

Cerner Corporation



EMC Proven storage solutions make Cerner's Exchange 2003 upgrade seamless and disruption-free

Cerner Corporation has revolutionized healthcare information technology by allowing clinicians to care for clients without the errors, variance, and waste associated with paper charts. As the leading supplier of healthcare IT solutions, Cerner has nearly 5,000 associates—including almost 1,000 engineers dedicated to advancing its proprietary architecture, Cerner Millennium™ (CM). Sharing and accessing information over its Microsoft Exchange Server environment is critical for productivity.

When employees started using the system more regularly, Exchange quickly became a resource for collaboration on CM and other company projects. As it became integral to Cerner's operations, the firm saw Exchange usage grow 600 percent. Its value as an information repository was evident, but the demands on the system created both performance and scalability challenges. To achieve all the benefits of information lifecycle management, Cerner used EMC Proven™ storage solutions. This ensured a seamless Exchange 2003 implementation for its data and e-mail with the scalability and reliability the company needed.

"We're in business to make healthcare smarter," says Cerner Technical Architect Jeff Flannery. "Information has got to be available, it's got to be easily accessible. Our clients' challenges are managing the volume and the cost of this information. An EMC information lifecycle management strategy employs a set of integrated technologies that can help clients better and more cost efficiently manage information."

Cerner was using direct-attached storage (DAS) for their mission-critical information and e-mail, but managing multiple systems (some of which were individual workstations) became increasingly difficult. Regular corruption issues and decreasing reliability also increased operational expenses and impacted productivity. To reduce these costs and meet ever-increasing data storage needs, Cerner uses an EMC Symmetrix® DMX system with EMC TimeFinder® and Symmetrix Remote Data Facility (SRDF®) software to eliminate a nearly six-hour backup window. SRDF promised—and delivered—a greater degree of data consistency across Cerner's information infrastructure. The Symmetrix system and TimeFinder software also create frequent point-in-time images to reduce anticipated recovery times in the event of a system failure. In addition, these solutions made the upgrade from Exchange 2000 to Exchange 2003 significantly easier.

“There is probably nothing more technically difficult than a bulletproof Exchange implementation within an organization,” says Flannery. “It’s a very challenging environment.”

Once implemented, the EMC solution also shortened an 18- to 24-hour maintenance window that had been caused by information corruption and defragmentation on individual storage repositories. Infrastructure costs were minimized and Cerner improved service levels.

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Technical Architect

Increased uptime and productivity meets SLAs

For Cerner, managing information at the host level is important to maintaining uptime, information accessibility, and integrity. The company has almost 1,750 live CM applications used by clients worldwide, so meeting stringent, self-imposed service level agreements (SLAs) and delivering superior healthcare applications are primary initiatives. In addition, the company added approximately 2,500 mobile associates to its work force who are highly dependent on e-mail to stay productive. As a result, e-mail and storage requirements grew rapidly, and data access and system availability became even more critical.

When uptime became a problem because of the variability of individual workstations, Cerner migrated its operation to a centralized SAN-based storage system. The goal is to be back online in less than an hour. With EMC Proven storage solutions, information availability and productivity for remote employees and local staff has increased. The migration has also resulted in system reliability across all channels and enables Cerner to meet its SLAs.

“Before moving to Exchange 2003 and deploying EMC technologies, our backup window was excessive, and it impacted production performance at night,” says Eric Siley, director of technologies. “The EMC and Microsoft solutions eliminated this problem. EMC provides technology that works as advertised.”

Cerner is also able to perform hot splits on business continuance volumes (BCVs) within the EMC system, which allows backup without impact. And by using this in conjunction with snap technology, where snaps are done hourly, Cerner can be back online in minutes if a disaster or corruption occurs.

Centera enables compliance with data requirements

“We implemented EMC Centera™ because e-mail has become a system of record,” says Siley. “In looking ahead at what regulations would require over the next 12 to 24 months, we wanted to be on the leading edge in terms of compliance.”

Cerner expects its reliance on Exchange and EMC will grow as its data storage needs increase. The long-term plan for data, compliance, and content management includes leveraging other EMC solutions to enable disk-to-disk backup and shortened recovery times. Foremost in their plans is a CLARiiON®-based solution in conjunction with Centera to address archiving needs which are expected to increase enormously.

“To go from traditional direct-attached storage to centralized SAN-based storage means management is considerably easier,” says Flannery. “EMC’s storage management software

tools also enable us to manage the new array that runs Exchange and other arrays that were already in-house. Provisioning and basic SAN monitoring are done from a single view.”

Cerner now benefits from better performance, scalability, improved operational efficiencies, and reduced loads on individual servers. In addition, EMC’s solutions enable seamless communication between the Outlook 2003 and Exchange 2003 client server infrastructure, which allows adding more users from multiple locations.

“We chose EMC for our Exchange 2003 implementation because EMC had the only solution that met all of our business requirements—and the expertise to implement it,” says Siley. “EMC offers a service-provider-grade system that’s always available, has a very fast restore time, and offsite data replication capabilities. EMC has helped us make our Exchange 2003 implementation bulletproof.”



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