DELLTechnologies

POWERING DATA-DRIVEN SUCCESS

Optimise your storage and minimise your data footprint

An essential guide to help you establish a predictable and future-proof storage provision that drives greater power efficiency with robust data security and best in-class versatility.

KIOXIA

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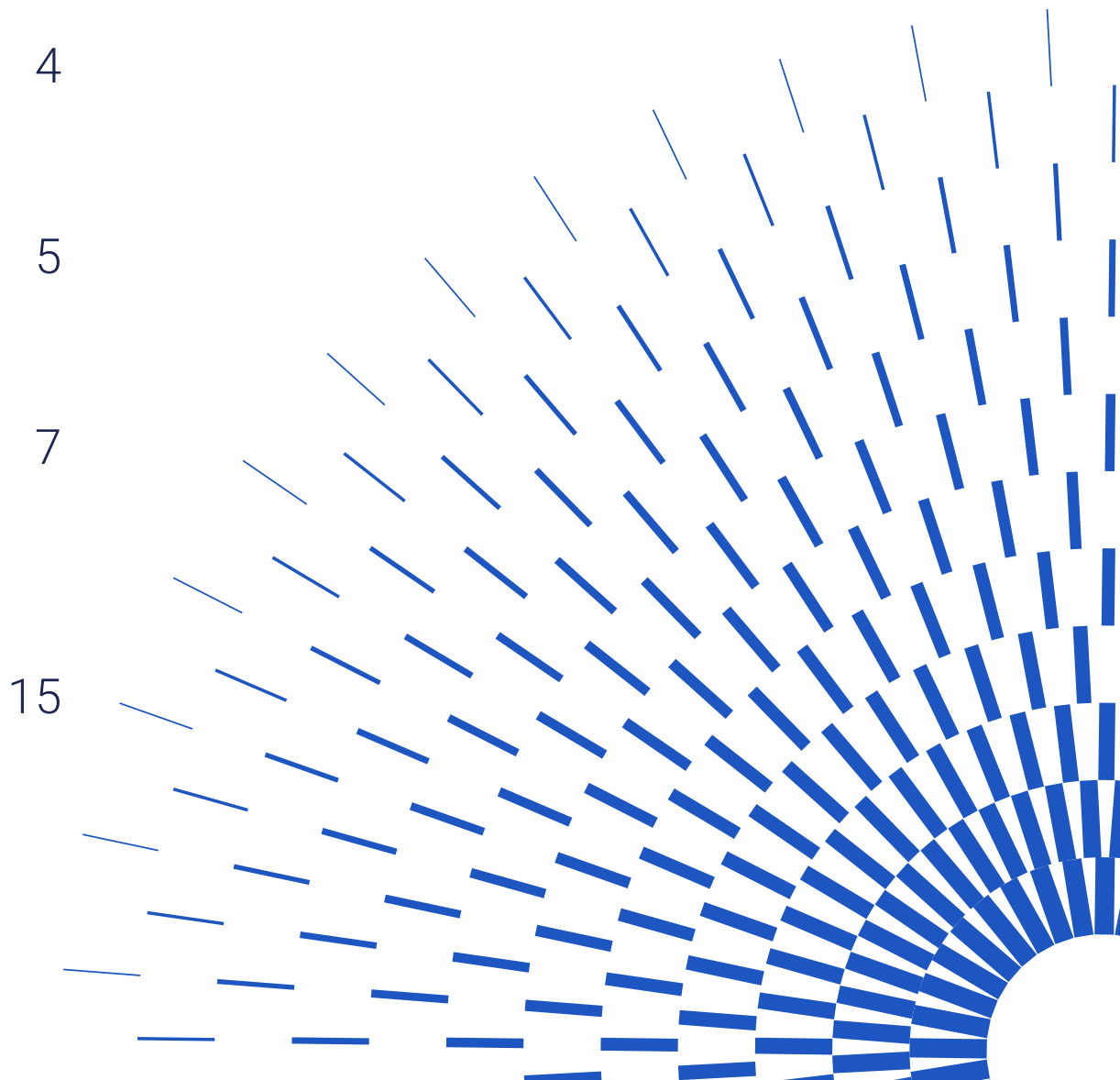
UNDERSTANDING THE CHALLENGE

Predicting a clear future for your business

Data has become one of the most important assets any organisation will possess. Even without any expansion of business, it's a fact that our needs to store and manage data will grow every day. Predicting the growth of data can be tricky – and potentially costly.

