Dell PowerStore

Smart choice for all-flash storage

PowerStore is #1 in ease of use[1]

PowerStore is the only storage system with a certified NPS® scoring methodology by Bain & Company (the inventors of the Net Promoter System℠.)[2] Read the white paper.

Adaptable

- **Any workload** – Single platform supports block, enterprise file, vVols, containers.

- **Built for performance** – End-to-end NVMe, active/active design delivers high IOPS, sub-millisecond latency.

- **Scale up and scale out** – Easy, plug-and-play expansion to over 23 PBe per cluster.[5]

- **Cyber resiliency** – Built for 6 9s availability[6] and Zero Trust cybersecurity. Native metro replication with witness, multicloud backup.

Intelligent

- **Self-optimizing** – Built-in machine learning optimizes environment without manual effort.

- **Efficient** – Lower-cost QLC option, 5:1 Data Reduction Guarantee,[7] 28% improved density,[8] multiple ENERGY STAR® certs.

- **AIOPs** – Simplify planning, reduce risk with predictive analytics and GenAI assistant.

- **Programmable infrastructure** – Streamline DevOps, automate end-to-end workflows, innovate with multicloud.

Continuously modern

- **All-inclusive software subscription** – No license fees, non-stop PowerStore innovation.

- **Non-disruptive hardware updates** – Protect investments and ensure your workloads are always running on the latest technology.

- **Lifecycle Extension with ProSupport** – Premier investment protection with world-class support and flexible technology upgrades.

New in PowerStore Prime

- ✓ The industry's most flexible QLC offering[3]
- ✓ Industry's best data reduction guarantee[4]
- ✓ Enhanced native replication
- ✓ Cloud backup and migration
- ✓ AI-assisted operations, and more…

Welcome to the next phase of software-driven, continuously modern storage

The current period of unprecedented change across the global business and technology landscapes has been particularly impactful for storage, where IT managers are dealing with an explosion in both the amount and the distribution of data. No longer confined to a centralized location, today's applications are powered by data that is now captured and stored *everywhere*, residing in diverse formats both inside and outside the core data center.

To keep pace with rapid transformation in an AI-accelerated world, companies are adopting new distributed IT strategies such as multicloud and edge computing. Many of these deployments are well underway – and businesses that have not transitioned to a modern approach are realizing they need to catch up fast! But as solution scope and diversity increases, companies also know they can't afford to add complexity. Today's infrastructure must be future-proof *and* simple. As plans change (and change again), IT managers want storage that will adapt seamlessly. Storage that just works.

PowerStore's software-driven architecture is designed to give you a permanent agility advantage while eliminating management complexity. It can simplify your operations for the long term, helping you achieve both today's goals – and the ones you have yet to set.

Adaptable architecture

The PowerStore advantage begins with a comprehensive lineup of enterprise capabilities that provide maximum headroom and flexibility for change.

Any workload

PowerStore's unified design consolidates block, enterprise file, and vVols storage formats in a single high-density footprint, providing a convenient, easy-to-manage platform for broad innovation. Ideal for both general purpose and specialized workloads, PowerStore supports applications as diverse as large-scale databases, cloud native apps, edge-based IoT analytics, and file-based content repositories.
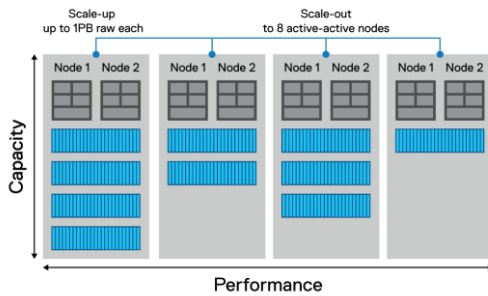
The platform fits seamlessly into existing infrastructures, with multi-protocol physical network support (including 32Gb FC and 100Gb Ethernet) and options to meet specialized industry requirements, such as DC/low-line-power, NEBS-ready solutions or government compliance. No matter where your business strategy takes you, PowerStore's full-featured, adaptable design can help you build your unique breakthrough.
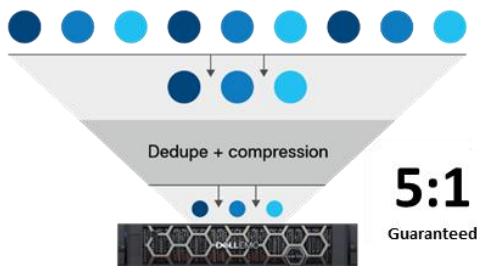
Built for performance

Consistent, predictable performance has long been a baseline for workload success – but the new key requirement for distributed IT is performance that can expand and grow with your needs.

