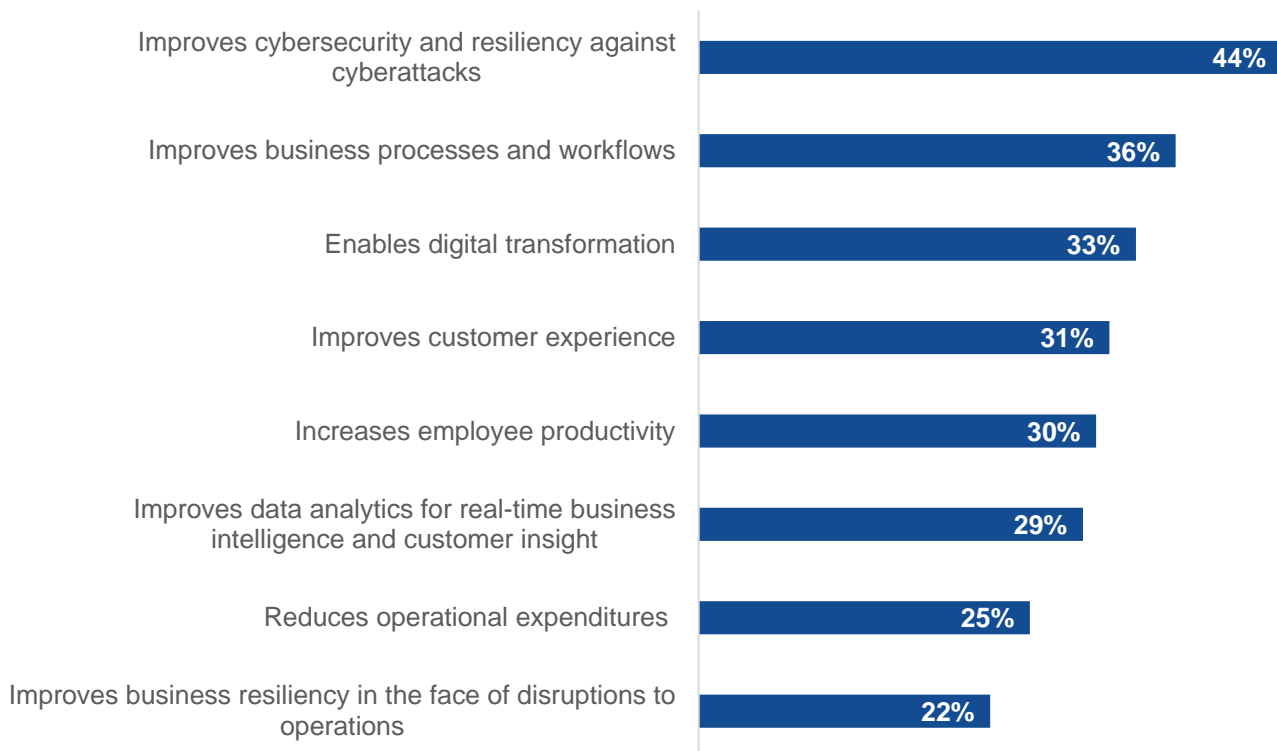MAY 2024

Dell PowerStore Resiliency

Craig Ledo, IT Validation Analyst

IT Challenges

TechTarget's Enterprise Strategy Group research shows that improving cybersecurity and resiliency against cyberattacks (44%) and improving business processes and workflows (36%) are the top considerations that will help justify IT investments to business management in 2024 (see Figure 1).[1] Organizations know that they need to improve resiliency and cybersecurity policies, but given the increasing demands on IT professionals, they also know they can't afford to add complexity.

Figure 1. Top IT Investment Considerations – Improving Cybersecurity and Resiliency

Which of the following considerations do you believe will be most important in justifying IT investments to your organization's business management team over the next 12 months? (Percent of respondents, N=903, five responses accepted)

Improves cybersecurity and resiliency against cyberattacks	44%
Improves business processes and workflows	36%
Enables digital transformation	33%
Improves customer experience	31%
Increases employee productivity	30%
Improves data analytics for real-time business intelligence and customer insight	29%
Reduces operational expenditures	25%
Improves business resiliency in the face of disruptions to operations	22%

Source: Enterprise Strategy Group, a division of TechTarget, Inc.

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[1] Source: Enterprise Strategy Group Research Report, *2024 Technology Spending Intentions Survey*, February 2024.

Dell PowerStore Resiliency

Dell Technologies recently announced PowerStore Prime, a comprehensive, integrated offering that combines new all-flash storage advancements with strategic business advantages. PowerStore Prime includes both product and program components that help organizations leverage Dell's unique position as a technology leader, including its broad enterprise portfolio and its global ecosystem of trusted partners and distributors.

PowerStore Prime delivers multiple enhancements to the platform's resiliency capabilities, including:

- **Broader OS support** for the popular Metro Volume feature that now supports Windows and Linux environments in addition to VMware. Metro Volume delivers active/active availability with a zero recovery time objective (RTO) and a zero recovery point objective (RPO) for any workload, with fully automated failover/failback via third-site witness and support for both volumes and volume groups.

- **New synchronous replication for file and block** that ensures 100% data integrity across sites, with zero data loss and the ability to protect volumes, volume groups, and network-attached storage servers across multiple clusters.

