

## Flexible platform helps healthcare system enhance patient care

A leading U.S. healthcare system deployed the Dell EMC PowerFlex rack to run Epic and other key applications essential to quality patient care.



Customer profile

### Leading Healthcare System

Healthcare | United States



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**Leading Healthcare System**

### Business needs

To support its rollout of Epic Hyperspace and also consolidate a large SQL environment to ensure timely patient information for clinicians, a large and growing healthcare system found the massive performance, sub-millisecond responsiveness, scalability and exceptional resilience of PowerFlex to be the perfect prescription.

### Business results

- Supports 80,000 concurrent Epic Hyperspace users.
- 500% faster response times for key transactional databases.
- Millions of dollars saved in database licensing fees.
- 80% lower cost per VM than large public cloud providers.

### Solutions at a glance

- [Dell EMC PowerFlex](#)
- [Dell EMC PowerScale](#)
- [Dell EMC PowerProtect DD](#)
- [VMware vSphere](#)



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### Leading Healthcare System

A highly respected not-for-profit healthcare system relies on physicians, nurses, other clinicians and staff to deliver high-quality, personalized care throughout a patient's health journey. In addition, its researchers are leading the way in driving medical innovation to improve patient outcomes.

To accomplish its mission, the healthcare system required the highest levels of performance, flexibility and resilience from its IT — while reducing costs. Responding to these challenges had become more difficult due to an aging infrastructure and underpowered siloed resources, leading to complexity and inefficiencies.

## Supporting life-critical workloads

The healthcare system chose the Dell EMC PowerFlex rack as its foundation for a sweeping data center modernization — consolidating dozens of disparate storage arrays down to a single, highly scalable platform in each data center.

Beginning with the rollout of a Microsoft SQL Server Database-as-a-Service platform, the healthcare system then deployed an Epic solution on PowerFlex, using Epic's Hyperspace virtual desktop infrastructure to ensure clinicians have critical patient information at their fingertips.

With the success of this implementation, the healthcare system ultimately standardized on PowerFlex for virtually every workload — from Epic to an enterprise data warehouse and general-purpose applications — all running in a VMware virtualized environment.

PowerFlex has easily scaled as the Epic environment has expanded to 80,000 concurrent users, helping to deliver medical services faster across healthcare facilities. Around 500 nodes support the Epic environment, while another 250 nodes are used for general-purpose workloads — with approximately 6 petabytes of total storage capacity.

The result has been significantly better performance and responsiveness, efficient utilization, exceptional dependability and reduced costs system-wide.

## 500% faster response times

In patient care, time is of the essence. Since deploying PowerFlex, I/O response times have improved by as much as 500%, from five milliseconds or more to sub-millisecond responses.



**80% lower cost** than a public cloud.



“The data elasticity and reduction capabilities of PowerFlex have decreased the cost per VM to one-fifth that of a public cloud provider.”

**Leading Healthcare System**

PowerFlex can process tens of millions of input/output operations per second (IOPS), orders of magnitude beyond what was possible in the past. In addition, by consolidating dozens of storage systems into a single modern software-defined platform in each data center, millions of dollars are being saved annually in database licensing fees.

The data elasticity and reduction capabilities of PowerFlex have also decreased the cost per VM to one-fifth that of a public cloud provider.

## Simplified management

To manage its platform and stay up to date, the IT team relies on PowerFlex Manager, which provides full visibility into its environment and offers tools for automating IT operations and lifecycle management. The team especially appreciates how compute and storage can be scaled independently as required. This helps ensure that the hospital system can meet its SLAs and respond efficiently to a recent need to stand up a 1,000-bed field hospital in days.

Beyond the PowerFlex platform, the healthcare system uses Dell EMC PowerScale to manage massive amounts of unstructured data such as medical imaging, as well as PowerProtect DD appliances to provide backup and recovery protection for its data.

PowerFlex and other Dell Technologies solutions will remain at the heart of the healthcare system's strategy for data center modernization and patient care going forward.