CASE STUDY: THE COLLEGE OF WILLIAM & MARY

Historic University Prepares for the Future with Aerohive Wi-Fi Solution

THE COLLEGE OF WILLIAM & MARY, THE SECOND OLDEST COLLEGE IN AMERICA, sits on a 1200 acre campus in historic downtown Williamsburg, Virginia. Named one of Intel's 50 "Most Unwired College Campuses" for its campus-wide wireless network, William & Mary is a genuine blend of old and new. One of the newest additions to the over 100-building campus is the three-story, 166,000 square foot Alan B. Miller Hall that houses the University's Mason School of Business.

Like the rest of the campus, the School of Business needed full wireless LAN coverage throughout its new facility. A formal vendor selection process was begun in 2007. Four key requirements were identified. High on the list was support for 802.11n. "It made sense to invest in the latest technology, which provided higher throughput and more channel availability," says Norman Elton, Network Engineer, who manages the wireless LAN at the University.

Even more important was reliability. "We were in the midst of redesigning our wired switch and router infrastructure to be more fault-tolerant and resilient to failure. We were looking for the same characteristics in the new School of Business wireless LAN as well," says Elton.

Another important criterion was the ability to integrate easily with the University's existing home-grown Network Access Control (NAC) system. And finally, with a large, complex campus-wide infrastructure to maintain and limited staff to maintain it, the chosen wireless LAN solution had to be easy to deploy and easy to manage.

Aerohive Architecture Delivers Effective Solution

Elton evaluated wireless LAN products from Cisco/Airespace, Meru, Trapeze, Aruba, and Aerohive. In the end, Aerohive best met the needs of the University. All but Aerohive relied on a controller-based architecture. "We felt that going forward with the controller model didn't line up with our desire to be more fault tolerant," says Elton. "Tunneling all the traffic back to the core didn't make a lot of sense."

The Aerohive solution offered a different architecture. Aerohive's cooperative control access points (HiveAPs) require no network controllers or overlay networks. Instead, software in the HiveAPs enables them to self organize into groups called Hives. The result is enterprise-class network management and security without the cost, performance, and availability issues associated with controller deployments. "Aerohive provides centralized control and management. The access points communicate with each other, but there is no single point of failure for user traffic," says Elton. "That was really the clincher for us."

Elton deployed about 100 HiveAPs throughout the School of Business over the summer break. Elton's team performed a site survey, a contractor pulled the cable to the designated locations, and a field engineer from the University installed the access points within a few days, mostly above the ceiling for aesthetic reasons. A few outdoor HiveAPs were installed to cover green space. "The engineer just hung them, plugged them in, and walked away," remarks Elton. "It worked out pretty well."

The HiveAPs integrated seamlessly with the University's NAC system, which segments different groups such as freshmen, faculty and staff, visitors, and contractors. Each group has its own security policies. Faculty and staff go through WPA2 encryption to access academic applications such as Blackboard, as well as Banner, the school's ERP system.

Managing the HiveAPs has been easy with the HiveManager, which provides centralized configuration and monitoring and simplifies provisioning for system-wide policy management. "We've found it to be a well-written, well-designed management platform," says Elton.

Since deployment, the HiveAPs have performed without issues. "Coverage and reliability have both been good," says Elton. In spite of many different types of wireless devices, including laptops, smart phones, and PDAs, Elton is unaware of any connectivity issues. "Overall, the users have been very happy."

> "WE FELT THAT GOING FORWARD WITH THE CONTROLLER MODEL DIDN'T LINE UP WITH OUR DESIRE TO BE MORE FAULT TOLERANT. TUNNELING ALL THE TRAFFIC BACK TO THE CORE DIDN'T MAKE A LOT OF SENSE."
>
> Norman Elton, Network Engineer
> The College of William & Mary

3150-C Coronado Drive, Santa Clara, CA 95054 | phone: +1 408-988-9918 | toll-free: +1 866-918-9918 | fax: +1 408-492-9918
www.aerohive.com **info@aerohive.com**