SUCCESS STORY

Technology

NETAPP | PROBLEM SOLVED

NetApp modernized its video surveillance infrastructure to fuel powerful video analytics applications and to solve business problems in innovative ways.

NetApp Uses Video Analytics to Drive Digital Transformation

In a world that's being transformed by digital technology, it's impossible to move ahead with data in silos. The data authority for hybrid cloud, NetApp uses its own technologies to harness the power of data to drive digital transformation throughout its organization. Recently, NetApp Safety and Security (SAS) began a multiyear project to upgrade and to standardize its video surveillance deployment across the world to improve coverage and to use the latest in camera technology. With the new system in place, the organization can now use advanced analytics tools to turn its video data into an invaluable source of business insights.

1,020
cameras worldwide

120
office locations

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Ralph Renne
Senior Director of Workplace Resources

A Fortune 500 company, NetApp has 120 office locations throughout the United States and around the world. NetApp SAS monitors on-site security and provides 24/7 monitoring and assistance for NetApp's worldwide locations from its Sunnyvale, California, headquarters.

In 2017, NetApp SAS, in partnership with NetApp's Video Surveillance Solutions team, began a multiyear project to upgrade its global video surveillance infrastructure.

"At the time, we just wanted to upgrade our cameras," explains Ralph Renne, senior director of Workplace Resources at NetApp. "But when we sat down with NetApp's Video Surveillance Solutions engineers, they opened our eyes to ways that we could turn our video data into a strategic asset. That's when we started getting really excited."

The project began at NetApp's Sunnyvale headquarters, where 173 video cameras provide a comprehensive view of activity in the site's two garages, multiple building entrances, and building interiors. Before the deployment, the Sunnyvale site had a traditional CCTV solution with cameras that sent analog data over coaxial cables to local DVRs. In some cases, data was retained in the camera. If a camera broke, the video that was stored in the camera could be lost forever.

"Our priority is to protect and to secure our campus. But we can also play a role in digital transformation at NetApp by using our surveillance video to solve problems for the business," says Renne. "To do that, we really needed to move out of the old analog world and into the digital world so that we could break down silos and bring our data together."

MOVING INTO THE DIGITAL WORLD

NetApp chose 1080p Axis cameras, Milestone XProtect video management software, and its own E-Series video surveillance storage solution.

"E-Series was the obvious choice for us," says Ben Shaw, senior manager, SAS Americas. "It combines the reliability that we need to keep our employees secure with the speed that we need to power analytics for the business. NetApp's integration with Milestone and with other analytics applications gives us confidence that our infrastructure will serve us far into the future."

To date, 230 cameras have been replaced at NetApp's Sunnyvale and Wichita locations. Over the next 2 years, Shaw and his team will complete the upgrades to the remaining 520 cameras at NetApp's other global locations.

HIGH AVAILABILITY AND LOW MANAGEMENT OVERHEAD

The new solution has already changed how NetApp protects and secures its campuses, thanks to higher-resolution images, longer retention times, and improved reliability.

"Just after we had installed the new cameras, an employee reported that her car was hit in the parking garage," recalls Renne. "With the new solution, we were able to clearly see that her car had damage when it came into the garage. With the old system, we would not have had an image that was crisp enough to make that distinction."

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The high-density drives of E-Series enable NetApp to retain high-resolution video data for 30 days. More storage can be added nondisruptively as needed, without lengthy rebalancing or downtime. The solution also provides 99.999% availability and faster rebuilds if a drive fails, which enable continuous recording and reduce management overhead.

"Because they are constantly rewritten, drives fail over time. It could take hours or days to rebuild the storage array with a traditional RAID configuration," says Shaw. "Who can afford days of downtime in their surveillance environment? With NetApp, you pop the drive in, and it automatically picks up where it last left off without any downtime."

ANALYTICS IN ACTION

Although still in the early stages of the deployment, NetApp has already begun to use the new solution to solve business problems and to improve operational efficiency. In the past, the Facilities team used magnetic car counters to provide employees with useful information about remaining available spaces in the site's parking garages. These counters were continually failing and had difficulty detecting vehicles. The Facilities team now uses video analytics on their existing cameras to determine how many cars are in the garage. That's information that the team can also use for infrastructure planning.

"These days, car counters are a basic requirement for all garages," explains Renne. "We would have had to literally rip out and replace our old magnetic counters, but now we can use video data that we are already collecting to get an accurate and immediate result."

The new system is also now being used to accurately demonstrate the company's compliance with transportation demand management requirements from the City of Sunnyvale. According to code, NetApp must deliver 30% reduction in peak traffic during commuting hours. If the company doesn't meet the city's reduction requirements, it could face fines in the millions of dollars.

To achieve the reduction goals that the city has set, NetApp strongly promotes alternative transportation and work-from-home policies. In the past, the company relied on an annual employee survey to demonstrate compliance. However, the city considered all survey nonresponses to be single-occupant vehicles, resulting in consistent underreporting of traffic reduction.

"We needed to do more than just count cars," explains Renne. "Our cameras are now giving us an accurate way to determine the number of people in a car. Today, we can present irrefutable data that shows the progress that we are making."

Soon, Renne and Shaw hope to combine existing video data with facial recognition software to improve campus security through multifactor authentication for building access.

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"We have looked into replacing our badging system with alternatives," says Shaw. "But with facial recognition, we won't have to. With facial recognition, we can identify people with 99.9% confidence to provide that extra validation."

Facial recognition will also enable the SAS organization to identify and to monitor unrecognized people on campus. If a theft or criminal activity occurs, facial recognition could be used to identify persons of interest. Video images can be cross-referenced with the employee database to identify whether an individual is an employee, a contractor, or an unrecognized person.

SETTING A NEW STANDARD

As an early adopter of video analytics, NetApp is just beginning to explore the partnership between the SAS organization and the business. Yet, even at this early stage, it has already attracted the attention of customers as an example of analytics in action.

"Our sales teams are bringing us into discussions with customers to demonstrate what we are doing with our video data," says Renne. "They are impressed with the video quality and the video management capabilities. Now they're also asking, 'What else can we do? How can we apply video analytics to our own business problems?"

SOLUTION COMPONENTS

NETAPP PRODUCTS

NetApp® E-Series systems

THIRD-PARTY PRODUCTS

Axis Communications cameras

Milestone XProtect Video Management Software

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+1 877 263 8277

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