



Are You Storage-Prepared?

5 must-haves for modern and AI
workload readiness

Future-proof your infrastructure investment

Today's business is driven by technology.



Hybrid and Multi-Cloud



Artificial Intelligence



Containers and Next-Gen Apps

Organizations are moving to the cloud to take advantage of its potential for agility and operational efficiency. They're adopting advanced technologies such as containers, which are ideal for application deployment. They're tapping into AI to uncover insights from vast volumes of data.

To support modern technology demands, you need HCI. In this guide, we cover the top five must-haves for modern and AI workload readiness.

Must-have 1: Unified infrastructure

A unified infrastructure for AI and virtual machine (VM)-based workloads, containers and cloud native applications paves the way for streamlined management. With this unified infrastructure, you avoid creating both a learning curve for users and unmanageable silos in the different layers of your HCI.



Key capabilities:

- A unified platform that manages the entire stack and seamlessly integrates all your workflows
- Seamless integration with container orchestration platforms (e.g., Kubernetes) and container runtimes (e.g., Docker)
- Implementation of storage and networking solutions optimized for container workloads
- Compatibility with AI software frameworks (e.g., TensorFlow, PyTorch)
- Simplified administration and management along with optimized resource utilization

Must-have 2: Optimized performance

AI workloads typically involve the processing, analysis, and interpretation of large volumes of data to derive meaningful insights. These workloads often require substantial computational resources, including powerful processors such as CPUs or GPUs, memory, and storage.



Key capabilities:

- High-speed networking for data-intensive AI processing and analysis (e.g., InfiniBand, 100Gb Ethernet)
- High-performance computing resources
- Specialized hardware accelerators (e.g., NVIDIA GPUs)

Must-have 3: Flexibility and scalability

You should be able to build an HCI environment that matches your needs and wants—an environment that can change as your business changes. That way, there's no new hardware to learn, and no new purchasing process or support model to navigate.



Key capabilities:

- The broadest possible choices for the hardware platform
- Flexible scaling, with the ability to add nodes to a cluster or drives, or to create storage-dense clusters
- Independent and precise scaling of compute and storage across any topology to meet application needs and optimize resource utilization
- A flexible subscription model to purchase resources as your business needs them

Must-have 4: Readiness for multi-cloud and hybrid cloud

Across industries, organizations are embracing multi-cloud and hybrid cloud to accelerate service delivery, promote agility for easy and cost-efficient scaling, and reduce business risk. (Disaster recovery is by its very nature a hybrid cloud requirement.) To support these goals, your HCI must be able to extend to these environments with elasticity.



Key capabilities:

- Highly automated, built with a cloud-first design
- Integration with all the global hyperscalers—including Alibaba, Amazon, Google, IBM, Microsoft, and Oracle—as well as private clouds often built for on-premises deployment
- Cloud native storage that supports all key storage API objects within Kubernetes

Must-have 5: Security and compliance

Businesses need to keep their mission-critical and sensitive data safe and compliant. A truly future-proof infrastructure stack needs to support security for every layer of the stack, especially those associated with VMs, containers, and microservices.



Key capabilities:

- Robust security covering hardware components, the virtualization layer and the management framework
- Data encryption, microsegmentation, identity management and role-based access, and automated security
- Support for a container registry with integrated vulnerability scanning, image signing, and auditing

Seems like a lot? It is. But don't worry: **VMware HCI has you covered.**

Transforming with VMware vSphere+ and HCI

HCI—advanced on-premises storage—is one of the most powerful services consumed through the VMware vSphere+™ cloud console. In the past, making the switch to HCI might have seemed like a daunting project—but with the VMware vSphere+ cloud console, you can get there with greater ease.



Advance directly to a highly scalable, cloud-like deployment with minimal risk by deploying VMware's proven, enterprise-grade solution:

- Seamlessly expand virtualization to storage with HCI built into the VMware vSphere® kernel.
- Inject innovation into your business by empowering developers to run any workload, from traditional to modern and AI.

For VMware vSphere environments, choosing VMware HCI just makes sense. With storage and compute constructed as one, you could gain a more than 45 percent reduction in storage TCO. Level up to accelerated operations, resource utilization flexibility, and stellar performance—all with minimal disruption to your current infrastructure and without acquiring new skills.

Industry leaders get results with VMware HCI



“Without VMware, I don't think we would have the uptime or reliability to be able to perform what we do on a global scale and do what we do best—save patient lives.”

—Paul Green, CIO, Angel MedFlight



“What used to take us weeks of planning and preparation and ordering, now it's just there. Thanks to our all-flash [VMware vSAN™] nodes, we've been able to reduce latency and improve the customer experience.”

—Dustin Plank, Manager of Information Technology, Nol-Tec Systems



“Moving to hyperconverged and cloud infrastructure in one year, we've reduced [costs] by multiple, multiple millions.”

—Matthew Douglas, Chief Enterprise Architect, Sentara Healthcare

Still on VMware vSphere? Upgrade and skip ahead to the cloud.

Upgrade to VMware vSphere+ and easily extend your on-premises IT infrastructure to the public cloud while leveraging existing skills, tools and processes.

Consume services and capabilities through your VMware vSphere+ cloud console, including HCI, disaster recovery as a service (DRaaS), ransomware protection, enterprise app infrastructure as a service (IaaS), automation, developer services, and more. Take advantage of cloud management and economics without disrupting your current infrastructure or operations.

VMware vSphere+ supercharges performance, enhances operational efficiency, and accelerates innovation.

[Upgrade to VMware vSphere+](#)

