ZyXEL

Overview

Solution Provider
Knight Security Systems

Industry
Government

Challenge
Install a turn-key video surveillance and monitoring solution for twelve state-supported living centers across Texas

Solution
A comprehensive and scalable network solution from ZyXEL that features centralized network monitoring & management

Benefits
Knight Security System's "common platform" solution delivers reliable video surveillance at all locations, saving time & money. ZyXEL's superior product and warranty service supports scalability as system needs grow. Safety & security are optimized via central monitoring and control.

Knight Security provides comprehensive network-based video surveillance system for the State of Texas

Challenge

The State of Texas Department of Aging and Disability Services (DADS) was created to administer long-term services and support for people who are aging and who have cognitive and physical disabilities. DADS also licenses and regulates providers of these services, and administers the State's guardianship program. DADS needed a method to insure proper care and safety to its residents and clients, and determined that a video surveillance solution would be the answer. The system requirements published by DADS included a turnkey video and surveillance and monitoring solution for 12 state-supported living centers spread across the State of Texas. Each living center campus was different; some had only six buildings and some had 62 buildings, but all required video surveillance.

The contract was awarded in December 2009. The installation began in 2010 and will be completed by February 2011 – six months ahead of schedule. The implementation required support for 3,200 network-enabled IP cameras covering 336 buildings on 12 campuses spread across the State of Texas.

Due to the scope of the project and the diverse nature of the installation locations, emphasis was placed on a solution that could be easily scaled. While one campus needed as few as 52 cameras, a larger campus required over 450. For DADS, the ideal solution would come from a common platform provided by a single vendor; a platform flexible enough to support such diverse installation scenarios while remaining cost effective.

Because of the relatively short time between the award of the contract and completion deadline, there was little time to spend troubleshooting or waiting for fixes. The equipment selected had to be highly reliable and robust enough to handle the demands of numerous IP video cameras running simultaneously.

Another consideration was network monitoring & management. With several thousand cameras in the field and multiple network switches providing backhaul, it was important that the entire network be easily monitored and managed from a central location. Remote management was required to compensate for the distance between locations and the time/expense of on site service calls.

ZyXEL

Solution

DADS selected Knight Security Systems because of their expertise in video surveillance and system design. The Knight Security solution provided a common platform across all systems while assuring seamless control by way of SNMP network monitoring and management. In the end it wasn't the lowest bid that won; it was the best solution.

Knight Security evaluated networking solutions from other vendors. However, only ZyXEL offered the proper mix of switches to meet all requirements of the DADS contract. The need for a small PoE switch with fiber backhaul to a high capacity core switch was of extreme importance. ZyXEL provided a comprehensive networking solution that precluded the need to bring in networking products from other vendors. ZyXEL's USG series of UTM security appliances was chosen to act as the gateway to the IP backbone and provide a secure IPSec VPN tunnel from each campus back to Knight Security's Customer Support Center.

- ZyXEL's XGS series of switches was used to aggregate fiber links between the buildings and provide routing functionality. The high capacity switches met the demands of always-on streaming video.
- ZyXEL's GS2200 series of switches provided Ethernet connectivity from the XGS switch to video (and other) servers located on each campus.

ZyXEL's ES series of PoE products was used to provide PoE power to the cameras. The cameras required only three watts of power from each port. ZyXEL's "consumption mode" allowed Knight Security to use affordable "half power" switches and still provide sufficient power at each port to power all cameras. The ability to prioritize ports also ensured that, should a high-consumption device be connected, critical devices would still operate without interruption.

ZyXEL's ProEMS network monitoring & management solution was also used to provide network monitoring for all network devices at each campus. ProEMS provides an easy to use interface for monitoring and managing all switches, UPS systems, servers and cameras deployed in the field.

Conclusion

Knight Security had previous experience deploying ZyXEL products and was familiar with product reliability. ZyXEL has over 20 years of expertise building carrier-grade products used by major Telcos and ISPs, which provided additional peace of mind. The type and behavior of packets on an IP video network is very different from typical data packets found on a typical business network. ZyXEL's experience building products to handle IPTV for carriers ensured the components would be able to handle the video load generated from the large numbers of video surveillance cameras on each campus.

ZyXEL's wide range of products allowed Knight Security to source all the switches needed for the deployment from one vendor. This meant that all equipment, from small PoE switches to layer 3+ switches with 10G backhaul were all offered by ZyXEL. As an added bonus, the total cost of the ZyXEL-based solution is significantly lower than competitor solutions offered by HP and Cisco.

ZyXEL's limited lifetime switch warranty and 5-year firewall warranty also added to Knight Security's peace of mind in choosing ZyXEL products. The unique feature set of the ES2108PWR (8 port full power PoE switch w/ Gb fiber backhaul) further convinced Knight Security of the end-to-end solution from ZyXEL.

