
DELL Technologies
Microsoft Azure
6 Workloads Optimized on
Dell AX System for Azure Local
Premier Solution for Microsoft Azure Local
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8 in 10 C-suite leaders brace for faster pace of innovation

When thousands of C-suite leaders from some of the world's leading organizations were asked about their biggest concern regarding innovation, a whopping 81% acknowledged they're bracing for an even faster rate of change, yet only 52% feel they're fully prepared. So, what does it take to be prepared?

This eBook addresses what it takes to be prepared by running diverse workloads on Dell AX System for Azure Local. More specifically, how these workloads are optimized both in the cloud and on-premises, empowering organizations to embrace and unlock innovation with a consistent Azure experience across their IT environments, no matter how fast the rate of change.

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Workload Optimization

- → Azure Virtual Desktop
- → Azure AI Services
- → Azure Kubernetes Services
- → Edge Deployments
- → Hybrid Database-as-a-service (SQL)
- → Traditional Virtualized Applications

Find out about operating in a multicloud world →

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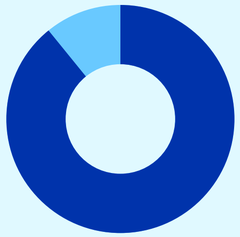
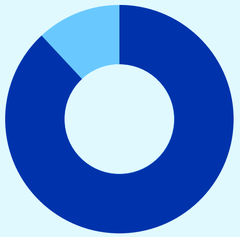
It’s a multicloud world

You require a platform that meets tomorrow’s needs, whatever they may be.

The current application landscape is increasingly decentralized, with the majority of organizations anticipating further distribution in the next two years.



88% of organizations agree that leveraging multiple public cloud providers delivers strategic benefits.[1]



87% of organizations expect their application environment to become distributed across even more locations over the next 2 years.[1]

82% of organizations struggle to properly size workloads for the optimal infrastructure environment (on- or off-premises).[1]

What are some barriers to multicloud? →

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Barriers to multicloud

Barriers to cloud deployment underscore important justifications for on-premises infrastructure.

Even organizations prioritizing cloud adoption opt for on-premises solutions for new applications due to various requirements including regulatory compliance, data governance, proximity to existing legacy applications and data, and total cost of ownership considerations.

45%
stated they've deployed a net-new application on-premises despite having a cloud-first application deployment policy due to application owner or developer preference.[1]

Other causes of exceptions to cloud-first policies include:

42% stated data governance or sovereignty considerations[1]

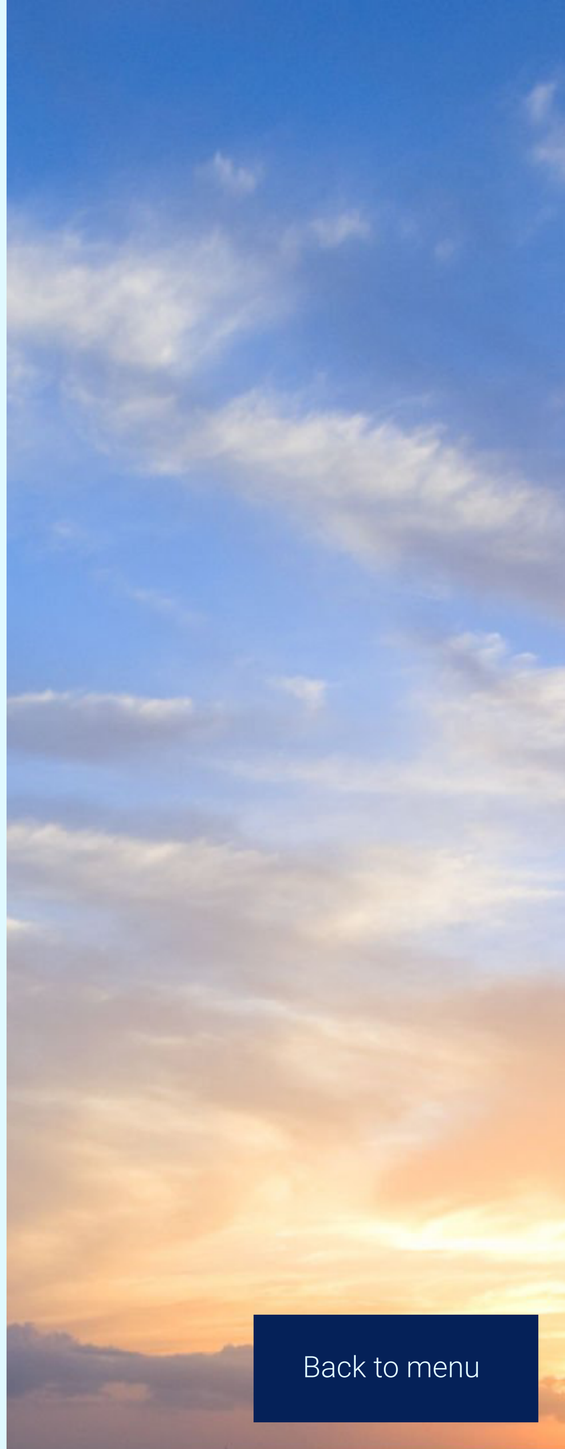
42% stated Total Cost of Ownership (TCO)[1]

