

School District Protects Students and Staff on Open Campuses

Customer Case Study



EXECUTIVE SUMMARY

Organization: Los Alamos Public Schools

Industry: K-12 Education

Location: Los Alamos, New Mexico

Employees/Volunteers: 3500 Students;
750 Staff

Challenge

- Protect students, staff, and property on open campuses
- Minimize IT staff time spent on video surveillance
- Simplify camera installation and set-up

Solution

- Connected 95 Cisco Video Surveillance IP Cameras on three campuses
- Monitored live and recorded video feeds from workstations and tablets
- Automated camera and switch configuration using medianet technology

Results

- Increased awareness of people and incidents on campus
- Enabled one security resource officer to effectively monitor 10-acre high school campus
- Reduced time and skills to install and replace cameras

Los Alamos Public Schools centralized video surveillance for multiple campuses, so staff can monitor feeds from workstations or tablets.

Challenge

Los Alamos Public Schools, in New Mexico, has five elementary schools, a middle school, and a high school. Total enrollment is 3500. The size and location of the schools complicate physical security. For example, the high school spans 10 acres, and the middle school sprawls over 63 acres. Some campuses are adjacent to forested areas, so hikers or wildlife sometimes wander onto the grounds. All schools have an open-campus policy, and many high school students leave for lunch.

“Parents and staff want to make sure we know everyone who steps foot on campus,” says Ted Galvez, network administrator for Los Alamos Public Schools.

The district had already taken some security measures. The high school and middle school each has a local police officer, and the elementary schools share an officer. Everyone needs a badge to enter main entrances. But security officers who were watching the parking lot would not notice an unregistered visitor walking down a corridor. “Our principals wanted better security for all schools in the district,” says Galvez. “We have a small security staff, and we wanted to do more with the same manpower.”

School principals had tried video surveillance. But each school had a separate system, each with limited capabilities. For instance, safety resource officers could not view video at the other schools. Elementary school staff could not view live video feeds to make sure that visitors were checking in at the office. Some of the cameras couldn’t stand up to extreme temperatures, rain, and snow. And picture definition wasn’t good enough to identify faces and clothing, making video less effective for incident investigation.

“The superintendent and principals asked for a simple, low-cost way to prevent and investigate incidents, especially trespassing and vandalism after dark,” Galvez says. “We want to know who is on campus at all times.”

“With our old cameras, we had to review the feeds from every camera to find significant video. Honing in on the video associated with motion saves a lot of man-hours during investigations.”

Ted Galvez

Network Administrator
Los Alamos Public Schools

Solution

Now safety officers, principals, and secretaries can monitor all of their school’s video feeds. They can use workstations or tablets from anywhere on campus. The difference is a Cisco® Video Surveillance solution. “We had confidence in the Cisco physical security solution, because we’ve had a great experience with Cisco switches and IP phones,” says Galvez. “They are reliable, scalable, and consistent. And we can recognize faces even at nighttime, with Cisco high-definition cameras.”

The solution shows the value of today’s Internet of Things for physical safety and security. It connects people and things that previously were not connected. That includes cameras, campuses, district personnel, and the police department. The result is a safer learning environment.

The high school and two elementary schools are the first to use the new video surveillance solution. Advanced Network Management (ANM), a Cisco partner, installed 64 Cisco Video Surveillance IP cameras at the high school. Pan-tilt-zoom (PTZ) cameras cover open courtyards and parking lots. Safety officers can zoom in to identify cars and read license plates. High-definition cameras monitor main entrances and areas where students congregate. Fixed cameras monitor corridors so that school officials can find out about incidents such as vandalism, bullying, and falls.

Galvez set up 27-inch monitors for principals and secretaries so that they see when someone enters through the front door. “That gives them peace of mind,” he says. The police officer at the high school monitors different video feeds on a tablet. “When you cover such a big campus, it’s very useful to see what’s happening in different areas without having to walk there,” Galvez says.

At the two elementary schools, a total of 32 cameras cover the main entrances, gyms, and hallways. A secretary who sees an unfamiliar person picking up a child can question the person over the intercom or call the police if necessary.

Replacing the Cisco Video Surveillance IP Cameras takes little time or training because configuration is automated. Behind the scenes is medianet technology, built into Cisco Video Surveillance Manager. “Not having to manually assign IP addresses saved us about 16 hours for 95 cameras,” say Vance Krier, principal engineer for ANM, the Cisco partner.

