

Case Study

QUICK FACTS

Industry/Solution:

- Healthcare

Platform/File System:

- Microsoft Windows 2003

Applications:

- Microsoft Exchange 2003
- Microsoft Active Directory
- Microsoft SQL Server
- Oracle

Partner Hardware:

- NetApp FAS6040, FAS3050, FAS3020, FAS3040 and FAS270
- HP EVA8000 and EVA5000 arrays
- HP MSL6030 and MSL6060 tape libraries

Challenges:

- Backup Exec lacked enterprise-class data protection capabilities to keep pace with rapid growth
- Backup and recovery at remote sites were "hit or miss"
- Persistent problems restoring data to dissimilar hardware during DR drills and a server failure
- More than four hours of administrative overhead to manage daily processes due to excessive hand-holding and backup monitoring
- Need for more comprehensive data management, including seamless support for NDMP, Linux and VMware environments

Competitive Challengers:

- Symantec Veritas NetBackup

Solution:

- CommVault Simpana

Benefits:

- CommVault's multi-streaming capabilities and seamless integration with NDMP have slashed backup windows while accommodating a 20-fold increase in storage
- With CommVault's web-based management console, monitoring of backup jobs has been delegated to operations staff for a dramatic reduction in administrative overhead
- Robust reporting increases operational efficiencies while enabling IT team to do more in less time
- High rate of restores to dissimilar hardware elevates disaster recovery capabilities
- Vault Tracker streamlines media management to eliminate arduous re-cataloging

Sharp HealthCare Prescribes CommVault Data Protection to Alleviate Backup and Recovery Pain while Reducing Administrative Headaches

Customer Profile

Sharp HealthCare is a not-for-profit integrated regional health care delivery system, including four acute hospitals and three medical groups plus a full spectrum of other facilities and services. Based in San Diego, the health care leader has been serving the community for more than 50 years with an unwavering commitment to patient care and organizational excellence.

Ranked the No. 1 health care provider in California by Modern Healthcare, Sharp regularly is recognized for clinical excellence in a variety of areas, ranging from cardiac, cancer and multi-organ transplantation to orthopedics, rehabilitation, behavioral health and women's health. In 2007, Sharp HealthCare was named one of five organizations to receive the coveted Malcolm Baldrige National Quality Award. A passion for caring is shared by Sharp's more than 14,000 employees, 2,600 physicians on its hospital medical staffs along with 1,500 physicians in affiliated medical groups.

Data Management Environment

Sharp's IT accomplishments also have received accolades for leveraging leading-edge technology to enhance quality of care for both patients and staff. The provider is dedicated to providing access to the latest information and technology tools to streamline operations. Computerworld ranked Sharp HealthCare third on its 2007 "Best Places to Work in IT" survey while Hospitals & Health Networks magazine named Sharp one of the nation's "Most Wired" healthcare systems for the ninth consecutive year.

An IT department of nearly 300 ensures the wellbeing of a vast technology environment. An important subset of that group is an 11-person distributed systems support team with responsibility for the "Wintel" portion, comprising nearly 600 Microsoft Windows 2003 and Linux servers. The group supports full weekly backups of 20 TBs, comprising Microsoft file and print, Microsoft Exchange and Active Directory data as well as a variety of Microsoft SQL and Oracle databases. While annual storage growth for file and print data hovers around 25 percent, regular spikes occur when new clinical applications or databases are brought online, such as an all-digital Picture Archiving Communication System (PACS) for capturing, storing and distributing all medical images.

To keep pace with rapid storage growth, the distributed systems support group maintains an extensible storage foundation, consisting of NetApp FAS6040, FAS3050, FAS3020, FAS3040 and FAS270 filers along with HP EVA8000 and EVA5000 arrays. Additional HP MSA storage and SATA drives are also part of the mix to support the team's reliance on disk for backup and near-line storage. Tape backups are run on a combination of HP MSL6030 and MSL6060 tape libraries at remote sites as well as primary and alternate data centers.

Protecting patient privacy is an overarching objective. Fastidious attention to HIPAA | compliance guidelines and stringent internal procedures safeguard patient data while adding an additional layer of security. According to Gil Tuquero, manager of distributed systems

support for Sharp HealthCare, continuing server growth and compliance priorities led to upgrading to CommVault® enterprise-class data protection software. “We saw the writing on the wall as our legacy data protection solution proved inadequate for supporting our ever-expanding environment,” he recalls. “Sharp won’t compromise when it comes to protecting patient data, so we had to make a change.”

With CommVault’s Data Protection, Sharp has remedied previous backup and recovery ailments with a much more robust and reliable platform. Most aspects of daily and weekly backup operations have been automated, shaving off substantial time from recovery efforts. Sharp also has consolidated remote backups and oversees all operations from a centralized management console that has reduced administrative time significantly. Moreover, Sharp leverages CommVault’s Singular Information Management® software approach to integrate seamlessly with its ever-increasing VMware, NetApp NDMP and Linux environments.

Diagnosing Ailing Backup and Recovery

Prior to its CommVault deployment, Sharp HealthCare relied on Symantec’s Veritas Backup Exec, version 8.6, for daily backup and recovery operations. As a workgroup application, the software initially was adequate for tape-based backups but weakened considerably as Sharp’s storage growth escalated.

According to Tom Rothstein, principal technical analyst with Sharp HealthCare’s distributed systems support, the team encountered increasing numbers of job failures and missed backup windows, especially if jobs had to be restarted. “Backup Exec didn’t provide

the enterprise-class functionality Sharp eventually needed,” he explains. “We couldn’t automate basic procedures and it became harder to oversee remote sites since the software lacked centralized management.”

