

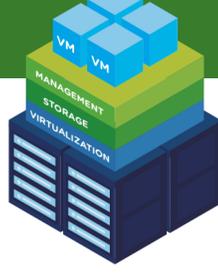
10 Questions and Answers About Hyper-Converged Infrastructure (HCI)

HCI has generated a great deal of buzz in recent months. But what's so great about it, and more important—is it right for you? We've pulled together some of the top HCI-related questions to help you get up to speed fast.



1 Q: What is Hyper-Converged Infrastructure?

A: HCI is the natural evolution of server virtualization. An integrated software stack, it delivers all key data center functions—compute, storage, storage networking, and unified management—and runs on industry-standard x86 servers, enabling a simple, building block architecture with scale-out capabilities.



2 Q: How does HCI solve data center challenges that traditional or converged infrastructure cannot?

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|---|--|
| <p>A: Cuts Costs. With a simpler, modular architecture, you're buying lower-cost, industry-standard components only when you need them.</p> | <p> Eliminates Overprovisioning. With VM-centric provisioning and management, you use only what you need, where and when you need it.</p> |
| <p> Reduces Complexity and Risk. Deploy one software stack built on the industry's most proven hypervisor with end-to-end management.</p> | <p> Enables IT Agility. Policy-based controls automate provisioning and SLA changes and enable fast, non-disruptive scaling.</p> |

3 Q: When does it make sense to deploy HCI? And what are the top use cases?

A: Changes in your data center environment, such as server refresh; storage refresh, expansion, or upgrade; and first-time deployments of vSphere are common triggers for exploring HCI.

TOP USE CASES FOR HCI			
Virtual Desktop Infrastructure	Business-Critical Applications (BCAs)	Management Clusters	DMZ
DR Sites/Secondary Data Centers	Remote Office/Branch Office	Test/Dev/Staging	Cloud Providers

4 Q: How will HCI change my job responsibilities?

- A:** HCI makes your job a whole lot more enjoyable by:
- Removing dependencies, giving you the ability to make changes fast—such as provisioning an app or moving a workload—without waiting for another team or group to fulfill a request
 - Enabling you to work in a more holistic way across the data center by breaking down silos
 - Separating storage provisioning from storage consumption through per-VM storage policy-based management, to allow even greater self-sufficiency



5 Q: What are the best deployment options for HCI?

CERTIFIED HCI SOLUTIONS	ENGINEERED HCI APPLIANCE
Customize a pre-certified Virtual SAN Ready Node	Choose a turnkey solution with VCE VxRail HCI Appliance
FLEXIBILITY	DEPLOYMENT SPEED

VMware offers two flexible deployment options:

1. Certified HCI solutions enable ultimate customization. Virtual SAN Ready Nodes are a ready-to-go hardware solution available from all major x86 server vendors.
2. An engineered HCI appliance provides a turnkey solution. The VCE VxRail appliance is a fully integrated, preconfigured, tested solution.

6 Q: What is important in an HCI solution?

A: There are five key areas to consider when evaluating HCI. Each of these five is equally important; a good solution will deliver in all areas, not just one or two.

Simplicity. Eliminates infrastructure silos with single-pane-of-glass and policy-based management to automate provisioning and eliminate manual tasks.

Performance. Optimized for all-flash storage capacity, handles important workloads, and provides built-in automation through VM-centric policies.

Cost. Does not require expensive purpose-built hardware, uses resources efficiently, and leverages the technical resources and expertise you already have.

Flexibility. Enables “grow-as-you-go” scalability and offers the ability to select the vendors of your choice to accommodate future needs.

Availability. Supplies built-in resiliency and fault tolerance, even under suboptimal conditions.



7 Q: How should HCI interact with components in my data center?

A: HCI provides a unified view across your data center. Additional capabilities like network virtualization and advanced management can be added and managed from a single pane of glass. Since your resources are now virtualized and software-based, you can dramatically increase efficiency, improve flexibility, and reduce TCO across the data center.



8 Q: How does HCI help reduce TCO?

A: **Reduces CapEx.** Eliminates the need for purpose-built hardware and dedicated storage networks. Portability of software licenses will provide additional savings.

Reduces OpEx. Offers a single software stack that streamlines provisioning and automates manual tasks with per-VM policies.

Lowers data management cost. Helps you save with features like data reduction and space efficiency.

Eliminates costly overprovisioning. Lets you scale out and scale up with a pay-as-you-go model. No more bulk upfront purchases or overprovisioning.



9 Q: How does HCI help prepare my data center for the future?

A: HCI lets you take advantage of emerging hardware technologies as they become available.

It also provides dynamic, application-based provisioning on a modern architecture designed to meet the requirements of traditional applications, next-generation cloud applications, and containers.

Finally, the right HCI solution provides a streamlined path toward the Software-Defined Data Center (SDDC).



10 Q: How does HCI help improve data center performance and reliability?

- A:**
- Delivers hardware flexibility that allows you to support new technologies, adopt new tools, or upgrade a system without having to wait for lengthy refresh cycles.
 - Provides a solution optimized for all-flash and embedded in the kernel to accelerate I/O throughput and minimize latencies.
 - Ensures predictable performance with QoS features and a self-tuning platform.
 - Enables data protection and availability with built-in failure tolerance, asynchronicity long-distance replication, and stretched clusters.



VMware® provides a unique, software-defined approach to HCI, leveraging the hypervisor to deliver compute, storage, and networking in a tightly integrated software stack, called VMware Hyper-Converged Software (VMware HCS).

It consists of three components: the VMware vSphere® hypervisor, VMware Virtual SAN™ storage, and VMware vCenter Server.™ Together, these components provide the simplest, most efficient, and highest-performing hyper-converged software solution on the market.

Find Out More

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[Try Virtual SAN in a Hands-on Lab today >](#)

