



SUCCESS STORY
Transportation



COTA | PROBLEM SOLVED

Central Ohio Transit Authority (COTA) is expanding and upgrading its video surveillance infrastructure across municipal transit networks to keep riders safe.

Central Ohio Transit Authority: Building Smarter Transportation Solutions with Enhanced Video Security

In 2016, the city of Columbus, Ohio, was one of 50 cities that received the US Department of Transportation's Smart City Challenge grant. Today, the Central Ohio Transit Authority (COTA) is leading the country in building smarter transportation solutions to bring mobility as a service to the United States. As part of this effort, the organization is expanding and upgrading its CCTV and surveillance systems to increase coverage and improve security for millions of riders.

1.2 million
residents

18 million
passenger trips annually

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COTA is on a mission to help get more people to more places more easily by bringing together public and private transportation to enable mobility as a service. From its headquarters in Columbus, COTA services seven counties, reaching more than 1.2 million residents in Central Ohio. Its fleet of more than 400 vehicles provides more than 18 million passenger trips each year.

To keep riders, employees, and vehicles safe, COTA's security team provides 24/7 monitoring of live CCTV and video surveillance streams from stops and stations. Video also plays an important role in investigating accidents and incidents involving passengers or staff, so archived data must be protected and accessible at all times.

Until recently, busses, facilities, and Park & Ride sites each had their own platform for storing and managing their data. As the organization expanded its services to reach new and underserved locations, its rapidly growing network strained its video surveillance systems.

Each bus in COTA's fleet has between 9 and 11 high-definition cameras that are constantly recording video. Because of the high-resolution requirements of these cameras, it's not feasible to stream that video back to a central recorder, so each camera stores the data locally until it can be downloaded.

"We had disparate solutions for our CCTV and surveillance systems," says Aaron Hibbard, senior systems engineer for COTA. "As our environment grew, it became more and more cumbersome for end users to be able to pull video efficiently and accurately. We didn't have a simple way for them to manage all of the data that they needed to see."

With hundreds of cameras recording high-definition video around the clock, COTA's IT department grappled with capacity limitations. Across the system, white-box digital video recorders (DVRs) were being pushed to their limits, with as many as 40 cameras recording to a single DVR. With DVRs running out of storage space, COTA could not meet its goals for data retention. Downtime due to failed DVR drives became more frequent, and costs began to rise.

To solve the problem, Hibbard began bringing together all of COTA's video surveillance data onto a single, centralized platform, using Genetec's video surveillance solution with NetApp® E-Series storage.

"Today, we are migrating close to 4,000 cameras onto our NetApp E-Series storage," says Hibbard. "Instead of having a bunch of little systems, we were able to centralize storage and management under one umbrella. Between Genetec and NetApp, we have a bulletproof solution that's fully replicated and completely sustainable."

EASY TO DEPLOY, EASY TO MAINTAIN

Hibbard purchased E-Series as part of FlexPod® Select, a converged infrastructure solution with Cisco servers and switches and NetApp E-Series storage. The FlexPod prevalidated architecture made it easy to get up and running quickly with the push of a button. NetApp's integration with Genetec further simplified deployment and management of the solution.

"It's so easy to set up, I could be live and recording in less than 4 hours," says Hibbard. "After that, I never have to touch it. I sometimes forget that it's there."

The solution's simplicity contributes to low ongoing costs for management, resulting in a lower total cost of ownership compared to cloud storage. "When I look at the cost to value against some of the big hyperscale clouds, it turns out to be much more cost effective for us to keep it on site and be able to control our performance," Hibbard explains.

AROUND THE CLOCK AVAILABILITY

Unlike COTA's previous white-box storage solution, NetApp's video surveillance storage solution built on E-Series gives COTA enterprise-grade reliability, virtually eliminating downtime. Built-in redundancy and NetApp Dynamic Disk Pool technology delivers greater than 99.999% availability. Data is mirrored between two locations for seamless recovery in the event of a disaster.

“The system itself is a rock,” adds Hibbard. “Even if I lost an entire data center, I wouldn’t lose a minute of video. My users might see a blip for a few seconds before it reconnects.”

IMPROVING SAFETY AND SECURITY FOR MILLIONS OF RIDERS

With the performance and reliability of its new enterprise-grade video surveillance solution, COTA is fulfilling its mission and rapidly rolling out new projects to help keep riders safe. The solution’s simple, streamlined infrastructure allows transportation supervisors and security staff to spend less time managing data storage and more time on initiatives that increase security.

Until today, cameras mounted on light poles in the Park & Rides recorded directly to dedicated storage boxes attached to the light poles. The cameras were checked only in the event of an incident.

In the months between incidents, cameras could go down or drives could fail, but no one would know until the next incident, when they’d discover that there was no video. As a result, security supervisors spent hours every day observing the city’s Park & Rides.

Today, COTA is deploying a fiber network to its Park & Rides, enabling cameras to feed data in real time back to centralized E-Series storage. Soon, security personnel will be able to access live video streams from any of the city’s Park & Rides without ever leaving their desks.

As COTA continues to expand its reach to new and underserved locations, Hibbard is confident that the E-Series solution will grow with them.

“We built the platform so that we can continue to grow and grow,” he says. “With NetApp E-Series, I can add capacity in minutes. It’s purpose-built for speed, efficiency, and reliability. NetApp knows data. That’s why we buy it.”

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