And using the same cameras on all campuses makes it easier to keep all cameras working. If a camera fails, anyone on the IT team can replace it with a spare.

Results

Increased Safety for Students and Staff

The Internet of Things has created a safer learning environment. Now administrators and secretaries can see who enters the campus from their desks. If they are concerned, they notify a security officer. “Feedback from parents has been very positive,” Galvez says.

Student behavior has improved. “Knowing that someone is watching you now, or can watch later, changes behavior for the good,” Galvez says. And if an incident occurs, security officers can review it from different angles to get a more accurate story. They also have visual evidence if people deny their involvement.

“Not having to manually assign IP addresses saved us about 16 hours for 95 cameras.”

Vance Krier

Principal Engineer
Advanced Network Management, a
Cisco Partner

Throughout the day, safety officers can quickly see if any camera has captured unusual activity. One screen shows thumbnail images of video feeds associated with motion. If everyone should be in class and a thumbnail shows motion in a corridor, the safety officer investigates. “Now we can easily see the pathway a person of interest took through campus,” says Galvez. “With our old cameras, we had to review the feeds from every camera to find significant video. Honing in on the video associated with motion saves a lot of man-hours during investigations.”

If one of the security officers at the high school is ill, the police department can monitor the video feeds from the station.

Emergency Preparedness

As part of emergency preparedness, the district conducted a mock active-shooter exercise. Security staff and police officers used Cisco Video Surveillance Manager at the muster points. One monitor displayed live video, and another was used to play recorded video. District administrators watched video from different sectors on their laptops.

“During the exercise, the police remarked on the high image quality and how quickly we could pull up recorded video for forensics,” says Galvez.

More Efficient Processes

In the mornings, the district facilities manager can look over campuses from home, using a web browser. Do any campuses need a snowplow? Tree service after a windstorm? Cleanup after bears toppled garbage bins? “Not ordering snow plows when they weren’t necessary has saved us a lot of money,” Galvez says.

Next Steps

Now the district is working with the partner, ANM, to provide mobile video surveillance IP cameras. Different campuses can set them up temporarily in areas where students are smoking, for example, or graffiti keeps appearing.

The district is also planning to control access to equipment rooms using Cisco Physical Access Manager. To enter these areas, personnel will need to present a badge. “We’ll be able to admit technicians over the network instead of driving to campus to let them in,” Galvez says. “And we won’t have to pay to re-key our locks when employees are terminated.” The elementary schools might also use the solution for staff entrances. That way they can see which teachers and staff are on campus at any time.

Technical Implementation

The Cisco partner, ANM, saved two days of labor by using the medianet features in the Cisco switches and Cisco Video Surveillance solution. Ordinarily, assigning an IP address to a camera takes 5-10 minutes. ANM eliminates this time by turning on the Auto Registration option on the Cisco switch. As a result, cameras automatically obtain an IP address as soon as they were connected. They appear in Cisco Video Surveillance Manager a few minutes later, and start streaming video within 30 minutes.

The district hosts Cisco Video Surveillance Manager as a virtual machine on a Cisco Unified Computing System (UCS). Operating the software as a virtual machine speeds up deployment and simplifies management.

For More Information

To learn about Cisco Physical Security Solutions, visit: www.cisco.com/go/physec.

PRODUCT LIST

Network

- Cisco Catalyst® 2960 Switches
- Cisco 2821 Integrated Services Routers (ISR)

Physical Safety

- Cisco Video Surveillance Manager
- Cisco Video Surveillance IP Cameras 6000, 5000, 4000, and 2960
- Cisco Video Surveillance PTZ IP Cameras
- Cisco Physical Access Control

Data Center

- Cisco Unified Computing System™ (UCS®) C22 M3 Rack Server



Americas Headquarters
Cisco Systems, Inc.
San Jose, CA

Asia Pacific Headquarters
Cisco Systems (USA) Pte. Ltd.
Singapore

Europe Headquarters
Cisco Systems International BV Amsterdam,
The Netherlands

Cisco has more than 200 offices worldwide. Addresses, phone numbers, and fax numbers are listed on the Cisco Website at www.cisco.com/go/offices.

Cisco and the Cisco logo are trademarks or registered trademarks of Cisco and/or its affiliates in the U.S. and other countries. To view a list of Cisco trademarks, go to this URL: www.cisco.com/go/trademarks. Third-party trademarks mentioned are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (1110R)