The unpredictability of the size of your future data volumes and the growing need to access information across multiple fragmented environments can create challenges for organisations. Lack of control and visibility poses threats to data integrity, increases power consumption, spiralling costs and threatens your sustainability goals. According to a study from IDC, companies lose up to 20%-30% of revenue due to avoidable inefficiencies[1].

Because of this, the ability to predict and prepare for the future has never been more critical, and the organisations that succeed are those that are best prepared.

Data storage snapshot

328.77 million

Approximately 328.77 million terabytes of data are created each day[2].

120 zettabytes

Around 120 zettabytes of data will be generated this year alone[2].

ADDRESSING THE OPPORTUNITY

How modern data storage challenges legacy perceptions

When it comes to data storage infrastructure, legacy thinking often shapes perceptions. This can lead many businesses to retain outdated solutions that are not matched to modern workloads and usage patterns.

Whilst this approach might provide a degree of security or familiarity in the short-term, it does little to firm up the solid foundations required to scale, meet sustainability targets and ultimately identify and implement essential cost and power savings that can result in greater operational efficiencies.

With a wealth of misconceptions to navigate it can be confusing how and when to act. So, to help address this, we've set to dispel some of the major ones.

Cost

All-flash storage is not expensive. In fact the daily operating costs of modern storage solutions can equal the cost of a coffee[3].
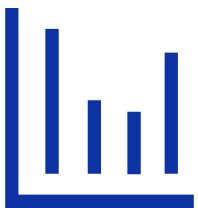
Efficiency

PowerStore Prime and PowerMax 2500/8500 deliver the industry's best data reduction ratio guarantees of 5:1[4], so you can be assured that your data occupies the smallest possible data footprint. That equates to greater efficiency from less physical hardware, and less power consumption.

Performance

Modern solutions have dedicated processing for data services and provide simplified management, anywhere without compromising performance.

Scalability

Scaling capacity and performance independently, even down to a single drive is possible. Expansion is smooth and seamless, rather than through rigid, disruptive upgrades.

A PREDICTABLE SOLUTION

Overcoming data growth hurdles

In a market filled with outdated solutions, modern data storage delivers unmatched power efficiency, robust data security and built-in versatility to scale, allowing you to proactively plan for data growth challenges ahead.

With a modern storage solution, organisations concerned about explosive data growth or rising power costs can achieve greater visibility and control to unlock pathways to improved power and efficiency.

With PowerStore Prime, organisations can achieve greater visibility and control to unlock pathways to improved efficiency, security and agility — resulting in $3.3 million in annual business savings[5].

Greater efficiency unlocks more potential at every level

Accelerate innovation

Redirect savings to fuel business transformation through better IOPS per watt.

Meet sustainability goals

Meet strict efficiency standards, by saving energy and protecting the environment through multiple certified energy efficient models.

Shrink data footprint

Intelligent, always-on data reduction guaranteed to provide more effective capacity.
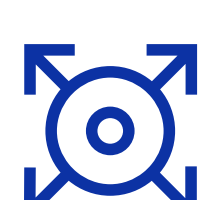
As change accelerates, efficiency delivers predictability. Dell PowerStore Prime is the modern storage solution that provides you with the essential ingredients your organisation needs. You don't need to predict the future. With software-driven innovation you can equip your organisation with reliable and modern storage that is fit for any purpose, whilst also gaining the tools you require to support your strategic goals — no matter what the future holds.

A PREDICTABLE SOLUTION

Future-proofing your storage infrastructure with PowerStore Prime

Dell PowerStore Prime delivers enterprise-class data services tailored to modern workloads, with a future-proof foundation to stay ahead of rapid change.

With cyber-resilient encryption securing data at rest and in motion, PowerStore accelerates your infrastructure to move at the speed of business — preparing you for tomorrow.

Security and seamless operations

Cyber-resilient encryption ensures data security, while unified support simplifies infrastructure for a streamlined management experience.

Storage efficiency and performance

Always-on data reduction guarantees 5:1 savings[4], and end-to-end NVMe technology accelerates performance for critical workloads.

Cloud integration and cost reduction

Active cloud integration protects data while lowering the total cost of ownership, contributing to an efficient and cost-effective solution.

Unmatched scalability with intelligent automation

The PowerStore family offers unmatched scalability (up to 5.9PBe per appliance and over 23PBe per cluster (Based on 5:1)[4]. PowerStoreOS provides intelligent automation for streamlined operations, handling intensive tasks in minutes.

