The City of New Haven

- Required a network that could support 1,600 government employees across 55 sites
- Deployed switches and access points city-wide for improved connections
- Remotely manage switches, APs, Z1s, and endpoints all from the same interface

Known as the Elm City to 130,000 residents and students at Yale University, New Haven, Connecticut, is a vibrant city with a passionate governing body focused on delivering the best work experiences for government employees. Yet, with only three people on the network team, finding an easy-to-manage solution that would support over 1,600 city-wide employees across 55 sites seemed impossible. With aging, unmanaged switches and no wireless access, the city of New Haven desperately needed a network refresh in order to provide reliable connections for departments such as parks and recreation, public works, police, and fire, while giving the network team more time back to focus on other critical projects.

The city's IT department knew it was time to bring their network into the 21st century with managed switches, access points, teleworker gateways, and endpoint management. When they heard that with Cisco Meraki they could remotely manage all of their devices from the same interface, they were sold. The team decided to replace all of their edge switches with Meraki MS320s, deploy wireless access points at government buildings, provide teleworker devices to key employees, and manage their government devices with Systems Manager.

Manage the Network From Anywhere, Even The Couch

Within two weeks, Eric Valli, Network Administrator, and the network team deployed all of their Meraki switches. The ease of management and level of visibility that the switches provide through the Meraki dashboard has been a huge improvement for Valli. Before, he would have to drive to each site, go into the switch closet, and look at each switch configuration to figure out if they had been updated. Because this process was so manual and time consuming, switches would go years without being updated, putting the network at risk. Now, Valli and the IT team can log into dashboard and schedule the upgrades remotely, ensuring all hardware is up-to-date in just a few clicks. When users are experiencing slow connectivity, Valli can easily troubleshoot the issue with a cable test to see where the fault is, and make changes accordingly. He also uses the port mirroring and packet capture features, and references the error log regularly. Managing the network used to be reactive; a switch might be down for hours before Valli even knew about it and he would have to manually find a fix. Now, he gets an email alert right away when a switch goes down, and is able to fix the issue before anyone knows about it. And, best of all, Valli can now make changes or troubleshoot issues from the comfort of his own home, not even needing to leave the couch.

> "What really sold us on Meraki was the ease of management and that we had 30 switches deployed, up and running, and working within an hour."
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> *– Eric Valli, Network Administrator, City of New Haven*

Bringing Wi-Fi, VPN, and iPhones to Government Employees

Historically, the city only provided wired connections to government employees, and with most workers docked into a computer station, the need for wireless wasn't as apparent. But as Valli and the IT team worked to build a modern network, they concluded that wireless was a necessity at their government sites. They deployed Meraki MR access points across the whole city, in locations such as police departments, fire houses, city hall, public works, and the parks department. Generally, the wireless network is designed for use by government employees, with public access only in key locations, such as city hall and conference rooms at the parks department. The ability to segregate the staff traffic from the public traffic ensures no public devices can see local network traffic, which was key for Valli. They also segregate traffic internally through group policies and local saved connections, with 14 total SSIDs, some public and some hidden. Depending on what client group a device is in, it automatically has access to certain SSIDs, saving the network team from having to manually configure every device. The wireless network has also enabled government executives to be mobile; with Layer 3 roaming capabilities they can go from city hall to the hall of records without losing their connection. Another useful feature is the heat map, which allows Valli to visualize where and why someone might be having connectivity issues. They can see if someone is trying to connect in a dark portion of the map or if an area is congested, and make a case for deploying more access points or moving a device. Overall, deploying the access points was a breeze, and Valli has had minimal troubleshooting requests since the initial deployment.

"The port mirroring is fantastic. The packet capture feature is fantastic. Having the error log and the GUI interface as opposed to a CLI interface is great. It is hands down better than managing a switch locally every day of the week."

– Eric Valli, Network Administrator, City of New Haven

For government officials and the IT department, it is important to be able to connect to the city network from home. Previously, if someone needed to connect to the network via VPN, the network team had to grant them an SSL VPN tunnel through their primary firewall. To remove this cumbersome process, the team deployed Meraki teleworker gateway devices to provide reliable and secure connections for the mayor, chief of staff, deputy to the CIO, IT department, and others. The Meraki Z1 and Z3 teleworker gateways connect back to a Meraki MX100 so staff can securely access the network. And with the Z3s having a PoE port and improved

bandwidth, Valli can give workers a phone to use at home as well. Valli added, "The great thing about the Meraki teleworker gateways is that government officials have more issues with their laptops than they have with the Z1s. They just click on the network that says City of New Haven, and they're sitting on our network."

The city provides cell phones to employees who need them for simplified management and increased security through Meraki Systems Manager. The team just enters the phone's serial number into Systems Manager, gives it a tag, and the phone comes out of the box ready to use. Based on the phone's tag, the team pushes different work-based applications, while also giving employees the ability to download their own applications. They also use Systems Manager to push out the SSIDs certain devices can connect to, and can remotely wipe a device if it is lost or stolen, which Valli has had to do several times.

"The fact that I manage my switches, wireless access points, the Z1s, and the MX100 all from the same interface just makes my life so much easier."

– Eric Valli, Network Administrator, City of New Haven

One Interface. One Network. One Happy IT Team

Being able to manage the city's switches, access points, teleworker gateways, and mobile devices, all from the Meraki dashboard, has been life changing for Valli and the network team. Valli explained, "The fact that at any given time, I can pop into any network and see the switches that are up or down and make on the fly, granular changes super easily, and at a click of a mouse, is fantastic." He can also solve network challenges that much faster; instead of driving from site to site, going switch to switch to figure out where the failure is, he is immediately notified of which switch, even which switch port, is down, and can make adjustments accordingly. Valli also takes advantage of the Meraki 24/7 support team, adding "It doesn't matter what time of day I call, I get somebody right away, and that is absolutely priceless for this network." The network team has saved time, improved connections, and simplified network management thanks to Meraki.