Organizations find it challenging to determine the optimal placement for applications and data, despite recognizing their critical importance. These challenges include the cost, complexity, and risk associated with refactoring or replatforming applications for the cloud.

81%
of organizations reported that they face challenges with application and data portability across locations (including data center, public cloud, and edge).[1]

How do you extend and optimize Azure everywhere? →

[1]Source: Enterprise Strategy Group Report, Unlocking the Power of Multicloud with Workload Optimization, published May 2023.



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Dell AX System for Azure Local

With a Premier Solution for Azure Local, you can advance your cloud strategy – so you can accelerate your innovation.

Dell has been a leader in developing co-engineered solutions that enhance the Azure Local experience. As the first partner to offer products in the Microsoft Premier Solutions category,[2] Dell continues to set the standard for innovation and collaboration. The Dell AX System is a testament to this legacy.

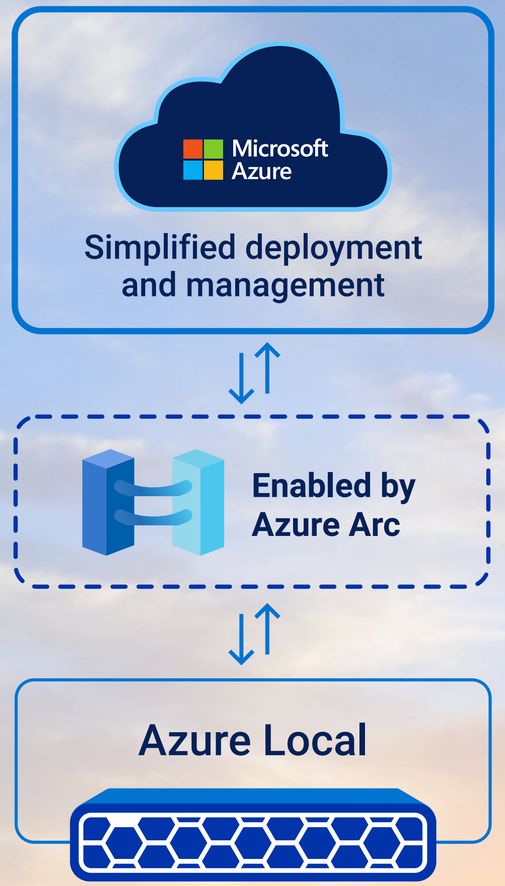
The Dell AX System integrates Microsoft-native tools and the Dell OpenManage Integration with Microsoft Windows Admin Center to provide simplified, at-scale operations and rapid feature updates.

