



Simplified data transforms frontline policing

The Edmonton Police Service
solves crimes quickly with
improved data insights

Frontline officers are leveraging new data insights to better serve the community. By implementing a new data management system, Edmonton Police Service (EPS) officers now have more time for proactive police work. A modern storage platform consolidates digital evidence from disparate sources that improves workflows and ultimately saves public funds.

Embracing innovation in police work

To protect citizens and ensure public safety, the EPS relies on data-driven evidence that helps officers respond to and prevent crime and disorder. “Our number one goal is to reduce crime for the citizens of Edmonton,” says Nathan Wong, director of technology services for the EPS.

The EPS prides itself on being a forward-thinking police service that balances law enforcement with the city’s social needs through strong community partnerships while cultivating a diverse, inclusive workforce. The organization serves the city of Edmonton, one of the fastest-growing cities in Canada. As the city has grown, so has the EPS; today, the organization employs nearly 3,000 people, including almost 2,000 police officers and 900 civilians who work as 911 operators, administrative support, and IT personnel.

Nathan shares, “We are a very innovative service that’s always looking to leverage technology. It’s all about supporting the frontline members in reducing crime and promoting public safety.” Increasingly, this means implementing new technologies that enable police officers to perform their jobs more effectively and ensure the critical systems the EPS relies on are always available.



Industry: Public sector

Country: Canada

Vision

Better serve communities with enhanced policing by leveraging technologies that use data more efficiently

Strategy

Improve data clarity, availability, and accessibility by implementing a scalable storage solution that saves public funds

Outcomes

- Saves CAD\$2 million over five years by moving to OPEX model
- Reduces backup times by 76.9%, down from 13 hours to 3 hours
- Achieves multisite resiliency with data center rapid recovery

He notes, “One of the things that’s very important to us when we’re talking about safety is being able to react quickly to the changing needs of the community.” This is exactly what happened in March 2020 with the onset of COVID-19. The EPS had to quickly transition to a remote work environment. The pandemic also triggered other changes, from a broader organizational level to the way police officers conduct their work. One big change was a new reliance on remote network access capabilities, video communication, and collaboration tools to allow members to conduct work safely both internally and with the public.

Changing needs in the wake of the pandemic

“The move to a mobile-enabled workforce was a direct result of the pandemic,” says Nathan. “It wasn’t something we had necessarily planned for, so we had to consider the implications of the transition on our infrastructure. Suddenly, we had to deploy a large amount of compute and storage infrastructure, but how could we provision this in a timely manner with supply chains simultaneously grinding to a halt?”



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– **Nathan Wong**, Director of Technology Services, Edmonton Police Service

This fundamental change ended up highlighting the need to transition legacy systems with inadequate provisioning models to modern platforms that could enable rapid deployment and expansion without extended procurement cycles. The pandemic exasperated procurement while also accelerating the pace of the EPS’ ever-evolving needs.

“To go from an idea to something being prepared and implemented would take six months to a year previously—we just can’t operate that way anymore,” says Nathan. “We have all these changing needs, and we have to be able to react quickly.”

The EPS needed built-in agility to enable officers and staff to quickly respond to the rapidly changing environment and new technologies—whether it’s a new video solution, cameras installed around the city, or other innovations coming into operation.

Boosting efficiency and saving police time

In addition to more infrastructure capacity being brought online, the EPS recently implemented an electronic content management system that stores evidence in a more organized, streamlined fashion. This, in turn, facilitates more efficient use of police resources.

Evidence was previously stored in many different forms—everything from physical pieces of paper, to video on CDs, to audio recordings. This assorted mix of data was stored in disparate systems. “We didn’t have a good handle on all the various assets we had,” says Nathan. Not having data centrally stored in a uniform way negatively impacted the EPS’ ability to efficiently perform their work as officers spent time searching for information in different locations.

