Rowan-Salisbury School System

Large School District Selects Aerohive for Cloud-Networking Wireless Solution to Enable 1:1 for All Students

Challenges

- Revamp entire wireless network to meet technology and strategic goals by providing a reliable and effective infrastructure for all stakeholders
- Design robust network to accommodate future demands as well as 1:1 digital conversion
- Establish wireless network access in every classroom across 35 schools
- Meet tight budgets and select cost-effective wireless network partner

Results

- Deployed full-scale wireless network across all schools and locations
- Implemented cloud-based network management from Aerohive to easily allow remote monitoring, updates and changes
- Enabled 1:1 initiative across entire district ahead of schedule and met budget constraints
- Empowered teachers and administrators to creatively use wireless access for digital learning and operational efficiencies

About Rowan-Salisbury School System

Located in North Carolina, the sprawling Rowan-Salisbury School System is a leader in technology education and has been creatively integrating new technologies within its educational environment. With five support sites and 35 schools; including six high, seven middle and 20 elementary campuses, the District has established an ambitious strategic plan that drives its work, including completion of a comprehensive 1:1 digital conversion. The District serves approximately 20,000 students, and with 3,000 staff members, is one of the largest employers in Rowan County.

> "A high-quality, reliable wireless network solution is an essential component of any district's digital conversion. Aerohive solutions provide security, scalability, ease of use and untethered mobility. Mobility allows collaboration, connection and learning opportunities that are expanded beyond the walls of the classroom. It's tremendous to be a part of the transformation and so exciting to watch."
>
> **—Candace Salmon-Hosey**
> Executive Director of Technology & Career Technical Education

Equipped with a new logo and motto, "Extraordinary Education Every Day", as well as a comprehensive 2014 – 2017 Strategic Plan, the District is focused on literacy and student engagement. Transforming classrooms to increase rigor and engagement requires a well-designed mobile network infrastructure in order to reach its goals and objectives.

The Challenge

Prior to 2000, the District's primary form of access was through wired Ethernet. As wireless technologies became more sophisticated, the District implemented Aerohive solutions to accommodate Wi-Fi as the primary access layer as well as remove barriers of cost, mobility and facility infrastructure limitations.

During the spring of the 2014 school year, District leadership established a framework to align resources and priorities around the most important initiative of improving literacy proficiencies. Central to this objective was providing 24/7, anytime, anywhere access to mobile technologies for its students, staff members, schools and support sites.

By June 2014, the technology department had begun the journey of the District's digital transition. All Rowan-Salisbury Schools' students in grades 3-12 would be assigned take-home devices with the intent

that a student's assigned device would replace the traditional textbook. With the main driver being teaching and learning, this initiative required a complete overhaul of network systems, infrastructure, wiring and wireless presence, as well as the creation of new policies, procedures and protocol.

To execute this strategy, the District planned a renovation of its WAN with an 802.11n upgrade from its existing wireless LAN setup, which provided access but lacked the density required for a 1:1 solution.

The school system needed to allow for a multiplicity of devices connecting to its wireless network simultaneously, while maintaining a consistent application experience for each Wi-Fi client. Like many school districts, meeting a tight budget and keeping costs as low as possible were also key requirements.

The Solution

In order to facilitate the District's shift to a digital conversion and increase mobile connectivity for staff and students, the District capitalized on its partnership with Aerohive. Solutions from Aerohive have proven consistent and reliable in performance, the controller-less solution is easily managed across the large district, and the customer support is second to none.

With learning opportunities expanding beyond the classroom, Rowan-Salisbury deployed Aerohive access points across all locations, with future plans for 802.11ac access points to enable Gigabit Wi-Fi. Schools have a broad variety of Aerohive APs, including Aerohive AP121 and AP330 access points to achieve consistent Wi-Fi coverage. The District is also currently testing the Aerohive AP1130 outdoor 802.11ac access point to enable wireless network access outside of buildings. The IT team utilizes Aerohive's HiveManager Online for cloud-based network management.

Rowan-Salisbury has also deeply leveraged the solutions from JAMF Software, an Aerohive Mobile Device Management solution provider. The District uses the full suite of products from JAMF to complement the Aerohive network in order to enable management of Apple devices, including automated enrollment, configuration and security profiles, and inventory and license management. "The combined services of Apple, JAMF Software and Aerohive formed a very powerful, solutions-oriented relationship. This factor was central to the District's successful implementation of the 1:1 digital conversion," states Candace Salmon-Hosey, Executive Director of Technology & Career Technical Education.

The multi-tiered, multi-layered network architecture is scalable in design and will enable IT services to establish guest networks at all sites in the upcoming school year. Student devices and visitors will be configured to connect to the guest networks in order to ensure and maintain a secure data environment. VLAN network segmentation coupled with a specific SSID will serve to further increase data security.

Results

Originally, the target for the District's aggressive strategic plan was to deploy a complete 1:1 environment by 2017. The District met that goal ahead of schedule in early 2015, with MacBook Air laptops in place for all teachers and high school students, and iPads for elementary and middle school students. "Rowan-Salisbury has standardized every school and classroom on Aerohive and the wireless network is now our primary access layer," explains Candace Salmon-Hosey. "Project management for a 1:1 initiative in a district as large as Rowan-Salisbury is a monumental task. Partnering with Aerohive increased our effectiveness and allowed us to leverage enterprise network features that make our district technology services and support more efficient."

The District will soon consolidate its central support and office location from four administrative buildings to one and HiveManager Online will enable the IT team to easily make updates, changes and additions to the network.

"A high-quality, reliable wireless network solution is an essential component of any district's digital conversion. Aerohive solutions provide security, scalability, ease of use and untethered mobility. Mobility allows collaboration, connection and learning opportunities that are expanded beyond the walls of the classroom. It's tremendous to be a part of the transformation and so exciting to watch," states Candace Salmon-Hosey.

The benefits of the Aerohive network can be seen across all campuses in the District. A STEM bus travels from school to school for mobile science, math and engineering instruction, powered by an Aerohive access point. Rowan-Salisbury recently hosted an EdCamp designed for educators to connect, share ideas and learn from each other and Aerohive was instrumental in helping the connections happen during the "unconference". Having gone through the 1:1 digital conversion, many classes are taking advantage of the wireless solution and devices to creatively design learning opportunities that traditional classroom structures don't offer.

Greater Collaboration & Connection

New approaches to instruction are influencing school technology leaders in the design of district network infrastructures within 1:1 mobile learning environments. With the help of Aerohive, Rowan-Salisbury Schools has successfully created mobile learning environments that serve as a catalyst for educational change.

As these mobile technologies have enhanced individualized and collaborative learning outcomes for students, it has caused the District to think more broadly about bringing Wi-Fi to places in the greater community, as well as expanding the network on its campuses. With the Aerohive architecture firmly in place, the District is prepared to take on digital learning challenges for years to come.