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Dell PowerScale for Microsoft Azure

A New Way to Simplify and Improve the Consistency of Cloud Operations

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Introduction

The present state and the future of IT operations is hybrid. That is, it will continue to consist of both public cloud and on-premises resources. Therefore, IT decision-makers need to stop treating cloud and on-premises operations as separate, disparate environments. After all, it is impossible to overstate how much more complicated cloud and on-prem environments are going to get in the future with AI and siloed data.

Consider that 91% of senior IT leaders surveyed by Enterprise Strategy Group said the pace of change in IT is accelerating, and 82% said their overall IT infrastructure environment has become more complex in the last two years.[1] They require more consistency as they manage hybrid environments because consistency accelerates operations while reducing risk. But importantly, IT, cloud, and application teams cannot compromise on capability either.

Modern data solutions often promise streamlined simplicity; however, in practice, many organizations find their current setups fall short. Achieving the necessary performance and scalability to support business initiatives can become a complex challenge, especially when seeking seamless integration between on-premises data and cloud-based data. Organizations must evaluate whether their current storage solutions will be able to meet future demands.

Adopting enterprise storage infrastructure technologies inside public cloud services is a way to increase the capabilities of a public cloud infrastructure. Dell PowerScale for Microsoft Azure, which is Dell PowerScale technology deployed as a natively integrated cloud service inside Microsoft Azure and fully maintained by Dell Technologies, is such a solution.

Operational Consistency Is a Priority in the Public Cloud

The movement to embrace enterprise storage technology within the cloud should not be surprising. According to Enterprise Strategy Group research, businesses adopt public cloud services hoping to achieve a variety of business benefits, including:

- Improved risk management (cited by 63% of respondents).
- Better access to innovation, features, and functionality (63%).
- Improved time to value (60%).

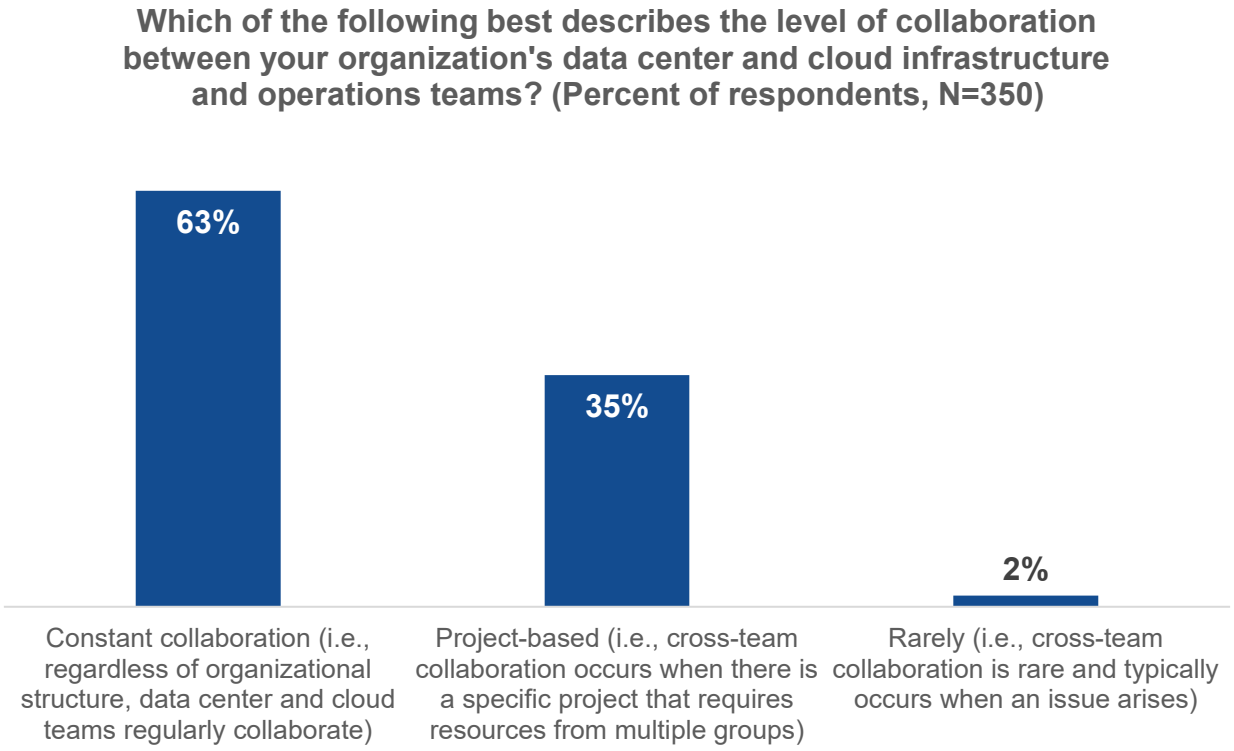
The increased adoption of public cloud services has reinforced the importance of hybrid cloud environments and has compelled IT and cloud operations teams to evolve in recent years (see Figure 1).

