JetStor®
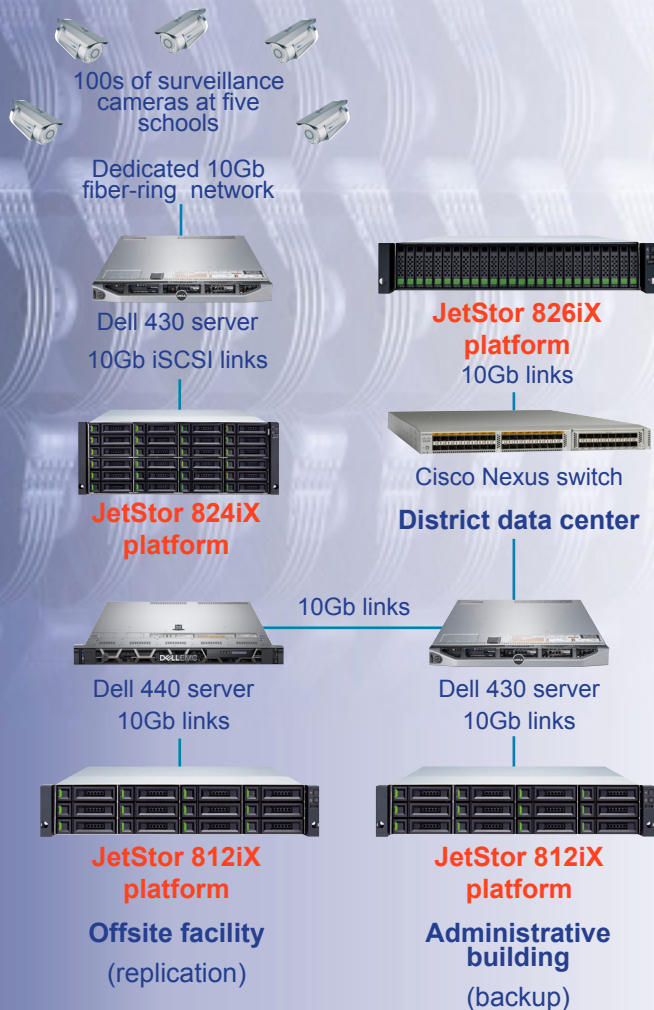
Storage. Solutions. Support.

Cost-Effectively Storing Production, Surveillance, Back-up & Disaster Recovery Data

100s of surveillance cameras at five schools

Dedicated 10Gb fiber-ring network

Dell 430 server

10Gb iSCSI links

JetStor 824iX platform

JetStor 826iX platform

10Gb links

Cisco Nexus switch

District data center

10Gb links

Dell 440 server
10Gb links

Dell 430 server
10Gb links

JetStor 812iX platform

Offsite facility
(replication)

JetStor 812iX platform

Administrative building
(backup)

School District Affordably Supports Students, Operations & Video Surveillance with JetStor® Arrays

THE ORGANIZATION

Based in Spring Mills, PA and spanning a handful of rural communities in the middle of the state, Penns Valley Area School District takes pride in its progressive education. Comprised of a high school, middle school, and three elementary schools, the district integrates technologies into daily instruction. K–6 students each have an Apple iPad Mini and older students have MacBook Air laptops. Instruction is personalized and classrooms are creative learning spaces for group and project learning.

THE CHALLENGE

To enhance security on its campuses, the District needed to support video surveillance cameras. With each camera generating a megabyte of video every second, its legacy, multi-vendor storage devices lacked the speed to store continuous video feeds from several hundred cameras, undermining school safety.

The District uses Jamf, the Apple mobile device management solution to administer the 1,800 computers and iPads used by its 1500 students and 200 faculty and staff. Jamf, however, generates a significant amount of log data daily that also strained the District's storage.

Moreover, the District must store business, financial, and student management information, including a database-driven business application developed for some PA school districts.

"This business app has a large client that our legacy storage couldn't load quickly for users," said Cody Wian, Director of Technology for Penns Valley Area School District. "We also want to bring our student information system inhouse from a cloud, and we plan to roll out virtual desktops, both of which would tax our existing systems even further."

Finally, the District required strong backup and replication for data protection. It was paying $1000/mo. for backup services, an ongoing expense it wanted to eliminate.

"Our legacy devices lacked the performance to meet our current needs," added Wian. "To ensure our educational standards, we wanted very fast, affordable solutions, ideally from one vendor to ensure we always had a single point of contact for service."

THE SOLUTION

One **JetStor 826iX 2U 26 bay All Flash Array** from AC&NC
One **JetStor 824iX 4U 24 bay Array** from AC&NC
Two **JetStor 812iX 2U 12 bay Arrays** from AC&NC

The JetStor 824iX and JetStor 812iX Storage Platforms
from AC&NC

SYSTEM CONFIGURATION

- One **JetStor 826iX 2U 26 bay All Flash Array** with 12 1.6TB SSDs
- One **JetStor 824iX 4U 24 bay Array** with 24 10TB drives
- One **JetStor 812iX 2U 12 bay Array** with 12 10TB drives
- One **JetStor 812iX 2U 12 bay Array** with 12 with 4TB drives

BENEFITS IMMEDIATELY REALIZED

"Our **JetStor Arrays** deliver extraordinary performance and capacity, enabling us to meet the district's present and future needs," explained Wian. "Moreover, we maximized our school budget by purchasing all four devices for less than what a single unit from a major vendor would cost."

