

## Case Study

### QUICK FACTS

**Industry/Solution:**

- Healthcare Services Provider

**Platform/File System:**

- Microsoft Windows
- UNIX
- IBM AIX

**Applications:**

- Microsoft Exchange, Active Directory and SharePoint
- Pandora and Siemens clinical and financial applications
- AMICAS Picture Archiving and Communication System (PACS)
- Specialized healthcare applications built upon SQL, Oracle and Sybase databases

**Partner Hardware:**

- EMC CLARiiON and Centerra SANs

**Challenges:**

- Series of mergers and reliance on digital imaging created surge in data growth.
- Growing need to accommodate long-term data retention of electronic medical records for best practices and HIPAA compliance.
- Proliferation of disparate backup and recovery solutions created an administrative burden.
- Increasing demand for enterprise-class data management with improved reporting and increased functionality.

**Solution:**

- CommVault Simpana software Backup & Recovery and Archive modules and McAfee ePolicy Orchestrator

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## Ellis Medicine Lowers Compliance Risk With Integrated End-to-End Data and Security Management Solution From CommVault and McAfee

**Customer Profile**

Ellis Medicine is the only provider of acute hospital care in New York's Schenectady County, a diverse upstate community with more than 150,000 residents. More than 600 affiliated physicians and 3,400 employees serve patients across three main campuses comprising Ellis Hospital, Bellevue Women's Center and Ellis Health Center.

In 2009, Ellis Medicine was the only hospital in the state and one of only 76 nationwide to be ranked among the top five percent of U.S. hospitals for both patient safety and clinical excellence, according to a study conducted by HealthGrades, a leading national healthcare ratings company. In addition to this honor, Ellis Medicine takes pride in a continuing commitment to state-of-the-art technology and advanced medical procedures as well as the traditional art of caring and a firm commitment to quality care.

To that end, the organization also boasts one of the most sophisticated health information technology systems in New York and continues to embrace electronic health records. According to Rodney Kowalczyk, network engineer for Ellis Medicine, different departments and clinical areas rely on leading-edge technologies and applications to meet ever-evolving healthcare dynamics. "Many areas within Ellis Medicine have unique needs, so we support a wide range of small, specialized clinical applications," he explains. "Our goal is to provide the same level of consistent, quality protection and security for all applications and platforms."

As a result, Ellis Medicine takes advantage of a highly unique solution that integrates

end-to-end data management and security compliance. The solution marries CommVault® Simpana® software with McAfee ePolicy Orchestrator® (ePO™) to provide enterprise-wide visibility to the status of all critical data. "With our combined CommVault and McAfee solution, Ellis Medicine can better correlate data management and security to help reduce costs and administrative overhead while improving threat protection and overall compliance," says Kowalczyk. "The ability to take security management beyond the endpoint to encompass data management and network protection is huge."

**Data Management Environment**

A six-person team of network engineers oversees Ellis Medicine's server infrastructure while managing data at its dispersed campus locations. The team manages an approximate mix of 200 physical and virtual servers running 32- and 64-bit versions of Microsoft Windows and VMware ESX, respectively. The team also supports a handful of UNIX and IBM AIX servers.

Responsibility for data protection, compliance and security encompasses core Microsoft applications, including Exchange and SharePoint, as well as specialized healthcare applications. For instance, deployments of Pandora hospital pharmacy analytics and Siemens clinical and financial applications are supported with other applications built upon SQL, Oracle and Sybase databases.

Over the years, a series of mergers and increased reliance on digital imaging systems, such as a AMICAS Picture Archiving and Communication System (PACS), created a surge in data growth. Currently, Ellis Medicine manages approximately 70 TBs of data residing

## QUICK FACTS (continued)

### Benefits:

- CommVault Simpana software integrates seamlessly with McAfee ePolicy Orchestrator (ePO), bolstering patient data security with increased enterprise-wide visibility into all critical data.
- Single, customized dashboard approach lowers risk by providing automated reports and alerts that decrease administration while increasing data management and security.
- CommVault software's Exchange archive with message journaling feature supports increased compliance demands while reducing storage costs by up to 75 percent.
- Greater manageability and protection of growing virtualized environment further reduces costs and improves disaster recovery capabilities.

on EMC CLARiiON and Centera storage area networks (SANs). In addition, Ellis Medicine strives to meet ever-increasing compliance requirements, especially in accommodating long-term retention of electronic medical records and e-mail. "Patient data security takes priority, so we work hard to ensure complete HIPAA compliance as well as retention timeframes for keeping different types of electronic medical records up to seven years," explains Mark McGill, senior network engineer for Ellis Medicine.

