

Independent Testing Reveals Efficiency and Performance Advantages for Dell EMC PowerStore and PowerMax

PowerStore proves more cost-effective and higher performing over a solution from another storage provider - 36% better data reduction and 33% more IOPS¹. Testing also confirmed PowerMax's advantages over "Vendor B" with 29% superior data reduction and 65% more IOPS.²

By Andrew Glinka | December 9, 2021

The data era is in full swing. Modern workloads transform the way enterprises do business as technology enables innovative new ways to deliver customer outcomes. These applications pressure IT teams to accommodate high-speed access to critical data alongside rapidly expanding capacity requirements. Infrastructure must be efficient to avoid data center sprawl while delivering top-tier performance. Many storage providers promise these capabilities, but there is a difference in how effective their products can execute against these rigorous requirements.

Dell Technologies commissioned an independent, 3rd party study by Principled Technologies measuring [PowerStore](#) and [PowerMax](#) data reduction and performance capabilities against similar solutions from another storage provider to illustrate the impact our solutions can have on your operations.

The testing results convincingly demonstrate that both Dell Technologies storage products excel against Vendor B's solutions. Principled Technologies finds "with the Dell EMC PowerMax 8000 storage array, enterprise-level organizations can maximize storage capacity and increase storage performance while maintaining fast response times." Principled Technologies concludes PowerStore's "efficient inline deduplication and compression technologies allow organizations to use less capacity to store data on-demand." At the same time, "the speedier performance of a PowerStore solution can help you grow while avoiding frustrating slowdowns and delays." Vendor B's test results are lackluster in comparison, offering inferior cost efficiency and performance.

Let's dive into the key findings from the Principled Technologies study and discover the significant gap between PowerMax, PowerStore and the competition.

PowerStore vs. "Vendor B"

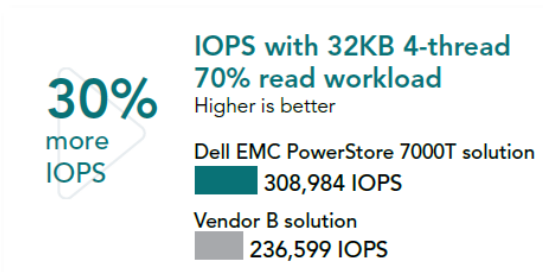
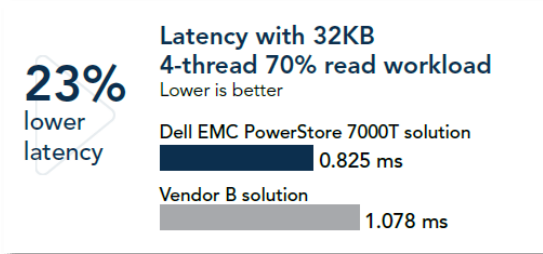
Principled Technologies conducted multiple tests measuring PowerStore's maximum IOPS against "Vendor B." The report clearly demonstrates PowerStore delivering higher maximum IOPS for a variety of typical enterprise workloads:

¹ Based on a Principled Technologies report commissioned by Dell Technologies, "Offer faster access to critical data and achieve greater inline data reduction with a Dell EMC PowerStore 7000T storage solution", November 2021. Actual results may vary. Full report: [insert link]

² Based on a Principled Technologies report commissioned by Dell Technologies, "Store data more efficiently and increase I/O performance with lower latency with a Dell EMC PowerMax 8000 array", September 2021. Actual results may vary. Full report: [insert link]

	Dell EMC PowerStore	“Vendor B” Solution	PowerStore Advantage
Simulated 32-thread OLTP	534,092	400,859	33% More
8KB 32-thread random read	1,231,617	1,012,745	21% More
4KB 32-thread random write	800,478	582,119	37% More

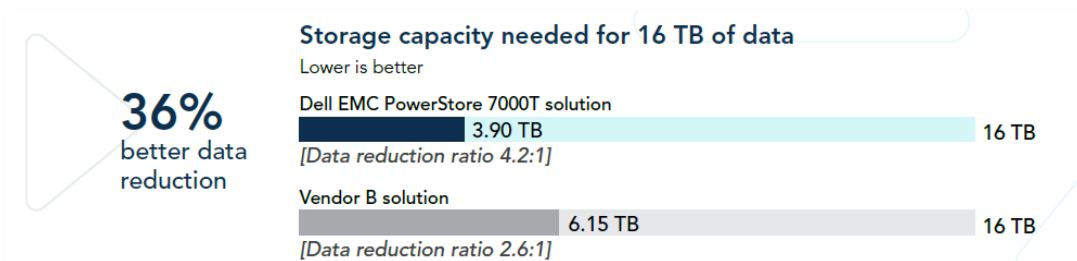
Applications can't falter when you need them most. Rapid data retrieval is critical to delivering the outcomes your customers expect, especially during the busiest times. The independent study measured both arrays under heavy load finding PowerStore more capable than the competition:



From the Report:

“These results indicate that the Dell EMC PowerStore 7000T could process heavy user request loads while still delivering fast response times, potentially improving application response times.”