The **JetStor 824iX platform** reliably ingests nearly 300Mb of video streams from the schools surveillance cameras every second. The system stores about 100 terabytes of video, well short of its quarter of a petabyte of capacity.

"We save all this video without read or write errors for added peace of mind," said Wian. "The **JetStor 824iX system** also gives us one pane of glass for all our video recorders, avoiding the cost and maintenance of many individual video servers. With a **JetStor solution**, we cost-effectively improved school safety."

The District benefits from the ultra-fast **JetStor 826iX Array** with its flash drives. "We effortlessly store Jamf logs and data from all of our devices," said Wian. "We can quickly push out apps like our inhouse student information app, virtual desktops, and our business system. Users are delighted that they no longer have to wait for clients to load or for reports to be generated."

Thanks to its **JetStor 812iX Arrays**, the District has strong data protection. One, located across a street from the District's high-school data center, backs up production data, eliminating monthly service costs. The second, located off-site, stores replicated data for disaster protection. Wian added that "We were confident that the **JetStor systems** would provide high-speed performance and capacity, but we were pleasantly surprised by how affordable they are."

HOW WE DID IT

The District installed the 2U **JetStor 826 chassis** at its data center and linked it to a Cisco Nexus switch at 10Gb speed. With its fifth-generation Intel D1500 Quad core processor and twelve 1.6Tb SSDs, the next-generation storage system effortlessly supports even the most data-intensive student and business applications. Configured for RAID 10 with data mirrored and striped, the solution delivers very robust data protection

The District deployed the 4U **JetStor 824iX platform** also in the data center to store footage from the surveillance cameras. The 24-bay unit, expandable to over 4.4Pb of capacity, stores hundreds of live video feeds using a 10Gb

CUSTOMER TESTIMONIAL

The Sanos 4.0 Web-based management interface
from AC&NC

The JetStor 826iX, 824iX & 812iX Storage Platforms
from AC&NC

fiber-ring network linked to several buildings that is isolated from the District's production network. It links via 10Gb iSCSI connections to a production VMware hypervisor environment that captures the video feeds from the cameras.

One 2U **JetStor 812iX Array** with 12 4Tb drives sits in an administrative building near the District's high school and serves to backup the District's production data. It links at 10Gb Ethernet to a disaster recovery VMware hypervisor environment hosting Veeam Backup Essentials, which connects to the data center over a private 10Gb network.

For greater redundancy, the District replicates its data to a second **JetStor 812iX solution**, provisioned with 12 10Tb drives, at an offsite facility. Traffic replicates to an offsite Dell 440 server and then to the **JetStor platform**. The **JetStor 824iX** and **812iX Arrays** operate at RAID 6, which is ideal for critical applications.

"I'm familiar with managing storage networks, particularly from the big brands, and the **JetStor platforms** are the easiest solutions I've ever set up" said Wian. "We didn't need a vendor engineer onsite. Moreover, we now have a consistent user interface across all our storage systems, which makes administration even easier."
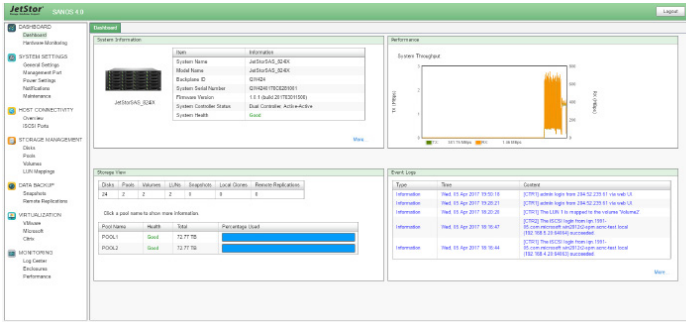
CONCLUSION

"We're very happy with AC&NC because its staff was focused on helping us to meet our needs, not selling products," said Wian.

"For us, that was a big difference over the big-name vendors. AC&NC not only provided outstanding solutions, it also delivered far better value than what we would have gotten from other providers. We bolstered our infrastructure, enhanced the safety of our students, and maximized the district's budget. That's an excellent bottom line."

ABOUT ADVANCED COMPUTER & NETWORK CORPORATION (AC&NC)

AC&NC™ / **JetStor** meets the evolving needs for data storage, protection, and management. We leverage leading technologies to offer high-value solutions for NAS, SANs, clouds, and hyper-converged infrastructures (HCIs). Since 1994, our customers have spanned virtually every industry, and range from Fortune 500 enterprises to small and medium-sized firms. We support environments from data centers and clouds to branch offices and remote sites.

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