



[POWERSTORE](#)

Secure and Efficient Storage Is Simpler Than You Think

Five ways the newest PowerStore release makes it easy to safeguard and optimize your enterprise data infrastructure.

By [Ben Jastrab](#) | May 10, 2023

Topics in this article

[Multicloud](#)

[PowerStore](#)

[Zero Trust](#)



If there ever was a time when IT organizations needed the “easy button,” it’s now. Rapid technology change has gifted us unprecedented opportunity to capture value from data – but it’s also unleashed new competitive pressures, forcing businesses to move faster than ever before. Meanwhile, a perfect storm of instability in global markets, rising energy costs and staffing pressures have combined to make companies increasingly cautious about expenditures. You need to innovate more every day, but you may not get additional resources.

To make matters worse, cybersecurity threats are at an all-time high, with almost 50% of organizations reporting a cyberattack in the last 12 months.¹ Companies can’t succeed if their data isn’t safe, but for the reasons above, they also know the “cure” can’t slow down innovation by introducing complexity, effort and cost.

It’s a classic conundrum: Can organizations achieve robust data security, resource efficiency and business velocity at the same time?

The answer is “Yes” – if you have the right technology.

PowerStore Was Built for Times Like These

Since 2020, [Dell PowerStore](#) has helped thousands of customers become agile and efficient during periods of uncertainty. Designed to knock down technology barriers to innovation, PowerStore’s intelligent, adaptable storage architecture minimizes effort, optimizes performance – and best of all, evolves to meet unexpected challenges, helping you accomplish new goals while squeezing the most out of existing resources.

The platform’s impact on IT operations is well-known. According to recent [IDC research](#),² PowerStore’s intelligent automation enables up to 61% quicker deployment of new storage resources and drives business productivity gains contributing to an astounding [468% average three-year ROI](#) for customers – paying for itself in under a year.²

PowerStore efficiency also drives power and space savings. The latest release is up to 60% more energy efficient,³ with up to 61% higher data density.⁴ Compared with a family of equivalent all-flash arrays from a competitive vendor, PowerStore offers superior data density across the entire portfolio.⁵ The Energy Star-certified PowerStore 500 model, for instance, has a power cost roughly equivalent to your daily latte,⁶ delivering up to 13.5x more TBe/Watt than Pure Storage FlashArray X//10.⁷

New Goals for 2023

But we’re far from finished. This year across the larger Dell Storage portfolio, you’ll see multiple product announcements focusing renewed effort on two key areas we’ve identified as critical to organizational success in 2023.

- **Cyber resiliency** to secure and protect data everywhere
- **Breakthrough efficiency** to lower both operational and energy costs

PowerStore is the perfect platform to kick off the party. Let's look at five new ways PowerStore software-driven innovation is addressing these dual requirements.

“PowerStore's secure snapshots and PowerProtect DD integration give you great ransomware protection right out of the box. You don't need to do a lot of work to be very secure.” – Ulrich Betzler, Storage Architect, KIT

[Share](#)

1. Automate Cybersecurity Best Practices

PowerStore has always had a strong “security DNA,” safeguarding data with advanced capabilities like hardware root of trust, data-at-rest encryption and AIOps security analytics. As with everything about the platform, the focus is simplicity and automation – delivering “always on” protection without increasing management complexity or relying on human vigilance to be effective. In 2023, the newest PowerStoreOS 3.5 release adds even more [cybersecurity features](#) to meet the stringent requirements of the U.S. Federal Government and Department of Defense (DoD), while also enabling an authentic Zero Trust experience for business solutions.

- **STIG hardening.** Required for U.S. federal sales, “STIG mode” enforces DoD-specific rules regarding password complexity, timeout policies and other practices.⁸
- **Multi-factor authentication.** Highly secure, yet simple and familiar to users, MFA shields PowerStore from hackers and also mitigates poor password practices by employees.
- **Secure and immutable snapshots.** Prevents snapshots from being modified or deleted prior to their designated expiration date, even by an administrator with highest privileges. Easy to schedule and automate via PowerStore's protection policies.

2. Simplify Multicloud Data Protection

To increase resiliency even if data is compromised, PowerStore's new [PowerProtect DD integration](#) lets users create PowerStore snapshots directly on both cloud-based or on-prem versions of Dell's [PowerProtect DD](#) series appliances, the industry's leading data protection solution.⁹

- Setup takes as little as 90 seconds¹¹
- Efficient incremental backups (changes only) – up to 150TB/day¹¹
- Encrypted data transfer
- Easy, granular data recovery

This convenient capability empowers storage administrators with numerous advantages, including the ability to create cost-effective cloud archive solutions leveraging PowerProtect's renowned data reduction to lower costs.

