Aerohive NETWORKS

Lubbock Christian University

University in Texas Chooses Manageable, Reliable, and Interoperable Wireless Networking from Aerohive

Challenges

- Autonomous access points lacked centralized management capabilities and were becoming increasingly unreliable
- Required a wireless LAN architecture upgrade that would be easy to manage and reliable
- Required a WLAN that could integrate easily with the rest of the network, which relied on a TippingPoint Network Access Control (NAC) and Microsoft Active Directory for security and authentication
- Eliminating problems associated with controller-based WLANs

Results

- Liked Aerohive's cooperative control access points (HiveAPs) running 802.11n technology, which require no network controllers or overlay networks
- Liked ease and flexibility to configure the HiveAPs to support multiple networks
- Academic WLAN divided into three separate networks for students, faculty, and staff, which provided secure, encrypted access to applications and resources
- Utilizing HiveManager for centralized management, ensuring the access points are running properly

Lubbock Christian University, in Lubbock, Texas, was established in 1957 by members of the Churches of Christ. Its mission is to teach students the spiritual dimension of life, provide a quality education, and impart a system of values for living and for service to family, community, and church. Its 1800 students have a wide choice of studies and degrees to choose from.

To serve a population of students, faculty, and staff growing ever more mobile, the school installed two wireless networks: one covering academic areas of the campus, and the second serving student housing. These systems provide access to basic Web applications like Webmail, as well as academic tools such as Panopto, a video recording application that allows instructors to record a classroom lecture and students to play it back through their laptop web browser later.

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> **—Sherri Hayes**
> Network Administrator, Lubbock Christian University

Time for an Upgrade Away from Controller-Based WLANs

By summer 2008, the academic wireless LAN was beginning to show its age. Its autonomous access points lacked centralized management capabilities and were becoming increasingly unreliable. Sherri Hayes, Network Administrator, had been monitoring the market for a replacement that would bring the school's academic wireless network up-to-date.

The requirements were straightforward. The new academic wireless LAN had to be easy to manage and reliable. It also had to integrate easily with the rest of the network, which relied on a TippingPoint Network Access Control (NAC) and Microsoft Active Directory for security and authentication. "We had some problems when we deployed the controller-based wireless network in the dorms two years ago," says Hayes. "Customer support was pretty high on our list of requirements for the new wireless LAN."

Controller-less WLAN Architecture

In her research, Hayes came across Aerohive. "I thought their solution looked interesting." One of the features that stood out for Hayes was Aerohive's cooperative control access points (HiveAPs) running 802.11n technology, which 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. "I liked the resiliency Aerohive offered," says Hayes. "There was no single point of failure."

Another key feature was the ease and flexibility to configure the HiveAPs to support multiple networks. This was especially important to Hayes. The academic wireless network needed to operate as three networks. One network for students, faculty, and staff provided secure, encrypted access to applications and resources. Another network provided secure, but not encrypted access, while a third network provided unsecure Internet access for guests. "I liked the fact that Aerohive worked strictly on the switch ports and we could set up our VLANs there," says Hayes. "There was no need to reroute the traffic through a separate device, as would have been the case with a controller-based wireless LAN. Aerohive made it very easy to configure the three different networks."

When it came time to purchase a new wireless LAN later in the fall, Hayes set up an evaluation, installing several HiveAPs and inviting users to try them out. "The evaluation went well. We didn't run into any glitches."

Smooth Deployment

At the end of the year, the school decided to purchase HiveAPs to replace the existing academic wireless network. During the last week of January, Hayes and her team configured the HiveAPs and swapped out each existing access point with a new one. "We only made a few minor changes to the configuration we had set up during the evaluation," says Hayes. To identify potential interference issues, Hayes hired Accuvant, a security consulting organization, to perform a post-site survey.

Centralized Network Management

Ongoing management is provided by the HiveManager. "I login every day and use the quick view to make sure the access points are running properly," says Hayes. "The HiveManager is easy to get around and easy to work with. So far the network has been reliable." Configuration changes are quick and easy too. Unlike the old network that had to be updated one access point at a time, Hayes can modify the configuration and push it out to all HiveAPs within seconds.

Network Integration

One of the key requirements for the new academic wireless network was smooth integration with the rest of the network. "Aerohive has eliminated a lot of potential interoperability problems," says Hayes. Aerohive works seamlessly with TippingPoint and Active Directory, which control network access policies for the two secure networks. For the guest network, Hayes configured the HiveAPs with firewall rules to limit access to the public Internet. "That makes it easy for guests to use because they don't have to go through the NAC login."

Easily Expanding for the Future

At the beginning of the fall 2009 semester, the academic wireless network could expand its user base by a significant amount. The school is in the process of reviewing its options for some form of mobile initiative. "We purchased some spare HiveAPs," says Hayes. "If we see a big load during class times we can add more access points."

Aerohive networks are simple to expand because they're not constrained by controller capacity limits or wireless overlay planning, easily meeting and exceeding LCU's growth requirements well into the future.

Aerohive™ NETWORKS

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

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