

## CommVault Galaxy Software Simplifies and Speeds Backups for Blue Valley School District

### QUICK FACTS

**Industry/Solution:**

- Education

**Platform/File System:**

- Windows, UNIX, Apple MacOS X

**Applications:**

- Active Directory, MS Exchange, SQL Server, 3D Studio, purchasing, education programs

**Partner Hardware:**

- Dell Windows servers and desktops
- Sun Solaris server

**Challenge:**

- One district-wide backup solution

**Competitive Challengers:**

- Veritas Backup Exec
- Computer Associates Arcserve

**Solution:**

- CommVault Galaxy Backup & Recovery
- AUX Copy
- Synthetic Full Backup

**Benefits:**

- One central point for all backups
- Faster incremental and full backups
- Ability to backup SAN directly to the tape library, without having to go across the network
- Faster backups using Galaxy Synthetic Full Backup capability
- Galaxy AUX copy enables backup to disk, copy to tape
- Ability of Galaxy to compress data at client sites, before it goes across the network

### Customer Profile

Located in Overland Park, Kansas, a few miles south of Kansas City, the Blue Valley Independent School District serves 19,000 students in 30 school buildings and has a staff of 2,500. Rob Taggart is Manager of Network Services in the Information Technology Services (ITS) department. ITS supports, implements, and manages all information technology for the entire school district. "Our first mission is to empower better education for the students," says Taggart. "We also support administrative functions. But the administration is essential for the students' education, so it's really one whole package."

### Data Management Environment

Including students, teachers, and administrators, ITS supports 20,000 user accounts using resources that include 135 Windows servers, ten UNIX servers, and 8,500 desktops. Almost all the desktops are Windows machines, along with a small number of Macs. The school district owns its own private fibre optic gigabit switched network, so they do not have to pay wide area network charges. The district also has a 45 megabit connection to the Internet, and a Cisco-switched KVM-over-IP telephone network.

Primary applications include Microsoft Active Directory, Oracle ESIS student information system (grades, transcripts, medical information, contacts), purchasing, MS Exchange email, and SQL Server. They also support dozens of student programs, everything from 3D Studio, a sophisticated Mac animation system, to children's education software programs, like an earthquake simulator for grade-school science classes.

### Information Storage Environment

Storage is distributed between local disks in the school buildings and central storage on a Storage Area Network (SAN) in the district office. Each of the district's 30 school build-

ings has its own storage server; information for students in each building resides on its building server. The SAN has two terabytes of storage capacity and a Dell tape library with two drives. Currently, the SAN is running at about 80% capacity; within the next year or two, the district plans to increase the capacity of the SAN to five TB. They also plan to install four additional SANs, one in each of the district's four high schools. The SAN and the building servers are all backed up with CommVault Galaxy software.

### Too Many Backup Systems

In 2004, the school district experienced problems with a succession of backup solutions, problems that were accelerated by the installation of the SAN in the district office, and which prompted their move to Galaxy software for heterogeneous, enterprise backup and recovery.

Before the move to Galaxy, the district was using a combination of Veritas Backup Exec, CA ArcServe, and Alex, a UNIX backup application. They were not happy with ArcServe, because of its poor performance backing up Microsoft Active Directory and MS Exchange. To deal with that problem, they added Veritas Backup Exec to back up those critical applications. However, when they implemented the SAN, they found out that Backup Exec could not back up their UNIX servers, which forced them to add yet another backup system, Alex. At the same time, overall performance was very slow. "The nightly incremental backups were taking 13 to 15 hours, and the weekly full backups over 40 hours," says Taggart. "We could only do one server at a time, and we had to pull the data over the network uncompressed."

### Switch to CommVault Galaxy

Confronted with a fragmented and unsatisfactory backup situation, Taggart went looking for a better solution. "As soon as I saw CommVault, I was pretty sure that was what I wanted," he recalls. "A local

reseller showed me a demo, and then I did some research, and we went ahead and bought the CommVault Galaxy backup and recovery software. The installation went smooth as silk. We installed agents in the building servers, in the SAN, in the MSX servers, and in the UNIX servers. Two of our people went to training at CommVault first. Then the local implementation engineer from CommVault came out, and it took three days to install the whole thing, the entire infrastructure. It went in, and it worked right away." Since the installation, Galaxy has kept right on running smoothly. "At one point we had trouble deploying Idata for MS Exchange," says Taggart. "The technical support we got from CommVault was excellent. That's the only occasion we've had to use it."

### One Enterprise-Wide Solution

The school district does incremental backups each weekday night for the whole system, including building servers and SAN, and a Synthetic Full™ backup over the weekend. The backups of the building servers go direct to tape over the district network. Some backups go to disk first. Then a copy is made using the AUX Copy capability of Galaxy, and the copy is sent to tape.

Galaxy has made sense out of the backup situation for the school district. "Before we installed Galaxy, we had three different backup systems," says Taggart. "Now Galaxy has become the single point for all our backups, the enterprise backup system for all our building storage servers and our SAN." It has also made backup management easier and more effective. "With Galaxy we get a unified console and software, and one backup solution," says Taggart. "With a central console for all backups, the backup and restore administrator can go to one spot and do restores for anyone on the network, without having to jump from one system to another, and without having to know three or four different companies' software."

### Galaxy Delivers Much Faster Backups

Galaxy has reduced backup times significantly. "The first thing about Galaxy is that it compresses data at the client before it goes over the network," says Taggart. "That saves a lot of time. And with Galaxy agents in each server, we can back up four or five servers at once." The ability to back up the SAN directly to the tape library, without having to go across the network, has made SAN backup much faster. Galaxy Synthetic Full backups also save time. "Synthetic Full backup takes the incrementals and makes a full," explains Taggart. "It's incredibly faster. It used to take up to 48 hours to do the full backup. Now it takes just a few hours, not two days."

### CommVault's DataMigrator is Next

The school district has plans to add more capabilities from the CommVault product suite. "We're going to use DataMigrator," says Taggart. "At a certain age, it removes files from main storage, moves them to nearline storage (a set of dedicated tapes in the library), and leaves a marker, a stub. When someone requests that file, the system retrieves it from nearline storage. This reduces the storage demands on the SAN, without significant impact on performance from the user's point of view."

### Data Protection is Critical for Students

Protecting the data on their systems is critical to fulfilling the ITS commitment to students. For example, MS Active Directory is the core network operating system that all the machines operate off. "If we lose it," says Taggart, "people can't log on, can't get to the Internet. Recently we had a problem with Active Directory. We did not have to use Galaxy to restore from tape this time, but we know we can if we have to. When you're talking about the importance of the data on our systems, you're talking about student records, medical records, contacts. If you lose that data, it's a huge problem for the district. For other files on the network, just look at all the work the staff has put in. And for students, if we lost their class work, it would set back their progress, and might give them lower grades. We are not going to let that happen."

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