3. Increase File Resiliency

Continuing a trend that began with our [3.0 release](#), PowerStoreOS 3.5 dramatically boosts PowerStore's file capabilities, increasing a number of key NAS limits.

- **Up to 4x more snapshots per appliance.**¹² More protection points for self-service data recovery.
- **Fail-safe networks (FSN) support.** Extra layer of automated protection against port, cable or switch failures.
- **Streamlined file permissions.** Now manage SMB share access directly from PowerStore Manager or REST API. Respond quickly to security threats.
- **Up to 4x more file systems, 5x more NAS servers, 2.5x more SMB shares.**¹² Increased management granularity and flexibility.

4. Accelerate DevOps Innovation

Kubernetes users can further streamline application development workflows with these enhancements.

- **Terraform provider.** Now use popular [Terraform toolset](#) to create reusable self-service automations to provision PowerStore, with no low-level coding required.

- **Ansible module updates.** New support for vVols, vCenter and VMFS gives VMware customers even greater DevOps flexibility.
- **Container Storage Module (CSM) for App Mobility.** Empowers admins to clone and migrate stateful applications and metadata between Kubernetes clusters with a single command.

5. Dynamic AppsON

“Dynamic AppsON gives you single-pane-of-glass management automation across HCI and PowerStore’s enterprise-class storage. That’s not the kind of integrated value you can get from other vendors” – Jonas Emilsson, Lead Architect, Atea

[Share](#)

Last but not least, we’re pleased to announce the immediate availability of [Dynamic AppsON](#), a tightly-integrated “better together” solution combining the advantages of PowerStore and VxRail – the industry’s leading hyperconverged solution.¹³ Dynamic AppsON increases flexibility and efficiency for both platforms, simplifying management of both compute- and data-intensive workloads.

- Scale compute and storage independently
- End-to-end VMware control eliminates operational silos
- [Solution-level Lifecycle Management](#) keeps all components optimized

Taken together, these latest PowerStore advantages help companies further safeguard their data while simultaneously optimizing human, energy and capital resources in an unpredictable landscape. In typical Dell style, *we’re* solving the technology conundrums so you can move beyond your current challenges to explore new business opportunities in a rapidly evolving world.

Be sure to join us at [Dell Technologies World](#) to learn more about PowerStore and all the other Dell Technologies solutions.

¹ Statistics from the Dell Technologies 2022 Global Data Protection Index Snapshot, March 2022.

² IDC White Paper, sponsored by Dell Technologies and Intel, “The Business Value of PowerStore,” IDC #US50037323, March 2023.

³ Based on Dell analysis comparing maximum IOPS per Watt for PowerStore 1200 base appliance configurations with PowerStoreOS 3.0 vs. PowerStore 1000 base appliance configuration with PowerStoreOS 2.0. Actual results vary.

⁴ Based on Dell analysis comparing maximum effective capacity for largest PowerStore configurations with PowerStoreOS 3.0 vs. PowerStoreOS 2.0. Assumes average 4:1 data reduction. Actual results vary.

⁵ Based on Dell internal analysis comparing maximum effective capacities of PowerStore and FlashArray //X. Assumes average 4:1 data reduction. for PowerStore, 5:1 for FlashArray //X. Actual results vary.

⁶ Estimate based on Dell analysis using Dell PowerStore 500 base appliance power consumption (1040 W) and an average electricity price of [\\$.168 per KWH](#) (source: Electricity per KWH in U.S. city average from U.S. Bureau of Labor Statistics, data accessed in February 2023). For estimation purposes only. Actual costs will vary depending on actual product configuration, usage, operating conditions, power management settings and other factors.

⁷ Based on Dell analysis using publicly available specifications in March 2023. Estimates comparing maximum effective capacity and peak power consumption for Dell PowerStore 500 base appliance only (1213 TBe; 1040 W) versus Pure Storage FlashArray //X10 (73 TBe; 845 W). Actual results will vary depending on actual product configuration, usage, operating conditions, power management settings and other factors.

⁸ 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.

⁹ #1 in data protection appliances and software market, based on combined hardware revenue from the IDC 4Q22 Purpose-Built Backup Appliance (PBBA) Tracker and Data Replication and Protection Software revenue from the 4Q22 Storage Software and Cloud Services Tracker.

¹⁰ Optional PowerProtect Data Manager software for additional advanced features.

¹¹ Based on Dell analysis, March 2023.

¹² Based on comparing file capabilities for PowerStoreOS 3.0 to PowerStoreOS 3.5 for PowerStore 3200, 5X00, 7000 and 9200.

¹³ Source: IDC Quarterly Converged Tracker, Q4 2022. Hyperconverged Systems product category.