



Seeking Surveillance Capabilities to Match their Security Objectives, Delaware Valley School District Invests in a Complete IP Upgrade

Overview

With increased security a priority for school districts across the country, administrators are taking a close look at their technology to ensure it can deliver in an emergency. Concerns over active shooters and other violent scenarios have districts paying attention and putting heightened security measures in place.

Christopher Lordi, Director of Administrative Services at Delaware Valley School District in rural, northeast Pennsylvania, knew it was time to upgrade his district's surveillance technology, so he turned to the integration expertise of Guyette Communications to get the job done.

The DVR system that covered Delaware Valley's seven schools and nine buildings was state-of-the-art when it was installed a decade ago, but it was no longer meeting the district's needs. Administrators complained that it was difficult to view and manage video from all of the cameras as a unified system. The analog video made it hard to identify faces and see other important details. And the outdoor PTZ cameras that panned back and forth were causing them to miss a lot of activity. "We had a lot of blind spots," says Chris.

Guyette Communications, of Plymouth, PA, has worked with the district for over a decade supporting its technology needs, so Chris looked to them for guidance. Scott Surochak and Rick Scalzo, both of Guyette, recommended a new-to-market VMS, Vicon's Valerus, that they felt would provide all the features and performance the district sought in a very cost-effective manner. They also recommended that the district abandon their analog cameras and standardize district-wide on higher performance, megapixel IP models.

The significant expense of replacing not just the VMS system, but hundreds of cameras district-wide, required buy-in from the school board. Rick and Scott, along with Vicon's regional sales manager, Doug Stadler, provided an in-depth

Organization

Delaware Valley School District



Challenges

- Provide a unified district-wide VMS solution that makes it easy to view and manage all cameras through a single platform
- Provide flexible monitoring access to school district's police force
- Record high-resolution video capable of capturing license plates, faces and other important details
- Eliminate blind spots previously resulting from use of PTZ cameras
- Make it easy to search large quantities of video for forensic evidence of crime or vandalism

Solution

The district invested in an end-to-end Valerus VMS solution, including servers for each building, 400 cameras and several NVRs. The system has been designed to minimize bandwidth transmission between buildings while providing a unified management interface.

Results

The school's police force is empowered to better maintain safety through access to high-resolution video viewable from workstations and smartphones. Strategically placed cameras have eliminated blind spots. The thin-client interface gives complete viewing flexibility, including the option to share video with local or state law enforcement. Crimes have been solved that would not have been possible with the previous system.



“Our school board takes safety and security very seriously. They want top-notch safety, and Valerus delivers that.”

~ Chris Lordi, Director of Administrative Services, DVSC

demonstration of the capabilities of Vicon’s new Valerus VMS, along with its line of IQeye Alliance cameras, to the school board. The new system would allow them to clearly identify the faces of visitors, read license plates within the school parking lots, eliminate current blind spots throughout the campuses, and easily search video to quickly find evidence of crime or vandalism. Convinced of the long-term value of the investment, the school board gave a green light to proceed.

The Installation

Installation began in March, 2017 and continued throughout the summer. Approximately 400 cameras were installed throughout the district’s nine buildings, almost all of which are Vicon 3MP IQeye Alliance fixed domes. These provide coverage of all entrances to buildings, busy hallways, and spaces like lunchrooms, auditoriums, playgrounds, parking lots and athletic fields. In addition, Vicon Cruiser domes with 30X optical zoom were installed in each parking lot to capture license plates. To support so many high-resolution cameras transmitting at full frame rates, Guyette installed a dedicated security network capable of handling the bandwidth. All cameras are hard wired with new CAT-6 cabling, which feeds back to CISCO switches and a fiber backbone that runs through each building.

To minimize bandwidth transmission between buildings, Guyette recommended that each school locally record video from its respective cameras. The five lower schools have each been equipped with a single Valerus server that both runs VMS application software and performs as an NVR. The middle school and high school, which share a building, have an application server plus four NVRs to support the higher number of cameras. Because the Valerus VMS software makes exclusive use of a thin-client, there was no need to install software on any workstations. Complete user and administrative functionality is available through a standard web browser interface.

Rick says that “Installation went very smoothly. The system works well and it’s easy to navigate and program. I’m used to systems where we have to do everything manually, but with Valerus, it does a lot of things for you. For example, you can copy programming to multiple cameras. Setting up one camera and then copying it to 50 others is a huge time saver.”

