Dell EMC PowerMax Drives Epic Performance

Best-in-class storage helps clinicians deliver best-in-class patient care

Architecture

- Incredible Performance
- Scale from 13TB to 4PBe
- Up to 5:1 Data Reduction

Operation

- Consolidate workloads on one platform
- Achieve consistent and predictable performance
- Monitor storage health with CloudIQ

Innovation

- Machine learning ensures maximum performance and SLAs
- Architected for 6 9's of availability
- Industry's gold standard in replication with SRDF
- D@RE keeps patient data safe

Next-Gen Infrastructure for EHR Deployments

Electronic Health Records (EHR) are an integral part of today's healthcare IT landscape. With EHR deployments, such as Epic, hospitals can deliver safer and better patient care across the healthcare continuum. With the implementation of electronic records, storing, protecting and accessing critical patient data where and when it is needed becomes a top priority for care providers.

Focused on the patient at the center, health IT professionals need next-generation infrastructure they trust to perform without ever "skipping a beat." With physicians, nurses, pharmacists, technicians and patients demanding information at the speed of now, the technology needs to be fast. Storage needs to have the ability to scale as the number of patients and corresponding data continues to grow. At the same time, data must be protected and secured to enable and meet HIPAA and GDPR requirements. This is where Dell EMC solutions can help.

Deploying and maintaining an EHR environment can be demanding and you need technologies that seamlessly address the workflow, management and security needs associated with these workloads. Dell EMC offers technology that truly works with Epic. In fact, more than 65% of Epic's customers deploy Dell EMC solutions[1]. When it comes to storage, PowerMax is a true and trusted solution for EHR environments.

Dell EMC PowerMax, the world's fastest storage array[2], brings performance without compromise to your healthcare organization by providing a powerful architecture, simple operation and trusted innovation for EHR workloads

Performance Without Compromise

When patient data is needed at the point of care, healthcare providers need access to the data at lighting speed. PowerMax is architected to deliver incredible performance with NVMe done right including dual port NVMe based drives – flash and SCM, and NVMe over Fabric. Blazingly fast speeds of up to 15 million IOPS[3], 350 GB per second bandwidth[4] and less than 100 microsecond response times[5] ensure clinical data is there when it's needed most. The highest levels of performance deliver a better experience for both patients and healthcare professionals.

Many healthcare institutions are growing, either in number of patients or through acquisitions, and oftentimes both.

PowerMax- Consolidate with Confidence
Consistent, predictable performance across all aspects of Epic

With that, the amount of patient data also continues to grow, meaning you need storage that grows with you. PowerMax starts as small as 13TB and offers true multi-dimensional scale up to 4PBe. With the ability to scale up and out, you have the flexibility to expand capacity and performance.

When it comes to capacity, you want the most out of your storage. PowerMax offers extreme efficiency with inline, hardware-based global deduplication and compression. With the use of these two data services, you can see up to a 5:1 data reduction and you can turn them off or on at the application level. This means you have the flexibility to manage your workloads the way that best fits your needs.

Simple Operation

In many cases, EHR deployments like Epic have multiple production databases and 3rd party applications, as well as copies for analytics, dev/test, back up, go-live testing and more. PowerMax simplifies operation by consolidating all of your workloads on one platform while achieving consistent and predictable performance. PowerMax is the ultimate platform for EHR consolidation.

Patients are not the only ones that need to stay healthy in healthcare institutions; your storage does as well. By utilizing Dell EMC CloudIQ, you can monitor your storage health from anywhere, anytime. CloudIQ alerts you when problems arise and helps prevent issues from occurring in the first place - it's like a "fitness tracker" for your storage.
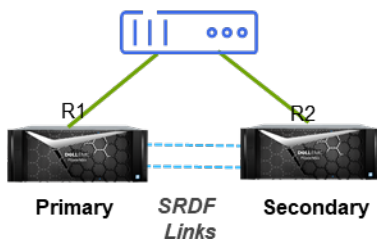
Trusted Innovation

PowerMax, with its trusted data services, has been a solution for mission-critical databases for years. The PowerMaxOS offers innovations such as the built-in machine learning engine that ensures maximum performance with no management overhead. PowerMax analyzes 40 million data sets in real time[6] and makes 6 billion decisions a day[7]. Meaning you can consistently meet your SLAs on both Epic and non-Epic workloads with the service level objectives your organization requires.

PowerMax is a trusted platform offering high availability, protection and security for your EHR data. Caregivers need to access a patient's record in a moment's notice. The only way to guarantee this is with a storage array architected for 6 9's of availability, like PowerMax. With non-disruptive migrations and updates as well as component-level fault isolation and multi-controller architecture, PowerMax simply does not go down. Epic is mission-critical for you, and we intend to keep it up and running all the time.

Protection and security of patient data is also enabled with PowerMax. PowerMax provides replication with the use of SRDF software, which is the gold standard in the industry for business continuance. SRDF allows you to replicate data across multiple sites or extended distances. In fact, SRDF/Metro delivers active/active high availability for non-stop data access. Replication on PowerMax complements Caché/IRIS mirroring and allows you to replicate non-Caché/IRIS data with no additional infrastructure.

Metro

R1   R2

Primary   SRDF   Secondary
           Links

PowerMax with Dell EMC PowerProtect Storage Direct technology gives you the ability to back up data directly to Dell EMC PowerProtect. This results in up to 20x faster direct backups and 10x faster recoveries.

D@RE (data at rest encryption) protects your data at the drive level. PowerMax is designed for FIPS 140-2 validation and meets the Advanced Encryption Standard (AES) 256.

Trust your patient's data is safe and protected with PowerMax.

Trusted by Epic

Epic runs on both PowerMax and VMAX AF, the previous generation of the product family. Due to Epic's experience with PowerMax, they have given the array the distinction of "High Comfort." PowerMax and VMAX AF are extremely popular in EHR environments and currently has the highest number of Epic deployments worldwide at over 100.

Future-Proof Infrastructure Investments

The Dell EMC Future-Proof Program takes the worry out of buying storage and qualifies your PowerMax purchase for a 3-year satisfaction guarantee. Get peace of mind with your PowerMax.

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1 HIMSS Analytics, October 2018

2 Based on Dell EMC internal analysis of published bandwidth of the PowerMax 8000 versus competitive mainstream arrays, July 2019.

3 Based on Dell EMC internal analysis of Random Read Hits Max IOs Per Second (Within a single array on 2 floor tiles) on the PowerMax 8000, July 2019.

4 Based on Dell EMC internal analysis of Random Read Hits Max GB per Second (Within a single array) for the PowerMax 8000, July 2019.

5 Based on Dell EMC internal analysis using the OLTP2 HW benchmark for a single PowerMax 8000 array, July 2019

6 Based on Dell EMC internal analysis of PowerMax 2000/8000 with 200TB of

capacity, July 2019 7 Based on Dell EMC internal analysis of a single PowerMax 2000

or 8000 array, July 2019