

Dell PowerMax: Enterprise Storage Designed for Demanding VMware Environments



Dell PowerMax is a new class of enterprise storage that delivers unprecedented levels of performance, scalability, and agility for the most demanding VMware environments.

PowerMax provides seamless integration with VMware vSphere, Virtual Volumes (vVols), SRM and SRDF replication for unmatched data resiliency.

Benefits

- **VMware Integration** – delivering mission-critical availability and the [highest scalability for VMware vVols](#) deployments (64,000 vVols)
- **Linear Scale-Out** – increasing storage capacity and performance for VMware environments, with 100% uptime
- **Integrated into the VMware** management paradigm – improving administrator efficiency
- **Offload Storage Tasks** – Storage API Integration (VAAI, VASA) shifts vSphere storage tasks to PowerMax
- **Virtual Storage Integrator (VSI)** - in-context storage translation and provisioning in vCenter
- **Designed for Speed** – true multi-controller scale-up, scale-out architecture with built-in end-to-end NVMe
- **Efficiency without Compromise** – global inline data reduction reduced VMware footprint with guaranteed 4:1 data reduction rate²
- **DevOps Automation and Containers** – workflow automation and streamlined IT processes (vRA, vRO, CSI, Kubernetes)
- **Mission-Critical Availability** – proven six nines availability³ and gold-standard replication for unmatched disaster recovery protection

Overview

VMware vSphere is the most widely adopted virtualization platform today – running in over 80% of organizations supporting diverse workloads¹. VMware has evolved from server virtualization to a complete ecosystem that now includes security, networking, and storage. It also provides management and automation as well as cloud functionality. With the release of vSphere 7, VMware enables organizations to run cloud-native, containerized applications side by side with virtualized applications.

VMware supports connection to external storage in vSphere through the vStorage API for Array Integration (VAAI) which allows the offload of storage intensive operations from vSphere to the storage array. This storage integration has been extended through vStorage APIs for Storage Awareness (VASA) allowing vSphere to recognize the capabilities of storage and leverage this through VMware Virtual Volumes (vVols). vVols provides a management framework for external storage and offers flexibility of choice for changing workloads – traditional VMs, containerized applications, and more.

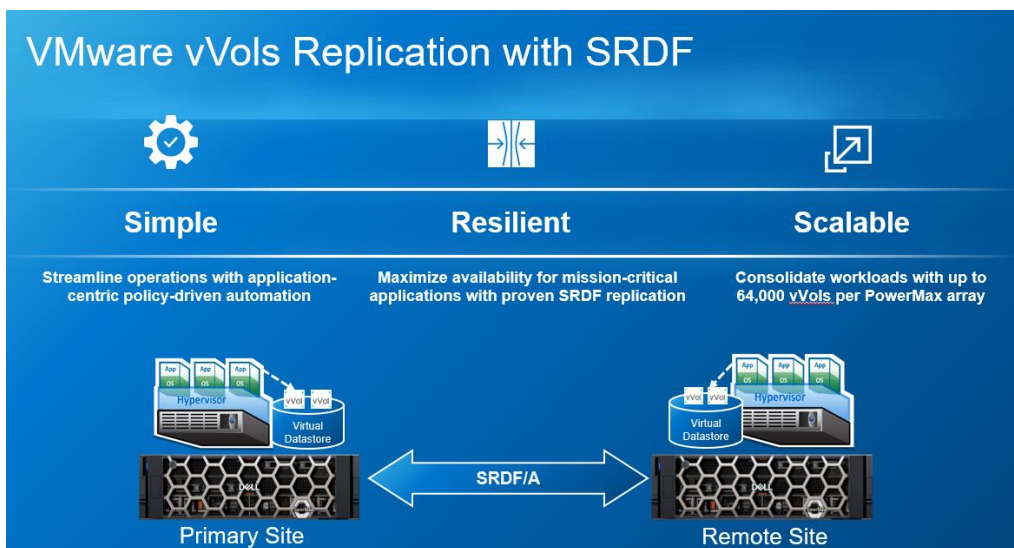
Dell’s most powerful storage platform – [Dell PowerMax](#) – is built with VMware in mind and integrates into VMware management frameworks making it easy for VMware administrators to manage storage and improve their efficiency. PowerMax accommodates modern data sets and was designed to utilize modern storage technologies, such as NVMe and Infiniband. It is designed for vVols with simple to use native integration and also supports container storage needs.