The new electronic content management system enables the EPS to bring together the varied pieces of evidence into one single location, along with paper records that have been converted into an electronic format. “Every single piece of digital evidence can now be uniformly stored,” says Nathan. “So, when there’s an occurrence, police not only have all the information related to it, but they also have all the evidence that can be tied together.”

The new digital evidence system also frees up time for police to spend on other proactive policing activities. “We’re reducing the amount of time it takes for police to conduct their work, which has a direct impact on the capacity they have to serve more citizens of Edmonton in a timely manner,” says Nathan.



Evolving needs reveal gaps

There were major implications for the organization's IT team, as they anticipated the increased workload for digitally converting and storing the massive volume of both paper evidence and electronic exhibits.

"The question was where we were going to put all of this because we were talking about going from terabytes into the petabyte scale, and we didn't have the capacity to store everything with our legacy system," says Nathan. The legacy systems operated on a block storage level and simply couldn't accommodate any intensifying storage demands.

"The scalability of our legacy solution did not meet increasing demands for storage, nor accommodated our unstructured storage needs for projects, such as CCTV video that place a greater demand on our infrastructure," says Gary Wong, infrastructure section manager at the EPS. "We were looking for a solution that could meet our needs, was cost-effective, and would provide us with the reliability that we need for the future."

Increased flexibility and cost savings

The need to transition to a flexible, scalable, and cost-effective solution prompted a major overhaul of the EPS' storage infrastructure environment.

The EPS worked with Microserve and HPE to deploy a solution that includes the HPE GreenLake edge-to-cloud platform, HPE scalable object storage with Scalify RING, HPE 3PAR StoreServ 8000 storage, and the HPE Apollo 4510 Gen10 and HPE Apollo 4500 system, as well as Veeam for backup. "Microserve played a significant role in the coordination, procurement, and facilitating the contract between HPE and EPS. They provided added value through their warehousing and delivery with white-glove service to our data centers. They continue to be partners in our contract term for HPE GreenLake." The HPE and Scalify solution acts as a base layer for all the virtual infrastructure that supports the EPS' new digital asset management system.

Gary emphasizes that the HPE GreenLake platform and the procurement capabilities it enables

have been a beneficial part of the organization's digital transformation. "HPE GreenLake gives us so much flexibility and solves some of the challenges we had," he says. "The pay-as-you-grow capabilities mean we don't have to outlay so much capital at the beginning for things we don't need."

Nathan also praised HPE's delivery team and ongoing support teams. "They've done a fantastic job," he says. "They consistently support us with any questions, upgrades, and maintenance."

