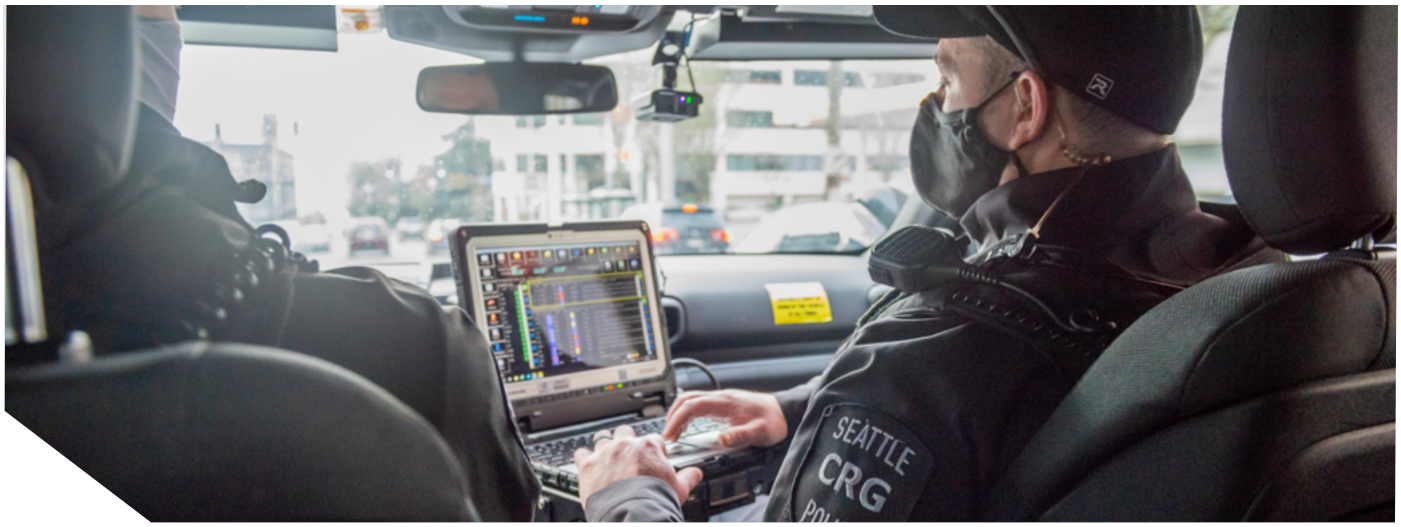

Solution: NetCloud Service for Mobile ▪ **Industry:** Law Enforcement ▪ **Use Case:** In-Vehicle Video Streaming

Seattle Police Stream Video from Connected Cruisers to Headquarters at Critical Times

Agency selects Cradlepoint's wireless edge routers and centralized management solution for connecting new video and evidence platforms

> **It's really nice to have a piece of technology that makes wireless connectivity possible, easy, and efficient, because if you lose that connectivity in the field, it can become a real safety issue for officers."**

Nick Zajchowski,
Strategic Advisor, Seattle Police Department

Summary

Challenge — The Seattle Police Department's long-standing commitment to protect and serve the public is evidenced by the officers on patrol, its fleet of high-tech cruisers, and safety-focused digital tools. The agency was planning to install new evidence and video capture platforms and utilize essential applications — tools meant to decrease operational inefficiencies, reduce officer overhead, and boost overall safety. The IT team needed to upgrade its old in-vehicle connectivity system, which lacked key capabilities and was about to be discontinued.

Solution — Seattle Police chose to deploy Cradlepoint's NetCloud Service for Mobile and ruggedized in-vehicle wireless edge routers featuring built-in LTE, GPS, robust Wi-Fi, and support for national public safety networks.

Benefits — A comprehensive solution of technologies by Axon Enterprise, Inc., and other partners, connected by Cradlepoint via cellular broadband, ensures critical video footage and other data can be securely connected to the Internet 24x7. With a highly reliable networking solution in place, the department can support existing, planned, and future upgrades to cruisers and connected devices.

