CASE STUDY

Blue Valley School District

Blue Valley School District Selects Qumulo File Storage for Video Surveillance and Sees Major Impact to Student and Building Safety

Blue Valley School District (BVSD) is the fourth largest district in Kansas with 39 schools and 44 total buildings. They serve a diverse population of 22,000-plus students in grades kindergarten to 12 that speak 90 different native languages. Day-to-day they are committed to examining students' diverse perspectives and preparing them to thrive at school or out in the world--efforts which have been recognized as having an impact on the community.

The technology they also invest in, ranging from servers for file management to cameras that monitor district-wide activity, benefits teacher instruction, student learning, and school safety for BVSD and other large districts throughout Kansas and the Kansas City metro area of Missouri. The District's storage and data demands increase with school safety concerns and evolving technology use.

Blue Valley is not alone in experiencing growing pains from unstructured file data. At the root of their unstructured file data is added equipment, especially security cameras, and software to address growing safety concerns in the wake of devastating school incidents, as well as evolving instructor, student, and curriculum needs. School districts, including BVSD, know change and pressure, but these have been constant the last few years with the pandemic and its after-effects, driving a need to consider software-defined, centrally-managed data storage.

Qumulo provides scale and performance to support video surveillance, IT modernization, and district growth

The district's network video recorder (NVR) system provided by Avigilon, which includes 1,500-plus cameras for building surveillance, initially required 80 physical servers. Those were managed by another storage vendor that was "thousands and thousands of dollars in district costs and required considerable time for a lean team of engineers to manage and handle manufacturer updates," explained Tyler Davis, Chief Systems Engineer at BVSD.

"We also had a higher rate of failure," added Nate Chipman, Life Safety and Security Specialist at BVSD. Ordering a part or a whole new server when there were problems, and then waiting for it to be built, meant downtime and hampered resources that could be used on other areas needing attention.

To modernize its video surveillance system (VSS) storage, BVSD took steps after the 2020-2021 school year to transition 80 physical servers to 13 virtual Avigilon servers and centralize the district-level teams responsible for IT and security under Information Technology Services (ITS). During summer 2021, they made network adjustments for memory usage and RAM, but without students in session when the need of cameras is higher, BVSD easily transitioned to the 12 new servers and maximized performance for its petabyte of data as school started.

Blue Valley School District (BVSD), the fourth largest district in Kansas and serving more than 21,000 students, chose Qumulo file storage for its video surveillance system (VSS) supplied by Avigilon.

- **Streamlined storage:** With safety and security of students, staff, and buildings a top priority, Qumulo's ease of use and capacity made it seamless to transition 80 physical servers to 12 virtual ones—maintaining unquestionable performance for 1,500-plus cameras that generate a petabyte of data while monitoring activity in and around 44 buildings.
- **Maximized IT resources and time savings:** Qumulo offers scalable, easy-to-maintain storage so the district's small IT team can focus their time and energy on other pressing or unexpected issues.
- **Data accuracy:** Qumulo can support hi-resolution, multi-format data produced by the district's VSS. Data is captured from complex camera configurations that include several frames per second of visual resolution, discern between relevant vs. irrelevant visual motion, and capture two-way audio generated by intercoms that are paired with the cameras.

Qumulo

©2023 Qumulo, Inc. | info@qumulo.com

Twelve servers are for their cameras, and one is for access control (the building system for card reader access). The 12 connect via SMB to Qumulo, ensuring ideal configuration of the servers and cameras to account for frame resolution or movements that don't need to be captured--trees blowing in the wind or cars driving by, for instance--and therefore maintain optimal storage volume and bandwidth. Each school's common areas are monitored by respective building officers and school administration, but ITS is notified of all district-wide activity and can see when doors are left open, and for too long. They regularly access and check the 12 servers to ensure camera streaming and recording is maintained and server performance is optimized, but find "everything just runs and they don't need to manage or worry about Qumulo," said Davis.

"We can also push server updates in a matter of minutes, and any downtime is 15 minutes or less." Plus, the responsiveness, ease of use, and amount of data stored with Qumulo, including files from the district's Chromebooks saved to Google Drive, OneDrive, or Canvas, for example, is incomparable.

"With the investment in Qumulo, the increased productivity and improved capabilities our district gains will create long-term, cost-effective value – not just for our resources, bottom line, but most importantly student and community safety."

– Nate Chipman, Life Safety and Security Specialist, Blue Valley School District

Customer support ensures smooth transition to virtual storage

During the transition phase, when it can be a significant undertaking to shift from 80 physical servers to 12 virtual ones, Chipman explained how the process was easier than he expected. It helped to have a partnership from Davis and Qumulo to quickly resolve any performance issues observed. Davis also added how helpful it is to use Slack for instant connection with Qumulo technical or account support, and having thorough Qumulo documentation made it very easy to plug, rack, and boot everything up, on his own, for the first cluster.

In the near future, Blue Valley School District expects to add 500 more security cameras to its infrastructure, growing from 1,500 to 2,000, and accounting for growing student populations or new schools. Chipman stated that "for larger school districts, it's worth the investment to embrace Qumulo and have the ability to refocus resources elsewhere instead of on physical servers."

©2023 Qumulo, Inc.