



HIGH PERFORMANCE WI-FI NETWORK

Kalamazoo Valley Community College Ensures Wireless Connectivity for All with ADTRAN

Located in Kalamazoo, Michigan, Kalamazoo Valley Community College (Kalamazoo Valley) first opened its doors to students in 1966, thanks to the approval of voters in Kalamazoo County. Today, it is a two-year public community college with about 9,000 students and nearly 1,000 employees during the peak times of the academic year. The College spans four campus locations featuring many different buildings in need of wireless connectivity.

“The biggest reason we have chosen to stay with ADTRAN for our current and new deployments is that we have a long lasting relationship with a company that has provided us with superior customer support.”

Tim Welsh, Director of Network Services
Kalamazoo Valley Community College

Benefits

Kalamazoo Valley Community College leverages ADTRAN Wi-Fi solutions to ensure all vital college applications can be accessed over the wireless network. ADTRAN's APs and routers deliver the constant connectivity needed to support the modern classroom learning environment across four campus locations.

- **By virtualizing its Wi-Fi network with ADTRAN, Kalamazoo Valley is able to minimize hardware failure risk, lower overall electricity usage, cut down physical space needed for network infrastructure and guarantee Wi-Fi network redundancy when changes need to be made to the network.**
- **Staff and students are able to experience worry-free connectivity no matter where they are on campus and access applications over the wireless network at any time.**
- **Centralized management of the network allows IT staff to monitor and adjust services as needed from anywhere.**

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Scalability and Network Management Issues Drive the Need for Change

Prior to ADTRAN, the college was using a wide variety of vendors and solutions to provide Wi-Fi connectivity throughout its multiple locations. Oftentimes this led to managing many devices from each vendor when changes needed to be made. This caused downtime for the network and numerous hours lost for the IT department trying to maintain all the access points. Kalamazoo Valley also needed a scalable and unified solution that could meet the evolving needs of a college campus while easily being managed from a single point.

As more and more students, staff and faculty members began connecting their personal devices to the network to do assignments or run teaching and learning applications, the college began facing issues with providing the right amount of wireless coverage. Frequently, too many access points (APs) would be located in a single area, while not enough were supplied in others, leading to an unbalanced wireless network. Kalamazoo Valley required a means of determining exactly how many APs would be needed to properly provide Wi-Fi service to the entire campus for the students, staff and faculty.

“At the time, we needed a vendor who could provide us a single solution that was not only cost-effective, but also gave us reliable technology coupled with proper service and support,” said Tim Welsh, Director of Network Services. “Any vendor can sell access points and controllers, but what counts is getting the product support to back it up. That became our main criteria when it came to choosing a vendor for our Wi-Fi solution.”

To supply its students, staff and faculty with the tools necessary to succeed in the classroom, Kalamazoo Valley wanted to ensure that all of its buildings and campuses had sufficient Wi-Fi resources to meet their connectivity needs. Recently the college opened two new, state-of-the-art buildings that required a robust Wi-Fi network to support student devices, learning applications and faculty needs. As a result, the college needed to upgrade both its hardware and software to meet not only user needs, but also the needs of the IT department.

Kalamazoo Valley Community College Chooses ADTRAN Solutions

Kalamazoo Valley first turned to ADTRAN about 10 years ago, relying on the company’s APs and routers to provide the necessary wireless connectivity throughout its sprawling campus locations. In 2015, to ensure that its network requirements were continually met for the future, ADTRAN moved to help the college get its Wi-Fi network standardized within a virtual environment. This move to full virtualization provided a cost-effective, globally scalable wireless networking solution. This streamlined Kalamazoo Valley’s network administration and provided the critical means of being able to centrally manage the entire wireless network from a single point. Centralized network management of the wireless network offered the college the freedom and flexibility it did not have with its prior hardware-centric Wi-Fi network solution.

