

A PRESCRIPTION TO HANDLE UNPRECEDENTED GROWTH

Steward Health Care gets the database performance and scalability needed to double its size and expand into three new states while continuing to deliver world-class care to patients



Healthcare | United States

Business needs

A major acquisition doubled Steward Health Care's size, adding new hospitals in Florida, Ohio and Pennsylvania to Steward's hospitals across Massachusetts. To support its 23,000 staff and 4,500 physicians in delivering exceptional patient care, Steward needed high-performance, highly scalable storage.

Solutions at a glance

- [Dell EMC XtremIO](#)
- [Dell EMC VMAX All Flash](#)
- [Dell EMC Unity All-Flash](#)
- [Dell EMC Isilon](#)
- [Dell Financial Services' Transformational License Agreement \(TLA\)](#)

Business results

- Supports extraordinary growth rate
- Eliminates competition for top-tier storage resources

- Hosts multiple data copies without affecting performance
- Provides ideal platform for next-generation EHR

2x
database
performance



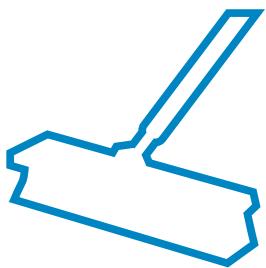
5:1
storage efficiency
ratio extends capacity



Since 2010, Steward Health Care has been among the nation's fastest-growing community healthcare systems. A leading accountable care organization (ACO), Steward has pioneered a new model of integrated care designed to improve quality, eliminate care fragmentation and reduce service duplication. Steward's success has brought recognition from numerous industry groups including the Centers for Medicare and Medicaid and The Leapfrog Group, from which Steward's hospitals have earned "A" ratings.

Recently, Steward acquired eight additional hospitals in Ohio, Pennsylvania and Florida. This acquisition nearly doubled Steward's network to 18 hospitals, 30 affiliated urgent care centers and 42 preferred skilled nursing facilities — with 3,700 beds under management. A staff of about 23,000 employees, including 4,500 physicians, provides care for approximately 2 million patients annually in 800 communities.

75%
reduction in
floor space



Just what the doctor ordered

One of the biggest challenges for Steward's IT department has been designing and deploying systems that scale efficiently to keep pace with this rapid growth. In the past, Steward deployed storage from vendors such as IBM, HP and NetApp. The systems weren't integrated, and it was difficult to match tasks and platforms.

"We needed a strong partner that offered the best end-to-end storage solutions," says Michael Hale, senior director of enterprise architecture for Steward Health Care. "We've

really achieved a transformation of our core enterprise data center platforms since we began our partnership with Dell EMC."

Handling critical patient information

Steward relies on the MEDITECH electronic health record (EHR) system to provide the highest-quality care more efficiently and at less cost. The MEDITECH data repository contains critical patient information needed daily by physicians and staff — as well as executive dashboards used to monitor staffing levels and patient progress and to manage business functions.

Although the two databases aren't huge — totaling 12TB — Steward needs to host four copies of them, and this had been consuming most of the top tier of its storage resources. SLAs were in danger of being missed. To address this, Steward moved the MEDITECH data repository to a Dell EMC XtremIO storage array.

Steward also migrated many other essential workloads and applications — including financial and business applications

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running on Microsoft SQL Server and Kronos platforms — to XtremIO. Starting from a single 10TB X-Brick, Steward has quickly ramped up to four 20TB X-Bricks to support the production and replicated copies of its databases and workloads.

“Our most critical functions were starved for performance,” Hale remarks. “When we moved the databases and workloads to XtremIO, we found that they consumed twice the IOPS they had been using on the previous platform — doubling the performance to better support our physicians and staff.”

Improving agility and cost-effectiveness

XtremIO’s built-in integrated copy data management (iCDM) helps consolidate production and non-production databases while ensuring extraordinary agility and performance for Steward’s production SLAs. A 5:1 compression and deduplication ratio reduces costs by effectively extending the capacity of the XtremIO array. Hale and his team are also taking advantage of Connectrix DCX8510-8B director-class switches for massive scalability, again without affecting performance or functionality.

“One of the features we really love about XtremIO is the mobility,” notes Hale. “It’s allowed us to dynamically move workloads around on the fly, with no downtime or degradation in service.”

Steward enjoys additional cost savings and flexibility while accommodating its unprecedented growth through Dell Financial Services’ Transformational License Agreements (TLAs). Under a TLA, which has terms that last three to five years, Steward can get the software it needs today and be able to freely swap and replace software as needed.

“We were delighted to have a simple, cost-predictive way to plan for growth while future-proofing our environment — without overbuying,” says Julie Berry, Steward’s CIO. “Dell’s TLA has been beneficial to our company’s expansion.”

Transforming care with MEDITECH 6.1

Steward is now working toward the launch of MEDITECH 6.1, a next-generation EHR platform capable of dramatically transforming clinical care for the health system. The solution will offer a complete story for every patient — with all information just a touch away. To ensure that needed data is always at caregivers' fingertips, Steward will rely on Dell EMC's VMAX All Flash storage.

"We initially selected the VMAX 450F All Flash array, with its ideal combination of price and performance," Hale explains. "But because we're quadrupling in size, the VMAX 950F All Flash is likely to be our preferred choice for MEDITECH 6.1. It will also reduce our data center floor space by 75 percent and power consumption by 80 percent in our new colocated facility."

Technology partner for the future

With Steward's continued expansion across the U.S., Hale's team will be creating regional data centers to ensure optimum performance and responsiveness. These centers will run on XtremIO and Dell EMC Unity storage arrays. Steward is also using replicated Dell EMC Isilon storage to support an enterprise file-sharing platform for MEDITECH that's been growing by nearly 2TB a month. Isilon has eliminated issues with scalability, sustainability and data protection that were problems with older block-based storage.

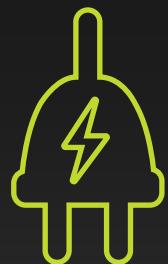
"With the end-to-end solutions of Dell Technologies and Dell EMC, we no longer have gaps in our IT platform," states Hale. "Dell has positioned itself as the data center and technology partner for the future, and that offers clear benefits. It will enable us to continue to deliver the world-class integrated care our patients deserve — efficiently and cost-effectively."

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80%
less power
consumption



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