Additionally, 86% of respondents said their operations will be hybrid cloud-based for the foreseeable future, and 84% said their organization regularly moves data across on-premises data center and cloud environments. The pervasiveness of hybrid cloud environments, along with regular movement of data across the locations, adds complexity and places greater importance on ensuring effective hybrid cloud operations. Dell PowerScale for Microsoft Azure addresses that issue by providing a consistent and seamless experience across environments.

This could be an important step in simplifying those environments. A consistent, seamless experience is highly beneficial to IT organizations, 89% of whom said that collaboration across on-premises and cloud teams is more essential now than it was two years ago. Additionally, 89% said they are actively investing in consolidating experiences across clouds and on-premises locations.

[1] Source: Enterprise Strategy Group Research Report, *IT Transformed: Inside the Convergence of Hybrid Cloud and AI*, July 2025. All Enterprise Strategy Group research references and charts in this paper are from this report unless otherwise stated.

Figure 1. Hybrid Cloud App and Data Environments Often Demand Constant Collaboration



Source: Enterprise Strategy Group, now part of Omdia

Integrating Enterprise Storage in the Public Cloud Is an Opportunity to Simplify While Augmenting Capabilities

Despite the operational benefits that public cloud services provide, organizations often desire more when it comes to integrated storage capability. Consider the findings shown in Figure 2, which identify the top challenges organizations experience with public cloud file storage.[2] Protecting and securing data, which includes meeting data security expectations, was the most commonly cited challenge, but several other challenge categories emerged as well, including issues tied to limited data services capabilities, managing the protection of copies of data across locations, meeting performance expectations, and meeting cost expectations.

[2] Source: Enterprise Strategy Group Research Report, *Navigating the Cloud and AI Revolution: The State of Enterprise Storage and HCI,* March 2024.

Figure 2. Top Challenges With Public Cloud File Storage

Source: Enterprise Strategy Group, now part of Omdia

Public cloud services are valuable as a way to offload individual infrastructure maintenance and instead manage storage as a service based on the specific needs of workloads. That change alone can provide transformational benefits.

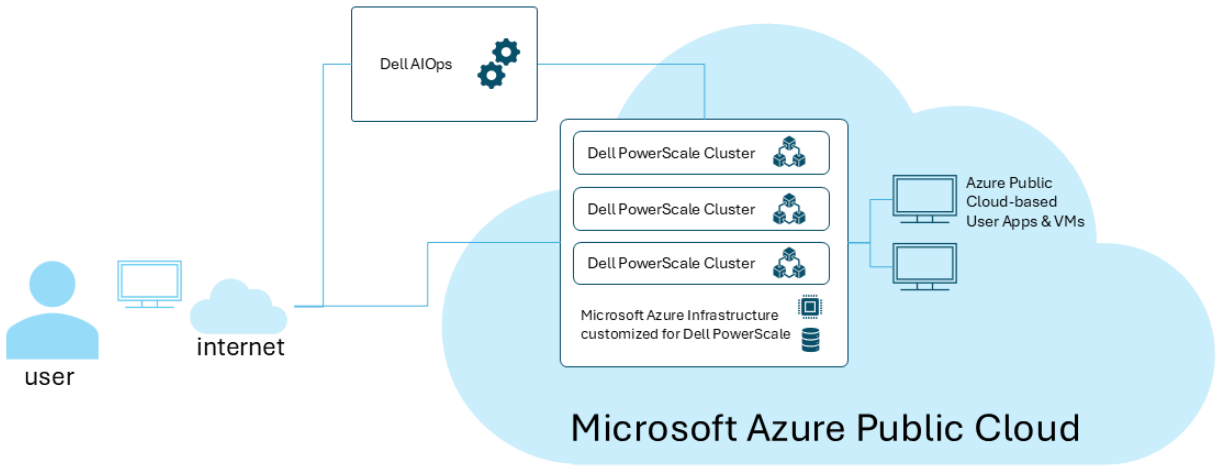
Basically, businesses require three things from public cloud storage: agility, flexibility, and choice. Those characteristics each help accelerate time to value, but organizations should not be limited in terms of technology choice. They need the top-tier technology, deployment flexibility, and simplicity that native-cloud options offer—specifically, storage technology that provides an optimal experience, best-of-breed performance, scalability, and data services for protection and security. Consistency of experience is an important additional benefit to reduce the burden on internal personnel and lower operational risk.