Built from the ground up for NVMe technology, PowerStore provides the choice of either NVMe TLC or QLC SSDs within the appliance base chassis and expansion enclosures plus NVMe/TCP and NVMe/FC in the external network. This end-to-end NVMe ecosystem delivers extremely high IOPS and sub-
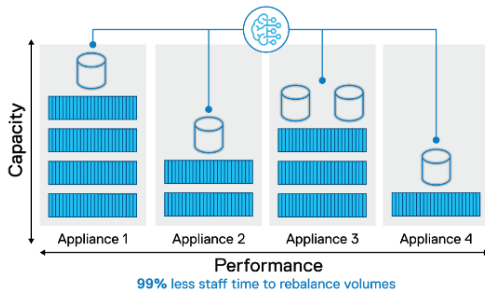
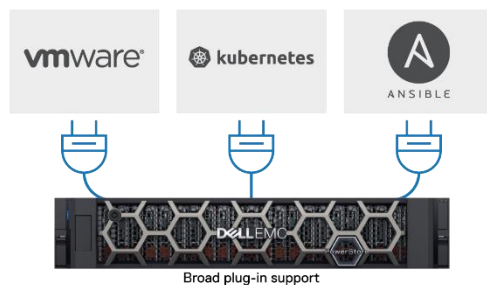**Next-gen performance, advanced clustering**

Intelligent, "always on" data reduction

Machine learning engine

99% less staff time to rebalance volumes

Automated, end-to-end workflows

Broad plug-in support

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millisecond latency, ensuring long-lasting value through multiple solution lifecycles.

Scale up and scale out

Expanding the capabilities of your initial PowerStore configuration is simple and efficient, as performance and capacity may be scaled independently. Each PowerStore appliance features dual active-active nodes, and can grow with single-drive granularity to over 6.1 PBe NVMe capacity.[9] Any combination of appliances can be clustered in a federated configuration for increased processing power and capacities exceeding 23 PBe NVMe capacity.[5]

Enterprise availability

No matter how you grow, PowerStore's patented Dynamic Resiliency Engine (DRE) safeguards business-critical data, leveraging advanced virtualization methods to protect against simultaneous drive failures while maintaining high levels of efficiency and cost savings.

In multi-appliance environments, native file, block and vVols replication provides data mobility and policy-based secure and immutable snapshot protection for any workload. Across shorter distances (up to 60 miles), native metro synchronous replication gives you a software-only, zero RTO/RPO high availability solution, configurable in as few as six clicks[10] – for no extra cost!

PowerStore's PowerProtect DD integration even lets you set up and manage remote or multicloud backups directly from PowerStore Manager UI, using the included Instant Access feature for easy, granular restores.

Cybersecurity

PowerStore keeps you ahead of evolving cybersecurity threats with capabilities like Secure Snapshots, Data-at-Rest Encryption, Multi-Factor Authentication, File Level Retention (FLR), Hardware Root of Trust, security analytics and new STIG mode for US Federal/DoD environments.[11] Data security is fundamental to PowerStore's DNA, and the platform's NIST-aligned development helps organizations of all kinds accelerate Zero Trust adoption to protect, prevent and recover from attacks more quickly and easily than ever.

Built-in intelligence makes change EASY

But just having the *capability* to respond to change isn't enough – you need change to be simple and non-disruptive.
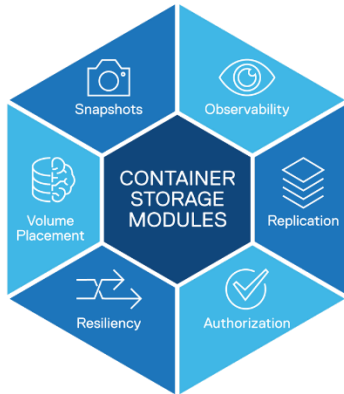
Self-optimizing appliance

PowerStore's integrated intelligence auto-tunes efficiency, performance, and availability without manual intervention on your part, even when you make rapid strategy shifts. All storage services are configured automatically as soon as you insert a new drive. As the solution evolves, intelligent data reduction, backed by Dell's industry leading 5:1 DRR guarantee,[7] keeps capacity and power costs consistently low, minimizing your data footprint in the background *without* compromising performance.

AI/ML processes eliminate dozens of labor-intensive tasks and decision points, for both individual and clustered appliances. From volume placement to migrations, resource balancing and issue resolution, PowerStore enables faster delivery of applications and services with up to 99% less management interaction.[12] Additional intelligence handles metadata tiering and QoS, and the included SmartFabric Storage Software even eliminates manual effort in the network with the industry's first automated end-to-end NVMe deployment.[13]
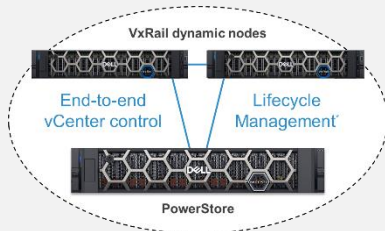
Proactive health analytics

When you do need to make decisions, PowerStore lets you move forward quickly with intelligent analysis and connected insights across multiple infrastructure categories – including servers, storage, networking and cloud. PowerStore's AIOps application, Dell APEX AIOps, speeds time to resolution with a new GenAI assistant, reduces cybersecurity risk, improves staff productivity and forecasts future needs – with convenient cloud-based access from any mobile device.