Efficient upgrades and deployments

Lifecycle Extension with ProSupport provides disruption-free flexible technology upgrades.

SETTING UP FOR SUCCESS

Three ways to meet the next evolution of modern data storage

In the following pages, we present three scenarios where PowerStore equips your business with future-proof capabilities to address current data challenges, adapt to changing market conditions, and accelerate innovation strategies.

Outstanding power efficiency:

Intelligent data reduction guarantees, flexible QLC offerings and AI-optimised workload placement maximise storage density while minimising power, cooling and footprint.

Robust data security:

Secure snapshots, immutable data protection, continuous technology refreshes and AI-powered security optimisations safeguard your most valuable data.

Best-in-class versatility:

Flexible as-a-Service consumption models, seamless scalability, workload mobility and unified cloud operating experience provide industry-leading agility.

SETTING UP FOR SUCCESS: POWER EFFICIENCY

Reduce waste and improve energy consumption

The enhanced efficiency PowerStore Prime provides is not just feel-good sustainability. Rather, it unlocks measurable cost reductions from year one of deployment. Consider the substantial electricity costs consumed by legacy storage infrastructures. PowerStore eliminates this waste by consolidating workloads onto high-density appliances purpose-built for efficiency.

Transitioning to PowerStore Prime provides increased ROI, up to 468% across three years[5] — from radically diminished power cooling bills to freeing up capital by curtailing sprawl. The efficiencies directly translate into hard cost reductions and budget liberation so you can funnel innovation elsewhere.

60%
more energy efficient[6]

81%
reduction in
data footprint[7]

468%
possible ROI
across 3 years[5]

SETTING UP FOR SUCCESS: POWER EFFICIENCY

Customer Story: University of Pisa

With over 50,000 students and rising energy prices, the University of Pisa needed to reduce IT costs and consolidate its data centre footprint. Legacy systems were energy intensive, hampering sustainability initiatives and the ability to support modern workloads like AI and machine learning.

The university deployed Dell PowerStore to drive performance while slashing power consumption. PowerStore simplified management with its automated efficiency features while PowerEdge thrived under high temperatures up to 45°C, cutting cooling expenses.

By implementing Dell solutions the University achieved:

30%
reduction in cooling costs

60%
boost in storage efficiency vs previous infrastructure

80%
faster performance for virtual workloads

"PowerStore was designed with a sustainability focus, which has allowed us to do more with less."

Maurizio Davini CTO, University of Pisa

SETTING UP FOR SUCCESS: DATA SECURITY

Establish greater resiliency and data protection

Dell PowerStore Prime offers businesses unparalleled data security, providing tangible value in today's dynamic digital landscape. The native metro synchronous replication provides active/active availability ensuring seamless data protection with zero downtime and zero data loss, empowering businesses to maintain continuous operations without the fear of data disruption.

Integrated multicloud backup

Streamline data protection across diverse environments, reducing setup time to 90 seconds. This helps to minimise infrastructure impact and enhance operational efficiency.

Cyber resiliency features

Multi-factor authentication and data-at-rest encryption, accelerate Zero Trust adoption. Gain confidence that critical data is safeguarded from evolving cyber threats.

Robust data security benefits

Businesses can fortify against potential data breaches, instil trust in their data protection strategies, and focus on driving innovation confident that their data is secure.

SETTING UP FOR SUCCESS: DATA SECURITY

Customer Story: DesktoptoWork

DesktoptoWork is an online workspace and collaboration solutions provider seeking to offer customers the most modern tools to work better. Rapid growth strained DesktoptoWork's legacy storage, hampering performance for thousands of customers.

They sought an agile infrastructure to consolidate workloads across multiple data centres at scale, with security ensured at all layers.

DesktoptoWork deployed Dell PowerStore and gained an adaptable foundation for innovation:

"PowerStore is a dynamic and evolving platform, and security stays at the forefront of development."

Duco Rob, CEO, DesktoptoWork

83%
reduction in footprint

(moved from 3 racks to half
a rack in 1 data centre)

300%
server reduction

2x
capacity per terabyte

SETTING UP FOR SUCCESS: BEST-IN-CLASS VERSATILITY

Streamline operations with seamless interoperability

The exceptional adaptability of Dell PowerStore Prime provides you with a competitive edge in rapidly evolving markets.