As a result, management of nightly incremental backups started to take up to four hours of administrative overhead, especially since the team had to oversee backups at the data center and remote locations. “We had to connect to each backup server to see job status and manually make sure tapes were being changed and reloaded, which was a ‘hit or miss’ proposition,” adds Ric Cumplido, senior systems analyst with distributed systems support.

With the addition of storage-intensive applications, including PACS and a new data warehousing system, the ailing data protection platform worsened. Furthermore, poor performance during a major recovery effort underscored the need for an upgrade. “Sharp experienced a catastrophic server failure and Backup Exec didn’t do a good job of restoring data to dissimilar hardware—which often is the case in a disaster recovery situation,” notes Rothstein. “Even during regular DR drills, Backup Exec didn’t measure up to expectations.” Sharp also was concerned about support for its ever-increasing VMware server population while ensuring compatibility with other aspects of its environment, such as NetApp and Linux.

Conducting a Thorough Exam

With an upgrade on the horizon, the distributed systems group reviewed leading enterprise-class software, including newer versions of Backup Exec, NetBackup, CommVault Galaxy® Data Protection software and HP Data Protector. Among the evaluated criteria were the ability to perform disk-to-disk-to-tape backups, ease of use, centralized management,

reporting and automation of policy-driven operations. While newer versions of Backup Exec supported disk backups, they still lacked a centralized management console. In contrast, NetBackup had much more sophisticated features and could read Backup Exec files, which could prove useful in restoring data from long-term archives.

CommVault also was a promising alternative as its unified approach to data management eased deployment of new features and additional environments without having to add a series of point solutions. CommVault’s centralized management console would enable Sharp to manage its data center and remote operations using a cohesive, completely integrated platform. “Centralized management was critical,” says Tuquero. “The team is responsible for accurate, manageable and timely backups—even after hours—so we needed a view of each and every job.”

The distributed systems support group next tested CommVault and NetBackup for 30-to-60 days to determine which enterprise-class solution was best for its environment. CommVault met all expectations for ease of installation while NetBackup required outside assistance for installation as well as initial set-up and operation. “CommVault went in easily and worked seamlessly,” adds Cumplido. “In particular, we liked how easy it was to schedule backups and restores as well as automated self-inventory and the different automatic alerts.”

In contrast, Sharp HealthCare had recurring problems with NetBackup and only had limited opportunities to test restores, since additional help was required. “After 30-to-60 days, choosing CommVault was a ‘no brainer’ as the difference between CommVault Galaxy and NetBackup was night and day,” adds Tuquero.

Clean Bill of Health

Since its initial evaluation of enterprise-class data protection several years ago, Sharp HealthCare's storage requirements increased 20-fold. Still, daily and weekly backup windows are met without concern, reinforcing compliance and best-practices disaster recovery requirements. "We went from backing up a couple hundred servers and a couple of terabytes to protecting 600 servers and more than 20 TBs of data—and backups work better than before," notes Rothstein. "By first backing up to disk, we reduce the time for full backups by more than 50 percent, so there's no concern about missing a backup window." Full, incremental and synthetic backups provide Sharp with elevated backup and recovery efficiency. Moreover, the team takes advantage of multi-streaming functionality to achieve performance gains, enabling ever-increasing amounts of data to fit into smaller backup windows.

By adding disk to its backup equation, Sharp HealthCare benefits from tiered data protection and dramatic improvements in file recoveries. "With nearly instant file restores on disk backups, we can meet our recovery time objectives while also significantly lowering the administrative effort required for restores," explains Cumplido. Perhaps the biggest productivity boost, however,

comes from CommVault's web-based, centralized management console, which has enabled Sharp Healthcare to consolidate data protection for all locations and delegate daily operations to other staffers. "We used to spend more than four hours a night watching backups—but no longer," adds Cumplido. "We've been able to turn a lot of backup monitoring to 24/7 operations staff, which frees us to focus on strategic initiatives involving disaster recovery and compliance."

In fact, Sharp's monthly DR testing has improved substantially since migrating to CommVault. "We've had a high rate of DRlevel restores to dissimilar hardware," adds Rothstein. "Performance during regularly scheduled as well as surprise disaster recovery drills has been excellent."

Sharp Healthcare also leverages CommVault's support of NetApp's NDMP protocol to complete full backups in 10-to-12 hours when it used to take upward of 30 hours. "We really like that CommVault leverages the NDMP protocol to deliver a proven solution with efficient backups and reliable restores," explains Rothstein. "It was simple to implement the NDMP media agent and throughput has been phenomenal."

Additionally, Sharp fortifies backup and recovery operations with CommVault's GridStor automatic fail-over, load

balancing, restart and job prioritization capabilities. With CommVault's Vault Tracker feature, Sharp automates the management, tracking and reporting of offsite tapes. "It's much easier to manage our media," notes Cumplido. "With CommVault, I can go back six to nine months and locate a tape without having to re-catalog, which can be an arduous process."

Built-in reporting capabilities provide Sharp HealthCare with proactive monitoring and trending analysis. A variety of reports are available, including recovery job history, tape tracking and rotation, along with operator and administrator audit tracking. "Reporting was non-existent in Backup Exec, so we have embraced CommVault's robust capabilities to further optimize our data protection environment," says Tuquero.

Sharp HealthCare has just recently migrated to CommVault's Simpana® 7.0 software to take full advantage of advanced capabilities, including integrated archiving for increased email retention and legal discovery as well as Ingle Instance Store for extending data retention periods on disk without proliferating physical disk requirements. "CommVault keeps up with the latest industry innovations," concludes Tuquero. "As Sharp HealthCare continues to grow, we will continue to expand our CommVault solution suite."



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