PowerMax is architected to consolidate demanding virtualized workloads through its unprecedented levels of performance, integrated data reduction, automatic data placement recommendations, and machine learning to streamline storage operations and bring these features to vSphere deployments.

It is true modern scale-out storage designed for mission-critical applications of today and tomorrow – including demanding databases, massive transaction processing workloads, and real-time data analytics.

Drawing upon years of experience working with VMware, PowerMax provides a highly resilient storage platform to optimize your outcomes in virtual deployments. PowerMax is designed for [Zero Trust security architectures](#)⁴ and offers unmatched performance, global inline data efficiencies such as de-duplication and compression, a built-in machine learning engine to optimize performance, and the ability to consolidate massive amount of block, file, mainframe and virtualized data on a single array. PowerMax is also qualified for deployment in Virtual Infrastructure (or workload) domains through VMware Cloud Foundation (VCF).

PowerMax delivers greater levels of simplicity, scalability and data resiliency for VMware deployments by tightly integrating PowerMax SRDF replication with VMware vSphere Virtual Volumes and VMware Site Recovery Manager (SRM 8.3). These enhancements help organizations transition from a vSphere hardware-centric storage environment (VMFS/RDM datastores) to an application-centric vVols datastore model that provides massive scalability (up to 64,000 vVols), high data resiliency (SRDF remote replication) and simple operation for VMware administrators.



Benefits

The combination of Dell PowerMax and VMware has the following benefits:

- Leverage leading functionality of enterprise storage:** Customers can now benefit from the advanced and unique functionality of Dell storage platforms on which they have come to rely, including highly available storage architectures, machine learning-based service levels, advanced secure snapshot, and data reduction capabilities, and now the ability to run applications protected by SRDF/A remote replication to maximize data availability.
- Reduce TCO:** By leveraging existing storage investments, people skills, and operational procedures, the overall cost of application deployments utilizing PowerMax in VMware environments and with VMware Cloud Foundation can be reduced.
- Provide more granular performance and scale:** Enterprise storage can scale independently from the compute infrastructure. When application usage demands high-I/O density solutions, PowerMax can scale performance, network connectivity, and storage capacity without disruptive VMware operations providing massive consolidation opportunity.

Future-Proof Program

PowerMax is part of the [Future-Proof Program](#), which is designed to provide investment protection through a set of world-class technology capabilities and programs that enable Dell storage products to provide value for the entire lifetime of customers' applications. The program is available to customers at no additional cost in terms of maintenance or product prices.

FUTURE-PROOF PROGRAM



Dell Technologies Services

For the most demanding workloads, we offer a host of services to maximize productivity across your environment. From planning through deployment and optimization, training, and professional certifications—you'll have access to our global team of PowerMax experts, industry-leading tools, and automated, proactive support.

For a faster path to productivity, take advantage of Dell EMC [ProDeploy Plus](#), delivering up to 66% faster deployment time and up to 85% less time on project planning⁵. To identify and resolve issues before they happen, PowerMax includes your choice of Dell EMC ProSupport or ProSupport Plus, delivering 24x7 predictive support, automated case creation, 4-hour mission critical onsite hardware response and operating environment software upgrades. With [ProSupport Plus](#), our most feature-rich offer, organizations experience up to 19% fewer critical issues and up to 70% faster response times⁶. Talk to a Dell Technologies representative for details about which services best fit your needs*.

* Services availability and terms of service vary by country.

1. <https://www.controlup.com/hypervisor-market-share-controlup-perspective/>

2. Based on Dell's Future-Proof program that offers 4:1 data reduction guarantee based on PowerMax data reduction tools (dedupe and data compression) for open systems storage, April 2022. Actual data reduction rates will vary.

3. Based on the Dell's specification for a single PowerMax 2500 or 8500 array, March 2022. Actual system availability will vary.

4. Based on Dell's internal analysis of cybersecurity capabilities of Dell PowerMax compared to Dell's seven pillars of Zero Trust architectures, March '22.

5. Based on July 2019 Principled Technologies Report commissioned by Dell EMC, "Be production-ready sooner by using ProDeploy Plus for Enterprise".

6. Based on a September 2019 internal analysis of service requests from August 2017 to August 2019 for Dell EMC Storage and Data Protection products.



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