The proliferation of disparate backup and recovery solutions also resulted from continued growth and mergers. The hodgepodge of solutions included Tivoli Storage Manager (TSM) to support a Siemens application initially, Symantec Backup Exec for SQL data management along with a Kronos deployment and network server backup appliances from Unitrends. At the time, Ellis Medicine only had 130 servers yet had one person dedicated to backups as it took additional effort to manage all the discrete platforms. While the team was used to wearing lots of hats, the administrative burden of managing all the different systems became too much. "We had no centralized repository for backups and it became harder to manage everything as some applications provided better reporting than others," recalls Kowalczyk. "So we identified the leaders in the data management space and went in search of one integrated data management platform."

### Rx for Better Backups

After Ellis Medicine issued a bid, the team participated in various product demos to find enterprise-class software that could easily accommodate a variety of application platforms. "We started looking for a system with comprehensive support for all our databases and one console to manage it all," says Kowalczyk. The team reviewed the existing players plus a few new ones, including CommVault and EMC Legato Networker.

In seeking a singular data management platform, Ellis Medicine sought a solution that worked as well as its McAfee security management suite. Previously, the organization had made a strategic investment in the advanced version of McAfee Total Protection (TOPS) for Endpoint and ePO. In doing so, the organization had attained end-to-end security risk management for anti-virus, anti-spyware, anti-spam, desktop firewall, intrusion prevention, network access control and policy auditing. "We wanted one security solution that could handle everything with one console," notes Kowalczyk. "We achieved that with McAfee and we wanted the same thing on the data management side."

When comparing various data management contenders, CommVault Simpana software's centralized management console and flexible platform support stood out. "CommVault took care of our SharePoint environment, had both backup and archiving for our Exchange mailboxes and could handle any flavor of database," says Kowalczyk. CommVault software's singular platform approach meant Ellis Medicine could consolidate the management of backup, recovery, archiving and more. "We could centrally manage everything, which really gave us the benefits of one-stop shopping," Kowalczyk adds. "It was clear CommVault was the total data management company for us."

The move to Simpana software enabled Ellis Medicine to gain better control of daily backup and restore operations as the team now easily handles a combination of daily full and incremental backups. "CommVault has a lot of nice flexibility when it comes to scheduling as we perform a blend of incremental and full backups daily." Approximately 13 TBs of data are backed up to disk while another 14 TBs gets backed up to tape. Critical clinical data is kept on disk for up to a month whereas other less crucial data is kept on disk for about two weeks before being offloaded to tape for longer retention. Near-instantaneous restores of disk-based data streamlines the recovery process.

One of the biggest benefits of switching to Simpana software became readily apparent when CommVault announced availability of a built-in connector for sharing backup, recovery and archive status within a custom McAfee ePO dashboard. "We chose CommVault and McAfee because they are two leaders in their respective fields and to have them integrate their offerings is icing on the cake," says McGill.

### **Single Console Improves Management, Decreases Risk**

CommVault Simpana software now is one of nine windows on Ellis Medicine's ePO dashboard, producing "at-a-glance" updates on data management events. In particular, the team appreciates the color-coded status alerts that enable quick pinpointing of any issues that require attention. "We know right away if a drive or library goes offline," explains Kowalczyk. "The dashboard gives us a history of when an event was generated, which helps us identify potential risks and troubleshoot them well before data integrity becomes compromised."

Automated reporting and e-mail alerts also reduce operational costs by improving visibility into all data management operations, encompassing backup, recovery and archive. The consolidated view also improves the ePO administrator's ability to monitor data management and then switch to the CommVault console to proactively address any issues that arise. "The dashboard helps us keep pace," notes McGill. "We get a quick status check and have access to all the history and can track recurring issues without having to dig for answers."