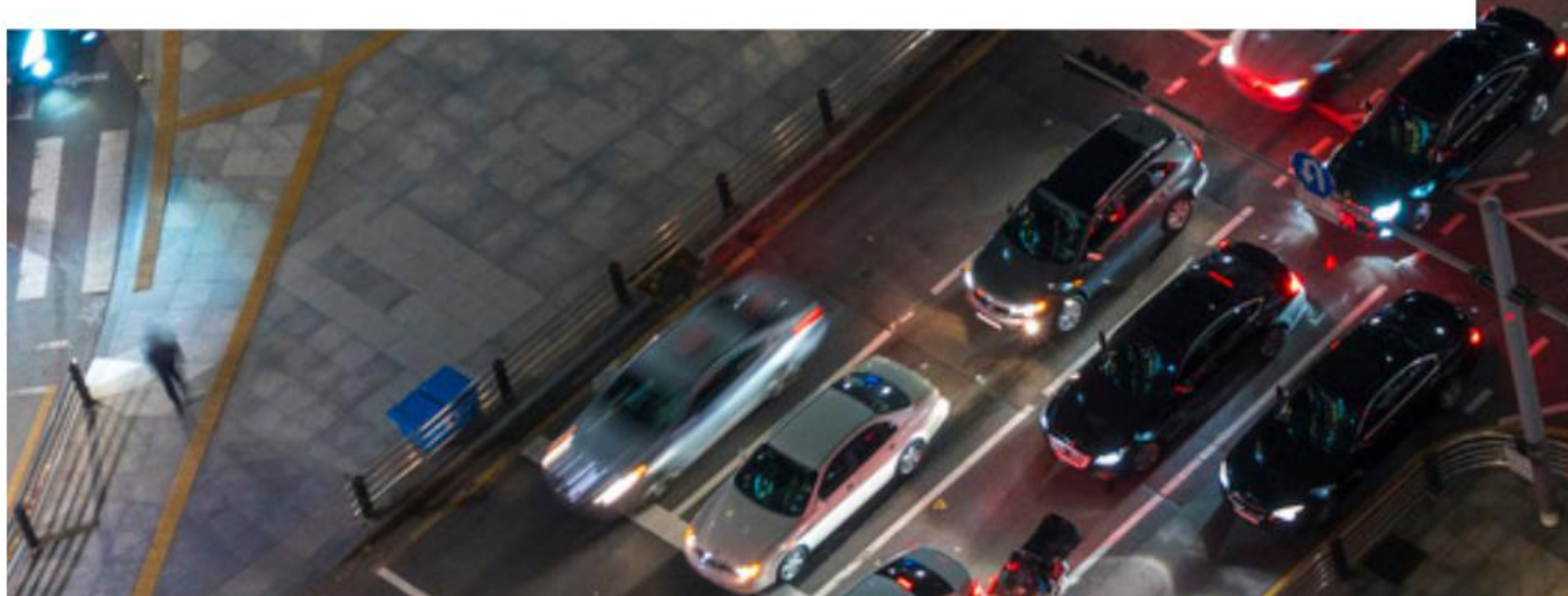
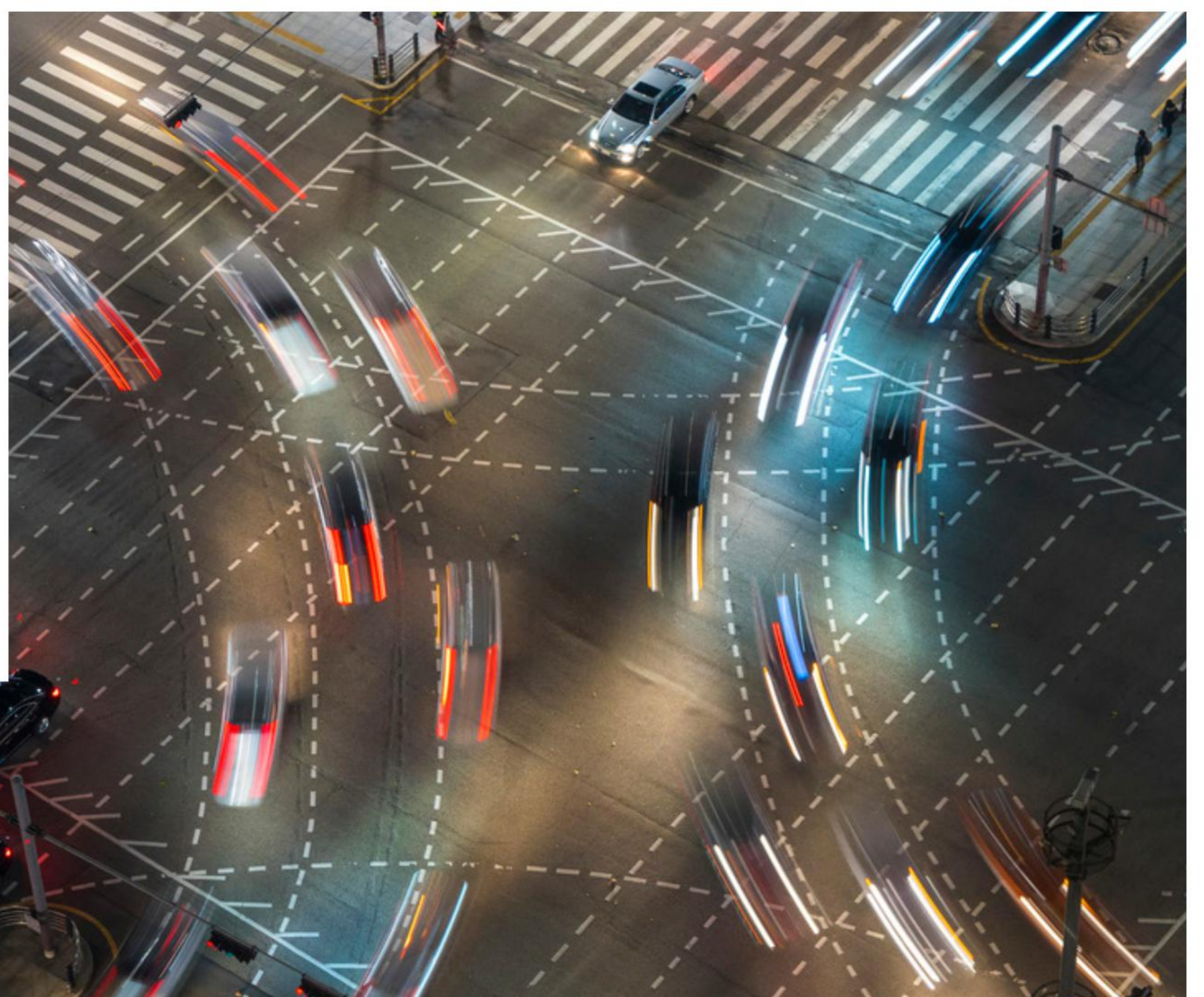
Implementing a solution that better suits the police service's current and future needs in a rapidly evolving environment meant switching from a CAPEX model to a consumption-based model. According to Nathan, this change will save the EPS about CAD\$2 million over the next five years.

