Rowan-Salisbury School System

North Carolina School District Uses WLAN to Expand Learning Opportunities Beyond the Classroom

Requirements

- Accommodate an influx of Apple iPads, iPod Touches, and other Wi-Fi mobile devices
- Enable students to use same device in the classroom and home
- Needed a WLAN that was resilient, centrally administered, easy to manage, secure and cost-effective
- Consumer-grade wireless access points were unreliable and difficult to manage

Results

- Access points mounted on carts were replaced with Aerohive APs
- Students and teachers making great strides in using Apple iPads and iPod Touches for everything from data collection to video
- Using HiveManager to monitor entire wireless network and all client activity
- Aerohive has provided the school district with a highly resilient wireless network that's both easy to manage and cost-effective

The Challenge

Located in North Carolina, the sprawling Rowan-Salisbury School System is an educational force to be reckoned with. It's comprised of 35 schools, about 20,000 students, and about 3,000 employees. It's the largest employer in Rowan County.

Like many others, Rowan-Salisbury was facing the growth pains that come for school districts that embrace high-tech trends: It needed to accommodate an influx of Apple iPads, iPod Touches, laptops, and other popular Wi-Fi-enabled mobile devices, on its wireless network. The decision to change wireless networks was based mostly on this growing wave of devices.

In addition, the district's technology team wanted to provide students with an enriched learning experience by letting them use the same devices in the classroom as they use at home, and this meant upgrading its WLAN.

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> **—Phil Hardin**
> Executive Director for Technology
> Rowan-Salisbury School System

"We used to, in the old days, provide a laptop cart with an access point," said Phil Hardin, Executive Director for Technology for the Rowan-Salisbury School System. "So if you didn't have a cart in your room, you didn't have wireless access. But now the learning opportunities are expanding beyond the classroom. We want our students and staff to take advantage of those learning opportunities, so we wanted to make our campuses able to support that with wireless."

Rowan-Salisbury's mobile device initiative required an 802.11n upgrade from its existing wireless LAN setup. The school system needed to allow for thousands of devices connecting to their wireless network simultaneously, while still enabling each Wi-Fi client to experience a consistent application experience. And price was a big issue.

Considering the Alternatives

Hardin and his team evaluated wireless solutions from Cisco, Meraki, Meru, and Aerohive. Hardin found most of the solutions to be complicated to manage or not worth the cost. After evaluating some wireless solutions, cost became a bigger issue. "We didn't see that the price point being offered, for the product being offered, was competitive," Hardin said.

As just about all school districts can attest to, Rowan-Salisbury has budget issues these days, and finances must be stretched. As Hardin

puts it in a down-home, North Carolina sort of way: "We try to get a quarter out of every two dimes we have."

Deployment

In the winter of 2010, Hardin and his team began an Aerohive wireless LAN pilot program at one school in the district. That went well, so he decided to broaden out the wireless test with a business showcase, which included members of the public, at a school on a Saturday.

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These days, in one typical school in the Rowan-Salisbury School System, the wireless network supports about 700 mobile devices, plus about 400 laptops. That particular campus has about 35 to 40 Aerohive APs, Hardin said.

Hardin also said he had help during the deployment from SLAIT Consulting, a reseller and Aerohive partner.

Implementing Bonjour Gateway

Hardin also praises Aerohive's new, patent-pending Bonjour Gateway. To make networks service-aware and make BYOD with Apple devices a native part of every network, Aerohive is introducing the Bonjour Gateway feature to manage and control Apple service availability (such as AirPrint, AirPlay, file sharing, collaboration applications, etc.) across an entire enterprise-class network.

"We're very excited by this feature, because we use iPads in our one-to-one program," Hardin said. "We use separate VLANs for students and teachers, and that security separation makes it difficult to fully use AirPlay and AirPrint in the classroom. We're excited by Bonjour Gateway because it integrates the technologies we've already chosen into our learning environment."

Result

The Rowan-Salisbury School System turned to Aerohive with its cooperative control access points running 802.11n technology that didn't require network controllers or overlay networks. Unlike controller-based solutions where there is a single point of failure, Aerohive APs work together to recover from component failures without the need to deploy redundant systems. In selecting Aerohive, the school system made a bold decision to completely change WLAN architectures.

The bottom line? Hardin said he would absolutely recommend Aerohive to others. "It was probably not the most known product when I first started looking at it. But the more I looked, I thought: this is just a really neat product. And then when we started doing the tests, everything that they said the product would do, it did. It's just been a great experience for us."