



Northwestern Memorial Hospital

EMC information infrastructure supports and protects clinical and administration applications

A subsidiary of Northwestern Memorial Healthcare, Chicago-based Northwestern Memorial Hospital strives for consistently high standards of quality, safety, cost-effectiveness, and patient satisfaction. The facility offers healthcare services in virtually every specialty, and draws upon the collective strength of more than 5,000 dedicated employees, including those from the Northwestern Memorial Physicians Group, a multi-site practice of primary care physicians. Northwestern Memorial Hospital is also one of the country's leading academic medical centers, and is the primary teaching hospital of Northwestern University's Feinberg School of Medicine.

To better support the capacity demands of its growing patient- and business-critical Cerner environment, and reduce the time and overhead associated with its existing direct-attached storage-to-server environment, Northwestern Memorial Hospital deployed an EMC® Symmetrix® DMX system. Based on the success of that deployment, a second Symmetrix DMX™ system was purchased six months later to support other key clinical applications as well as VMware® server virtualization and Exchange e-mail environments.

The organization's EMC information infrastructure also makes use of EMC NS series NAS solutions and EMC software to help streamline storage management and facilitate fast and reliable backup and recovery.

“Supporting our Cerner Electronic Medical Record is mission-critical for us,” says Corey Gaarde, manager of Clinical Systems. “We needed to ensure that the storage technology that we were considering was fully interoperable with those applications. EMC's ability to understand and work with the intricacies of Cerner gave us the state-of-the-art storage solution we needed.”

Information from key applications entrusted to EMC Symmetrix DMX

EMC Symmetrix DMX storage successfully supports the organization's critical clinical and administrative Cerner applications' data. It replaced older technology that was time-consuming to manage and unable to provide the flexibility to quickly and cost-efficiently accommodate the hospital's growing capacity demands.

The organization also deployed EMC's most powerful system, the EMC Symmetrix DMX-3, to better accommodate the rapidly expanding capacity demands of its other key applications such as a SoftMed Medical Records system, Misys Healthcare Systems lab software, GE Centricity PACS, and Microsoft Exchange. Data was quickly and safely migrated from the organization's older EMC Symmetrix by linking the two systems together and by using

EMC Symmetrix Remote Data Facility (SRDF®) software to mirror the information to the new Symmetrix DMX-3. Supporting enhanced reliability within this environment is EMC PowerPath® software which provides redundant pathways between the servers and the data.

“The biggest benefit we’ve realized since the deployment of our Symmetrix DMX has been the ability to scale,” says Gaarde. “Other advantages include better applications performance, higher availability, and the ability to maximize the utilization of our disk space.”

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In addition to the EMC Symmetrix platforms in place, the hospital is also using an EMC NS series NAS gateway system which has facilitated significant consolidation of the hospital’s file serving environment, and provided the added benefits of faster and more reliable file access.

Business continuity for 24x7 operations

Initiatives to improve performance and business continuity were facilitated through seamless, in-the-box, mirroring capabilities made possible by advanced EMC Symmetrix DMX technology, and by leveraging EMC TimeFinder® for simplified, economical backup and rapid recovery.

Running mirrored copies on the EMC Symmetrix DMX improves performance because dual writes are done to both copies, and reads can be done from either of the two copies at any point in time. The advantage is that if more than one clinician needs to view a patient’s medical records on the same disk, they don’t have to wait for availability and can view records simultaneously. In addition, if a drive failure occurs, a hot spare is automatically inserted, and a mirrored copy is used to quickly rebuild the data onto the new drive.

EMC TimeFinder is used to create non-disruptive business continuance volumes (BCVs) of the data residing on the EMC Symmetrix DMX system. The BCV is then sent for backup to tape. If needed, data can be quickly and easily retrieved from the BCV.

“The ability to create BCVs has been very beneficial toward dramatically improving our backup time,” says Gaarde. “It used to take over a day to back up our system, and now it takes four hours to spin it off to tape.”

An optimized IT environment with VMware

An early adopter and heavy user of virtualization technology over the last four years, Northwestern Memorial Hospital currently has over 200 instances of VMware in operation throughout the facility.

VMware virtualization, in combination with a centralized, high-capacity EMC storage environment, gives Northwestern Memorial Hospital the flexibility and ease of management to enable the facility to quickly and economically accommodate new and expanding application needs. Within the Cerner environment alone, data growth is rising by 100 gigabytes a month and six new applications are planned for deployment by year end. Overall, concurrent users are expected to top 2,200 in the coming year.

“The overall capacity, performance, ease of management, and flexibility provided by EMC’s proven technology and VMware virtualization solutions give us many options for effectively managing our growth and further improving the quality of care,” concludes Gaarde.



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Customer Profile
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