Solution Brief

VAST AI OS for Red Hat OpenShift Virtualization

Modern storage architecture for VMs and containers



Enterprise virtualization strategies are rapidly evolving. Faced with acquisition-driven licensing changes and price hikes, years of outdated storage systems, and the inflexibility of hyperconverged offerings, IT leaders are under pressure to find alternatives for managing business-critical virtual machines. At the same time, they need to modernize their application stack and prepare for emerging AI workloads without introducing more storage silos.

Red Hat OpenShift Virtualization

Red Hat OpenShift Virtualization brings virtual machines into the Kubernetes operational model, enabling VMs and containers to run side by side on a single platform. Infrastructure teams can manage VMs by leveraging Kubernetes-based workflows for provisioning, automation, networking, security, and lifecycle management.

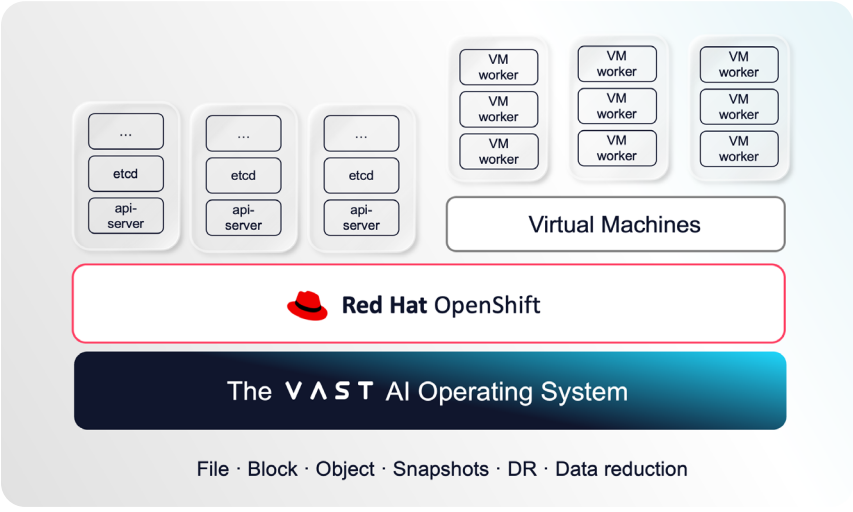


Figure 1. Better Together: Red Hat + VAST

Why VAST AI OS?

Migrate with Confidence

Move legacy VMs to OpenShift with the Migration Toolkit.

Scale Without Limits

VAST's DASE architecture serves thousands of VMs from a single tier.

Protect by Default

Snapshots, DR, and ransomware resiliency built into the data layer.

One Platform for All

VMs, containers, and AI workloads all on a single unified stack.

VAST AI OS

VAST AI OS complements OpenShift Virtualization with a scalable, all-flash data foundation for persistent VM and container storage. Through a Red Hat-certified VAST CSI Operator, organizations can provision and manage VAST storage using familiar Kubernetes storage classes and persistent volume claims (PVCs).

Modern Virtualization on VAST AI OS

Using the VAST CSI driver, OpenShift can dynamically provision persistent storage from the VAST DataStore. Virtual machine disks are backed by persistent volume claims, enabling OpenShift to request and attach VAST storage without requiring administrators to manually provision and map individual volumes.

This integration also simplifies the transition of existing virtualized workloads to OpenShift. Red Hat Migration Toolkit for Virtualization provides a structured migration workflow for moving VMs from legacy virtualization platforms onto OpenShift Virtualization, where their persistent data can be hosted and managed on VAST AI OS.

VAST AI OS offers:

- Red Hat certified integration: The VAST CSI Operator is available through the Red Hat Ecosystem Catalog and manages the VAST CSI deployment, configuration, and upgrades for OpenShift environments.
- File, object, and block storage options: Dynamically provision NFS and block volumes through CSI, or object storage buckets through COSI, based on application and workload requirements.
- Policy-drive storage services: Use Kubernetes storage classes to apply access controls, network settings, protection policies, replication policies, and other storage parameters.
- Integrated snapshots and clones: Protect Kubernetes persistent volumes and create writeable copies using standard CSI snapshot and cloning.
- Multi-tenant infrastructure: Map storage classes and VAST resources to isolated tenants, policies, virtual IP pools, and storage paths for different applications or business groups.
- Flexible scale: Expand storage performance and capacity independently without rebalancing data across isolated storage silos or workload-specific storage system.



Business Benefits



Simplify Infrastructure Operations

Kubernetes storage classes, alongside CSI automation, eliminate manual storage provisioning tasks. Administrators can define infrastructure policies once and offer standardized storage services to application developers and VI admins through self-service workflows.



Accelerate VM Provisioning and Recovery

VAST space-efficient snapshots and instantly writable clones help teams rapidly create copies of VM data for development, testing, analytics, migration validation, or recovery. This reduces the need for full copies and lengthy data migrations.

Building a Foundation for Today and Tomorrow

Together, VAST AI OS and Red Hat OpenShift Virtualization provide a modern infrastructure foundation for supporting VM migrations, consolidating VM and container storage, and safeguarding mission-critical applications.

VM Migration

Migrate VMs to a modern Kubernetes-based solution to reduce acquisition-related renewal spikes.

Workload Consolidation

Establish a shared data foundation for virtual machines, containers, analytics, and AI.

Data Protection

Protect VM data with snapshots and replication to ensure critical business systems remain operational.

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**.

©2026 VAST Data, Inc. All rights reserved. All trademarks belong to their respective owners.

06/26 I 00000