PRONGER SMITH MEDICAL CARE
EMC solutions speed performance, reduce costs, and enable disaster recovery

OVERVIEW
Pronger Smith Medical Care is a fully equipped medical practice in Blue Island, Illinois. Its 70 physicians represent a wide range of medical specialties and provide comprehensive and accessible care. Spanning three campuses, the practice includes a full suite of imaging modalities, a full-service pharmacy, an onsite laboratory, and physical therapy facilities.

BUSINESS CHALLENGES
Pronger Smith was using a near end-of-life EMC unified storage array supporting its VMware environment and an aging IBM server running an even older EMR application—both of which were resulting in performance problems. When the practice invested in a Picture Archiving and Communications System (PACS) for radiology, the system became even slower.

In addition, the company’s backup procedures were entirely tape-based. And the environment lacked a disaster recovery (DR) plan and had no failover if the main site went down.

When the practice chose to replace its existing electronic medical records (EMR) application with virtualized Allscripts EMR, the IT staff undertook a competitive search for a new storage infrastructure. The staff wanted a storage solution that could support application growth and had tight integration with VMware. Pronger Smith also wanted to reduce costs by providing fully automated storage tiering for infrequently accessed data, such as PACS.

SOLUTIONS
After considering proposals from EMC and Dell, Pronger Smith chose EMC® VNX® unified storage for its simplicity, performance, and low total cost of ownership. The VNX implementation includes the EMC FAST™ Suite (including FAST Cache and FAST VP) and Flash drives—a FLASH 1st strategy.

To address its backup needs, the company chose EMC Avamar® deduplication backup software and system. EMC RecoverPoint™ and VMware® vCenter™ Site Recovery Manager (SRM) provide replication and failover between the company’s main data center and its DR site less than 20 miles away in Tinley Park, Illinois.

“The competing solution involved software from different sources. With EMC, all the key backup and DR software was under the EMC umbrella. That was a key factor in our decision to go with EMC,” says Craig Cypress, Director of IT at Pronger Smith.
Pronger Smith purchased the EMC solutions with the help of EMC partner, Sentinel. "We were working with Sentinel on network monitoring and with EMC on our backup and DR plans. We already had a good relationship with both partners. We got the same high quality of service from everyone involved. EMC and Sentinel worked seamlessly together," says Cypress.

**HIGH PERFORMANCE, REDUCED COSTS**

Deploying VNX and the FLASH 1st strategy has greatly improved performance at Pronger Smith. Under the strategy, the company uses two percent Flash drives to support 67 percent of total IOPS—resulting in application response times under one millisecond. FLASH 1st also has enabled Pronger Smith to reduce costs because it needs fewer drives overall.

"Performance is so much better," says Cypress. "VNX and FLASH 1st keep the data flowing and the VMs are not dragging at all."

Even with its entire VMware implementation running on the VNX, the company will be able to grow for five to eight years without upgrading its storage.

"Today, we are barely scratching the surface of what our implementation can do," says Cypress. "The system is running at only five percent of its total capacity, ready to support additional applications and future growth."

"With EMC, all the key backup and DR software was under the EMC umbrella. That was a key factor in our decision to go with EMC."

---

Craig Cypress
Director of IT at Pronger Smith Medical Care

**RAPID BACKUP AND RECOVERY, SIMPLIFIED MANAGEMENT**

EMC Avamar enables Pronger Smith to complete all of its backups in less than an hour—previously with tape, this took all weekend. And the backups are reliable.

"While tape jobs were always failing, we have never had a job fail on Avamar and have never had a performance hit," explains Cypress. "100 percent of our backups complete in less than an hour."

Recovery is also dramatically faster. "We can do three days worth of backup in 20 minutes and we can recover data just as fast," Cypress reports. "On one occasion, when a server went down, we used Avamar to restore the drive in ten minutes. In the past, it would take a day just to find the tape."

Avamar has also enabled Pronger Smith to reduce its network bandwidth and storage by 98.92 percent and to simplify management.

The IT team is using Avamar application-specific agents to perform guest-level backups of business-critical applications, including Microsoft SQL Server and Microsoft Exchange. This enables application consistency during the backup, and most importantly, during the recovery.

"It really gives us a second level of comfort," says Eric Taylor, Lead Network Administrator for Pronger Smith. "If something happens to the replication from Site Recovery Manager, then we have Avamar to recover the data."
For image-level backups, Pronger Smith has seen performance improvements with proxy load balancing.

“Sentinel Technologies showed us how Avamar completes file-level restores and image-level Changed Block Tracking restores, which are significantly faster than restoring the entire VM,” reports Taylor. “Being able to get the VM running quickly is a huge benefit to the end-user. We also like that Avamar provides the flexibility to recover to more than the original VM.”

**SHORTENED RPO AND RTO, REDUCED BANDWIDTH COSTS**

With EMC RecoverPoint and vCenter SRM, Pronger Smith has shortened its recovery point objective (RPO) from 24 hours to less than 15 minutes. In most cases, RPO is less than one minute during the day. The company’s recovery time objective (RTO) has been reduced from days to four hours or less. In fact, in a recent vCenter Site Recovery Manager failover simulation, Pronger Smith brought up all 32 of its VMs in less than 40 minutes.

"With EMC RecoverPoint and vCenter SRM we are running at almost realtime speeds,” Cypress reports. “If we have a disaster we will be up and running in 40 to 45 minutes with the whole system functioning.”

RecoverPoint compression levels average 4.2 times at Pronger Smith—enabling the company to reduce its WAN bandwidth cost by $100,000 over three years.