DELL EMC

Delivering consistency, reliability and security across Tennessee

The University of Tennessee Institute of Agriculture (UTIA) enables a more reliable, secure and easily managed wireless network with Dell EMC and Aerohive technologies

UTIA
INSTITUTE OF
AGRICULTURE
THE UNIVERSITY OF TENNESSEE
Real. Life. Solutions.™

Higher Education | United States

Business needs

UTIA needed to establish a statewide managed network to address security needs, improve wireless connectivity and overall network reliability, streamline network support, and give its IT team more time to focus on new initiatives.

Solutions at a glance

Networking

- [Aerohive AP230 and AP1130 access points](#)
- [Dell EMC Networking HiveManager NG](#)
- [Dell EMC Networking N-Series switches](#)
- [Dell EMC Networking X-Series switches](#)

Business results

- Enables three-person IT staff to focus on new projects instead of troubleshooting

- Enhances network security

100+

Gives employees in over 100 locations reliable, consistent wireless access

multiple hrs.+

Saves multiple hours weekly on network management and configuration

Although the University of Tennessee Institute of Agriculture (UTIA) is officially based in Knoxville, employees work in locations in every corner of the state. UTIA, which includes AgResearch, the College of Agricultural Sciences and Natural Resources, the College of Veterinary Medicine and the Extension, is spread across 95 extension offices, 10 research and education centers, and four 4-H centers with camp and conference facilities.

Increasingly, the institute's distributed workforce model had led to major communication and network access problems. "Our challenge was providing reliable network services for our employees where they worked, and effectively troubleshooting remotely when there were issues," says Emily Tipton, IT coordinator, Extension for Information Technology Services at the UT Institute of Agriculture. "For example, Ag Research conducts research every day, but the network they used was not reliable, and we had no standard approach to equipment installation or support. Because our previous wireless network used individually managed standalone devices, it took a lot of time and travel for our three-person IT staff to manage and troubleshoot an access point. It also left us open to security vulnerabilities."

Implementing a cloud-managed Dell EMC and Aerohive wireless solution

UTIA sought to deploy a cloud-managed wireless solution to solve its reliability and security challenges. "We wanted a cloud solution that would enable us to better understand network usage and more easily manage all access points," says Tipton. UTIA chose to deploy a new solution consisting of Dell EMC N-Series and X-Series networking switches and Aerohive AP230 and AP1130 indoor and outdoor 802.11ac access points, with Dell EMC Networking HiveManager NG to manage the full wired and wireless network. "We had some Aerohive access points in a regional office, so we were very familiar with the quality and easy administration of the products," says Robert Ridenour, CIO of the UT Institute of Agriculture. "We also really liked the Dell EMC switches, and we felt like Dell EMC was going to be a true partner with us. They didn't just want to sell us hardware – they wanted a partnership.

And, we liked the idea that we could manage everything through HiveManager."

UTIA also upgraded its wireless technology from 802.11n to 802.11ac. "We wanted to move to the next-generation wireless technology for better speed and network penetration," Ridenour says. The UTIA IT team established two SSIDs to create secure networks for employees and guests, and uses University of Tennessee login credentials for seamless access across all UTIA locations. The new cloud-based unified wireless solution was rolled out to all UTIA offices and operations; it also includes extensive outdoor WiFi capabilities at 4-H and AgResearch centers.

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>
> **Emily Tipton**
> IT Coordinator, Extension, Information Technology Services, University of Tennessee Institute of Agriculture

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1st

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the Institute outdoor WiFi
capabilities for the first time

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Emily Tipton
IT Coordinator, Extension, Information
Technology Services, University of Tennessee
Institute of Agriculture

Boosting wireless network reliability at hundreds of locations statewide

UTIA now has a more reliable wired and wireless network at all its locations throughout the state. "The reliability and availability of our wireless solution improved significantly after we deployed the Dell Networking and Aerohive solution," says Tipton. "We can now give our 900 statewide employees the consistent network coverage they need to do their jobs efficiently, and we can provide WiFi to all our visitors at the facilities." The solution also gives the Institute outdoor WiFi capabilities for the first time. "For our 4-H centers, having outdoor wireless access will enable volunteers and guests to be productive. Also, for our Ag Research department, this will open new doors for them to think about data collection in different ways."

Giving IT more time for new projects

Instead of traveling 30 miles or more between locations across the state to troubleshoot wireless or switch networking issues, the three-person UTIA team can now manage and configure the network centrally, avoiding undue downtime. "We have a complete picture of our unified network now with the Dell EMC Networking switches and Aerohive access points," says Tipton. "We have a distributed workforce, but only three IT administrators to serve employees in 95 counties. Now, using the cloud-based Dell EMC HiveManager, we can easily manage the entire wired/wireless network and get insight into our switch configurations centrally. And, we have already seen a reduction in support calls. Overall, this will free up time for our IT staff to work on other important technology projects here at UTIA."

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Enhancing network security, driving productivity

UTIA has also enhanced its overall network security by deploying the Dell EMC and Aerohive solution. "Security was actually the primary driver for why we did this project. With centrally managed Dell EMC Networking switches and Aerohive access points, we now have secure, consistent wireless across the state," says Ridenour. "We only have two SSIDs to worry about, and security is now managed by our IT staff through a single password, instead of us having more than 30 passwords to worry about previously."

Adds Sandra Lindsey, chief information security officer, Information Technology Services at the UT Institute of Agriculture: "Through the partnership between Dell EMC, Aerohive and the University of Tennessee Institute of Agriculture, the Institute has been able to greatly improve IT security. Through the SHIELD project, we are now able to get our off-campus locations to connect via secure wireless connections, as well as through the VPN, to access Institute resources. This means that all locations will now be able to comply with the Institute's security plans and procedures."

As UTIA expands its new network to include more locations, it expects to enable more employee productivity. "We want to reduce the time it takes for employees to get their work done," says Ridenour. "Before, that was a real problem because of all the network reliability issues we had. With the capabilities we have on the new Dell EMC and Aerohive network, we think we can really drive productivity and help people do their work better overall. We are going to continue to enhance our ability to improve business processes for the entire institute."

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> CIO, University of Tennessee Institute of Agriculture
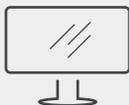
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