“The system is also really easy to update,” he says. “Two new Valerus versions were released during the months we were doing the installation, and we just had to download it once each time to an application server, and then it was automatically pushed out to all the other servers on the network.”



Putting the System to Work

Unusual for a district of its size, Delaware Valley has its own, full-time, six-person police force. Among other responsibilities, this force is tasked with monitoring the new Valerus system.

Each officer has been equipped with his or her own workstation from which they can monitor the cameras physically located at their assigned schools. Administrators at each building also have access to view local cameras. In addition, a centrally located, district-wide monitoring station has been set up to make it easy for officers and school officials to keep an eye on the district as a whole.

Rick Scalzo explains that while the VMS thin-client interface allows the officers to view video from anywhere, including on their phones or tablets, his team recommended the purchase of high-performance, manufacturer-certified PC workstations for each officer’s monitoring station. This was to ensure that these computers would have the necessary processing power to display large numbers of high-resolution camera feeds simultaneously. These workstations are hard wired to the network to provide the fastest and most reliable connectivity to the application server. Chris Lordi says that the district has also provided all officers with iPhone 6s, which they use regularly to monitor what’s happening at their buildings.

One of the capabilities that the district required of the new system is the ability to read license plates of vehicles entering or exiting school grounds. Officers are able to take control of the PTZ cameras in each parking lot and zoom in on the plates of any vehicles of interest. This can even be done via the iPhone interface. Chris explains that it has not been necessary to integrate Valerus with any special license plate recognition (LPR) software because his team of police officers has immediate access to databases where they can look up plates as needed. However, this integration is currently available for Valerus customers and can help automate the process for those who need it.

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~ Rick Scalzo, Guyette Communications



Solving Crimes

There isn't a lot of criminal activity in the Delaware Valley School District, thanks to outreach programs that create a collaborative relationship between the school police force, administrators, students and parents. However, sometimes issues do occur, and Valerus has already helped the district solve a theft.

Chris describes an incident that occurred while the system was still being installed in the spring of 2017. “There was a theft from one of the administrative offices. The employee thought the office had been locked, but our surveillance video was able to show that it was not, and displayed the comings and goings of everyone who entered the office during the time in question. The video quality was so clear that the thief’s face could be identified. The footage was turned over to the local police who were able to apprehend the thief and recover the stolen property. With our old VMS system, the video wouldn’t have provided enough detail for us to identify the culprit.”

Chris says he’d love to say that Valerus’ “museum search” made it possible to find the incriminating video in minutes. However, because the system was just getting installed, not all features were operational yet and his police force had to manually look through hours of video. “The officers are really looking forward to being able to use the search function in the future, now that we’re all up and running. They love how you can draw a box over an area of the video where you know something has happened, and Valerus will do all the work for you,” he says.

In speaking about response to crimes and emergencies, Rick adds that because Valerus uses a thin client, the school district has the luxury of easily providing outside law enforcement with access to their system. If they ever needed help from local or state police, like in an active shooter situation, administrators can provide them with a link to the district’s network so that they can better coordinate a response. This would have been impossible with their old system.

Embracing the Investment

Chris says that “Our school board takes safety and security very seriously, so for them, this significant investment was justified as soon as we showed them what it can do. They want top-notch safety, and Valerus delivers that.” Buy-in from teachers, and the union, who have expressed reservations over the placement of many new cameras that didn’t previously exist, has required additional communication and education. Both Chris and Rick have made it very clear that the upgraded system is not for the purpose of intimidating or keeping closer watch on employees as they perform their daily jobs. “Our main concern is thwarting security threats and keeping everybody safe. The additional cameras and new software might help us break up a fight or address bullying issues, but it’s also important for much more serious situations, like dealing with an active shooter or act of terrorism. Now we can use cameras to follow an intruder throughout our buildings, and that can help us keep everyone safe while we apprehend him.” Chris says that “When we put it like that, everyone gets on board.”

Chris is extremely appreciative of the support Guyette Communications has provided throughout this project, including individually training each school principal as their building was completed. “I can’t stress how well Guyette has delivered for us. They’re flexible, reliable and compassionate, and they’ve been a true partner at every step of the way. I’d recommend Guyette to anybody.”

With school back in session, and the district’s police force busy implementing its many safety programs, Chris looks forward to another school year without any major security incidents. However, with a new Valerus system and high-resolution cameras in place, he knows he now has not only the right people but the right technology to handle any crisis.