Chris Hugman, VP and Executive Project Manager, was Knight Security's lead system architect for the DADS project. "ZyXEL provided the comprehensive, scalable network infrastructure required for this project" said Hugman, "and they backed it with outstanding support and training to insure that we had a successful deployment. They've been a great partner."

Products Used

ES2108PWR

ES2024PWR

XGS-4528F

GS4012F

GS2200-24

USG100

ProEMS

About the Solution Provider

Knight Security Systems, a leading security systems integrator in Texas, designs, installs and services advanced security solutions for access control, video surveillance, intrusion, encrypted wireless networks, and fire and life safety systems for commercial and public sector clients. Knight operates full service locations in Austin, Dallas and Houston and serves clients throughout the state. Since 1983, Knight Security Systems has worked with more than 3,000 Texas customers, supplying them with state-of-the art security solutions designed to specific needs.

Application Scenario
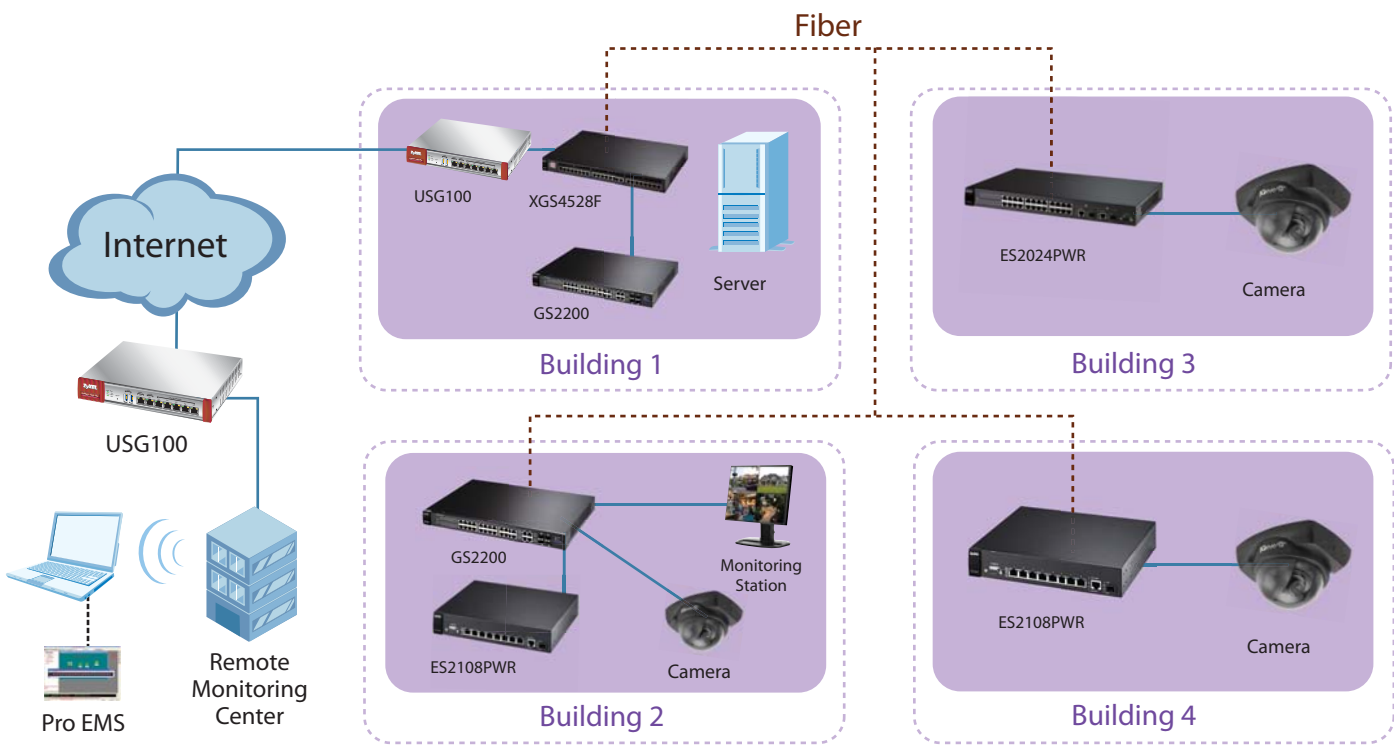
About ZyXEL Communications

ZyXEL offers a high-performance, carrier-grade suite of access and security solutions. Through its partner alliances, ZyXEL provides businesses with complete solutions and seamless support. With expertise in diverse technologies, such as wireless, security, Powerline, Ethernet and xDSL, ZyXEL offers integrated, secure network solutions to SMB, SOHO, residential and service provider markets. Located in Anaheim, California, ZyXEL's North America Channel Program offers industry-leading incentives with its full line of products. Please visit www.us.zyxel.com for more information.