

CONSOLIDATE MICROSOFT SQL SERVER ON DELL 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 of all your Microsoft SQL Server database instances.

One Array for All Microsoft SQL Versions



Simplified Management

- Embedded Management
- QoS
- Granular role-based access

Availability and Protection

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

Extreme Efficiency

- Inline deduplication and compression
- 4:1 data reduction guarantee
- Unified block and file storage
- Seamless data migration

Proven Security

- Designed for Zero Trust architectures
- Secure immutable snapshots
- Node-based encryption with D@ARE

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 times 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 managing the environment complex and wrought with inefficiencies.

[Dell PowerMax](#) provides a single platform to increase the overall performance and capabilities of Microsoft SQL Server, regardless of version. PowerMax, the world's most secure enterprise array, delivers optimal levels of performance and efficiency today as well as being future-proofed for next-generation media advancements. With under 60 microseconds response times and an architecture designed for massive scale-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 its Always On Availability Group capabilities; PowerMax maintains Dell Technologies' position as the gold standard in array-based replication. For constant availability with zero downtime, SRDF (Symmetrix Remote Data Facility) provides true Active/Active data center replication via SRDF/Metro as well as 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 remote 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.

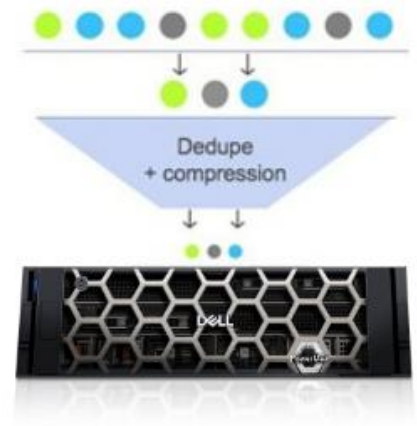
SRDF: The Gold Standard in Replication



Extreme Efficiency for Microsoft SQL Server Databases

PowerMax can radically reduce the amount of storage required for your overall SAP system landscape, offering powerful snapshot capabilities that allow developers to have their own environments, whether they are working on upgrades, new features or urgent fixes. With SnapVX technology, these individual environments are created instantaneously at near-zero cost and near-zero performance impact on the production systems, all with snapshot policy automation.

In addition, each environment includes a complete dataset (that consumes near-zero space) to help improve developer efficiency and code quality. With this approach, parallel-development projects can proceed without painstaking coordination, which helps unlock each developer's full potential and productivity.



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 Technologies integrated Copy Data Management (iCDM), via AppSync software, transforms workflow automation 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 that lower-priority applications are minimally disruptive to higher-priority applications. Service levels are offered with various ranges of performance expectations.

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 that are suffering from I/O latency, and non-storage issues, and greatly improves the overall communication between your storage and database teams.

Accelerated Backups for Large Databases

Dell 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 Data Domain protection storage system.

PowerProtect eliminates backup impact on application and database servers to gain up to 20 times faster backup, and 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 dynamic fabric technology.

The PowerMax operating system, PowerMaxOS 10, also comes with an intelligent built-in machine-learning engine that constantly analyzes IO and automatically places data on the most optimal data pool with zero overhead.