

Royal Cornwall Hospitals Prescribe Simpana® 9 Software to Alleviate Backup & Recovery Pain While Improving Data Management Health

QUICK FACTS

Industry/Solution:

- Healthcare

Platform/File System:

- Microsoft Windows
- Linux

Applications:

- SQL
- VMware vSphere ESX
- Specialized medical applications
- PACS imaging systems

Partner Hardware:

- EMC CLARiiON CX Series and EMC Centera

Challenges:

- Unreliable backup and recovery of rapidly growing and heavily virtualized environment
- Hodgepodge of solutions with multiple management consoles overburdened staff
- Heavy use of tape and VTL created a lot of network traffic, which impacted operations and data management
- Growing information governance and data management needs were largely unmet, as team didn't have sufficient visibility into overall environment

Customer Profile

The Royal Cornwall Hospitals NHS Trusts (RCHT) was formed in 1992 and comprises three hospitals: Royal Cornwall Hospital, Truro; St. Michael's Hospital, Hayle; and West Cornwall Hospital, Penzance. RCHT employs 5,000 staff to provide a wide range of acute and general hospital services for more than 600,000 patients each year.

As the principal provider of acute care services in the county of Cornwall, RCHT serves approximately a half-million residents, a number that typically doubles by holiday-makers during the busiest times of the year. Keeping at the forefront of medical advances is a top priority and RCHT has led developments in many clinical areas as part of its commitment to maximizing the range of specialist care offered.

According to Andi Patrick, backup and recovery specialist engineer for RCHT, a major part of delivering the highest levels of advanced patient care is ensuring that critical patient records and medical files are fully protected. "We have all sorts of requirements for safeguarding and retaining different types of data that require sound backup, recovery and retention strategies," he explains. "CommVault Simpana 9 software not only helps us keep pace with steady data growth, it's enabled us to move beyond just protecting data to truly managing it for greater business benefit."

Data Management Environment

With responsibility for overseeing 33 sites, RCHT's 160-person IT department manages a heavily virtualized environment consisting of a large VMware vSphere ESX cluster encompassing 200 virtual machines (VMs) as well as various Microsoft and SQL 2005 and 2008 server clusters. At the main data center, the environment is 70 percent virtualized, whereas about half the remote sites are currently virtualized. Plans are underway to continue in that direction for greater flexibility, increased operational efficiencies and reduced capital expenditures.

A diverse variety of medical information systems are supported, including applications for dispensing medicine as well as Picture Archiving & Communication Systems (PACS) for providing economical storage and convenient access to X-rays and other medical images. About 60 TBs of data is centrally stored on a pair of EMC CLARiiON CX Series SANs as well as EMC Centera storage for archiving data for long-term retention. "Our data growth has been crazy," notes Patrick. "Any new system must accommodate enough storage for five years, which varies but can increase easily to five terabytes in just a few years."

Rapid data growth, coupled with requirements to keep patient records and medical files from seven to 25 or even up to 100 years, means that RCHT's IT team must

QUICK FACTS (continued)

Solution:

- CommVault Simpana 9 software with capacity licensing model

Benefits:

- A more effective means of coping with data growth
- Seamless support for virtualized environment and flexibility to perform full VM or file-restores
- Tripled performance boost in backups and restores over previous versions
- Administration has been reduced from approximately 20 hours managing backups weekly to less than five hours handling multiple aspects of data management
- Reduced network traffic with integrated deduplication
- Greater visibility into overall environment to keep pace with rapid growth and meet burgeoning information governance demands
- Ability to move beyond data protection and focus on modern data management with integrated storage resource management, content indexing and archiving capabilities

move data from different storage platforms, depending on retention and recovery requirements. "In some cases, we're moving data off disk to tape for archiving while keeping other data on disk so we can access it easily to meet regulations and information governance needs," Patrick explains. "With CommVault Simpana software, we have all the tools we need to better manage live data."

Ailing Backups Worsen as Data Grows

Before bringing in CommVault® technology, RCHT struggled to keep pace with rapid data growth and nagging reliability problems with the legacy backup and recovery solution. The team protected about 40 TBs of backup data using different software solutions with a combination of tape and a virtual tape library (VTL) appliance that performed deduplication on the back end to reduce redundant data.

This hodgepodge mix created a lot of administrative challenges. "It would take until lunchtime to understand which backups had run successfully the previous night," recalls Patrick. "It was a constant fight, especially since we were only getting about 60 percent of our backups completed overnight, so we had to run backups during the day just to catch up."

While different products had been purchased over time for specific needs, the process of managing backups and restores across different consoles remained cumbersome and time consuming. "It became clear we needed a centralized management approach," Patrick adds. "In doing so, we could also simplify and elevate data protection."

RCHT wanted to introduce more disks into its backup and restore equation to streamline and accelerate operations.

"We had data going across our network four or five times a day, which flooded our Fibre Channel switches with backups," Patrick notes. "By adding disk-based processes, we could reduce network traffic and improve overall performance." Another major consideration was being able to accommodate RCHT's diverse environment, which encompassed Microsoft, Linux and highly specialized medical applications.

