DELL Technologies

Microsoft

Solution brief

Dell AX System for Azure Local with Dell PowerFlex

Designed with storage flexibility in mind

Modern enterprises face unprecedented challenges in managing dynamic workloads and rapidly growing data. Hybrid cloud solutions with both flexibility and scalability are essential to meet these demands. Storage Spaces Direct (S2D) in Azure Local delivers robust performance tailored to meet the needs of smaller environments. For larger deployments scaling beyond eight nodes or scenarios requiring independent scaling of storage, there's an opportunity to explore optimizations that enhance flexibility and efficiency as your infrastructure evolves.

The Dell AX System for Azure Local, integrated with Dell PowerFlex, offers a groundbreaking approach to Azure hybrid cloud. By addressing the limitations of traditional software-defined storage, this solution delivers predictable, near-linear performance at scale[1] and unmatched flexibility. Its architecture enables seamless management of applications and data across on-premises and

public cloud environments, ensuring smooth hybrid cloud operations and empowering enterprises to adapt confidently to evolving workloads.

Engineered for exceptional performance and reliability, PowerFlex extends the storage fabric to unlock new levels of operational efficiency. This integration eliminates scaling barriers, providing robust control over hybrid environments while supporting transformational growth. Rigorously tested and validated by Dell Technologies and Microsoft, the solution ensures enterprises are equipped with the enterprise-class capabilities needed to overcome complex operational challenges and drive innovation.

Unleash the full potential of your **hybrid cloud infrastructure**

Mission-critical performance

PowerFlex is optimized for high-performance and low-latency environments, making it ideal for mission-critical applications, transactional databases, and demanding workloads. Businesses can rely on its robust performance to support operations that require uncompromising reliability and rapid transaction processing.

Exceptional availability

With six 9s (99.9999%) availability,[2] PowerFlex offers near-continuous uptime, minimizing annual downtime to just 31.5 seconds. This level of reliability ensures uninterrupted operations for mission-critical workloads, whether supporting e-commerce platforms, healthcare systems, or other essential services. Its rapid rebuild and rebalancing capabilities further enhance resiliency, providing peace of mind in the face of unforeseen disruptions.

Consistent I/O performance

PowerFlex ensures consistent performance, even under heavy resource demands. This is critical for organizations running data-intensive applications, such as artificial intelligence, real-time analytics, media streaming, and data ingestion. It eliminates bottlenecks, enabling businesses to process massive datasets efficiently and glean actionable insights in real time.

Extreme scalability

Businesses experiencing exponential data growth need infrastructure that can scale dynamically to meet demand. PowerFlex's modular architecture allows for seamless, non-disruptive scaling of resources, ensuring enterprises can handle both predictable growth and unexpected workload spikes while maximizing resource utilization and minimizing costs.

Workload diversity

PowerFlex consolidates diverse workloads—from transactional databases to complex analytics workloads—onto a single unified platform. This eliminates infrastructure silos, simplifies management, and reduces operational overhead, enabling businesses to optimize resource efficiency and accelerate innovation.

Data mobility

Dell PowerFlex streamlines data movement across cloud environments, unlocking the power of Microsoft Azure's wide-ranging services. This enables businesses to harness the flexibility and performance needed to innovate, optimize operations, and tackle evolving demands.

Real-world applications

Financial services

Process high-volume transactions in real time while running fraud detection algorithms on the same infrastructure. PowerFlex ensures fast, reliable performance for critical financial systems.

Healthcare

Support electronic medical record (EMR) systems and advanced data analytics for patient care in a secure, high-availability environment.

E-commerce

Handle high transaction volumes and manage personalized shopping experiences with consistent I/O performance and scalable infrastructure.

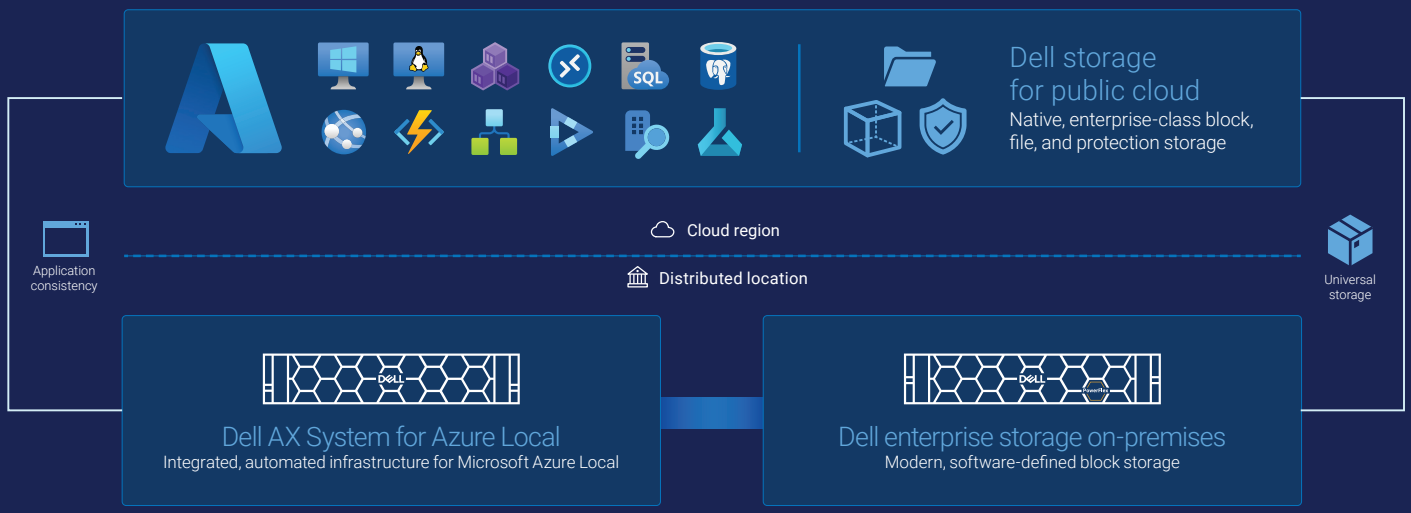
Artificial intelligence and analytics

Enable rapid data processing and model training for industries such as manufacturing, research, and logistics.

Delivering hybrid cloud innovation

The combination of Dell PowerFlex and the Dell AX System for Azure Local represents a major leap forward in hybrid cloud innovation. By delivering exceptional performance, scalability, and control, this solution empowers enterprises to confidently meet evolving storage demands. From eliminating performance bottlenecks to enabling seamless resource scaling and data mobility, this solution ensures businesses can meet today's challenges and anticipate future demands with confidence.

Driving storage innovation with PowerFlex integration



Explore
Dell AX System for Azure Local

Learn more about
Dell PowerFlex solutions

[1] Based on internal testing performed by Dell PowerFlex engineering. Testing was performed using an eight node PowerFlex cluster and scaling the cluster up to 128 bides. IO sizes consisted of 4K read/writes and 256k read/writes. March 2021.
[2] Based on research conducted by IDC. Interviews with existing PowerFlex customers determining what the outcomes of implementing PowerFlex in their environments.