Programmable infrastructure

PowerStore intelligence simplifies your overall ecosystem, streamlining application development and automating storage workflows via a powerful REST API and integrations with leading orchestration frameworks. DevOps users can shorten deployments from days to seconds,[14] provisioning PowerStore directly from Kubernetes using the platform's Ansible, Terraform and Container Storage Interface (CSI) plug-in integrations. Dell Container Storage Modules (CSMs) bring additional enterprise storage functions to Kubernetes, facilitating cloud native workloads, and Amazon EKS support lets you run container orchestration across public and on-premises clouds.

Two-way VMware integrations

PowerStore offers both end-to-end VMware visibility within the PowerStore Manager interface and the ability to provision VM-level PowerStore services directly from vSphere. No matter which management perspective you prefer, these integrations help you analyze and control how PowerStore resources are consumed in a VMware environment, minimizing effort and risk, and providing quicker time to solution.

Additional integrations include vRO, VAAI and VASA support with the VSI plugins, native block, vVols, and file datastores, vVols-over-NVMe networks and native vVols replication. These capabilities make PowerStore well-suited for both standalone VMware storage deployments as well as a complement to HCI solutions such as Dell VxRail nodes. *(See Dynamic AppsON sidebar.)*

Hybrid and Multicloud

PowerStore's software-driven architecture offers additional flexibility with support for a range of hybrid cloud and multicloud services. From VMware Cloud Foundation (VCF) solutions that extend on-prem vSphere management to the cloud, to hyper-efficient encrypted backup with PowerProtect DD Virtual Edition Cloud Tier or two-way migration between Dell APEX Block Storage for Public Cloud, PowerStore helps you leverage the strengths of individual cloud providers while reducing overall cost and maintaining complete control of your data.

Continuously modern

If the advantages stopped here, this powerful lineup of enterprise features would already offer incredible future-proofing value. But the platform is also designed to simplify transitions when PowerStore technology *itself* evolves.

Non-stop innovation

PowerStore's container-based software architecture, known as PowerStoreOS, improves performance, fault tolerance and security by isolating individual OS components as microservices. This unique flexibility also allows the PowerStore engineering team to deliver new features and enhancements at an unprecedented pace, passing innovations quickly to customers in the form of non-disruptive upgrades.

All-inclusive software subscription

All array software is included with the hardware purchase – both the initial OS version and the ongoing performance and feature upgrades. There are no licenses to buy and maintain, and all software enhancements are provided without cost, for the life of the product.[15]

Seamless hardware upgrades

PowerStore's modular hardware platform is also designed to remain continuously modern. For example, Gen 1 customers can upgrade the performance of their current appliance to a Gen 2 equivalent (or higher model) via a simple node/controller swap – keeping their existing drives, base chassis and any expansion enclosures. These data-in-place upgrades are accomplished without downtime or application impact.

Moving to PowerStore

Migrate from *any* array

PowerStore makes it easier than ever to upgrade with built-in tools and workflows. Discover and import data from any Dell or third-party platform in as few as seven clicks[16] using PowerStore Manager's built-in wizard. Simplify your upgrade to a modern, future-proof platform with agentless array-to-array transfers that automatically remap hosts while keeping workload performance high throughout the process.

File migration options

Import file data to PowerStore from legacy Dell arrays with built-in tools or use advanced DataDobi DobiMigrate file migration software for third party arrays, included with every new PowerStore purchase. DobiMigrate simplifies large, complex migration projects and is trusted by IT teams around the world. The software is free of charge for PowerStore customers, even for the largest migrations.[17]

Dell Technologies Services

Choice and flexibility throughout the life of your appliance

End-to-end ProSupport and ProDeploy services help you configure, support and optimize PowerStore, making your new infrastructure solution easy to adopt and manage.

Plan — Deploy — Manage — Support — Educate — Renew

Maximum value, worry-free results

FUTURE-PROOF
PROGRAM

Guarantee Outcomes — Maximize Investments — Navigate IT Futures

PowerStore is OEM-Ready. If you would like to OEM PowerStore and make it part of your solution, with Dell branding or un-branded, we can support you.

Lifecycle Extension with ProSupport

PowerStore's non-disruptive hardware upgrades are very cost-effective when purchased as add-on options – but Dell takes the benefit one step farther by combining world-class support and flexible technology upgrades within the new Lifecycle Extension with ProSupport program.