- **Support for up to 3x more snapshots and 8x more replication volumes** to protect more workloads locally or across sites.

These enhancements augment PowerStore's existing resiliency feature set, which now includes the following comprehensive lineup of local, remote, and cloud protection methods, as well as robust cybersecurity.

Local Protection

PowerStore enables users to efficiently manage, safeguard, and recover data on local PowerStore arrays.

- **Dynamic Resiliency Engine** protects against simultaneous multi-drive failures while intelligently managing both performance and efficiency.

- **Secure and immutable local snapshots** ensure that, once a snapshot is created, it cannot be altered or deleted until a predetermined expiration date, serving as an authentic reference point for data recovery.

- **File-Level Retention (FLR)** helps manage and secure file data by protecting file data from deletion or modification until a specified retention date, and is designed to meet the requirements of Securities and Exchange Commission rule 17a-4(f).

Remote Protection

PowerStore enables users to ensure data remains accessible and secure across distances.

- **Asynchronous replication** protects block, file, or Virtual Volumes (vVols) data across geographically distant data centers or disaster recovery sites for RPO-based business continuity, with failover/failback handled entirely by Dell PowerStore.

- **Synchronous replication** protects block and file data across local data centers or disaster recovery sites with zero RPO for business continuity, with failover/failback handled entirely by Dell PowerStore.

- **Metro Volume synchronous replication** (active/active) enables mission-critical, nondisruptive availability across metro distances (60 miles or 100 kilometers) for Windows, Linux, and VMware workloads and includes third-site witness capability for auto-failover/failback that avoids "split brain" scenarios.

- **Integrated remote backup** to Dell PowerProtect DD physical or virtualized appliances is a simple and efficient way to manage backup directly within PowerStore.

Cloud Backup and Mobility

PowerStore enables organizations to move data into the cloud for scalability, cost-efficiency, or data redundancy objectives.

- **Integrated cloud backup** offloads data to Dell APEX Protection Storage for Public Cloud for cost-effective cloud archiving with improved data reduction and fast recovery across any public cloud provider.

- **APEX Subscriptions** enables simple deployment of storage-as-a-service resources in an interconnected third-party colocation facility, as well as in the organization's data center or edge location.

- **Two-way workload mobility** between PowerStore and APEX Block Storage for Public Cloud.

Cybersecurity

PowerStore enables organizations to stay ahead of today's cybersecurity threats.

- **Native data at rest encryption** includes external key manager support and self-encrypting media.

- **Built-in hardware security** includes immutable hardware root of trust, secure boot chain of trust, and digitally signed firmware updates.

- **Advanced threat detection** features security configuration deviation, secure syslog events and exports, and antivirus and event publishing.

- **Trusted admin access control** offers multifactor authentication (MFA), role-based access control (RBAC), and lightweight directory access protocol (LDAP) support.

- **Security certifications** include security technical implementation guides (STIGs), NIST USGv6-r1, and Federal Information Processing Standards 140-2. PowerStore is also on the U.S. Department of Defense Approved Product List (APL) for deployment in DoD information networks.

PowerStore is designed for high availability, ensuring that workloads are always available, with continuous data access.

First Look

Enterprise Strategy Group reviewed the new Dell PowerStore Prime solution's capabilities and assessed how it would benefit customers. PowerStore Prime offers local, remote, and cloud data protection capabilities that ensures an organization's data is highly available and resilient against cyberthreats. The solution provides the following key benefits:

- **Simplicity.** Efficiently manage, safeguard, and recover data on any PowerStore array.

- **Accessibility.** Ensure data remains accessible, movable, and secure across distances.

- **Mobility.** Easily move data into the cloud for scalability, cost-efficiency, or data redundancy options.

- **Resiliency.** Safeguard data with 99.9999% availability.

PowerStore enables users to quickly and easily apply layers of protections to individual workloads. In a single workflow, users can access five different kinds of data protection, creating customized policies to apply snapshots, multiple kinds of replication, and cloud backup to any number of volumes at the same time.

Conclusion

The challenges associated with building, maintaining, and evolving ever-expanding data and storage infrastructures continue, yet the potential business benefits of getting it right have never been more exciting. In addition, as IT organizations respond to the evolving cybersecurity landscape, storage infrastructure and protecting data are becoming more and more important. For example, backups are now a primary attack vector for ransomware, cutting off what was an organization's best chance of a fast recovery from an attack. To protect against ransomware attacks, organizations should look to utilize the security protection tools that are baked into their primary storage environment, such as secure and immutable snapshots, which enable rapid recovery from trusted, point-in-time backups, as well as FLR, which helps manage and secure file data. There's no guarantee of total protection, but storage is becoming a key tool as part of a cybersecurity strategy.

Enterprise Strategy Group found that the Dell PowerStore solution can provide organizations with enhanced local, remote, and cloud data protection capabilities to safeguard workloads. PowerStore also offers robust security implementations, helping enterprises accelerate adoption of zero-trust cybersecurity models to better protect their data and to prevent and respond to cyberattacks. In addition, we found that PowerStore delivers comprehensive data protection capabilities that are very easy to administer and that help eliminate the possibility for error.

If your organization is looking to modernize your company's data protection capabilities with a holistic approach that encompasses local, remote, and cloud data, while minimizing administrative effort, you should consider Dell PowerStore Prime.

For more information on Dell PowerStore, please visit Dell Technologies PowerStore.