Solution Brief

VAST Polaris

Orchestrating Globally Distributed AI Infrastructure Across Hybrid and Multicloud Environments



As AI pipelines expand across diverse regions and providers, modern infrastructure has outgrown the capabilities of single-cluster deployments. Enterprises now face the challenge of managing training, inference, and data collection across geographically dispersed environments.

Operating distributed AI infrastructure often results in fragmented silos that complicate governance and cost control. Manual orchestration of multi-cluster environments creates significant operational friction, hindering the ability to scale AI workloads consistently across public clouds and on-premises datacenters.

VAST Polaris introduces a centralized, global control plane that automates deployment and lifecycle management, transforming isolated clusters into a single, operationally coherent AI Data platform.

Unified Fleet-Scale AI Infrastructure Management

Polaris utilizes a secure, Kubernetes-based control plane and lightweight agents on every VAST node to automate provisioning and orchestration. This layer allows administrators to define a state or release version, which Polaris then maintains across all cloud services.

The platform integrates directly with cloud marketplaces for seamless subscription management and entitlement. It simplifies operations by centralizing upgrades, node replacements, and expansions through a single API and interface, ensuring consistent configuration across all providers.

By pairing with the VAST DataSpace, Polaris abstracts infrastructure location while DataSpace abstracts data location. This results in a single logical environment where AI agents and applications operate seamlessly, regardless of where the underlying compute or data resides.

Benefits for Distributed AI Enterprises

Global Orchestration

Manage distributed AI clusters across public clouds and on-premises datacenters through a single, unified interface.

Automated Management

Streamline lifecycle operations by centralizing provisioning, software upgrades, and cluster expansions across your entire fleet.

Resource Optimization

Maximize efficiency by aligning compute placement with GPU availability and cost without changing your applications.

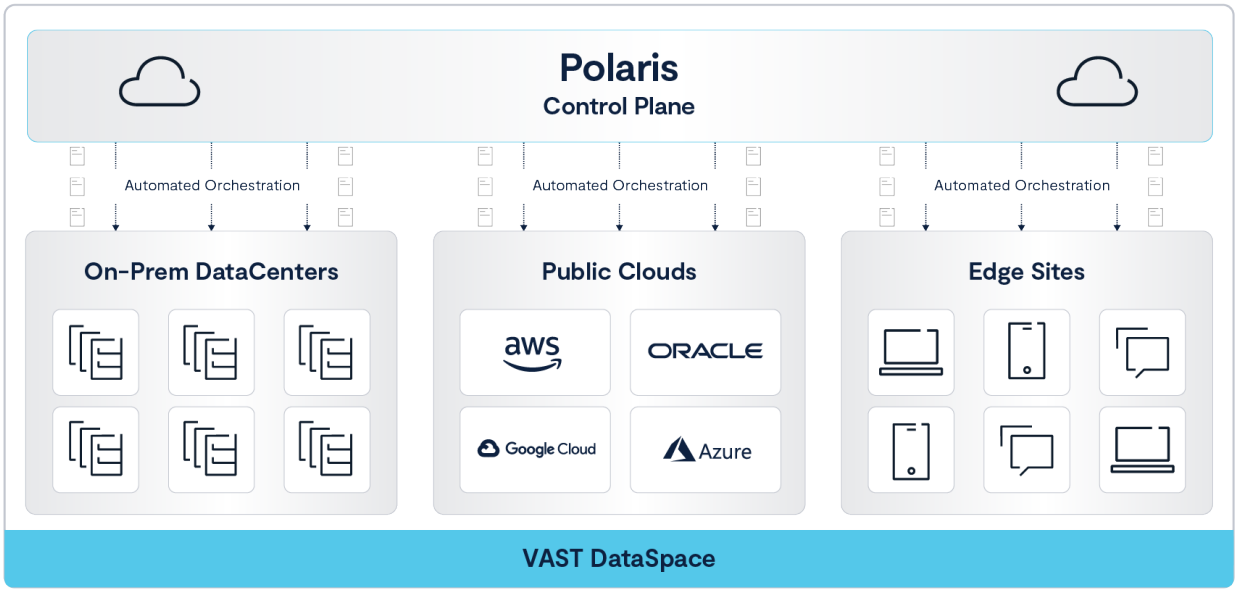
Unified Governance

Maintain consistent security policies and identity integration across hybrid multicloud environments via one central plane.

Seamless Scalability

Transform isolated infrastructure silos into a single logical platform that scales effortlessly across geographical boundaries.

The VAST Data Platform



Polaris provides a centralized service delivery layer that enables consistent policies and governance across all clusters. It coordinates both cloud-native and on-premises resources to maintain a secure, desired state of infrastructure globally.

Getting Started

VAST Polaris is available today as part of VAST cloud deployments. Visit the VAST Data website or your preferred cloud marketplace to begin orchestrating your distributed AI infrastructure through a single, secure interface.

Centralized Fleet Orchestration

Automate the deployment and lifecycle management of distributed AI clusters across diverse cloud and on-premises environments from one interface.

Deployment Automation

Configure the desired infrastructure state that Polaris automatically maintains using secure, Kubernetes-based agents across your entire global data fabric.

Unified DataSpace Integration

Abstract physical locations allowing AI applications to access data seamlessly regardless of placement.

Explore the VAST Possibilities – vastdata.com

Scalable to Exabytes · Performance for AI Workloads · Federated AI Architecture

About VAST Data

VAST Data is the leading data platform software company bringing businesses into the AI era. By accelerating time-to-insight for workload-intensive applications, the VAST Data Platform delivers scalable performance, simplifies data management, and enhances productivity. Launched in 2019, VAST has become the fastest-growing data infrastructure startup in history.

Looking to simplify your data center and unlock insights from all of your data? Contact us at hello@vastdata.com

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