Hardware updates, including BIOS, firmware, and drivers, are managed through a unified workflow in Azure Update Manager, ensuring your systems stay current with the latest enhancements and security patches. To maintain smooth operations and a seamless experience, the solution offers:

- Rigorous compatibility checks
- Regular readiness assessments for infrastructure updates
- Azure Local instance expansion
- Storage compatibility expansion

Flexibly scale with latest generation infrastructure

Dell AX System, built on industry-leading PowerEdge Servers, delivers next-generation technologies to accelerate IT transformation and future-proof your infrastructure. With flexible, factory-ready configurations, including the latest Intel processors, it optimizes your workload requirements.



What makes this offer unique? →

[2]Source: Based on internal analysis, May 2025.

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Designed with storage flexibility in mind

Dell AX System for Azure Local comes with Microsoft Storage Spaces Direct. Users can extend their storage fabric to include Dell software-defined storage (SDS).

Dell AX System for Azure Local integrates with Dell PowerFlex to offer a groundbreaking approach to Azure hybrid cloud. PowerFlex simplifies workload mobility, giving you control over where your applications and data reside. This solution addresses limitations of traditional SDS by delivering predictable, near-linear performance at scale and unmatched flexibility.[3]

Dell AX System for Azure Local integrated with Dell PowerFlex SDS currently provides block storage. Using Dell's enterprise-class storage solution to extend the Azure Local storage fabric enables new use cases and provides many benefits:

- Run a highly diverse set of workloads – including mission-critical databases and applications that require significantly low latency and high transactional performance at large scale beyond S2D's default capability.
- Deliver consistent I/O performance for streaming, ingestion, and reporting transactions within AI and data analytics applications.
- Achieve 99.9999% availability with extremely fast rebuild and rebalance operations.
- Address exponential data growth with a modular scale-out architecture.

What workloads can you optimize? →

[3]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.

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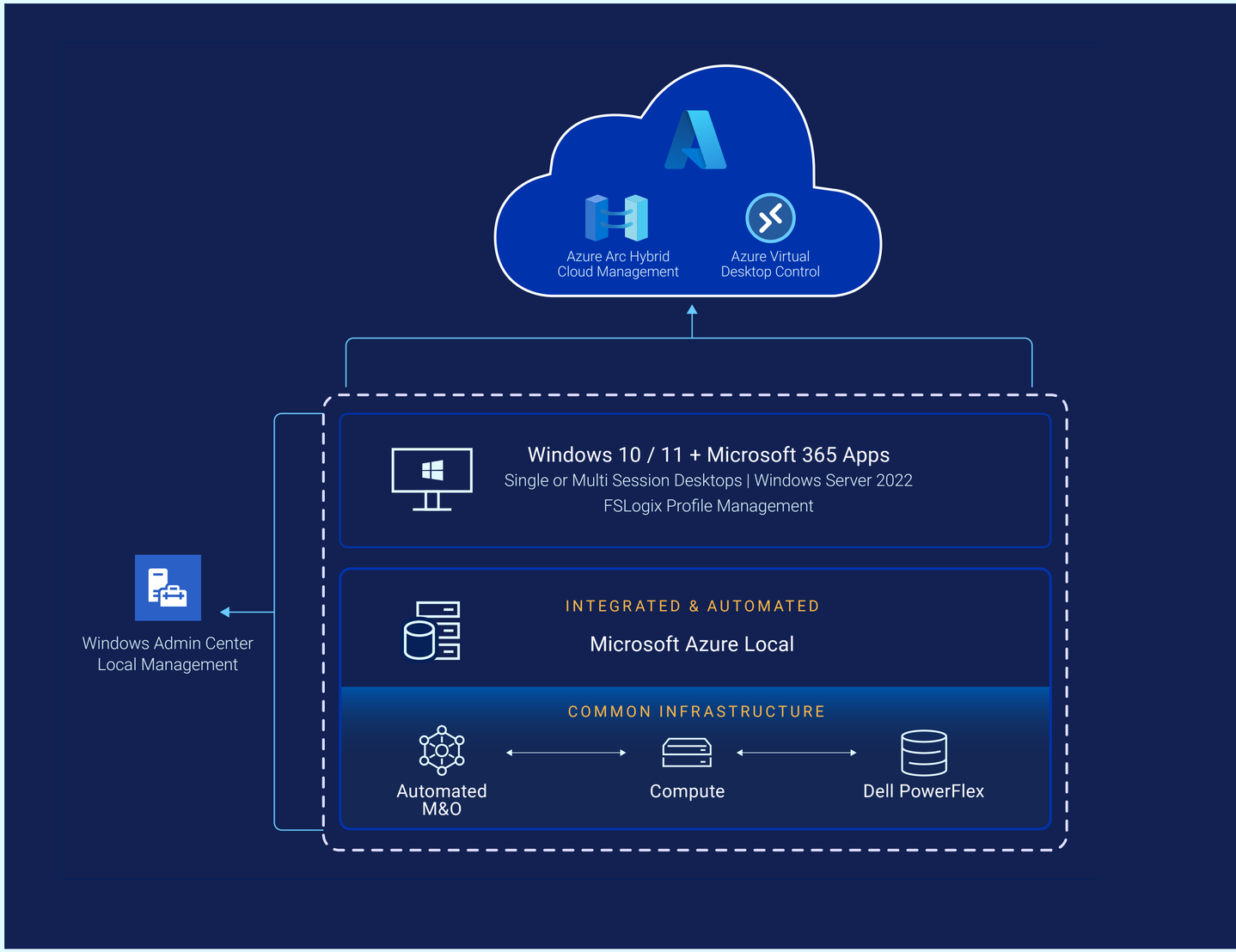
Workload Optimization: Azure Virtual Desktop