Streamlines operations and resource utilisation

Deploy new storage resources faster with less staff time. PowerStore streamlines operations provides businesses with a competitive edge in rapidly evolving markets.

Automated monitoring and predictive analytics

The always-on monitoring means businesses can proactively address infrastructure issues faster, enhance operational efficiencies and focus on strategic initiatives.

Continuously modern technology

Ensure workloads are always running on the latest technology, facilitating continuous modernisation and future-proofing their storage infrastructure.

SETTING UP FOR SUCCESS: BEST-IN-CLASS VERSATILITY

Customer Story: Coin Metrics

Coin Metrics, a leading crypto data provider, faced the challenge of managing over 100 billion trade rows from crypto exchanges, demanding a robust and scalable storage solution for their rapid growth.

Dell PowerStore significantly enhanced Coin Metrics' storage capabilities, driving operational agility, reliability, and efficiency, crucial for meeting the demands of the rapidly evolving crypto data landscape and supporting the company's continued growth and success.

24/7 reliability

The reliability of the storage system was crucial to maintaining Coin Metrics' reputation and meeting customer expectations.

Footprint reduction

Coin Metrics reduced its storage footprint by 80%, aiming for high reliability and a simplified infrastructure ensuring continuous uptime.

Operational agility

PowerStore freed up valuable time for strategic initiatives, enhancing operational agility and efficiency.

"PowerStore's high-performance architecture provides the input/output bandwidth that we need."

Kerry Ynstead, CTO

SETTING UP FOR SUCCESS

The smart choice for all-flash storage

PowerStore Prime provides the essential storage ingredient your organisation needs to bring your best ideas to life, optimise every IT investment and make accomplishing your business goals look effortless.

With performance and scalability continuing to be crucial considerations for organisations grappling with increasing demands in the age of AI, we know being prepared for the future is incredibly important. Yet maximising productivity while minimising resource consumption, can be challenging without identifying where efficiencies or financial gains can be made.

With PowerStore you can overcome these challenges with trusted infrastructure that's equipped to identify, prevent and recover from all sources of potential disruption. As you look to extend your multicloud future, PowerStore also equips you with real capabilities you can use today, no matter where you are in your cloud journey.

Discover the benefits of PowerStore Prime.

More performance

Efficient performance and expansion capability streamlines operations, enables greater workload and infrastructure consolidation – and provides headroom and flexibility to prepare for whatever challenges lie ahead.
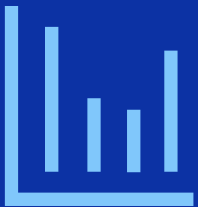
More efficiency

PowerStore has always been well known for efficiency, with intelligent, self-optimising automation representing one of its key advantages and provides up to a 24% reduction[5] in operational costs.

More resiliency

Built from the ground up for the modern data era, PowerStore has intelligent Cyber Resiliency in its core DNA and safeguards the integrity and accessibility of your valuable data.

More multicloud

With the Dell Technologies Advantage you get flexibility from the data centre, to the edge, to partner colocation facilities and out to the public cloud.

YOUR FUTURE ROADMAP
How to find the right solution for you

PowerStore Prime offers flexible and customisable configurations to meet your organisation's unique infrastructure objectives around performance, capacity and TCO.

As you explore which PowerStore Prime model and services best align to your current and future initiatives, we recommend focusing evaluation across four key dimensions:

- **Workload requirements.** Assess mission critical workflows demanding responsive performance, such as databases, VDI and server virtualisation. PowerStore Prime can scale seamlessly without escalating requirements.

- **Expansion trajectory.** Map expected data footprint growth over 3–5 years.

- **Consolidation needs.** Determine goals to consolidate disparate silos onto unified storage for administrative ease.

- **TCO thresholds.** Calculate ongoing power, cooling and efficiency costs savings you want to aim for.

If you would like more information around PowerStore Prime, and the value it can deliver for your business, contact our Dell Technologies experts on 0800 587 0798 (UK), request a call back, or visit Dell PowerStore Prime.

References

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5. IDC The Business Value of Dell PowerStore White Paper March 2023
6. 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.
7. Dell Power Store Data Efficiency – Technical Review (January 2024)

About Dell Technologies

Dell (NYSE: DELL) helps organizations and individuals build their digital future and transform how they work, live and play. The company provides customers with the industry's broadest and most innovative technology and services portfolio for the data era.