



Franklin Public Schools

Franklin Public Schools Overhaul Wireless Network to Enable Digital Learning, Increase Efficiency and Realize Cost Savings

Challenges

- Enable new state-of-the-art high school to be fully wireless
- Move away from controller-based Wi-Fi with better network management and control
- Meet state requirements for online standardized testing for 2014-2015 school year
- Allow Wi-Fi as primary access layer across all district schools

Results

- Reliable and robust network across entire district with remote management
- All classrooms, faculty planning rooms and open spaces equipped with new wireless technologies
- Firm foundation for digital learning and network expansion
- Ability to conduct online testing for all students in district

About Franklin Public Schools

Franklin Public Schools are located in the town of Franklin, Massachusetts, a suburban industrial community located approximately 20 miles southwest of Boston and close to Providence and Worcester.

The district has a total of 11 schools, with one preschool, six elementary schools, three middle schools and a new state-of-the-art high school. The schools are spread over eight different physical buildings and serve more than 6,000 students, with approximately 500 faculty and staff.

The District's Technology Department supports not only all schools within the district, but also the Town of Franklin, serving approximately 33,000 residents.

The Challenge

Several years ago, Franklin Public Schools had a Cisco network in place, but it was not accessible and very limited. The District had only deployed a small number of access points and the purpose of the network was really only to allow people to use laptops around the buildings. The wireless network was considered a luxury at that time and was not crucial to everyday operations.

The high school was the first building to install comprehensive Wi-Fi capabilities throughout the school, and the Technology Department soon realized the Cisco solution was cost prohibitive and not going to meet its requirements and needs going forward mainly due to limitations related to expandability

In 2014, the District simultaneously built a new 300,000 square foot high school and rolled out a 1:1 program. The new facility would require robust and reliable Wi-Fi to accommodate a large number of devices and an environment to support ever-increasing BYOD.

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—Tim Rapoza

Director of Technology Services at Franklin Public Schools

The Solution

The IT team began a rigorous evaluation and testing process, speaking to other schools and looking at solutions from Ruckus, Meru and Xirrus before choosing Aerohive's controller-less solution. The District went through scrupulous testing, deploying a small number of Aerohive access points in one school and testing the solution for an entire year before then expanding testing to additional schools prior to the final deployment.

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The District deployed Aerohive AP330, AP370 and AP390 access points throughout all schools in the district, as well as HiveManager Online for cloud-based network management and control. The decision to use Aerohive's 802.11ac access points was for several reasons. The school rolled out nearly 3,000 Chromebooks to students, all of which are 802.11ac capable, and faculty and staff use 802.11ac-capable notebooks. In addition, it was important for the District to plan ahead and anticipate Gigabit Wi-Fi adoption and future-proof as much as possible.

The IT team has set up numerous wireless networks for administrative and student use. The main internal network is secured by Aerohive's built-in RADIUS server authentication, and all district-owned devices are connected to this network. The District also has a public Wi-Fi network for BYOD, set up with a captive web portal so guests can accept the use policy before connecting. The high school has a separate network for voice and wireless phones used by senior administration so they can receive calls from anywhere on the campus as if they were at their desk.

With over 150 teachers at the high school, teachers do not have assigned classrooms, but teach from a variety of locations using laptops, conducting planning and administrative functions in separate teacher planning rooms.

Support from Aerohive has been invaluable to the deployment. "I've been working with Aerohive now for several years and it is genuinely the only controller-less solution out there, and end-user support is extremely knowledgeable. In our line of work, it's sometimes rare to find someone on the other end of the line who knows what they're talking about. Aerohive not only offers a superior solution, but backs it up with outstanding service, which has been key for Franklin Public Schools," states Tim Rapoza, Director of Technology Services.

The Results

With the Aerohive solution in place, many functions and operations are being transformed to wireless capabilities within the District. The network architecture was built to handle up to five devices per user, and the District added nearly 10 times the number of access points than previously implemented.

The most significant wireless experiences are found at the newly built high school. Science classes now use wireless Panasonic 3E devices specifically designed for education, with an attachable magnifying lens to enable digital microscope, as well as built-in sound and light sensors, accelerometers and a temperature probe.

Access points are positioned in outdoor courtyards to ensure coverage at any point on campus. In teacher planning rooms, 14 teachers share space and the District did not want to install a phone at every station. The school created a 'Telephone Booth' in each teacher planning room with two standard phones. Additionally, teachers can use the NEC Instant Access Application on Wi-Fi-connected smartphones to use the school phone system to make and receive calls or access voice mail, without revealing the identity of their personal cell phone numbers. Franklin Public Schools is one of the first school districts in the nation to use this technology.

All schools in the district will migrate to online state testing for PARCC, the state standardized test given by the Massachusetts Department of Elementary and Secondary Education (DESE). After a successful pilot program during the previous school year, the District will be able to fully participate in this initiative. Now instead of sending students to computer labs for testing, all testing can be conducted via netbooks, laptops and Chromebooks in the students' familiar classroom setting.

Students can now access documents through Google docs used exclusively at the schools, and the District anticipates an increase in cloud application use as more and more teachers begin to utilize technology in the classroom, another strong driver for deploying ubiquitous Wi-Fi.

Built for Growth

"Since ramping up our Wi-Fi with the capacity that we need, the wireless network is quickly becoming mission-critical and we realize as a District we are depending on it more and more," explains Tim Rapoza. "I envision our entire district using the wireless network to a much greater extent as we begin to explore its vast potential."

The District purposely architected the network for future expansion. Plans include running fiber out to sporting fields to enable its large student-run TV station to use wireless portable cameras on the fields. Apart from the schools, the IT team will also begin to implement Aerohive at Town Hall and all town buildings in the Town of Franklin in the coming year.



Contact us today to learn how your organization can benefit from Aerohive wireless LAN architecture.

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