labs and common areas, as well as administrative buildings. Having access points with two radios was crucial to CCC to ensure top performance and withstand interference. CCC is also using HiveManager on site for network management and monitoring. The network has separate VLANs in order to segment traffic and devices.

CCC uses Aerohive's Bonjour Gateway technology to create an ultra-modern classroom experience with over 130 iPads deployed throughout the school able to project presentations on any of the Apple TVs deployed in the classrooms. The school uses band steering features to direct user traffic to the 5 GHz radio band in order to maximize throughput on the network. To save energy and achieve greater security, CCC has set the network for specific schedules, turning off the network at certain times remotely when school is not in session.

The school has deployed the network in phases, starting with the high school and younger grades, with plans to roll out the network to the junior high by the end of the year.

Results

With a solid wireless foundation from Aerohive, CCC can now focus on using technology in classrooms and expanding its digital learning environment. The school has set up a digital laboratory that they have named 'iClass' equipped with iPads for student use. Students are utilizing iPads for learning on all levels, from kindergarten where students are learning photography and taking videos to enhance their classroom studies, to the secondary level where students are researching and working on homework. In addition, the school has seven computer labs where notebooks are using Wi-Fi for IT instruction and other academic courses.

The school is a large user of videoconferencing, especially in foreign language classes where students connect with other La Salle schools around the globe to practice English, French and Chinese through conversation. In addition, the staff often has videoconferences with other faculty in South America to collaborate and work on academic programs.

iPads are placed on mobile carts and used in classrooms. The school has over 130 iPads at its disposal. A big boon for the school has been the deployment of the Sistema Integral Escolar (SIE) app that is accessible wirelessly and gives teachers and students access to calendaring, grade notifications, attendance, announcements and parent-teacher conference information. This application is used across all La Salle schools worldwide and is accessed frequently in the classroom.

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Students at all levels now have access to numerous apps, incorporating digital learning across Wi-Fi in many aspects of education. The school focuses on using technology with younger students to support classroom instruction, whereas older students use technology for research, collaborative projects and content creation.

As one of the largest projects in Northern Mexico, Soluciones Exa often showcases the Aerohive deployment to other schools and businesses looking to deploy enterprise-class wireless. "Aerohive has broad experience and superior technology to provide an ideal wireless solution for education. The deployment at CCC has been a huge success due to the quality and value of the Aerohive technology, in addition to providing excellent support and expertise in all phases of the implementation," explains Raúl Osorio, Sales Account Manager for Soluciones Exa.

HiveManager has enabled the school to easily troubleshoot and resolve issues, as well as access reporting from the simple interface. The ability to monitor devices on the WLAN has been of great benefit to the IT team.

Steps to Greater Learning

Outside of plans to expand its network across the entire school and campus in the coming months, CCC will also begin to evaluate several other Aerohive features and products.

The school is currently planning to test Aerohive switches as part of its plans for the second phase of implementation. CCC will also look at adding Wi-Fi to outdoor areas on campus, to give greater coverage to students and staff. Additional plans in the second phase include testing Aerohive's TeacherView, a classroom wireless access app that will allow teachers to view the online resources students are accessing.

With a robust wireless network in place from Aerohive, CCC is on its way to become a 'world of knowledge' and is well-positioned to enable its students to integrate technology and learning and enhance the academic experience.