Centralised Data Protection Cures Backup Ills

After evaluating many different data protection solutions, RCHT came upon CommVault in a backup forum and was impressed by Simpana® software's ability to handle everything. "With CommVault, we could check all the boxes on our list of criteria as there were agents to support it all," says Patrick. "This would offer us a seamless upgrade path for our mixed OS as well as our physical and virtual environment."

In addition to its wide-ranging OS and application support, Simpana software provided RCHT a wealth of capabilities for elevating both the protection and management of vital data. Simpana software's improved features, better functionality and ability to backup to disk were very appealing. "With Simpana software, we felt it would be much easier to keep pace with our business needs," Patrick notes. "We could use one platform for backups, restores, archiving, deduplication, content indexing—and whatever else came along."

As part of its due diligence, RCHT spoke with other companies that had benefited by moving to CommVault from other backup solutions. This input, combined with insight into the high level product roadmap for Simpana software, put

CommVault ahead of its competition. As a result, CommVault Simpana software was implemented initially in 2007, giving RCHT an immediate opportunity to bolster backup and recovery. "Previously, it took half a day to see whether backups had even occurred and with Simpana software, daily data management takes an hour tops," explains Patrick. "Restores are equally straightforward and painless."

Over the years, RCHT has stayed on top of CommVault's upgrades to keep its environment current while taking advantage of new Simpana software features. Most recently, RCHT upgraded to Simpana 9 software for a major leap in functionality without increasing its administrative overhead or budget requirements. With this latest release, CommVault offers all the tools RCHT needs to modernize its data management strategy while containing costs and improving operational efficiencies.

In particular, the team leveraged CommVault's new capacity licensing model, which was a major business driver in the upgrade decision as it simplifies licensing management by pricing the perpetual use license according to the amount of front-end data managed by Simpana software. For RCHT, the growing numbers of remote sites with small but important levels of data had become a growing issue as licensing costs continued to escalate.

In contrast, CommVault's capacity licensing model offers nearly unrestricted use of common file, database and application agents. It also opens the door to advanced Simpana features, such as source-side deduplication,

virtual server agents and content indexing. "CommVault's capacity licensing alleviates a big headache for me," says Patrick. "I no longer have to clear budget hurdles and perform in-depth cost analysis before adding a new capability, which enables me to respond so much faster and more efficiently to new business requirements."

This additional freedom also enables RCHT to respond much faster to growth and new business demands, as the team doesn't have to go through arduous budget approval processes every time they want to deploy a new capability. Rather, they can scale quickly, easily and economically with the ideal mix of features and functionality to elevate the protection and management of essential data.

When it came time to perform the upgrade, RCHT was confident the process would be straightforward and uncomplicated, so the team completed it over several weekends. "We had no worries about performing the upgrade ourselves," Patrick says. "We'd relied on CommVault's technical services during our Simpana 7 and 8 implementations, so we knew what to expect and had no surprises or disruptions."

Simpana® Software Improves Data Management Well-Being

With Simpana 9 in place, RCHT can scale seamlessly to support the ever-increasing demands of its virtualized environment. "Now we can mirror our entire VMware ESX deployment and restore whole virtual

machines or individual files," Patrick says. "CommVault logically groups virtual servers together and systematically maps the new backup structure to the virtual structures to ease backups and restores." CommVault's SnapProtect® for Virtual Server Agents is on the list to help RCHT protect hundreds of virtual machines in minutes.

CommVault's integrated Storage Resource Management (SRM) offers RCHT a 360-degree view of its physical and virtual environment without requiring installation of additional agents. Since RCHT's ultimate goal is to virtualize everything, Patrick wants to use CommVault's SRM feature to aid in the discovery, analysis and tracking of storage usage trends. "Being able to keep an eye on storage growth from a single console is highly beneficial," adds Patrick. "There's so much data out there and with CommVault's SRM and content indexing, we can find data faster and easier. In the future, others will have access to a self-search capability to simplify information governance and improve the audit process."

Integrated, source- and client-side deduplication also is producing results for RCHT as the team has reduced overall network traffic and decreased its backup window. Further operational efficiencies are forecasted with the addition of CommVault's Simpana Archive for automatically moving older data to low-cost secondary storage. "Consolidating everything on Simpana software makes a big difference as we can finely tune our policies and procedures with more visibility and flexibility than ever before," adds Patrick.

To that end, RCHT uses CommVault's push-update capability to expedite adds, changes and upgrades to its Simpana environment. "We downloaded Service Pack 3 yesterday and updated 260 agents on 90 percent of our clients, which is pretty impressive," Patrick notes. "The ability to push out upgrades seamlessly adds a lot of incremental value." Complementing the ease with which upgrades can be performed is CommVault's highly responsive and knowledgeable support staff, which RCHT rates as excellent. "Typically, Simpana software runs and manages itself, but on the rare times when we need assistance, we can always count on CommVault's technical support team to get back quickly, even when the call has a low priority," Patrick says.

RCHT looks forward to taking advantage of new Simpana 9 functionality along with greater insight into its overall environment to keep up with rapid growth without overburdening its staff or budget. "We haven't had to increase capacity footprint yet, which is incredibly unusual given our constant expansions," concludes Patrick. "We have a much clearer idea of where we'll be in six months or a year. With Simpana software, we'll be able to do more with our data than we thought was possible."



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