CASE STUDY

Future-proofing upstate: IT opts for Axis network surveillance.

Oswego County, NY uses IP video surveillance on existing backbone to promote public safety and secure county property.

Organization:
Oswego County

Location:
Oswego County,
New York, USA

Industry segment:
Government

Application:
Public safety and security

Axis partners:
Cedar Path Solutions Group, Genetec, Hewlett-Packard

Mission

Following a US Dept. of Health and Human Services report on workplace violence, Oswego County (NY) legislators were compelled to examine safety and security in their own municipal buildings. The conclusion: more needed to be done. After examining 15 different system bids ranging from analog DVR to all-IP, Oswego's IT department selected a county-wide IP video surveillance system to give the Sheriff's Department real-time information it needed to protect employees, taxpayers and county assets.

Solution

Cedar Path Solutions Group, a NY-based engineering firm specializing in network surveillance and physical security, recommended an IP video system that piggybacked on the county's existing wired and wireless network. Michael Klapheke, Senior Engineer for Cedar Path and Axis Certified Professional, led the team that installed more than 50 outdoor-ready and ruggedized Axis PTZ and fixed dome network cameras, feature-rich Genetec's Omnicast video management software and reliable Hewlett-Packard ProLiant DL380 G6 archiving servers at each building.

Video is stored on archivers and accessed via individual Genetec client stations throughout the county as well as streamed to the Sheriff's Department's central monitoring station. Motion detection triggers recording to optimize bandwidth and storage while accelerating archive searches.

Result

The Axis IP cameras have helped the Sheriff's Department identify thieves and recover expensive assets, including rolls of copper stolen from county storage facilities. The system is also set up to alert law enforcement to altercations in the courthouse parking lot. The Highway Department even uses network video to monitor weather conditions across the county, dispatching snowplows and sanders as needed from the nearest municipal garage during a winter storm, which saves the town time and money on potentially wasted man-hours.

AXIS COMMUNICATIONS

Always open: 'round-the-clock protection

Located along the shores of Lake Ontario, Oswego Country stretches across 1,312 square miles in upstate New York. Some of its 17 municipal properties sit isolated as far as 45 miles from the central services office. Most county facilities aren't manned after business hours, leaving them vulnerable to theft and vandalism. Oswego sought a county-wide surveillance system so the Sheriff's Department could watch these sites remotely, 24 hours a day, for unauthorized activity.

With the new surveillance project out for bid, 15 different integrators presented solutions. As the proposals came in, the IT Department questioned the scalability and future-proof capabilities of those recommending analog-based systems. Even though Oswego hadn't had a significant surveillance system in place – aside from a few standalone analog-based DVR systems – the IT department was confident that managing the video network would be similar to systems they already managed.

They decided that "openness" was the obvious choice. "Why go with a proprietary solution when you can use commodity off-the-shelf servers and add cameras in any increment you want?" questioned Rick Hogan, director of IT for Oswego County. "We're very familiar with IT-based systems. Some of the other DVR proposals would be like going back in time for us – and in the end would be more expensive."

Playing to Oswego's technical strengths

Since the county had an existing network that the surveillance system could piggyback on, including wireless connections via the 911 towers, there were no bandwidth issues when streaming the video data back to the central monitoring station.

"We could probably add another 50 or 60 more cameras on this system without a problem," shared Hogan.

While H.264 compression in the cameras played a major role in preserving bandwidth, understanding how to design the Axis camera/Genetec VMS solution to give the county full control over their video was critical. Klapheke, Oswego's main contact during the installation, had the technical know-how to make it happen as one of the first integrator engineers in North America to earn the distinction of being an Axis Certified Professional.

"Having an integrator on the project who can talk IP surveillance and who had the networking expertise was critical for us," continued Hogan.

Surveillance in the snow belt

The lake effect creates especially harsh winters in Oswego County, so they needed network cameras that could withstand extreme temperatures. Cedar Path installed AXIS Q6032-E PTZ Dome with Arctic Temperature Control and AXIS P3344-VE Fixed Dome Network Cameras for exteriors because both are rated to operate in temperatures as low as -40oC.

