Community College of Denver

- Community college deploys APs, switches, and security appliances on two campuses
- Integration with Cisco ISE authenticates users onto Wi-Fi seamlessly
- Visibility in the dashboard allows small IT team to quickly solve network issues

Small class sizes, talented professors, and world-class facilities are cornerstones at Community College of Denver (CCD). CCD provides an exceptional and affordable two-year education to approximately 8,000 students across three campuses. In order to support these students, as well as 1,200 faculty and staff, a two-person IT team manages the network, security, administration, telephony, and servers for the campus.

With no one on the team dedicated solely to the network and network infrastructure that was 13 years old, Chris Arcarese, Director of IT, realized it was time to replace their existing network. Not only was the previous solution difficult to configure and manage, but the team often received reports about spotty wireless. They also had little visibility into network issues, making it challenging to monitor and troubleshoot.

Arcarese sought to implement a comprehensive network solution with more visibility and that a small staff could easily manage across multiple sites. He had previously used Cisco Meraki and knew that it would be a great fit for CCD because of the web-based Meraki dashboard and live troubleshooting tools, which make solving issues remotely simple. Additionally, the enhanced visibility provided in the dashboard ensures the IT team is able to improve response times to issues and significantly reduce network downtime.

> "I like the ability to quickly track issues in the dashboard. If somebody is reporting that they can't get on the wireless, it's really easy to track through our network to see where the problem might exist"

– Chris Arcarese, Director of IT

Arcarese and his team decided to deploy Meraki MR access points, MS switches, and MX security appliances across two of CCD's campuses. The roll out went quickly, as they deployed 120 APs in two buildings and 115 switches in 15 buildings in only two months.

The access points are installed in classrooms, so students have constant wireless access while in class. The team uses Cisco Identity Services Engine (ISE) for students, staff, and guests to securely authenticate. With just one SSID, ISE can determine if the user is a student or a staff member, and whether they have a school-owned computer or personal device. Based on this, the user is routed to the appropriate network. This makes connecting to the right network seamless for the end-user. Open tickets about the wireless performance have decreased by more than 90% since

switching to Meraki, allowing the team to focus on proactive network maintenance. Moreover, the IT team can quickly find network issues in the dashboard when they occur. The network plan solidifies network security as the IT team has firewall rules in place to block access to peer-to-peer websites and unwanted protocols like BitTorrent.

Acarese and his team were able to easily configure and install the switches across 15 buildings. The team configured the switches and set up trunked ports in just a few clicks. The team can quickly look at the traffic and settings on each switch, making troubleshooting and management much easier than before. Arcarese stated, "We can tweak settings on a macro level, instead of having to make changes one by one to every switch." The team now schedules automatic firmware upgrades during off hours, making it seamless for both users and technicians.

"Updating our switches was time consuming and tedious before, but now we're able to roll out upgrades automatically."

– David Overton, Senior Director of Information Security

Troubleshooting tools in the dashboard have saved the team hours of investigating network issues. Using the packet capture tool, Arcarese can easily isolate and diagnose network problems. For example, by running a packet capture on the port a printer was connected to, Arcarese quickly confirmed that it was a printer issue and not a network issue. Arcarese added, "We can now monitor the network in a cohesive way, whereas in the past, we might have had to use additional software or monitoring devices."

Arcarese and his team deployed two MX security appliances for even more network visibility. The team configured several isolated networks for added security. Specific devices like their HVAC system, gas line monitoring systems, and credit card machines are on protected networks to prevent hackers from accessing the devices. The team also has VoIP traffic prioritized to ensure staff members have appropriate bandwidth.

While there are countless features in the dashboard that the team takes advantage of, scheduled summary reports are key for Arcarese and his team. With the summary reports Arcarese has automatically scheduled, the team gets emails about network traffic, bandwidth utilization, and security threats. If something looks wrong in the weekly report, like a spike in bandwidth usage, the team can look in the dashboard and quickly find the discrepancy.

In the future, Arcarese plans to deploy Meraki switches and APs to the third CCD campus. For now, Arcarese and his team are thrilled with how easy it is to monitor the network and provide robust and secure wireless for students while on campus. As Arcarese said, "Being able to manage everything in one dashboard is something I haven't been able to do in my 20 years in IT."

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