Deploy virtual desktops in a Microsoft hybrid cloud environment

While remote users enjoy working and learning from anywhere, it presents IT with unique challenges, including cybersecurity vulnerabilities that can pose significant financial and brand risk.

To address these challenges, IT is turning to Microsoft's Azure Virtual Desktop (AVD), a leading desktop and application virtualization solution, operating in both Azure public cloud and on-premises with Azure Local. It empowers IT teams with precise controls and simplified management, while delivering a rich experience for Windows and Microsoft 365 users.



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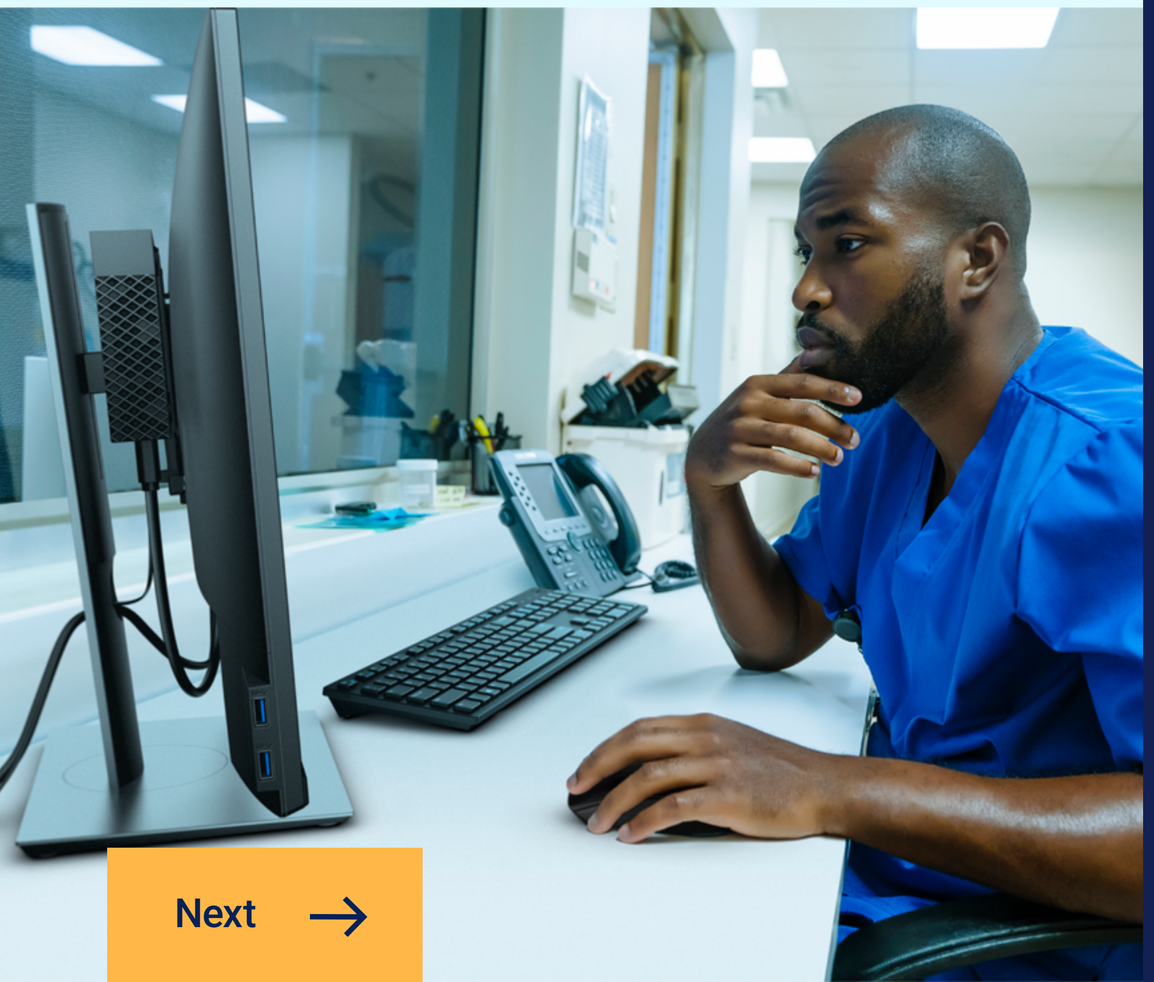
Workload Optimization: Azure Virtual Desktop



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Dell AX System for Azure Local further optimizes AVD deployments. Here are six reasons why it's the premier choice to enhance AVD:

- More productive IT
- Configure for your unique requirements
- Consistent experience
- Intrinsic security and improved compliance
- Cost-effective capabilities
- Ensure the latest updates

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Workload Optimization: Azure AI Services

Implement AI solutions in a Microsoft hybrid cloud environment

Artificial Intelligence (AI) and the innovation it can bring has driven immense excitement, but with these opportunities also come implementation challenges and unforeseen risk. By pairing Azure AI services with Dell AX System for Azure Local, you can leverage the value of Azure AI's suite on-premises, which is fully integrated with Microsoft Azure to automate deployment and operations for a turnkey solution.

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Azure AI services

Azure AI services provide containers that let you use the same APIs that are available in Azure, on-premises. Using these containers gives you the flexibility to bring Azure AI services like language, translation, speech, document intelligence, and vision closer to your data for:

- **Control over data**
- **Control over model updates**
- **Portable architecture**
- **High throughput/low latency**

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Workload Optimization: Azure Kubernetes Services (AKS)

Optimize delivery of AKS on-premises

Azure Kubernetes Services (AKS) simplifies deployment and operating Kubernetes clusters in Azure. It empowers you to manage containerized applications at scale using the powerful features of Kubernetes. With AKS, you can focus on your containers while Azure handles the complex parts of running Kubernetes.

