State University of New York at Buffalo Enables IP Surveillance Deployment With Power over Ethernet

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Mr. Michael Blumenson
Senior LAN Analyst in the Office of Medical Computing, The University at Buffalo

THE CHALLENGE

For several months, computer equipment and sensitive laboratory materials went missing or were tampered with in faculty offices and the laboratories in the University at Buffalo's Health Science Complex. According to Michael Blumenson, Senior LAN Analyst in the Office of Medical Computing, the school decided to install security cameras in problematic areas, such as the loading dock of the complex, in order to stop the burglaries. In addition to stolen equipment and chemicals, burglars were suspected of tampering with and ruining important lab experiments.

Under Mr. Blumenson's supervision, the IT staff developed a plan to deploy security cameras throughout the medical department – in the hallways, near doorways and also inside the loading dock where there is a high amount of traffic. While deciding where to place the cameras was relatively easy, it was crucial that the deployment wouldn't break the bank, as well as be practical given the limited staff to manage internal security..

A solution was required that would leverage the university's existing Ethernet network in order to ease the management and monitoring of the new IP-based security surveillance system.

THE SOLUTION

The University at Buffalo invested in approximately 60 Axis 211 security cameras and a capture server running Milestone xProtect Enterprise Software. A solution that would power the remote cameras inside of the medical complex, facilitate cost-effective deployment of this IP-based security surveillance system and interoperate with the existing base of Ethernet switches was required.

The university was able to meet all the requirements of this project with the help of Power over Ethernet (PoE) technology from PowerDsine Ltd., which designs, develops and supplies integrated circuits, modules and systems that enable the implementation of PoE in local area networks. The PowerDsine midspans also are compliant with the IEEE 802.3af PoE standard which ensures safe and reliable power support for terminals, such as security cameras, Voice over IP phones and Wireless LAN access points.

The IT staff deployed Axis 211 cameras in high-traffic areas throughout the medical facility using PowerDsine's one-port 3001 and 6001 PoE midspans, which deliver and manage electrical power over existing data network cables. Using Ethernet cabling to power the Axis cameras from the Cisco switches significantly reduces the time and money associated with hiring an electrician to wire new AC outlets in hard-to-reach locations, like stairwells and the building's loading dock area.

PowerDsine™

PowerDsine 3001, 6001
Power over Ethernet Midspans

IMPLEMENTATION

Utilizing PowerDsine's PoE Midspan technology, the University at Buffalo's IT staff deployed Axis 211 cameras, which record motion, in five buildings in the Health & Science complex between April and June of 2005.

"The great thing about using PoE for the IP surveillance deployment is that you don't need a dedicated power source for each remote camera," said Mr. Blumenson. "Because the cameras are connected to PoE-enabled Ethernet, we can move the cameras up to 300 ft away from the power source and they still work efficiently."

Another significant benefit for using PoE is that the University at Buffalo has saved approximately $500 per camera location because the IT staff pulled inexpensive Ethernet cabling rather than wiring new AC outlets around the medical complex. Additionally, existing Ethernet drops were used so savings were further realized by not having to install and dedicate new drops.

Soon after the implementation at the Health & Science complex, the thefts that had occurred in "high traffic areas," such as the loading dock, came to a "dead stop," said Mr. Blumenson.

CONCLUSION

Not only have thefts and experiment tampering declined dramatically at the university, but Mr. Blumenson noted that public safety is practically a non-issue now that they have deployed the motion-sensitive security cameras.

"The new cameras with PoE have created a terrific deterrent and have been a breeze to deploy and manage," said Mr. Blumenson. "Our old surveillance system was antiquated and difficult and crashed a lot, but now we have an IP-based system that can be managed by one person from a remote PC console 24/7."

Leveraging PowerDsine's PoE midspans, the University at Buffalo Medical School's IP surveillance systems is an excellent model for other security camera implementations.

BACKGROUND

Sometimes known as "The City of Good Neighbors," Buffalo, New York is the second largest city in New York State and houses the largest research university in the northeast. The University at Buffalo was founded in 1846 as a private medical college and merged with the State University of New York (SUNY) system in 1962. The university now enters its 159th year and the medical school remains the cornerstone of this state institution.

A member of the prestigious Association of American Universities, the University at Buffalo ranks first among the nation's research-intensive public universities. The school's strengths in medicine, engineering, and computer science enable it to conduct multidisciplinary research and provide education at a level of excellence that few universities can match.