

CONSOLIDATE MICROSOFT SQL SERVER ON DELL EMC POWERMAX

With most companies seemingly running every version of Microsoft SQL Server in their environments, PowerMax is the platform for optimizing the performance, efficiency, and agility capabilities for all your Microsoft SQL Server databases instances.

One Array for All Microsoft SQL Versions



Simple Management

- Embedded management
- QoS
- Granular role-based access

Availability and Protection

- Designed for six-nines availability
- Industry's Gold Standard in replication
- Automated and self-service data protection

Extreme Efficiency

- Inline deduplication and compression
- 5:1 storage efficiency guarantee
- Unified block and file storage
- Seamless data migration

Proven Security

- Controller based encryption with D@RE
- Secure snapshots

Copy Data Management

- Automation and Orchestration of copy data workflows

Optimization

- Automated data path management
- Monitoring and reporting across heterogeneous storage environments

Microsoft SQL Server is the core database engine for many enterprises, supporting their business-critical applications. Enterprise grade storage is a key component to successfully design, deploy, and optimize a Microsoft SQL Server environment. An effective storage subsystem is not only crucial to delivering fast application response time, but also affects the availability, and efficiency of the database.

Microsoft SQL Server DBAs face constant struggle, managing multiple legacy versions while facing pressure to deploy new releases to take advantage of feature and performance improvements. Feature differences inevitably result in massive inconsistencies in performance, availability, and security which make management of the environment complex and wrought with inefficiencies.

Dell EMC's PowerMax provides a single platform to increase the overall performance and capabilities of Microsoft SQL Server, regardless of version. PowerMax, the world's fastest enterprise array, delivers optimal levels of performance and efficiency today as well as being future proofed for next generation media advancements. With up to 15M IOPS, 350GB/s throughput and an architecture designed to be scaled up or out to meet the needs of your database instances today and beyond.

PowerMax is the ideal consolidation platform for Microsoft SQL Server, delivering a tier zero platform with proven six-nines availability for even the most demanding Microsoft SQL Server environments.

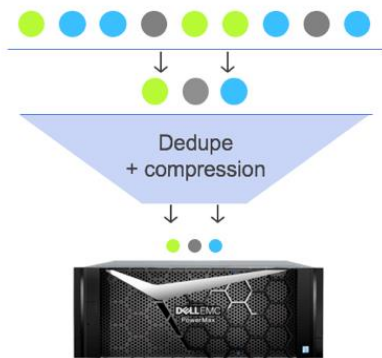
Always On Replicas & SRDF: Better Together

As Microsoft continues to improve their Always On Availability Group capabilities; PowerMax maintains Dell EMC's position as the gold standard in array based replication. For constant availability with zero downtime, SRDF (Symmetrix Remote Data Facility) provides a true Active/Active datacenter replication via SRDF/Metro as well and synchronous or asynchronous.

Always On Replicas are ideal for local synchronous HA replicas or local read-only replicas which can be leveraged for backups or real time reporting and analytics. SRDF provides superior capabilities for replication, spreading risk across up to four sites. Consistency groups, whether sync or async, ensure write order fidelity is maintained and the target devices always provide restartable replicas of the entire source application as a whole.

SRDF: The Gold Standard in Replication





Extreme Efficiency for Microsoft SQL Server Databases

PowerMax delivers extreme efficiency with thin provisioning, global compression and deduplication to significantly reduce storage footprint and lower overall TCO. Existing Microsoft SQL Databases, regardless of version can take advantage of these data services without any custom configuration.

Inline compression provides additional data reduction benefits, even when already leveraging SQL Server page or row compression. Inline deduplication works to help control the impact of database copy sprawl throughout the environment from host made copies. However, to maximize the efficiencies available in the array, leverage SnapVX.

Superior Protection and Flexibility with SNAP/VX

SnapVX software is used to create zero-impact, space-efficient local snapshots that could be used for local protection and recovery or repurposed for other use cases including development/test, analytics, backups and patching.

Dell EMC's integrated Copy Data Management (iCDM), via AppSync software, transforms workflows in SQL environments. iCDM builds on PowerMax's efficient SnapVX technology and delivers incredible performance to production and non-production copies without impacting the production SLAs.

Orchestration & Automation for Copy Workflows

Further orchestration and automation of these copy workflows are achieved via Integrated Copy Data Management (iCDM) with AppSync, which seamlessly integrates with PowerMax. AppSync provides the ability for DBAs and application owners to leverage familiar tools such as PowerShell to execute ad-hoc snapshots for protection or repurposing. Leveraging PowerShell, advanced software development workflows can be simplified to accelerate development and release dates.

Quality of Service for Prioritized Performance

Organizations are in constant need of IT infrastructures that can deliver instant access to largely increasing volumes of data. PowerMax offers a variety of service levels to ensure that business and mission critical databases get the resources they need by ensuring lower priority applications are minimally disruptive to higher priority applications. Service levels are offered with various ranges of performance expectations with

Intelligent Database Storage Analysis

Unisphere for PowerMax includes the Database Storage Analyzer (DSA) application which provides in-depth database to storage performance comparison troubleshooting capabilities for Microsoft SQL Server & Oracle Database. DSA quickly identifies databases which are suffering from I/O latency, non-storage issues, and greatly improves the overall communication between your storage and database teams.

Accelerated Backups for Large Databases

Dell EMC PowerProtect for PowerMax dramatically reduces the database backup window by completely eliminating backup servers and the requirement to send backups over the network. Microsoft SQL Server DBAs can back up databases from SQL Server Management Studio with data sent directly from PowerMax to a Dell EMC Data Domain protection storage system. PowerProtect eliminates backup impact on application and database servers to gain up to 20 times faster backup, up to 10 times faster recovery, with reduced cost and complexity.

Future-Proof Infrastructure Investments

PowerMax offers future-proof investments with non-disruptive upgrade paths to NVMe over Fabric and next-generation storage-class memory (SCM) drives. The PowerMax operating system, PowerMaxOS, also comes with an intelligent built-in machine learning engine that constantly analyzes IO and automatically place data on the most optimal media type (flash or SCM) with zero overhead.