PROWESS

Lower Storage Costs, Increase Data Efficiency, and Streamline Administration with Dell™ PowerStore™

Prowess Consulting compared the PowerStore 1200T platform with Vendor A's offering using side-by-side analysis. The PowerStore solution requires fewer drives to store an equivalent amount of data, takes less time to provision storage volumes, and delivers deeper insights into unique data.

In the ever-evolving landscape of storage solutions, high data reduction ratios (DRR), streamlined management controls, and energy efficiency are must-have capabilities for enterprises and small and medium-sized businesses (SMBs). To investigate what options are available in today's market, Prowess Consulting conducted side-by-side comparisons of storage solutions from two vendors: the Dell™ PowerStore™ 1200T storage platform and Vendor A's system. In this study, commissioned by Dell Technologies, we did a deep dive into each storage solution's capabilities, analyzing data reduction efficiency, ease of provisioning, level of unique data visibility, and platform energy usage.

After extensive analysis, the PowerStore solution emerged as a data-efficiency powerhouse that also excels in ease of management and energy efficiency. The latest PowerStoreOS comes with a new guaranteed DRR of 5:1, and our tests reveal that the actual DRR of 5.4:1 surpasses this guarantee.[1] When tested using the same benchmark (Vdbench) and an identical simulated dataset, Vendor A falls well short of its 4:1 DRR guarantee and achieves a DRR of only 2.5:1.

Usage testing revealed that the PowerStore solution performs extremely well when compared to Vendor A's offering in ease of management. The PowerStore solution's intuitive user interface (UI) simplifies administration tasks, thus providing faster provisioning with fewer clicks than the Vendor A UI. The PowerStore capacity accounting feature provides detailed insights into data volumes, enabling IT staff to provision resources as cost-effectively as possible.

Our total cost of ownership (TCO) analysis revealed several benefits offered by the PowerStore solution, including lower hardware costs, reduced infrastructure footprints, and reduced power consumption. These financial and physical savings make the PowerStore solution an attractive choice for organizations aiming to optimize resources without impacting storage latency and application performance.

Highlights

Side-by-side analysis with the Vendor A system reveals the Dell™ PowerStore™ 1200T platform's following advantages:[1,2,3]

5.4:1 DRR

confirmed by testing

54% lower

energy usage

3x faster

provisioning using less than half the clicks

Unequaled Data Reduction Efficiency

The latest PowerStore 1200T platform offers an impressive guaranteed DRR of 5:1, and our analysis showed a tested DRR of 5.4:1.[1] These results exceeded the promised and actual data reduction efficiencies as follows:[2]

- Surpassed the previous PowerStore platform's guaranteed DRR by 20%
- Outperformed Vendor A's DRR guarantee of 4:1
- Exceeded Vendor A platform's tested DRR by more than 2x

We found the Vendor A platform's tested DRR of 2.5:1 to be significantly lower than expected, because its guaranteed DRR is 4:1.

