Solution Brief

VAST AI OS on Microsoft Azure

One Data Estate, Azure Cloud GPUs

Enterprises are sitting on years of valuable data. Information that has gathered over decades. The problem isn't the data, it's getting it to where AI can use it. Moving data to the cloud is time-consuming, costly, and challenging for compliance. Every copy introduces drift: in content, in permissions, and in security posture.

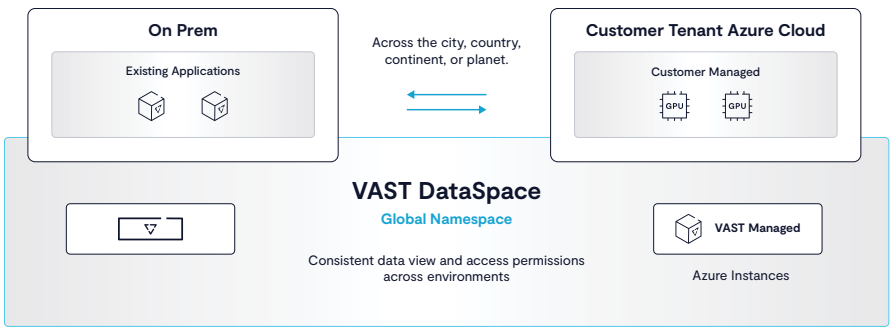
To make the most of the data, companies need capabilities beyond those offered by their legacy storage systems. They need an AI OS that combines file and object access, global metadata management, supports SQL-like queries, and provides automated lifecycle management to keep data discoverable, governed, and AI-ready across every environment.

That's precisely what the VAST AI Operating System (VAST AI OS) offers, giving enterprises production-ready access to VAST's complete suite of data services in Azure.

Hybrid Cloud AI with VAST AI OS

VAST's Global Namespace creates a single, consistent data environment that spans on-prem or cloud locations, even across vast distances. Existing applications can keep working locally while Azure-based AI workloads run against the same dataset without data copies, drift, or reconfiguration.

Figure 1. Federated Data Estate



Benefits

GPU

GPU Utilization

Maximize Azure GPU utilization without having to pre-stage all your data.

Global Availability

Access and interact with your data anywhere without copies or complexity.

Security

Global permissions ensure uniform security and compliance standards across all environments.

Compatibility

Works natively with AzureML, PyTorch, TensorFlow, JAX, Docker, and Hugging Face.

Tying this together, VAST Polaris gives you a single control plane over the hybrid estate. Rather than managing each cluster, region, and location as its own silo, your team sees and governs every site through one interface, turning what would otherwise be a sprawl of independent deployments into a single, coherently operated system.

Data in the Driver's Seat: Fueling Azure AI Services

For decades, enterprises have juggled separate storage silos for different data types: driving up costs, complexity, and security risks. VAST AI OS on Microsoft Azure shatters these boundaries. Discover how to deploy a single, unified data foundation for both structured and unstructured data, designed for ease, scale, and security.

- **Seamlessly migrate on-premises storage to Microsoft Azure.** By provisioning VAST data services in the cloud, you can leverage a single, familiar interface for consistent data management across environments. Effortlessly move data and workloads between your data center and Azure as your business needs evolve.
- **Accelerate innovation by pairing the VAST AI OS with Azure AI services.** VAST AI OS provides a high-performance foundation to prototype, test, and validate your AI pipelines. By eliminating data silos and keeping Azure GPU clusters saturated with high-throughput data, you can rapidly transition from testing experimental models to launching enterprise-scale inference and agentic workflows without friction.

Try VAST AI OS on Azure Today

VAST AI OS is available now through the Microsoft Azure Native ISV Service. With VAST, you can harness Azure's purpose-built AI services, custom models, and GPU instances while maintaining enterprise-grade data performance, scalability, and governance.

Learn more by visiting the Azure Marketplace listing.

Challenge

Legacy Data Architectures:
Organizations are under pressure to accelerate AI and analytics initiatives, but their data is often fragmented across on-premises infrastructure, multiple clouds, and disconnected storage platforms. Copying data into Azure can increase costs, introduces operational complexities, and delay business outcomes.

Solution

Modern Data Solution:
VAST Data for Azure extends the VAST AI OS into the cloud, connecting enterprise data across on-premises and Azure environments through a single platform. By eliminating data silos and complex data movement, organizations can accelerate AI and analytics initiatives while simplifying operations and maximizing cloud investments.

One Data Fabric

AI workloads can run wherever compute capacity is available while maintaining control of data and security policies.

Maximum Utilization

GPUs can access and load models from VAST storage with performance consistent with local NVMe devices

Consistent Policies

VAST DataSpace and Polaris enforces a single trust zone across environments. Data governance remains consistent everywhere.

About VAST Data

VAST Data is the AI Operating System company – powering the next generation of intelligent systems with a unified software infrastructure stack that was purpose-built to unlock the full potential of AI. The VAST AI OS consolidates foundational data and compute services and agentic execution into one scalable platform, enabling organizations to deploy and facilitate communication between AI agents, reason over real-time data, and automate complex workflows at global scale. Built on VAST's breakthrough DASE architecture – the world's first true parallel distributed system architecture that eliminates tradeoffs between performance, scale, simplicity, and resilience – VAST has transformed its modern infrastructure into a global fabric for reasoning AI. Learn more at vastdata.com and follow VAST Data on LinkedIn, YouTube and X.

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