AKS, enabled by Azure Arc, delivers a consistent developer experience for Azure Local. This can significantly accelerate application modernization and DevOps initiatives. Dell AX System for Azure Local enables you to run both your traditional virtualized applications in virtual machines and your cloud-native applications in AKS, enabled by Azure Arc, on the same infrastructure. Running Azure Arc-enabled services on-premises addresses application requirements involving data locality, regulatory compliance, performance, dependencies on existing on-premises applications, etc.

Azure Arc-enabled services available on-premises:

- SQL Managed Instance
- PostgreSQL Hyperscale
- App Services
- Functions
- Logic Apps
- Machine Learning

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Workload Optimization: Azure Kubernetes Services (AKS)

Other benefits of AKS include:

- Ease of deployment – provision AKS workload clusters on Dell AX System for Azure Local using Azure Portal, Azure CLI, ARM templates, Bicep, and Terraform.
- Best-in-class support for Linux- and Windows-based containers, which can run side by side on the same platform.
- Flexibility to leverage the broad ecosystem of Kubernetes Open Source Software (OSS).
- View all your AKS workload clusters running inside and outside of Azure in one place for inventory, grouping, and tagging.
- Manage access to your clusters using Azure role-based access controls (RBAC), and connect to your clusters from anywhere.

Leverage other Azure management and governance services like Azure Monitor for containers, Microsoft Defender for Kubernetes, Azure Policy for Kubernetes, and more.

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Workload Optimization: Edge Deployments

Extend Azure to the edge with small-footprint, specialized nodes

Operating in space-constrained, remote, and sometimes harsh surroundings demands resilient infrastructure that can adapt to unpredictable conditions. Consider scenarios like the back office of a bustling retail store, where inventory boxes vie for space, or a dynamic manufacturing floor teeming with people and machinery. Picture a telecommunication tower standing tall in the scorching desert heat. In all these contexts, robustness and flexibility are paramount.

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Dell AX System for Azure Local AX-4000 nodes are purpose-built for customers with a strategic focus on Azure environments. Specifically designed for edge and remote office/back office (ROBO) computing use cases, these small-footprint nodes offer an excellent choice for extending Azure to the edge, with optimized features that simplify integration into Azure-based ecosystems.

Chassis and compute design:

- Unique chassis and compute sled(s) concept.
- Two 14”-depth chassis form factors: "rackable" and "stackable."
- Modular compute sleds available in 1U or 2U form factors.
- Power is the only shared component between sleds.

Ruggedized design:

- Built to withstand harsh, unpredictable, non-data center environments.
- Operates in temperature ranges from -5°C to 55°C.
- Rated to meet MIL-STD-810H and NEBS Level 3 standards.

Deployment benefits:

- Suitable for space-constrained back offices, retail locations, or manufacturing floors.
- Reduces complexity and minimizes footprint costs.
- Increases energy savings at edge locations.
- Reduced latency ensures real-time performance for critical applications.
- Process and store data locally to strengthen security, reduce threats, and ensure compliance.

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Workload Optimization: Hybrid Database-as-a-Service (DBaaS)

Optimize data architecture through a consistent platform

Between data architecture complexities and growing business demands, Database Administrators (DBAs), IT administrators, and software developers carry a heavy burden when it comes to addressing database workload requirements. Managing this data across private cloud, public cloud, and edge requires mature and automated processes and technologies. IT staff struggling with technical debt and budget constraints are often too overwhelmed by operational complexity to stay current with emerging trends.

To address these challenges, Dell AX System for Azure Local provides a consistent platform to implement a Database-as-a-Service (DBaaS) architecture.

Adapting a DBaaS platform enables the creation of modern, cloud-native applications, minimizing the operational burden, and optimizing cross-functional productivity for DBAs, IT admins, and software developers.

