North Georgia College & State University

Aerohive Meets the Wireless Needs of the Always-Connected Students and Tech-Savvy Instructors

Requirements

- The college requires a wireless network that can handle an average of four wireless devices per student.
- Instructors demand a network that can handle state-of-the-art audio/visual enhancements, such as new projectors, multimedia carts, Apple TVs and sound.
- A network that will allow students to stream live video from one end of the campus to the other, indoors and outdoors.

Results

- Aerohive's quality, performance and numerous features reinforce the college's mission of excellence.
- Aerohive's controllerless solution with intelligent APs on the network's edge keeps access and security issues in check.
- The college is able to reduce operational time and money by using HiveManager NMS to provide centralized configuration and monitoring.

North Georgia College & State University offers a high-quality college experience in a beautiful mountain setting, about an hour north of Atlanta. The university is distinct among its peer institutions in that it is one of only six senior military colleges in the United States. The Army ROTC Corps of Cadets comprises about 13 percent of the student population.

Located in Dahlonega, Ga. – a small historic town in the Blue Ridge Mountains – North Georgia is the state's second-oldest university and the first to admit women. The college has about 6,000 students -- about 2,400 actually live on campus – and it is soon merging with another state college.

"When we merge, we'll have about 15,000 students, scattered across four campuses" said Jonathan Rockett, network administrator.

> "With the large amount of 24/7/365 clients and BYOD devices in our environment, features we've implemented such as band steering, mesh, and high-powered radios have increased performance and user satisfaction on the campus network."
>
> **—Jonathan Rockett**
> Network Administrator, North Georgia College & State University

With that kind of heritage and educational value, a first-rate wireless network is a must. But like all long-established colleges, old buildings and tight budgets present challenges to network administrators. As such, the campus in the past had been plagued by spotty wireless coverage.

In addition to older buildings, Rockett definitely has his hands full with the new generation of always-connected students, teachers and visiting family members.

"Now, with each new freshman, I have to plan for at least four wireless devices per student," he said. The typical student will have one or two laptops, a gaming device, smartphone, and/or other devices. "And when you have as many students as we have, that's a lot of wireless devices. And they're moving all over campus, going from building to building," Rockett said.

The Goal

The university had been using older HP equipment for its wireless network. When he came on board two years ago, Rockett said, "I knew I did not want a controller-based solution, because that's a headache."

There are many reasons Rockett wanted a controllerless solution. These include:

- Price point: With a controllerless network, he doesn't need to buy big expensive controllers, nor try to guess how many users will hit the network. With Aerohive, he can always just add more Access Points to expand the network. "I don't have to worry about buying more expensive controllers," he said.

- Intelligence on each AP: "I like to keep as much on the edge of the network as I can," Rockett said. With controllers, the traffic has to come into the network and then go back out. "With a controllerless solution, I can keep it on the edge of my network," he said. "It's either you're coming in, or you're not. That was a big plus."

Considering the Alternatives

In addition to Aerohive, Rockett and his team considered wireless offerings from Cisco, HP (with which they were very familiar), Aruba and Xirrus.

"At the time, Xirrus showed up first in my Google search, but it wasn't right for this campus," Rockett said.

After all his research, the only so-called bake off test he did was between Xirrus and Aerohive. After he installed a big Xirrus controller, "immediately people started asking me 'what is this huge thing on our ceiling? Will it fall and crush us?'" Rockett said.

But it wasn't just the heft. The Xirrus solution didn't work well in the university's environment, with all the offices, sharp corners and different classes. On the other hand, once he installed Aerohive APs, they automatically did auto channel selection, and he didn't have to worry about aiming. "It just worked," he said.

In addition to the price point, ease of use, performance and security, Rockett also praised the sleek Aerohive AP form factors. "They don't take your eye away from the rest of the building," he said.

North Georgia College & State University was very happy to use SeeGee Technologies, a VAR and Aerohive partner, in the purchasing of the APs.

Results

Rockett is so pleased with the network that he said he plans to use every Aerohive feature. For now, he particularly appreciates the band steering, mesh, detailed monitoring and spectrum analysis.

"With the large amount of 24/7/365 clients and BYOD devices in our environment, features we've implemented such as band steering, mesh, and high-powered radios have increased performance and user satisfaction on the campus network," Rockett said.

When his team rolled out Aerohive in their resident halls, they enabled certain policies to prevent physical and logical tampering with the units. "Through clear and detailed logging we are able take a proactive approach to problem resolution," he said.

A top priority at North Georgia is a classroom-improvement project that upgraded every classroom on campus with new state-of-the-art audio/visual enhancements, such as new projectors, multimedia instructor carts, high-definition monitors and sound. Instructors are wanting more technology that can work as an add-on to the classroom technology. Aerohive APs are a key component of the classrooms.

Future Plans

Rockett said he is currently working on using Aerohive in a gaming-only wireless network for the residence halls. He's also working on a separate campus-building-only network to allow Active Directory authentication and secure network drive access for faculty, staff, and students.

Rockett said the college is about to start using Aerohive's Bonjour Gateway. Aerohive's new, patent-pending Bonjour Gateway enables management and control of Apple's "Zero-Configuration Networking" technology, called Bonjour, to make services such as AirPrint, AirPlay, and remote display with Apple TV usable across large, multi-subnet networks regardless of the underlying topology. Bonjour Gateway is delivered as a software upgrade for existing customers and as an out-of-band device compatible with customers' legacy wireless and wired networks.

The Bonjour Gateway leverages the distributed intelligence and service-aware capabilities of Aerohive's Cooperative Control architecture. This approach and the awareness of the Bonjour protocol allow Aerohive to control Bonjour on any network, limit unnecessary service updates, and filter unwanted services, or devices, from being advertised across subnets.

"We have an Aerohive AP in each classroom, and beginning this fall we will implement the Bonjour Gateway with Apple TVs for each room," he said.

With the Apple TVs, along with all the iPads in use, teachers want to use Bonjour Gateway to control what's going on in their classroom "and not worry about the one across the hall." Or a student can use their own device and hook up their presentation as well, using Aerohive's Bonjour Gateway.

Finally, Rockett said his goal for the next fiscal year is for students to be able to stream live video from one end of the campus to the other, indoors and outdoors, and not drop a frame.

"Our customers expect a level of excellence that our department must meet, and Aerohive's quality, performance and numerous features reinforce our mission of excellence," Rockett said.