It's just as crucial that your array can efficiently deduplicate and compress data. The more effective capacity your array can deliver, the more you get out of your investment. PowerStore, supported by the 4:1 guarantee³ from the [Future Proof Program](#), is well ahead of Vendor B in reducing the physical storage needed to meet your capacity requirements with **36% better data reduction**:



³ Storage Data Reduction Guarantees: Requires customer signature and purchase of ProSupport Plus or ProSupport with Mission Critical. Applicable products include All-Flash Storage products only.

The Report’s Conclusion: “Choosing the Dell EMC solution could allow you to make better use of your storage, better support ecommerce, and similar transactional database workloads, and help control data center sprawl.

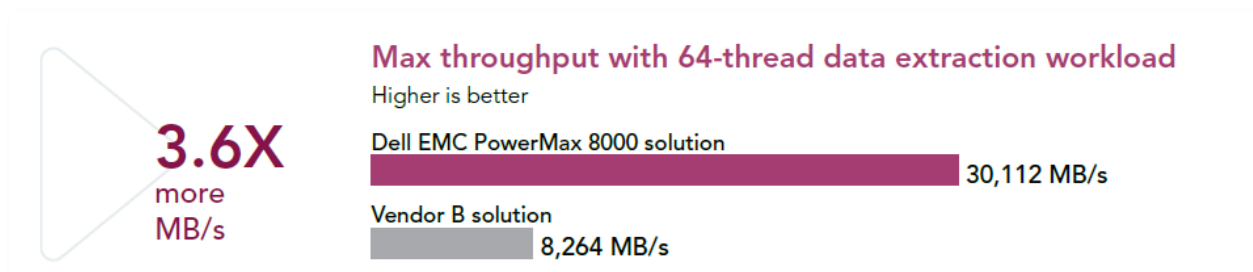
PowerMax vs. “Vendor B”

As the [gold standard in enterprise storage](#), it’s no surprise that PowerMax delivered impressive results compared to a solution from Vendor B. Principled Technologies measured maximum IOPS and latency using simulated database workloads:

	Dell EMC PowerMax	“Vendor B” Solution	PowerMax Advantage
32-thread OLTP	661,543	399,414	65% More IOPS
4-thread OLTP	405,271	302,354	34% More IOPS
4-thread OLTP latency	.621 ms	.839 ms	25% Lower Latency

Did you know? Fast OLTP databases can help your business grow, while slowdowns in those databases risk frustrating users, causing delays, and affecting your business.

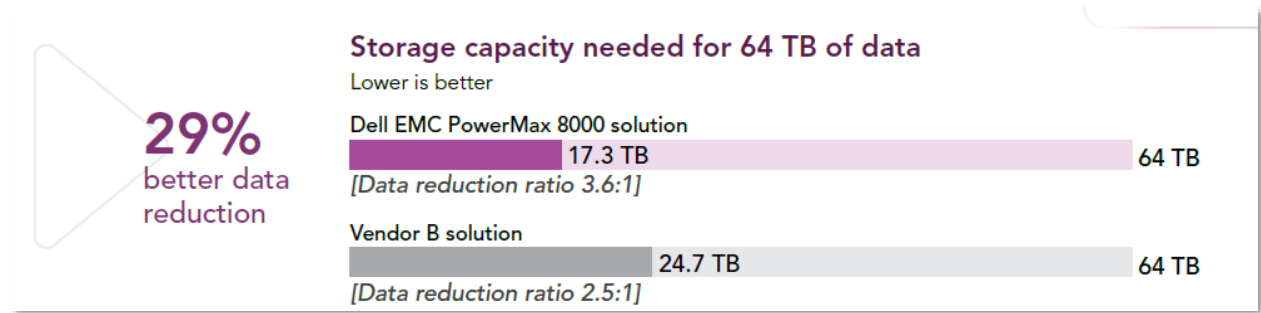
Deriving real-time insights from your data can give you a competitive edge in the marketplace. The faster you can extract, transform and load (ETL) data to analyze, the quicker you can make business-critical decisions. PowerMax stood head and shoulders above Vendor B when measuring data extraction, helping to validate why 95% of Fortune US 100 companies use PowerMax⁴ as part of their storage strategy:



Quickly moving data doesn’t come at the expense of storage efficiency. PowerMax is also backed by the [Future Proof Program](#), providing guaranteed storage data reduction rates for your workloads⁵. Compared to Vendor B, PowerMax’s inline data reduction delivered superior data reduction, helping to limit data center sprawl and reduce storage expenses:

⁴ Based in Dell Internal CML PowerMax/VMAX install base compared against Fortune 2021 Companies List, June 2021.

⁵ Storage Data Reduction Guarantees: Requires customer signature and purchase of ProSupport Plus or ProSupport with Mission Critical. Applicable products include All-Flash Storage products only.



The Industry Leader in Storage for a Reason⁶

As these Principled Technology studies demonstrate, the Dell Technologies storage portfolio is up to task in the most demanding datacenter environments. Be sure to read the following links' reports to learn more about the research Principled Technologies performed.

- [PowerMax vs. Vendor B - Full Report](#)
- [PowerMax vs. Vendor B - Infographic](#)
- [PowerStore vs. Vendor B – Full Report](#)
- [PowerStore vs Vendor B – Infographic](#)

To learn more about how PowerStore and PowerMax can improve your operations and transform your technology strategy, reach out to your local Dell or Partner representative.

⁶ Based on Dell analysis of published available data, September 2021.