Fast Provisioning and Granular Visibility

We were impressed with how much faster and more easily the PowerStore UI provisioned volumes compared to Vendor A's controls—3x fewer seconds and 2x fewer mouse clicks from a single window.[2] The PowerStore UI uses a unique capacity accounting feature that provides a more granular view of data volumes than does the Vendor A solution's UI (see Figure 1). The PowerStore UI lets you view details such as overall DRR for reducible and unreducible data, DRR for reducible data, and capacity used for unreducible data. These detailed insights can be used by IT staff to fine-tune workloads, optimize resources, and get the best cost per terabyte (cost/TB) from their storage investments.
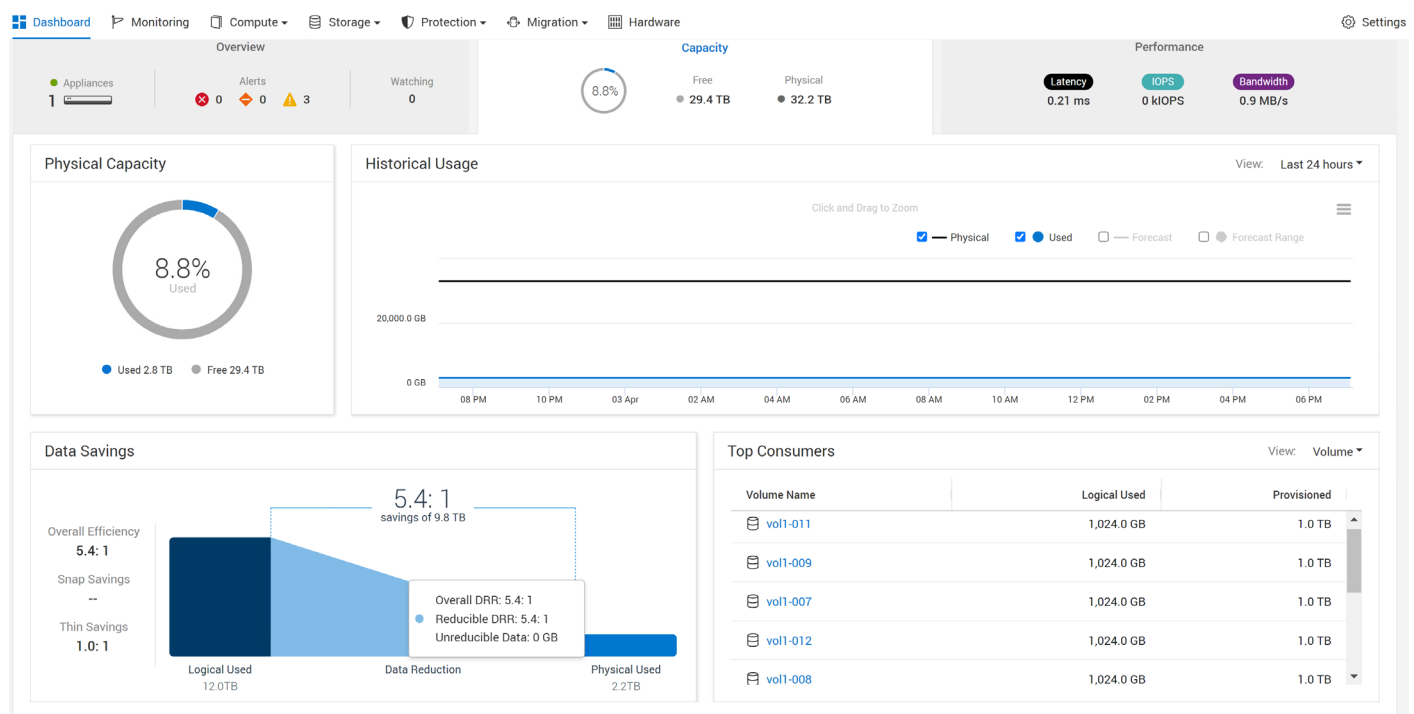

Figure 1. The Dell™ PowerStore™ UI provides deep insights into data storage

Cost and Space Savings

The superior data reduction efficiency provided by the PowerStore solution is highly beneficial to organizations that are navigating budget constraints and sustainability goals. A smaller physical footprint can translate into reduced hardware and software costs, infrastructure consolidation, reduced power consumption, and lesser cooling needs.

Sustainable, Energy-Efficient Infrastructures

Many organizations are looking to make their data centers more energy efficient and environmentally friendly. Based on the PowerStore platform's superior DRR, we calculated that the Dell PowerStore 1200T platform uses up to 54% less energy than the Vendor A platform to store the same-size dataset.[3] We also extrapolated that, as the PowerStore solution is scaled out by adding more drives, so too are your predicted energy savings.[1]

Our analysis indicates that the PowerStore 1200T storage solution outshines that of Vendor A in key metrics such as data efficiency, cost effectiveness, ease of management, granular visibility, and infrastructure sustainability. Organizations seeking to lower their TCO without impacting application latency and performance could do well by investing in the PowerStore 1200T storage solution.

Learn More

Get the full story by reading the technical research report, "Choose High Data-Efficiency Technology for Lower Storage TCO."

---

[1] Dell Technologies. Storage Data Reduction Guarantee: Requires customer signature and purchase of a Dell ProSupport™ for Infrastructure four-hour or next-business-day (NBD) support agreement, a ProSupport Plus for Infrastructure support agreement, or a valid support contract with a valid Dell Technologies support partner. Applicable products include all-flash storage products only. For more information, see www.dell.com/en-us/dt/storage/data-storage.htm.

[2] Prowess Consulting. "Choose High Data-Efficiency Technology for Lower Storage TCO." Commissioned by Dell Technologies. May 2024.

[3] Energy calculations based on comparing Vdbench results from the Dell™ PowerStore™ 1200T platform to a similarly configured storage platform from Vendor A. Actual results may vary. For details, read the full report, "Choose High Data-Efficiency Technology for Lower Storage TCO." Commissioned by Dell Technologies. May 2024.