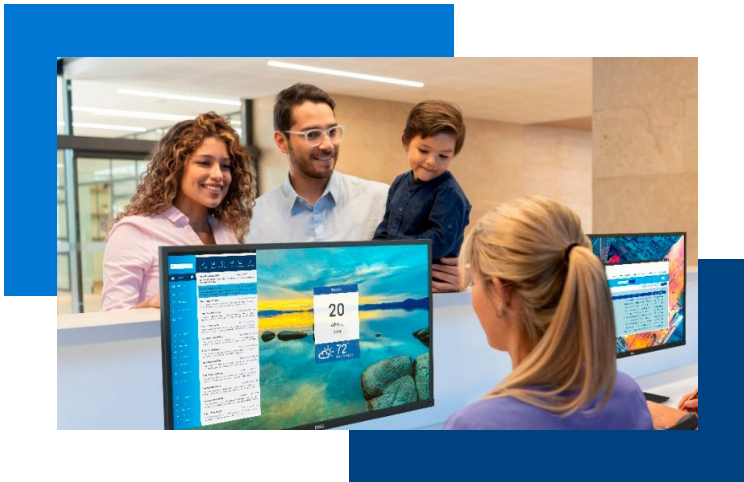


Delivering better patient care on a broader scale

As Steward Health Care quadrupled in size, the healthcare network turned to the latest Dell Technologies solutions to help redouble its commitment to transformative patient care and safety.



When we quadrupled in size in 2017, we needed storage for our EHR that was incredibly reliable and scalable—we have that in Dell EMC PowerMax.”

Michael Hale

Executive Director,
Enterprise Architecture & Engineering,
Steward Health Care

Business needs

With acquisitions and mergers quadrupling the size of Steward Health Care’s network of hospitals and urgent care centers across nine U.S. states and the nation of Malta, the organization relies on best-in-class Dell EMC IT infrastructure including NVMe storage to support 40,000 healthcare professionals and 6 million patient encounters annually.

Business results

- 6 million patient encounters yearly.
- Sub-100-ms latency for timely patient care and decision-making.
- 6:1 data reduction ratio for more efficient storage.
- Zero downtime to ensure care is always available when needed.
- Thousands of dollars saved in reduced power and data center costs.

Solutions at a glance

- [Dell EMC PowerMax](#)
- [Dell EMC VxRail](#)
- [Dell EMC XtremIO](#)
- [Dell EMC PowerScale](#)
- [Dell EMC PowerProtect](#)
- [VMware vSphere](#)



Since we deployed PowerMax, we've never had to chase any performance or application issues related to storage in our MEDITECH EHR environment."

Robert Lopes

Manager, Storage Engineering & Architecture,
Steward Health Care

Steward Health Care is the largest private, for-profit, physician-led healthcare network in the U.S. Its mission is simple: to improve the quality of care using the latest treatments and technologies, and expand access for underserved communities—while reducing costs for patients and small businesses.

Challenged by its rapid growth in the U.S.—with an increasing number of hospitals and urgent-care centers from Arizona to Massachusetts and overseas in Malta—Steward's IT infrastructure was experiencing a number of performance issues as well as occasional outages. With patient lives on the line, this was unacceptable.

"When we quadrupled in size in 2017, we needed storage for our EHR that was incredibly reliable and scalable—we have that in Dell EMC PowerMax," says Michael Hale, executive director of enterprise architecture and engineering for Steward.

Responsive access to patient records

In the past, physicians and nurses who required immediate access to patient records sometimes encountered problems including complaints about slow responses to queries that threatened timely treatment and decisions.

"As we grew, we migrated all patient information to the latest electronic health records platform, running on a large PowerMax 8000 storage array," explains Robert Lopes, manager of storage engineering and architecture for Steward. "Since we deployed PowerMax, we've never had to chase any performance or application issues related to storage in our MEDITECH EHR environment."

"PowerMax performance is second to none with up to 15 million IOPS and 350 gigabytes per second throughput with sub-100-millisecond latency," Hale notes. "That's pretty incredible. Our doctors and nurses can treat patients without delay—giving them more time to focus on providing care and not waiting for data."

Migrating data from Steward's previous Dell Technologies storage platform was fast and easy, using Dell EMC VPLEX and scripts built with PowerMax-compatible application programming interfaces (APIs).

"With the high availability and resiliency of PowerMax, we've had zero downtime—which is critical for any healthcare system," adds Lopes.

A cure for spiraling healthcare costs

Every healthcare organization keeps a keen eye on costs, and PowerMax has helped Steward shave its expenses by reducing its MEDITECH storage footprint from three racks to one—while doubling the storage capacity in a single cabinet.



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“PowerMax saves us thousands of dollars annually on power costs and frees up valuable data center space for future expansion of our IT services,” Hale states.

Steward also makes better use of its IT staff, thanks to high-performance NVMe technology and built-in PowerMax machine learning, which optimizes load balancing with minimal management overhead. “PowerMax frees up our time, so we can continue to modernize our legacy IT platforms,” remarks Lopes. “Overall, we just get better application performance—resulting in fewer calls and no headaches.”

Relying on Dell Technologies solutions

The entire Steward enterprise relies on a variety of Dell Technologies solutions and VMware virtualization:

- Dell EMC VxRail hyperconverged infrastructure to run a telemedicine service that provides remote ICU monitoring
- Dell EMC XtremIO for additional storage requirements
- Dell EMC PowerScale to store 4 PB of unstructured data across 30 nodes
- Dell EMC PowerProtect DD series appliances to back up vital patient and business data
- VMware to ensure the best performance in a virtualized environment

Hale and his team use the cloud-based monitoring, advanced analytics and anomaly detection of Dell EMC CloudIQ to proactively plan capacity and expedite troubleshooting to speed remediation and further optimize their productivity.

In addition, the Dell Technologies Future-Proof Program and the software Transactional Leasing Agreement from Dell Financial Services provide desired budget predictability and offer more choice and flexibility in how the organization consumes technology resources.

“Now more than ever, our professionals need reliable and quick access to patient information,” Hale comments. “With Dell Technologies solutions, we know we can deliver.”

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