“ADTRAN helped us create a manageable Wi-Fi network, which made life much easier for our Network Services support team,” said Welsh. “We can make changes and monitor the Wi-Fi network from anywhere, which makes network administration much easier.”



Kalamazoo Valley Community College



Kalamazoo Valley also wanted to ensure that its two newest buildings featured technology that could handle the networking demands. ADTRAN's long history with the college led it to call upon ADTRAN to supply it with new APs and virtualized solutions for the two newest additions to the College and the Wi-Fi network as a whole.

"The biggest reason we have chosen to stay with ADTRAN for our current and new deployments is that we have a long lasting relationship with a company that has provided us superior customer support. We have a long history with ADTRAN because of the quality of the products they produce, the service and support of the technical team and the good relationship we have with their sales team," said Welsh. "Kalamazoo Valley's leadership was relieved to hear we had chosen to stay with ADTRAN for providing Wi-Fi connectivity to our new campus additions. Supporting solutions from a single vendor is ideal. ADTRAN is a vendor that definitely looks out for its customers, not only for the present, but for the future as well."

Coverage Across Campus is Ensured

College students expect network coverage that is campuswide and uninterrupted. Thanks to ADTRAN's site survey undertaken during the summer of 2015, Kalamazoo Valley has been able to achieve just that. The site survey allowed the college to see where proper AP deployment should be for the college's campus

locations. Now, Kalamazoo Valley has deployed a fewer amount of APs while simultaneously maximizing and optimizing coverage without having overlapping signals and overpowering connectivity.

"The site survey that was conducted significantly improved our ability to provide quality network connectivity across all of our campuses," said Welsh. "Thanks to ADTRAN's site survey, we are utilizing fewer APs while providing maximized coverage for everyone on the network across the campus."

This has further allowed students to access vital teaching applications from anywhere on campus. For example, students in the allied health program are able to access an application that provides visual simulations of procedures that they run in class, completely over the wireless network. Academic counselors can have impromptu sessions with students anywhere on campus. Even Kalamazoo Valley's public safety office is benefitting from the robust wireless connectivity ADTRAN is providing. Public safety officers are using a real-time surveillance camera app that allows them to view video from surveillance cameras anytime from anywhere on campus.

"The wireless connectivity provided by ADTRAN ensures that everyone in all locations can access the vital applications they need. It isn't just limited to our students, as faculty who leverage our 'classroom on wheels' program to provide a pop-up classroom any-



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where on campus can rely on wireless connectivity to be available, no matter where they are,” said Welsh. “It is this kind of trust in the network that makes our jobs easier, knowing that we can scale services as needed at any time, from any place.”

Virtualization of the network also lessened the load on the college’s IT department. To minimize hardware risk and ensure bandwidth requirements could be met at any time, ADTRAN supplied virtual controllers to provide further network redundancy for when changes to the network needed to be made. This gives the IT department the crucial ability to scale services when needed, and manage the network without the threat of a hardware failure plunging the Wi-Fi network into darkness.

“Moving our physical Wi-Fi network to a virtualized Wi-Fi network that would better support our network needs and infrastructure was a huge commitment from ADTRAN,” said Welsh. “By standardizing the Wi-Fi network at the virtual level, we are now able to meet the

bandwidth requirements of our students, staff and faculty throughout the year. It is much easier to meet network connectivity expectations and needs during peak academic seasons.”

Welsh also found that any issues students, staff or faculty experience with the network are often issues with the devices themselves, rather than the network. Since ADTRAN equipment adheres to industry standards, almost any device will connect to the wireless network.

“Any feedback we usually get ends up being an issue with the personal device instead of a network error. That really speaks to the quality of the technology that ADTRAN supplies for us,” said Welsh. “The network should be something you don’t notice until it isn’t there. It should always be accessible to those who need it. The reduction of reported issues and complaints about the Wi-Fi network shows we are doing our jobs and that the technology has improved greatly.”

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