Background and challenges

The Seattle Police Department (SPD) provides its more than 1,400 officers with digital tools to enable effective police work, improve operational efficiency, and help keep officers and residents safe. To this end, each cruiser had been upfitted with an array of essential technology including an in-vehicle video system, a mobile data terminal (MDT), and a router for offloading files when in the proximity of stations — all of which depended on wireless connectivity.

However, with its wireless solution nearing end of life and amid initiatives to provide greater visibility of police work for command staff and the public, it became clear to the department's IT team that a more robust networking solution was required.

"The environment with our in-car video system and MDT is more complex than our old one, so we needed a router that could handle the increased load," said Nick Zajchowski, strategic advisor for the Seattle Police Department.

Administrators recognized the need to implement a new, more scalable wireless networking solution to address some key challenges.

Stuck at the station

Previously, when an incident occurred that required a supervisor's review of footage from the in-vehicle video system, officers had to go off patrol and return to the precinct. Video would start offloading only when in range of station-based fixed Wi-Fi access points, adding to operational overhead and decreasing time on the streets.

Difficulty troubleshooting technology

When legacy networking equipment failed or required support, cruisers had to be taken out of service for the SPD's IT team to identify and fix the issue. The result was that officers often had to wait for another vehicle to become available or for the repair to be completed — keeping officers in the station instead of the field even longer.

"It was difficult to support our vehicles and the technology in them. We needed to make a switch to something new that was more stable and would keep our officers in their patrol cars and the patrol cars up and running," Zajchowski said.

Meeting minimum system requirements

As critical applications became more advanced and data-hungry features were added, including those requiring location-based data from GPS, the police fleet's existing wireless networking solution was no longer powerful enough, lacking the key capabilities for scalability in the future.

Solution

To keep the latest safety-oriented technologies connected 24x7, Seattle Police upgraded cruisers with Cradlepoint's NetCloud Service for Mobile and ruggedized IBR900 Series

routers, featuring a built-in Gigabit-Class LTE modem, space for a second modem, GPS, and robust Wi-Fi that extends far outside each vehicle. This comprehensive solution includes centralized cloud management, integrated and scalable security features, and support for national public safety networks. The cruisers also now leverage Axon's Fleet 2 video camera system.

Benefits

Video upload from the field

When an incident requires instant supervisor review, video can now begin uploading over cellular broadband the

> **We went with Cradlepoint because it was more robust, had more functionality, and was a lot easier to manage and configure. It was kind of a no-brainer."**
>
> **Nick Zajchowski,** Strategic Advisor, Seattle Police Department

moment recording stops, allowing command staff to analyze events while officers are in transit — and without taking them off the beat.

In the event of an officer-involved shooting, teams tasked with investigating the incident can review video evidence before arriving on scene.

"With our switch to Cradlepoint, we're able to continuously upload video from the in-vehicle router. Now, the supervisor can review what happened before officers even get back to the precinct, which has a significant time and resource benefit," Zajchowski said.

Bandwidth to accommodate future projects

This upgraded in-vehicle networking system offers more bandwidth and better data transfer performance than SPD has ever had, as well as the processing power to support next-generation video platforms for the foreseeable future, including those from Axon and other partners.

"Routers are becoming more and more important as we start to add all these pieces of technology that require wireless connectivity," Zajchowski said.

Seamless switching at the station

When in range of a precinct, Cradlepoint routers can be configured to automatically and instantly switch from a cellular connection to utilize the Wi-Fi-as-WAN feature — which is especially beneficial for uploading large video files and avoiding expensive data overages.

"It's really nice to have a piece of technology that makes wireless connectivity possible, easy, and efficient, because if you lose that connectivity in the field, it can become a real safety issue for officers," Zajchowski said.

Centralized management for remote troubleshooting

Now, using NetCloud Manager, the SPD's IT team can support the whole fleet's routers and connected devices from anywhere — without bringing vehicles back to headquarters. The ability to address connection issues and complete software updates enhances the operational efficiency of the IT team.

"I use NetCloud Manager on a daily basis. Now, when I do have to provide networking support for our vehicles, it's like night and day. It's so much faster and makes life so much easier," said Remigio Isla, wireless technician at SPD.