Dell PowerScale for Microsoft Azure in the Azure Public Cloud

Dell and Microsoft are collaborating to launch Dell PowerScale for Microsoft Azure, a deployment in Azure Public Cloud that delivers advanced file storage capabilities in Azure. This solution combines Dell's scale-out network-attached storage technology with Azure's cloud infrastructure, enabling organizations to unlock the full potential of their data in the cloud. The solution features Dell PowerScale software deployed on customized Microsoft Azure compute instances that were co-engineered by Microsoft and Dell specifically for Dell PowerScale, leveraging a scale-out architecture to scale capacity and performance.

Dell PowerScale for Microsoft Azure is a public cloud service provided by Microsoft Azure and maintained by Dell Technologies, not an on-premises or data center solution. It leverages trusted, scalable, high-performance enterprise file storage, seamlessly delivered as a native managed service to meet the demands of modern workloads (see Figure 3).

Figure 3. Overview of Dell PowerScale for Microsoft Azure



Source: Enterprise Strategy Group, now part of Omdia

Organizations can select from three available plans—**Standard**, **Plus**, and **Premium**—for the fit that's right for their workloads. Additionally, the solution leverages Microsoft Azure's enterprise storage options to provide up to 8.4PB in a single namespace.

Enterprise Storage Capabilities and Benefits of Dell PowerScale for Microsoft Azure

The key file storage features and functions of this solution include:

- **Multi-protocol access,** including SMB, NFS, and S3, along with a global permission structure shared across users and protocols. Benefits include workload consolidation and improved data-access flexibility.
- **Identity and access management** (IAM) controls along with namespaces and role-based access controls. Benefits include improved data security and simplified data access management.
- **A scale-out architecture** for higher performance, scalability, and resiliency. According to Dell, Dell PowerScale for Microsoft Azure enables up to 4x greater performance, up to 4x larger namespace, up to 23x more snapshots per volume, 2x higher cluster resiliency, and easier and more robust cluster expansion than the closest competitor.[3] These are the most advanced file storage capabilities available for Azure.[4]
- **Data reduction** via integrated deduplication and compression technology. This translates into reduced storage capacity costs to help optimize budgets.
- **Quality of Service (QoS)** to set limits to ensure more predictable storage performance. The application experience for high-priority workloads remains consistent even as demand scales.
- **SmartQuotas** via quota management and thin provisioning. This further reduces the cost of cloud storage because organizations can pay by capacity actually used, rather than by capacity allocated.
- **Snapshots**, namely point-in-time, capacity-optimized copies of data. Benefits include improved data protection and faster recovery while minimizing the cost of protecting the data.
- **SyncIQ** in the form of asynchronous replication for data migration or disaster recovery. It is a simple and automated method to create additional copies of data for additional protection and disaster recovery, and it can simplify data migration to external locations or on premises.

[3] Based on Dell analysis comparing Dell-managed option of PowerScale for Microsoft Azure, August 2025. Performance compares read throughput per namespace.
[4] Based on Dell analysis of software capabilities, April 2025.

- **Public cloud provisioning and management** via lifecycle management along with cloud services-based provisioning, deployment, management, optimization, proactive health monitoring, and decommissioning. This provides a service-based experience, enabling organizations to harness public cloud operational benefits such as accelerated time to value and reduced infrastructure maintenance, enabling organizations to utilize their committed cloud spending efficiently.
- **Regional availability** across nine Azure data centers in seven countries (United States, Australia, Singapore, Germany, Ireland, Netherlands, and the United Kingdom) at time of General Availability. This wide-ranging availability supports global business operational growth while meeting region-specific demands.

The solution's rich data management capabilities listed above directly address the top public cloud file storage-related challenges identified in Figure 2. Meeting data security expectations, as well as challenges related to limited data services and managing the protection of copies of data, all reflect the complexity and limits of traditional cloud storage when it comes to protecting and securing data.