"The outdoor cameras deliver great image quality, automatically switching to day/night mode depending on the lighting conditions," states Klapheke. "Equally important, they both support advanced H.264 compression which is great for bandwidth and disk storage efficiency."

The outdoor quality is so great, in fact, that the county Highway Department even uses network video to monitor weather conditions and efficiently dispatch snowplows and sanders. For interiors, Cedar Path installed AXIS 216 MFD Network Cameras. "They not only deliver exceptional image detail, but they have a low form factor," explains Klapheke. "They're non-obtrusive and fit especially well in some of the smaller entrance areas and closer spaces where we deployed them."

Mosaics and multi-layered system control

Omnicast, Genetec's VMS used by Oswego, gives the county enormous flexibility in operating its surveillance network. The IT department remotely runs system health checks to keep components running smoothly. The Sheriff's Department uses a mosaic of rotating windows on a 55-inch monitor to view camera activity at all the facilities.

"Why go with a proprietary solution when you can use commodity off-the-shelf servers and add cameras in any increment you want?" We're very familiar with IT-based systems. Some of the other DVR proposals would be like going back in time for us – and in the end would be more expensive"

Rick Hogan, director of IT for Oswego County.

"Because Oswego chose to archive each building's video on site, we programmed the cameras to record at a high frame rate and high resolution and throttle down to a more moderate frame rate and resolution for remote viewing," explains Klapheke. "That way we capture and store the best images for forensic evidence."

Omnicast also allows Oswego to assign different password-protected permission levels to each user – from authority to view live feeds and retrieve recorded video to controlling pan/tilt/zoom of AXIS Q60 Series Network Cameras.

"We allow department heads to view cameras at their own facilities, but nowhere else," says Hogan. "They can log onto the system from their office workstation or from their home computers after hours through a secure Internet link." In response to queries from department heads, IT searches video archives for an event and then provides a video clip or snapshot of the incident.

Fighting crime and protecting liability with training to boot

Cedar Path field tested a pilot installation to determine the best camera locations. Motion detection – and, in some cases, cross-line detection – were crucial to monitor perimeters, parking areas and entrances to county property. They also use intelligent features in the AXIS Q60 Series PTZ cameras to enable automatic guard tours via the VMS.

"We've caught perpetrators trying to climb the fence around our Public Works storage facilities," shares Hogan. "Another hot spot is the parking lot for the county jail and family court house. On any given day we might witness some sort of altercation going on." The recorded video also helps the county refute phony slip-and-fall claims in the winter.

Axis cameras at county fueling stations deter theft and track how well drivers follow proper safety precautions. Hogan says the video doubles as a training tool on fueling safety, proper tank grounding and other procedures.

Crystal clear long-term protection

In Phase 2 of the installation they hope to add an additional 45+ Axis network cameras throughout Oswego as well as potentially expanding and connecting the county jailhouse system. They are also considering digitizing the few legacy stand-alone analog cameras so they can be integrated into Oswego's network surveillance system.

"There are two parts to our surveillance equation: personnel safety and asset protection," states Hogan. "The Axis/Genetec solution helps us address both. The cameras deliver crystal clear images — nothing blurry or choppy. And the video management system delivers the granular control we need to respond in real-time and quickly retrieve forensic video to support investigations and prosecution. Now that our staff has the expertise with this consistent platform, we can save time and money training future colleagues."

www.axis.com

48197/EN/R1/1206

About Axis Communications

As the market leader in network video, Axis is leading the way to a smarter, safer, more secure world – driving the shift from analog to digital video surveillance. Offering network video solutions for professional installations, Axis' products and solutions are based on an innovative, open technology platform.

Axis has more than 1,000 dedicated employees in 40 locations around the world and cooperates with partners covering 179 countries. Founded in 1984, Axis is a Sweden-based IT company listed on NASDAQ OMX Stockholm under the ticker AXIS. For more information about Axis, please visit our website www.axis.com

AXIS COMMUNICATIONS