Littleton Colorado

Executive Summary

Industry

- State and Local Government

Environment

- 48,000 residents
- Wired and wireless network infrastructure

Technology Needs

- Operational continuity for managing citizens' needs without being able to engage in-person
- Single pane of glass network management system
- Increase networking capability without disruption

Extreme Solution Components

- ExtremeCloud™ IQ
- ExtremeSwitching™
- Extreme Fabric Connect™

Results

- Eliminated issues with the wired network, connectivity, failover, performance
- Flexible, resilient network enables rapid deployment of digital technologies while providing an additional layer of network security
- Centralized management enables IT team to set up, monitor, and manage the wired and wireless infrastructure in a single solution

City of Littleton Takes Network Management to the Extreme

The city of Littleton, Colorado rests about 15 minutes south of Denver and is home to some 48,000 residents. Like most municipalities, it is moving towards a more digital environment with a growing volume of online connections and transactions within its city services environment. This year, in particular, with the COVID-19 pandemic impacting the entire globe, it was forced to accelerate its digital transformation plans and quickly enable its municipal workforce to operate remotely. It was the only way to ensure it could provide operational continuity for managing citizens' needs without being able to engage in-person.

Littleton is also a suburb of one of the emerging tech hubs in the country, so it's no surprise it is keen on having the most modern technologies available to manage the IT infrastructure that supports its operations. The network, after all, has been the lifeline of its operations through the past 10 months, and will continue to provide critical access to communications and other services as work environments return to some level of normalcy – though it will look slightly different.

Littleton manages a combination of wired and wireless network infrastructures to support each of the city's departments, including finance, public works, the police department, HR, the court system, communications, library, and even a Smithsonian-certified museum.

For its wired network, the city of Littleton is using legacy Ethernet routing switches from Avaya as well as VSP switches, as well as some newer Extreme Networks xl switches. The infrastructure is supported by Extreme's Fabric Connect, which allows it to run a flexible, resilient network that enables rapid deployment of digital technologies while providing an

additional layer of network security. The core network switches are connected by the fabric, as well as some of the edge switches, ensuring reliable service at both its main site and emergency operations center.

Littleton's Infrastructure and Platform Services Manager, Scott Rogers, says his team hasn't had any issues at all with the wired network, connectivity, failover, performance, or anything else.

"When people ask why application performance isn't where it needs to be, they usually assume it's in the network or the hardware," Rogers says. "For us, it's never been the network and it's never been the hardware."

The city already had a Wi-Fi infrastructure in place, but with the new demands – including a desire to eventually roll out a public Wi-Fi network – Rogers knew it needed to add on to its existing network. With Extreme, he conducted a comprehensive wireless survey, including all city buildings and offices, taking readings to create a roadmap for upgrading the network and adding quite a few access points.

"With the social distancing during the pandemic, we started using new areas for working and realized we had areas in our facilities we weren't used to serving with Wi-Fi access," Rogers noted.

Perhaps the single greatest asset the IT team has, though, it its network management solution. Littleton uses ExtremeCloud™ IQ to manage its networks. The solution provides Rogers and his team with a vast array of tools to set up, monitor, and manage not only the wired network, but also its wireless infrastructure in a single solution.

ExtremeCloud IQ gives Littleton's IT team a single pane of glass through which to view its entire infrastructure and usage, but it also provides the troubleshooting tools it needs to resolve any issues. With deep drilldown capabilities into network devices and users, and its integrated AI, ExtremeCloud IQ allows Rogers and his team to resolve any connectivity, access, performance, or permission issues quickly and easily – including easily kicking unwanted users off the network permanently.

Extreme's unlimited data feature even allows users to go back to look at an historical network data without any restrictions – as far back as they have had the system in place. This can allow for deeper network analytics and troubleshooting problems that may have begun days, weeks, months, or even years ago.

The city not only use the ExtremeCloud IQ platform for monitoring and management, but it can also use its predictive analytics capabilities to plot new access point placement and understand expected signal strength and coverage. With Extreme's heat map feature, the team can identify optimal placement for its Wi-Fi access points by uploading building floor plans and placing whichever APs they are using onto the map. The analytics capability will then revise the coverage heat map to show exactly where there may be gaps in coverage. The system even accounts for APs on adjacent floors to map coverage accurately. It's a great tool for efficiently and cost effectively assessing optimal placement of APs for reliable coverage in all areas as the city builds out its wireless infrastructure

Rogers says the experience has been seamless and even when migrating to the ExtremeCloud IQ platform, most users didn't even realize they had made a change. For the IT team, it provides a single interface to manage both the wired and wireless infrastructure and give them a complete view of what's happening at any point in the network.

"It's just so easy to go to one tool and have everything we need there that gives us a great vantage point into our network," said Rogers. "We can pop in and out of access points, everything is easy to find within the interface, and it's very easy for us to make any policy changes, network changes, and anything else. I can certainly recommend ExtremeCloud IQ."