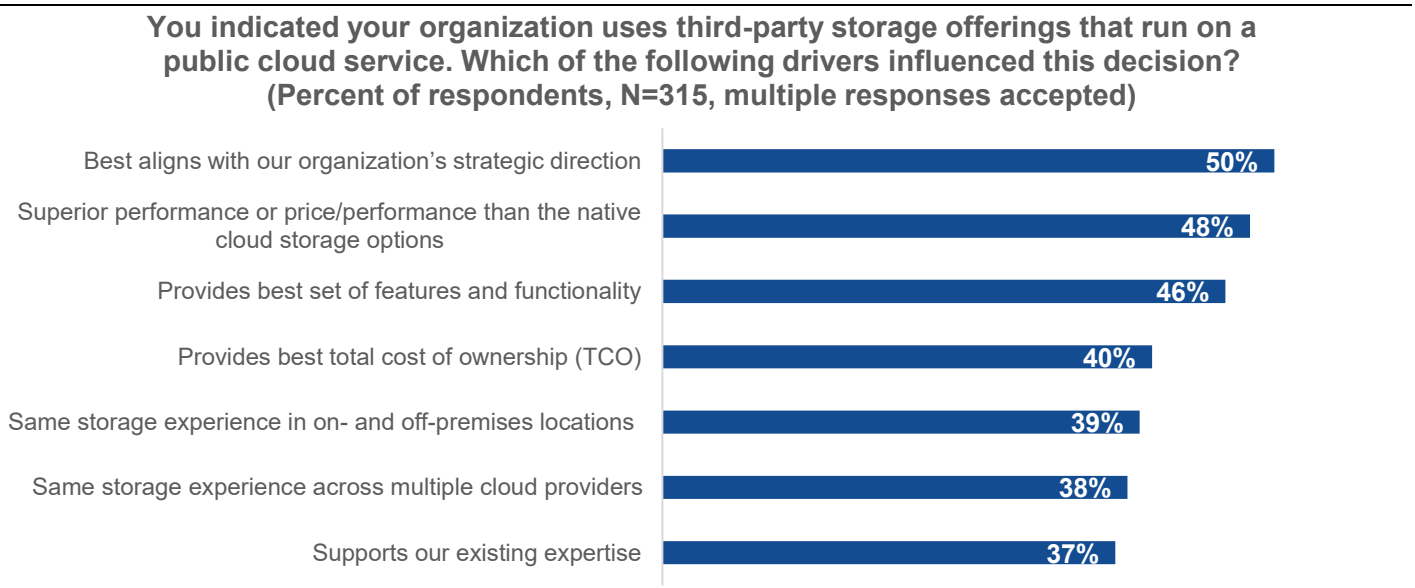
Dell PowerScale for Microsoft Azure helps address such challenges with IAM controls, namespaces, role-based access controls, a global permission structure across multiple protocols, advanced snapshots, and SyncIQ replication features.

Similarly, Dell and Microsoft help address the challenge of meeting performance expectations with the solution's scale-out architecture to provide superior performance scalability. In addition, the QoS functionality helps ensure that the performance experience is predictable.

As for meeting cost expectations, Dell offers data reduction and smart quotas to reduce the amount of actual storage being consumed by the application and data environment, bringing it down to just what is essential to protect data and serve the needs of the application environment.

According to Enterprise Strategy Group research, 96% of organizations leverage third-party storage offerings (storage technologies developed by a technology provider other than the public cloud provider) in the public cloud. As Figure 4 shows, the top rationales for doing so included gaining superior price performance, more scalability, snapshots, and better TCO.[5]

Figure 4. Drivers for Alternative Storage Technologies in the Public Cloud



Source: Enterprise Strategy Group, now part of Omdia

[5] Ibid.

Dell and Microsoft, two technology leaders, are partnering to deliver a public cloud solution that can offer the combined enterprise capability of Dell PowerScale to provide better performance, scale, and functionality, along with superior TCO and the public cloud simplicity and operational efficiency of Microsoft Azure.

They are also simplifying organizations' ability to leverage Azure tools to harness data within the PowerScale environment for potential use cases, including:

- Artificial intelligence and analytics.
- Disaster recovery and/or maintaining external copies for additional ransomware protection.
- Creating additional copies for cloud bursting.
- Easing data center to public cloud migrations.

Conclusion

On- and off-premises infrastructure and operations are becoming increasingly intertwined. As a result, it is important to strive for consistency of capability and experience across those locations. They need a simpler way to get data to the cloud, and they need a high level of operational consistency and ease of use afterward.

That consistency cannot, however, come at the expense of capability. That is part of the reason why organizations have progressively been adopting third-party storage technology in an effort to gain access to better features, better performance, and better TCO. Often, though, these third-party options require additional architectural work and sizing to deploy and maintain.

That's why it is such good news that Dell's PowerScale and Microsoft's Azure engineering teams have designed and are delivering a more capable option. Dell PowerScale brings enterprise storage functionality to the public cloud, including snapshots, data reduction, replication, QoS, and more. This solution leverages customized, optimized Microsoft Azure infrastructure in a scale-out fashion to improve performance and capacity scaling.

The bottom line is that organizations should not compromise. As IT becomes more hybrid, storage and cloud innovators, such as Dell and Microsoft, are partnering to deliver alternatives that can help organizations get a lot more out of their data—and in a much more consistent manner.

PowerScale has built an ecosystem of 300+ ISV applications that span across various industry workloads—including Healthcare, Media & Entertainment, Manufacturing, AI & Analytics, Backup, and Video Surveillance. The majority of these ISV applications will work seamlessly with Dell PowerScale for Azure out of the box like they do on-prem. Contact Dell to inquire about a specific ISV application, configuration, and/or sizing.

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