Simplify your ownership experience and unleash the full potential of your PowerStore investment with premier benefits including:

- **World-class support services:** Receive 24/7 access to live experts and access to insightful dashboards
- **Flexible technology upgrades:** Choose from higher model upgrades, capacity refreshes, scale-outs, and next generation platform upgrades
- **Appointed technical advisor:** Simplify your PowerStore upgrade and efficiency planning with expert recommendations.

Get enterprise-class support aligned to the criticality of your systems and engage with appointed technical advisors for expert guidance on maximizing the ongoing value of your PowerStore appliance. Use the flexible upgrades that best fit your business needs with included professional deployment services, allowing you to modernize your entire solution effortlessly. It's the closest thing you can get to a cloud-like experience with on-prem storage, ensuring your workloads are always running on the latest technology.

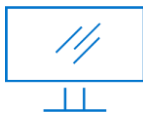## Trust your flexible future to Dell

And of course, we're talking about a leading storage offer from Dell Technologies, which means you get all the advantages of working with a trusted world-class infrastructure provider. You'll never be limited to a single solution or deployment template. Dell has the broad business experience and deep workload knowledge to help you keep your options open in a rapidly changing world.

From portfolio scope, supply chain excellence, and top-tier ProSupport and ProDeploy services, to financial flexibility through a range of consumption and subscription options, and robust FutureProof program guarantees and assurances, the broader Dell Technologies advantage is yet another fundamental strength of the overall PowerStore experience.

Get ready for a no-limits future. As PowerStore helps you build your next breakthrough – and the one after that – you can trust this continuously modern platform will be a long-term enabler of your business success.

See PowerStore Spec Sheet for additional details.

1 – Based on Dell Technologies analysis in October 2023 using double-blinded, competitive benchmark Net Promoter Score (NPS) data gathered by third-party commissioned by Dell for 1H FY24

2 – Based on Dell analysis comparing midrange storage providers as of October 2023. Dell Technologies was accredited with 2-star rating by NPSxSM by Bain & Company for the period of October 2023 to October 2024. Note: CX Accreditation is a proprietary rating of Bain & Company, Inc. ("Bain"). Bain does not certify or endorse any Dell product or service..

3 – Based on Dell analysis of Primary Storage QLC arrays – April 2024.

4- Based on Dell analysis of data reduction and effective capacity guarantees offered by primary storage competitors compared with Dell's All-Flash Data Reduction Guarantee program – April 2024. See terms and conditions for details at: All-Flash Data Reduction Guarantee Terms and Conditions – May 20, 2024. Actual data reduction rates will vary.

5 – Assumes 5:1 average data reduction. Single appliance max for PowerStore 500 is 6.1PBe. Max for other PowerStore models is 5.9PBe. Actual results may vary, depending on data types.

6 – 99.9999% system availability in customer environments, running target code levels, as measured April 2022. Actual results vary.

7 – 5:1 average rate guaranteed across customer applications. Rates for individual applications may vary. See Future-Proof program terms and conditions for details.

8 –"Based on comparing maximum effective PowerStore capacities of 4:1 versus average 5:1 data reduction. Actual results vary, refer to Power Sizer for capacity data in your environment.

9 - Assumes 5:1 average data reduction. Single appliance max for PowerStore 500 is 6.1PBe. Max for other PowerStore models is 5.9 PBe. Actual results vary, refer to Power Sizer for capacity data in your environment.

10 – Based on minimum steps and timeframe required to configure synchronous replication between two previously installed PowerStore appliances across a metro area distance. Actual steps vary by solution

11 – With PowerStoreOS 3.5, PowerStore is hardened to meet the security requirements of the US Federal Government. DoDIN Approved Product List (APL) listing in process.

12 – Based on Dell analysis of staff time required to maintain balanced PowerStore cluster vs. traditional multi-array deployment, March 2020. Factors in effort required to monitor, plan, define and execute volume migrations. Actual results will vary.

13 – Based on Dell analysis comparing NVMe/TCP discovery and registration with PowerMax/PowerStore using SmartFabric Storage Software vs competitive storage solutions, March 2022.

14 – Based on Dell analysis of effort required to deploy workloads with and without Ansible and vRO orchestration integrations, March 2020. Factors in effort required to monitor, plan, define and execute volume migrations. Actual results will vary.

15 – See Future-Proof program terms and conditions for details.

16 – Based on Dell analysis of minimum effort required to execute non-disruptive migration of volume group using PowerStore's built-in migration tools for Unity, SC Series, PS Series and VNX arrays, March 2020. Actual results will vary.

Learn More about PowerStore

Contact a Dell Technologies Expert

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