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Workload Optimization: Hybrid Database-as-a-Service (DBaaS)

Microsoft and Dell Technologies have created a modular, integrated solution that:

- Provides comprehensive lifecycle management to keep the entire technology stack compliant and up-to-date
- Automates common administrative tasks
- Leverages Microsoft Azure platform services
- Increases platform resiliency
- Ensures performance to meet defined SLAs

Dell AX System for Azure Local helps IT and database admins and software developers by providing:

- Simplified management to enable faster and more efficient database provisioning
- Flexible resource scaling to adapt to changing workload demands
- Lower costs by optimizing resources, automating tasks, and boosting efficiency
- In-depth, cluster-level detail and Azure Arc-enabled management and governance services for fleet management at scale
- Platform resiliency and performance to meet defined SLAs for continuous availability, data integrity, and optimal performance

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Workload Optimization: Traditional Virtualized Workloads

Get support for tried-and-true virtualized applications

Dell AX System for Azure Local delivers a turnkey platform, seamlessly blending traditional workloads with Azure's hybrid capabilities. Organizations that rely on legacy applications and systems can run their traditional workloads alongside modern, containerized applications.

With Azure Arc Resource Bridge, users can effortlessly provision and manage new virtual machines directly from Azure, streamlining operations and enhancing productivity.

- Easily provision and manage new virtual machines directly from Azure, streamlining operations and boosting productivity.
- Easily move virtual machines from Hyper-V to Azure Local with Azure Migrate.
- Data transfers occur securely on-premises, ensuring confidentiality and compliance.
- Provides a modern solution for legacy Microsoft workloads like Windows Server 2012 and SQL Server 2012, maintaining their security.
- Includes three years of extended security updates to secure and rehost Windows Server 2012 or SQL Server 2012 without extra costs.

Summary and takeaways →

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Microsoft Azure

Extend your business to the cloud
with an Azure hybrid solution

Summary

To keep pace with the accelerating rate of change within enterprise IT, organizations require infrastructure that's optimized for traditional and modern workloads. Dell AX System for Azure Local is purpose-built and designed to support these diverse workloads, while also delivering seamless Azure experience both on-prem and in the cloud. Deep integrations with Microsoft, simplified lifecycle management, and resilient architecture empower organizations to innovate confidently, operate efficiently, and scale as needed without sacrificing control, performance, or security.

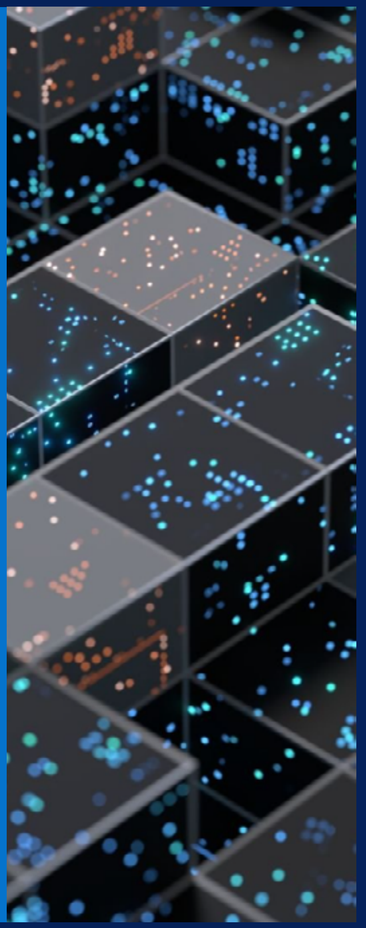
Dell AX System for Azure Local

Keep data and control local.
Bring Azure apps, data, and AI services anywhere.

› Visit **Dell.com/Azure-Local** to explore more

5 Key Takeaways

- **Optimized for what matters**
  Purpose-built to accelerate performance across six mission-critical workloads.
- **Azure experience on-prem**
  Get a true Azure environment locally, fully integrated and supported by Dell.
- **Streamlined operations**
  Rapid updates and patches, along with simplified lifecycle management, reduce IT complexity.
- **Edge-ready and resilient**
  Run powerful workloads even in space-constrained or harsh environments.
- **Control meets innovation**
  Keep sensitive data local while unlocking cloud-native agility and insights.



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