

School System Slashes Administrative Costs, Unifies and Simplifies Backup with CommVault Galaxy Software

QUICK FACTS

Industry/Solution:

- Education

Platform/File System:

- Windows

Application(s):

- Education and administrative applications, including email, Web services, student records, payroll, human resources, budget, accounts payable, food services, transportation, scheduling, facilities, and inventory

Partner Hardware:

- HP Pentium PCs, HP ProLiant servers, HP MSL 1000 Storage Area Network, HP MLS 5000 tape library

Challenges:

- Reduce administrative man-hours for backups
- Provide reliable backups

Solution:

- CommVault Galaxy Backup & Recovery

Benefits:

- Reliable backups
- Reduced administrative costs
- Superior reporting, ease of use

Customer Profile

Elizabeth, New Jersey, is a city of 120,000 just west of Manhattan. The city's school system includes 20,000 students, 30 schools, and 3,000 teachers and administrators, along with some 7,000 computers. The man responsible for the smooth operation of all those computers — and the networks that tie them all together — is Alberto Marsal, Manager, Computer & Network Services, Elizabeth Board of Education. "Our job is to integrate technology into the classroom," says Marsal, "both to help teach the course content, and to make sure that our students have the computer skills they need. Most of the research our students do for class is by computer. To help our students prepare for state-mandated tests, we have practice tests available on the computer. More and more, the computer is like your book and pencil and paper."

Data Management Environment

Every classroom in the system has at least five HP Pentium IV PCs. In addition, every school has two HP ProLiant servers, one for classroom applications and one for administrative applications. The servers in the schools (a total of 60 for the whole system) support local applications and local print and file-sharing servers. The school servers can also access system-wide resources, including email and Web services, which are supported at the data center in the administration building, where there are an additional 25 servers. These servers run applications including student records, payroll, human resources, budget, accounts payable, food services, transportation, scheduling, facilities, inventory, and MS Exchange and Novell Groupwise email systems.

All of the school system's computers are tied together with a network that includes 100 megabit Ethernet to the classroom desktops,

high-speed ATM (asynchronous transfer mode) circuits to every building, and a 155 mbps OC3 line into the administration building.

CommVault Galaxy Backup and Recovery software provides data protection for the servers in the schools and in the data center. Backup infrastructure in the data center includes an HP MSL1000 Storage Area Network (SAN) with a capacity of 3.7 terabytes. An HP MLS5000 library is attached to the SAN. It has four SDLT 220 tape drives and 50 tape cartridges.

Backup Was Eating Administrative Time: "We Needed a New Solution"

Early in 2004, Alberto Marsal and his team saw the urgent need for a major upgrade in their data protection strategy. At that time, servers in the schools were backed up locally, to attached stand-alone tape drives. However, as the number of servers and the amount of data to be backed up grew, this strategy proved to be a problem. "We needed a new solution," says Marsal. "We wanted to centralize our backup and make it simpler and more unified. We also needed to make it more automated. With our solution at that time, we had to log on to every server to see if there was a problem, and then go out to the school site to solve it. Our backups were distributed throughout the schools, not centralized. So we had a couple of IT staff people going around changing tapes and fixing backups that had failed. Our people were spending every day changing tape and fixing what went wrong. The same people are also responsible for maintaining the servers. But backup was taking ownership of all their time, so there was never enough time in the day for them to get everything done. The single biggest reason for the change in backup strategy was the need to reduce administrative costs. We went to centralized backup to free up the man-hours."

Centralized Backup Solution with CommVault Galaxy

The solution developed by Marsal and the IT team was to centralize backup of the school servers to the data center. Implementing the strategy involved installing a new Storage Area Network (SAN) in the data center, and making the switch to CommVault Galaxy Backup and Recovery software. "Our HP rep first suggested that we look at CommVault Galaxy," recalls Marsal. "Working with CommVault has been very positive. We are a growing organization. We're building 22 additional schools. We showed CommVault our growth plans, and they came back to us with how they would help. They were willing to work with us to help us achieve our plan. We looked at a number of products, ran benchmark tests, and concluded that Galaxy was the right solution for us."

The new systems, including the SAN, the tape library, and the Galaxy software, were installed in April 2004. Instead of being backed up to local tape drives, the school servers are now backed up remotely over the WAN to the data center SAN. Backups initially go to the SAN disk array, and are then copied to the tape library. Data center servers are backed up directly to tape.

"Right from the first day we started running Galaxy we noticed the ease of use, the ease of restores, the ease of monitoring the whole backup process," says Marsal. "Previously, we had to log on to each and every server individually to get its status. Now we automatically get an email from

Galaxy that says the backup was successful, or that there was a problem, and we get a good, informative message as to what the problem is. So far, we're running very clean, with no errors."

Faster Restores, Reliable Backups

"Restores are a lot faster with Galaxy," reports Marsal. "They take seconds now. They used to take forever, because we had to do them at the local level. Galaxy is much more granular, and much more user friendly for the backup administrators. We can do a recovery of an individual email message. That's very helpful. About 3,000 teachers and administrators are on our email system, using a combination of Microsoft Exchange and Novell Groupwise."

"CommVault has dramatically enhanced the quality and reliability of the backups," continues Marsal. "We used to always be concerned, is the backup really there? Before we moved to Galaxy, there were a high number of failures of backups during the week; there was a failure rate of about 10%. So we were always worried that a backup was going to fail or that it might not really be there even though we thought the backup had been successful. The high failure rate makes you lose confidence."

Backup Routine

Full backups of all the servers are done weekly. The backups start at 3:30 Friday afternoon, and take until Sunday morning to complete. During the week nightly incremental backups are done. "We do new, complete

full backups every week," says Marsal, "because we've got the window of time to do them." They use the same backup routine for all the servers, both administrative and educational. "Galaxy has delivered on its promise," says Marsal. "It gives us a centralized, simplified backup solution that saves administrative time. Now our people can spend their time solving other problems, not swapping tapes and fixing backups. We are able to monitor the process and double check that what we say we are backing up really is backed up. We can easily display and test and restore from one central location, without having to log on to every server. We have a more robust, more automated backup process that we have faith in."

Alberto Marsal emphasizes that protecting their data is critical for the school system and its students. "Imagine if we couldn't pay our teachers?" he says. "They couldn't come in to teach. Imagine if our student records were lost? We couldn't graduate people on to the next grade. It's important for us to be able to track student progress from pre-kindergarten right through grade 12 and graduation. We are a low-income school district. One of the ways you measure how a district gets financial aid funding based on population and income is by how many students get free lunches. So keeping that data safe is critical for funding. In every aspect of our operations, reliable data protection is a priority for us."

www.commvault.com | 888.746.3849 | E-mail: info@commvault.com

CommVault Worldwide Headquarters • 2 Crescent Place • Oceanport, NJ 07757 • 732-870-4000 • Fax: 732-870-4525
Regional Offices: United States • Europe • Middle East & Africa • Asia-Pacific • Mexico & Latin America • Canada • India • Oceania

