Olathe Kansas Police Department Cuts Costs, Serves Up Video Surveillance with Coraid Low Cost Storage

The Olathe, Kansas Police Department is using Coraid ATA-over Ethernet based storage to store video footage from the department's in-car video surveillance system. Peter Carrero and Bourke Hutchinson, GIS Programmers with the Olathe Police Department, implemented a storage solution that runs on Linux servers and communicates with Microsoft embedded Windows clients. The solution provides the City of Olathe's Police Department with the ability to scale data storage incrementally as they need it, up to multiple terabytes, while meeting compliance mandates under the FBI for data security, at a cost two to three times less than other storage systems available on the market today.

Business Need

The City of Olathe, Kansas Police Department is responsible for law enforcement of a jurisdiction covering more than 54.2 square miles under the laws of Kansas and the US. The city is the county seat of Johnson County and is located twenty miles southwest of Kansas City. Olathe is recognized as the fifth largest city included in the Kansas City Metropolitan Area and is one of the fastest growing cities across the nation. The Police Department includes about 200 sworn (Police Officers), and 40 civilian employees.

Due to the rapidly growing city, the department introduced a mobile surveillance system to help fight crime back in October of 1996. Like other state agencies across the nation, Olathe wanted to keep up with evolving evidentiary standards with digital technology but stay within a city budget. The department was looking for ways to increase staff productivity, cut costs, and better manage technology costs and workloads, it also needed to demonstrate a strong business case for investing dollars to fund new initiatives.

Olathe selected a Coraid EtherDrive chassis, which today is storing digital video surveillance from 15 recording units, this will expanding to cover 70 enforcement vehicles. During it's initial launch, Olathe wanted to control access to video from 10 to 15 cars per shift and support multiple environments from Linux servers to Windows embedded clients, as well as meet the federal statues for evidence retention and data security. The Olathe Police Department integrated Coraid storage with Integrian's Digital Patroller video solution to gain complete and instant secured control over all their video.

Key Challenges

In-car video surveillance is a mature technology, a decade old tool in the arsenal of Police Departments across the US. Like many law enforcement agencies today, the 200+ employee department had been utilizing an analog video capture and tape-management system to help create potentially court-admissible evidence. It could take several hours to find and retrieve video clips, making the process complex and costly to administer.

Business need: The Olathe Police Department was looking for ways to meet government regulations, cut costs, and better manage their video surveillance, it must demonstrate a strong business case in order to pay for new initiatives.

Solution: The department turned to Coraid, Inc. The company worked with Olathe's Police Department to install a cost effective storage solution to retain in-car digital video footage for the department patrol cars.

Benefits: The Olathe Police Department expects that the new solution will help streamline the evidentiary chain-of-custody process and provide more secure access to the data while saving tax-payers' money.

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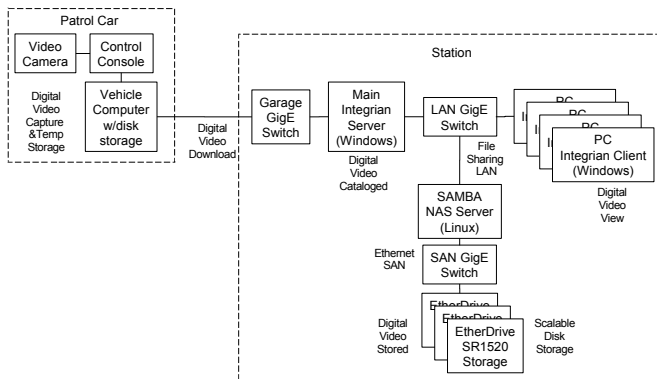
Senior Olathe officials wanted to reduce the amount of time that officers spent on administrative tasks so they could concentrate more on public-safety issues as well as eliminate high overhead to maintain systems. The department's video management processes were manual and extremely cumbersome. This led to extra time and money spent on tasks such as submitting, maintaining and accessing data. Even though the department had mobile data terminals in its squad cars, the terminals' slow connection speeds limited data transmission. With the Coraid and Integrian solution, officers can quickly and securely transfer gigabytes of data at the end of each shift versus the previous lengthy process of physically archiving tapes and DVDs.

Olathe also wanted a solution that was flexible, with the capacity to scale from handling many hours of recording on high-activity days to just a few hours of data recorded on an average day. To protect data integrity, Olathe also needed to implement a solution that met its security and disaster-recovery demands.

Solution: Coraid EtherDrive Storage connected to a Linux NAS Gateway exporting files with SAMBA

The Olathe Police Department turned to Coraid for assistance with the storage of video data from the city's Microsoft Window-embedded in-car video surveillance devices. Coraid was paired with Integrian's Digital Patroller. Integrian's NexCam allows Officers to capture high-quality digital images of traffic stops and criminal activities. The images can be stored on Coraid units for long periods and are instantly retrievable. The Integrian system generates authentication markers to ensure the integrity of the images and the chain of custody for legal proceedings.

Using Coraid's EtherDrive storage, Olathe Officers can upload video captures and incident reports at the end of their shifts. Olathe officers download video data at a rate of approximately 2 hours per vehicle per shift, and run 3 shifts per day.

All told Olathe is using 15 video units in their patrol and, on average, store 34 Gb of data per shift during the initial launch phase.

The backend of the mobile surveillance solution runs on MS-SQL servers. The enterprise-proven Intel Xeon processors provide industry-leading levels of computing performance at a very affordable price. The storage servers run Linux and the Reiser file system, and use SAMBA for communication services to Windows embedded clients and database servers that host applications for the video archiving and management. Olathe Police Department's technology group selected Coraid's SR1520. Using Coraid, Olathe PD stated they are storing data at a cost of less than $1000 per terabyte.

"Coraid's ability to quickly scale and deploy across our systems in less than an afternoon with very little disruption to our staff helped to make the project a success," said Carrero "Using our current solution, the PD will be able to do a better job of Law Enforcement using technology to help protect our citizens."

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Results

Olathe officials expect that the new solution will help streamline the chain-of-custody process and provide more secure access to the data while saving tax-payers' money.. Additionally, the advanced technology allows Olathe PD's Command-Staff to access digitally recorded evidence from their computer terminals as needed, improving efficiency and the quality of service provided.

"Protecting the public and ensuring the safety of our citizens is Olathe PD's top priority," says Bourke Hutchinson. "Using Coraid's incremental approach to storage, we are providing a cost effective solution that exceeds our expectations. Today, Olathe Officers are armed with a powerful way to improve performance and reduce costs associated with civil liability, personnel complaints and criminal prosecutions."

Storage Type:	Network shared video file storage
Operating System:	Linux, Windows embedded clients
Application software:	Integrian's Digital Patroller, MS-SQL server backend
Coraid products used:	SR1520
RAID configuration:	13 drives in RAID 5 plus 2 hotspares
Disk Size:	500gb/disk, 7.5TB of raw data space, 6.0TB of usable space
Cost Savings:	Less than half the cost of iSCSI or NAS solutions
Key Decision Factors:	Cost, Scalability, Reliability, Flexibility