Under the OPEX model, the publicly funded EPS is also saving government money by only paying for what it uses. "This allows us to more efficiently use our budget because we don't have to purchase a lot of capacity up front and have it sit there unused," says Nathan.



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Edmonton Police Service



More storage and faster backup times

The HPE GreenLake platform provides the EPS with mission-critical, scalable performance while Scality RING offers the flexibility needed to scale out the platform, store unstructured data, and put it onto performant hardware that meets the organization's needs while being cost-effective. The EPS is currently storing 1.4 PB of data on its new storage platform.

“With Scality RING on the Apollo platform, we have a great base for all the unstructured data that we know is coming down the line—such as video footage and audio recordings,” says Gary. “When you layer all those things together, plus knowing we don't need to pay for all of it up front, it really gives us the capability to meet the needs of the organization.”

Since deployment, the EPS' operations team hasn't experienced any challenges with performance reliability. “To just throw in a brand-new platform and have it run without any ongoing challenges, failures, or performance problems, I think speaks to some of the benefits that Scality has provided us,” says Gary.

Rounding out the overall solution is Veeam, which addresses the issues the EPS faced with their legacy backup system. “There were challenges around capacity with our legacy platform—it wasn't meeting the backup needs of the new storage requirements,” says Gary, adding the new environment needs 700 TB of backup storage, which is estimated to grow to 4.8 PB over the next five years. “Having Veeam and HPE Apollo gives us quicker backup times and restore times, along with better granular capabilities, which has improved our ability to restore and back things up much faster,” notes Gary. The EPS has reduced their backup times from 13 hours down to 3 hours.

Taking support to the next level

A high level of support from HPE Pointnext Complete Care— included with HPE GreenLake—has been key to the EPS' successful transition to a new storage infrastructure environment. “They're a great team to work with,” says Gary. “They made this a lot less painful than it could have been.”

Since implementation, monthly support calls with the HPE Pointnext Services team have been invaluable. “It gives us confidence knowing that the HPE and Scality teams are collaborating to make sure we're getting the best investment for our dollar,” says Gary. “Knowing that it's a holistic overview and they take into consideration everything within our environment gives us confidence we're going to be able to continue to leverage this for the long term.”



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– Gary Wong, Infrastructure Section Manager, Edmonton Police Service





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