



Cherokee County School District

South Carolina School District Overhauls Wi-Fi for Comprehensive Network Solution

Challenges

- Standardize wireless technology across all schools for a unified wireless platform
- Ensure seamless network management between wired and wireless networks
- Enable teachers, students and staff to move to greater digital functionality
- Implement comprehensive Wi-Fi coverage to meet requirements for state online testing and 1:1 programs

Results

- Robust and reliable Wi-Fi deployed across entire district
- Aerohive's TeacherView allows for classroom management and control
- Administrative and instructional activities now operate over wireless devices
- Flexible wireless infrastructure allows for seamless growth and expansion

About Cherokee County School District

Cherokee County School District (CCSD), located in the Upstate region of South Carolina, is home to 20 schools and serves over 9,000 students. Schools are pleased to offer a broad range of academics, athletics and the arts, to develop responsible and successful students. The District is one of the top 10 employers in the area, with 1200 employees including 650 teachers.

The District recently published a five-year strategic plan, with many technology goals and initiatives, including upgrades to infrastructure, complete wireless coverage, staff development and training, as well as a fully developed BYOD plan.

"Without licensing and warranty costs, the Aerohive cooperative control solution was clearly the right infrastructure for CCSD and just made sense. The fact that the access points could also think for themselves and the service support was bar none just added bang for our buck. Aerohive's intelligent features not only give us assurance that our network is not going down, but also provide mobility and flexibility for our students and staff."

—Todd Hughes

Director of Technology
Cherokee County School District

The Challenge

Several years ago CCSD had hodgepodge wireless access, with rogue access points by numerous manufacturers scattered throughout the school and administrative buildings. With state mandated online testing, as well as a strategic plan with directives to upgrade technology throughout the district, the IT team began to take a look at a comprehensive wireless solution.

In order to meet challenges for BYOD and to implement a 1:1 environment over the next several years across all schools, beginning first at the high school level, it was necessary to look at a solution that could accommodate a variety of programs and technical requirements. A paramount requirement was that the wireless network could seamlessly work alongside the wired network, which was to be upgraded during a similar timeframe.

CCSD needed a flexible and controller-less architecture, which could be easily managed remotely in a GUI environment. In addition, the District also wanted advanced features that enabled teachers to monitor and control the activities of students in the classroom.

The Solution

Looking at a combination of HP, Cisco and numerous other manufacturers, the IT team set out to standardize and choose a

comprehensive solution. A network engineer on the IT team had previously worked in a successful Aerohive deployment and suggested the District take a look at the solution. At the same time, the IT team began to look at upgrading the HP switches on the wired side for a seamless solution. After evaluating Cisco and HP, CCS D chose Aerohive for its secure and flexible wireless infrastructure and Brocade for its wired solution.

The District chose switches from Brocade, an Aerohive Network Solutions Partner to ensure simplified and unified management between its wired and wireless networks. Brocade offered outstanding price, performance and support, and the District was impressed with the reliability and durability of the switches.

On the wireless side, the District began deploying AP121 access points and now has standardized to the 802.11ac AP230 across all schools. CCS D has established three separate network segments to divide guest and iOS devices, as well as another network for staff and district-owned devices. The District uses HiveManager on premise, with possible plans to migrate to the next-generation HiveManager NG by the end of the year.

“One of the biggest selling points for Aerohive apart from a superior technical solution was the sales support we received,” adds Todd Hughes, Director of Technology for Cherokee County School District. “Working with Aerohive has been better than any other vendor we’ve experienced. Regardless of whether the issue we were experiencing was a wireless problem, Aerohive was interested in solving it, which was a huge benefit for a small IT team like ours that can’t possibly be experts in everything on our network.”

Some of the features the District leverages include RADIUS support on each access point for device authentication. The heat mapping tools were especially helpful as the District began to roll out access points in schools. Some schools were not budgeted for an access point in every classroom, and the mapping tools enabled the IT team to determine the best placement.

CCSD also uses Aerohive’s TeacherView, a classroom access app that allows teachers to monitor what online resources students are viewing, with the capability to enable and disable access or redirect students to specific sources. This app is easy to use and does not require any pre-configuration or elaborate teacher training.

Results

With robust and comprehensive Wi-Fi across all schools, the District can focus on other elements of its long-term strategic plan, including almost doubling the number of devices on campus in the next few months. At the present time, all high schools are fully equipped for 1:1 programs and other schools will follow suit as additional infrastructure is updated and funding is secured from sources such as the E-rate program. High schools have also upgraded to Brocade switches and added increased throughput.

A huge benefit to the Aerohive infrastructure is the flexibility to make adjustments and changes at each access point. Some APs are assigned different SSIDs, and some will lock access only for certain

sites for all devices attached to a particular AP. Aerohive’s high availability technology also enables load balancing among APs and ensures there is no single point of failure through its mesh connections. With HiveManager, the IT team no longer has to go on site to troubleshoot the network or make changes.

The Aerohive business model has also proved to save the District time and expense. “Without licensing and warranty costs, the Aerohive cooperative control solution was clearly the right infrastructure for CCS D and just made sense. The fact that the access points could also think for themselves and the service support was bar none just added bang for our buck,” explains Hughes. “Aerohive’s intelligent features not only give us assurance that our network is not going down, but also provide mobility and flexibility for our students and staff.”

Many teachers now take advantage of Aerohive’s TeacherView, and they have witnessed higher engagement from students as teachers know what they are focusing on during classes, and have the flexibility to direct students to a specific site. Teachers no longer have to physically walk around the classroom to monitor each device and can focus on lessons and instruction.

Many other administrative functions in the District are now done over Wi-Fi. Monthly principal meetings at the district office have cut substantial printing costs since all documents were moved online and Wi-Fi was installed in the meeting room. Staff absences and substitute scheduling are managed through Aesop and grading and other assignments are organized wirelessly through PowerSchool apps. Teachers take attendance through PowerTeacher using mobile devices, including PE teachers who now can take attendance outdoors, as well as indoors. The athletic practice fields have Wi-Fi access and use Hudl to record games and replay film to athletes.

The maintenance department is equipped with tablets and technicians can now look up repair tickets remotely without having to return to the central office for their next assignment. School buses are equipped with DVRs and data is uploaded over Wi-Fi. Bus drivers now use a digital time clock via an iPad.

Set for Success

Cherokee County School District continues to focus on its strategic plan and will continue to offer a greater number of devices in schools, set up additional mobile labs, and provide training for technology competency. The District plans to make enhancements to its guest wireless network, as well as expand the number of access points to enable a greater number of 1:1 initiatives and meet demand for BYOD. With a solid wireless foundation, the District is now set to meet this next stage of growth.



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

Aerohive Networks, Inc.
330 Gibraltar Drive
Sunnyvale, CA 94089

toll free 1-866-918-9918
phone 408-510-6100
fax 408-510-6199

www.aerohive.com
info@aerohive.com
CS-CherokeeCounty 092815