Ellis Medicine also takes advantage of the ability to fine-tune the dashboard. "As IT people, we want to be able to customize to suit the nuances of our environment," Kowalczyk adds. To that end, the team has tailored the dashboard to meet specific needs while also providing easy-to-follow status checks. "We can assess status from across the room," he says. "We have a lot

of confidence that we know what's going on at any time. Single console management of Simpana software and McAfee using ePO has helped us become very efficient."

As a result, it takes fewer people less time to oversee operations, which is a plus considering Ellis Medicine has gained additional servers to manage through its mergers without adding more engineers. "We're big on vision, so the opportunity to see issues with different servers at a glance is a big timesaver," comments McGill. "We don't need 14 monitors when one or two tell us all we need to know."

### **Centralized Archive Eases Compliance and Stems Storage Costs**

Another plus of Simpana software has been the ease with which Ellis Medicine keeps pace with Exchange e-mail growth as part of a goal to lower primary storage costs while significantly strengthening e-mail compliance to corporate policies. "Keeping electronic medical records is a given, but retaining e-mails for 1,500 mailboxes can be a major challenge, especially when people want to keep everything forever and you don't want to dictate the size of mailboxes," McGill adds.

Ellis Medicine takes advantage of CommVault's message journaling feature to archive all incoming and outgoing messages and attachments. "CommVault's Archive for Exchange is really helping us with our compliance demands," notes McGill. "We grab the Exchange journal twice a day and offload the data seamlessly to our EMC SAN." As part of the organization's archive policies, e-mails that haven't been touched for 18 months are archived on the CLARiiON for six months before being moved to the Centera platform for more cost-effective retention.

As a result, the team has been able to meet corporate policy compliance requirements while better controlling the growth and cost of primary storage. "We've been able to shrink e-mail box sizes from 4 GBs to a more manageable 500 MBs, while reducing storage

costs by up to 75 percent from moving older e-mails off high-cost RAID 10 disk onto more economical SATA storage,” says McGill.

With Simpana software’s Archive module, Ellis Medicine also has additional flexibility when finding, searching and retrieving e-mails based on policy-based retention. Universal search capabilities, for instance, span both archive and backup copies. “CommVault’s content indexing option makes it easy to retrieve one e-mail,” adds Kowalczyk. “We really like that we can get that granular and search through the compliance option to restore the e-mail, which makes IT look like heroes to our end-users.”

The ability to eliminate PST files is another welcome benefit, as the team has further decreased backup complexities and improved server performance. Additionally, Simpana software’s Archive module will be important helping Ellis Medicine accommodate a massive e-mail migration, which will bring the mailbox count to 3,000. “We’ll be migrating to Exchange 2010 and bringing about 1,200 nurses onto the Exchange platform in the next few months,” says McGill. “Simpana software scales well, so while we’ll be doubling our number of mailboxes, we don’t expect to incur much additional overhead in managing the increased e-mail backup, recovery and archive requirements.”

## Healthy, Holistic Data Management

Ellis Medicine’s plans for ensuring the continued well-being of critical electronic medical records and other crucial data involve ongoing expansion of its Simpana software platform. Virtualization is in the works to further reduce costs while fortifying disaster recovery capabilities. “CommVault’s Universal Server Agent will prove useful as we offload backup operations from virtual machines to a VMware Virtual Consolidated Backup proxy server,” says Kowalczyk. “We appreciate how Simpana software gives us greater manageability, data protection and disaster recovery options for our virtualized environment.”

Along those lines, the team also is considering Simpana software’s Replication module to strengthen data management and recovery for remote sites. Additionally, there are plans to use Simpana software’s Search module to delegate certain end-user searches. At some point, users will be able to recover their own e-mails, which will make things easier for administrators. “We trust CommVault Simpana software to bring our data back,” concludes Kowalczyk. “It’s a great feeling to know that McAfee keeps everything secure while CommVault keeps everything safe. The fact that the platforms integrate so well together is a complete win-win.”



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