



Naropa University

Naropa University Offloads Controllers for Robust Wireless Network Solution

Challenges

- Upgrade and move away from controller-based network environment
- Resolve critical issues with network reliability
- Implement a Wi-Fi network across distributed campus environment with remote management capability

Results

- Enterprise features from Aerohive allow flexibility, control and mobility
- Issues with connectivity eliminated at all campus and residence locations
- Cloud network management enables faster response and superior network configuration

About Naropa University

Naropa University is a private, non-profit liberal arts institution dedicated to advancing contemplative education located in Boulder, Colorado. Founded in 1974 by a Tibetan Buddhist monk and teacher, the university comprises a four-year undergraduate college and graduate programs in the arts, education, environmental leadership, psychology and religious studies.

Naropa University has three campus locations, a residence hall and administrative offices, serving over 1000 students. Naropa University is accredited by the Higher Learning Commission and a member of the North Central Association of Colleges and Schools. The university has been a pioneer in contemplative education, combining compelling instruction and excellent teachers in an environment that emphasizes community service.

Challenge

Naropa University began looking at its wireless architecture when its Cisco solution became increasingly difficult to manage. The existing network was aging out, but additional licenses were not possible without

replacing the entire solution. Even though Naropa had a service contract in place, customer support was increasingly frustrating, and the university lost a lot of time without coverage merely trying to rectify licensing issues. With three separate campuses, as well as administrative offices and a residence hall in different physical locations, a Wi-Fi solution with simplified network management was key.

Since a full rip and replace was cost prohibitive, the university began to explore other options. The IT team wanted to move away from a controller-based solution, since managing multiple controllers was growing more complex, costly and difficult to manage.

Coverage was also an urgent and fundamental concern. The university received endless complaints from students and staff about the reliability and slow connectivity of the network, especially at its off-campus residence hall. Increasing density was imperative, and troubleshooting network issues remotely was a crucial requirement.

The Solution

Naropa University was prepared to move forward with a Meru deployment, but after evaluating Aerohive, the University recognized it was a superior solution. Aerohive's management interface was a great value-add, without further costs for adding certain functions. The mapping and planning tools were especially beneficial across multiple campuses and directed the network layout for optimal performance and RSSI.

"The technology we have from Aerohive and the relationship we've formed is like none other. I cannot recommend Aerohive highly enough for a comprehensive wireless solution."

—Dave Edminster

Director of Information Technology

While the University also considered Meraki and Aruba, Aerohive was the clear choice. Dave Edminster, Director of Information Technology, explains, "One of the biggest value adds for Naropa was having all features baked in to the entire solution. "In the past I've often had to research each and every feature available in a solution, and then balance the features desired against overall cost, while also addressing concerns that we'd unintentionally punish ourselves in the process. Not having to do that saved a great deal of time, and that gave Aerohive a tremendous advantage."

Naropa uses Aerohive AP330, AP350 and AP170 access points throughout its five campus locations. The AP170s are used in outdoor common areas and outdoor campus sites. The majority of the deployment was installed during the summer months to accommodate returning students in August. Remaining locations were equipped later as buildings were renovated or became ready for the wireless equipment.

HiveManager Online is used for cloud-based network management, and the IT team found it easy to get up to speed with its intuitive interface. The University has separate wireless networks for University and non-University owned (BYOD) equipment. Having separate networks allows the university to better control, manage and secure its network, blocking peer-to-peer apps, for example, on the BYOD network.

At its residence hall, which houses up to 85 students, Naropa utilizes two SSIDs. One accommodates 802.1x compatible devices with the same SSID deployed throughout the whole of the university, and the other uses Aerohive's PPSK (Private Pre-Shared Key) technology to accommodate any remaining devices that are not 802.1x compliant, requiring the use of a separate unique one-time-use password for each device, to better manage bandwidth, connectivity, and to help prevent abuse. The band steering features from Aerohive enable the University to direct traffic to 5GHz band if possible, giving these clients a huge performance increase.

Naropa also takes advantage of Aerohive's built-in RADIUS server authentication in its own environment for optimum coverage. The University uses Aerohive's Client Health Score to troubleshoot and have "at-a-glance" visibility into all devices connected to the network. Naropa also utilizes Aerohive's mapping tools to plan future wireless deployments, as well as troubleshoot reports of any weak wireless coverage or interference.

The Bonjour Gateway feature from Aerohive is used to manage Apple TVs and other iOS devices, as well as bridge staff and student devices.

The Results

The University increased the density of the wireless network by four-fold and the results were immediate. The slew of endless complaints about the Wi-Fi ended and connectivity issues were effectively eliminated. At the residence hall where the network was designed to host up to 300 devices, the IT team was better able to manage bandwidth and traffic with Client Health Score and other monitoring and troubleshooting tools from Aerohive. Before the Aerohive deployment, it could take several days to resolve network connectivity issues, and now IT staff can monitor and troubleshoot why devices are not connecting to the network in real time and from any remote location.

Authentication to the network is now much simpler and automatic for all network users. Previously, users had to enter their credentials each and every time they connected to Wi-Fi, but that is no longer needed with Aerohive's solution.

Staff and students are now able to access several educational applications and tools wirelessly. Docutek ERes is a repository of digitalized documents used in classrooms, now referenced through mobile devices. Naropa 25Live is a scheduling and calendaring tool staff and faculty can use wirelessly to book conference rooms or other meeting space on campus. Enterprise Resource Planning (ERP) software from Jenzarab holds student data, academic records and other information now accessible from any mobile device within Naropa's wireless network.

Before Aerohive, the University was not able to utilize Apple TVs to project from iPads or other Apple devices, but now with Aerohive's Bonjour Gateway, Naropa is poised to add up to 12 additional Smart classrooms and utilize these display capabilities wirelessly.

One of the biggest boons for the university has been Aerohive's network management capabilities. "Mobility is driving everything", explains Dave Edminster, Director of Information Technology. "Now our IT staff can remotely connect to and view HiveManager at any time, from any location, to troubleshoot issues remotely or in person, saving time and creating efficiency for our team. When a student reports issues with connectivity, instead of sometimes spending days trying to resolve the concern, we can see within minutes that, for example, Netflix use is up and we can easily throttle down that application on the wireless network to ensure maximum performance for all users. Aerohive's network management is just smart."

In addition, Naropa has been impressed with Aerohive's support and community resources throughout its entire deployment process. Dave Edminster gives an example of a Tuesday night when he posted a comment at 11:30 p.m. to Aerohive's online community, HiveNation, commenting on a PPSK post with a question he had for his own environment. "My experience with community forums is that those are places where questions go to die. However, my question had a response within 15 minutes, and another Aerohive engineer added more information five minutes after that, and I was able to implement the change in HiveManager from home and resolve my question completely. Aerohive support goes above and beyond for customers."

Mobility Transformed

The university is confident it has deployed a solution that will easily scale for future expansion, as well as being equipped with features to meet any educational demands. In the words of Dave Edminster, "The technology we have from Aerohive and the relationship we've formed is like none other. I cannot recommend Aerohive highly enough for a comprehensive wireless solution."

Down the road, Naropa may consider Aerohive branch routers for management staff who travel extensively to eliminate the need for client VPN and to directly tunnel back to the wireless network. Other Aerohive features will be integrated to enable greater mobility and enhanced wireless tools for the classroom.



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

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