School District Boosts Learning Environment with AI-driven WLAN

Wireless networking is key to the learning process at North Canton City Schools (NCCS), a K-12 school district in Ohio serving over 4400 students and 650 staff. It enables easy access to web-hosted learning materials, lets students communicate while on the move, and is critical for online testing and boosting learning outcomes.

Recently, the number of connected devices across the school district began to grow exponentially thanks to a 1:1 computing initiative that required the deployment of over 5000 Chromebooks, coupled with a BYOD policy that allowed high school students to bring their own computers, tablets and smart phones. Unfortunately, NCCS’ existing wireless network, provided by Cisco Meraki, could not keep up. Like many school districts, NCCS had a challenge supporting a high density of devices in a consistent and reliable manner, and they had limited IT staff to spend time troubleshooting issues as they arose.

“Students were dissatisfied they couldn’t use personal devices and faculty were frustrated with poor Wi-Fi,” said John Fano, System Admin at NCCS. “The IT team was annoyed because we could not troubleshoot problems quickly and cost effectively. It was clear that we outgrew our WLAN and were in need of an upgrade.”

The NCCS IT staff, in conjunction with their trusted partner Technology Engineering Group, explored alternative WLAN options. Ultimately, they chose the Mist Learning WLAN and deployed over 300 Mist AP41 802.11ac Wave 2 Access Points, in conjunction with Mist’s Wi-Fi Assurance cloud service.

Mist is the first vendor in the industry to use AI to simplify Wi-Fi operations and troubleshooting through automation and insight.

Unique capabilities of the Mist platform include high density performance, visibility into the user experience, single-click root cause identification, dynamic packet capture (dPCAP), and simplified policy enforcement.
With the Mist Learning WLAN in place, NCCS has successfully deployed Chromebooks for their 1:1 initiative and has been able to allow a BYOD policy for their students. They also have confidence that the wireless network can seamlessly support key online applications, such as Schoology LMS, eSchoolPLUS SIS and LanSchool.

In addition, as part of Hoover High School’s Video Productions and Broadcast Journalism program, NCCS has an educational television station, ncTV. In order to give students a real-world experience with live event production, the school has a “Mobile Storyteller” production studio on wheels. The school deployed the Mist Learning WLAN in the vehicle to foster collaboration and rapid production while they are working on large media files that require gigabit Wi-Fi. By leveraging the Mist solution, the IT team has been able to keep the network up and running with remote troubleshooting that eliminated the need to send engineers out in the field if a problem were to arise.

The Mist AP41 Access Points also have integrated virtual Bluetooth® LE (vBLE) directional antennas for high accuracy location. They enable the district to easily deploy location-based services in the future, such as wayfinding (i.e. turn-by-turn directions), notifications and the ability to locate key assets like AV equipment carts. “While we are not ready for vBLE location services quite yet, it is great to know we have the infrastructure in place to support it with a simple software service upgrade,” said Fano.

North Canton City Schools is now prepared for the future as more devices enter the campus and educational tools continue to evolve, helping to accelerate learning for the next generation of innovators. “With Mist, students can connect and learn anywhere on campus with ease and reliability. You really cannot ask anything more of a WLAN, making us very happy with the decision we made to invest in Mist.” – John Fano, NCCS.