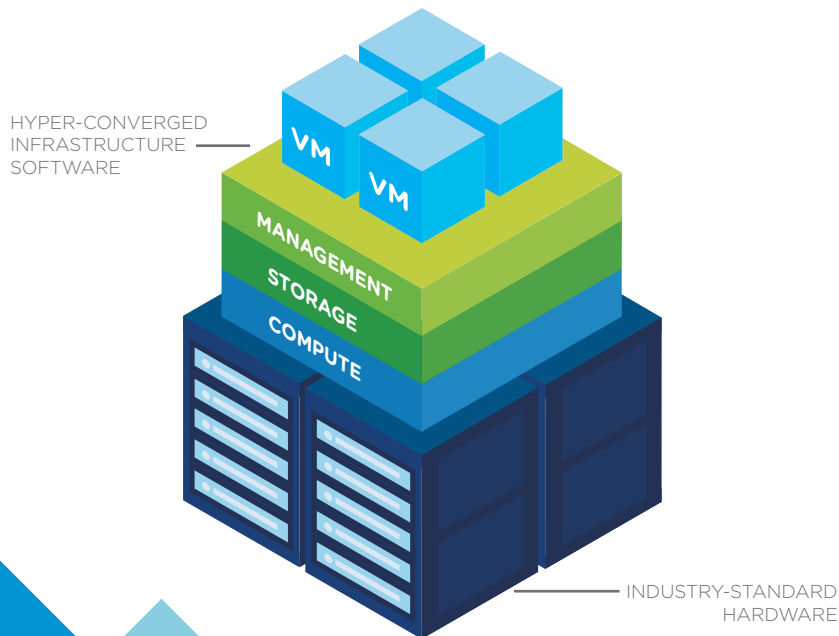# 5 Reasons to Choose Hyper-Converged Infrastructure Powered by VMware vSAN

vmware®

Introduction

When it comes to evolving your IT infrastructure toward a model that will save you money, simplify operations, and increase agility, VMware leads the way. Built on VMware vSphere,® the industry-leading virtualization platform, HCI software powered by VMware vSAN™ delivers everything you need to implement enterprise-class hyper-converged infrastructure (HCI) software.

HCI software allows the convergence of compute, networking, and storage onto industry-standard x86 servers, enabling a building-block approach with scale-out capabilities. In a hyper-converged infrastructure software, all key data center functions run as software on the hypervisor in a tightly integrated software layer.

HYPER-CONVERGED
INFRASTRUCTURE
SOFTWARE

VM

VM

MANAGEMENT

STORAGE

COMPUTE

INDUSTRY-STANDARD
HARDWARE

The importance of choosing the right HCI software solution

HCI software powered by vSAN provides a flexible, efficient solution for operating and managing your IT infrastructure. But how can you know for sure that VMware is the right choice?

It's all about knowing what you need in an HCI software solution—and how VMware delivers all that, and more.

VMware Delivers 5 Essential Capabilities You Need in an HCI Software Solution:

#1 Simplicity
One integrated software stack with streamlined management

#2 Lower Total Cost of Ownership
Enterprise performance without enterprise cost

#3 Ability to Evolve Without Risk
Run mission-critical apps with confidence

#4 Scalability for Tomorrow
Prepare your data center for future applications

#5 Deployment Flexibility
Respond quickly to changing business demands
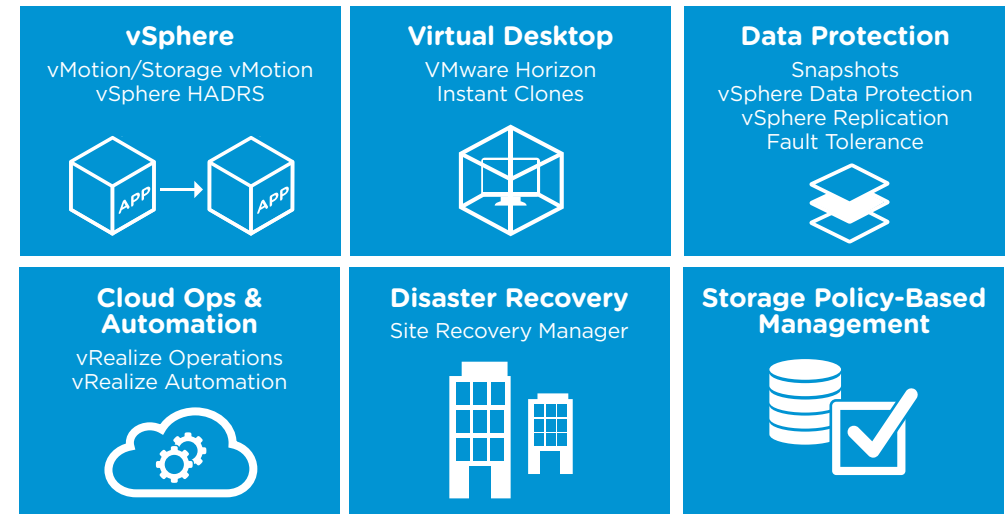
Let's take a closer look.

#1: SIMPLICITY

One Integrated Software Stack

To achieve maximum efficiency and cost savings, you need an HCI software solution that is simple to deploy, operate, and use. HCI software powered by vSAN delivers exactly that, with a powerful solution designed to eliminate infrastructure silos, automate provisioning, and provide support when you need it most. Streamlined management with policy-driven controls and a single-pane-of-glass management further frees up IT hours, leaving more time for innovation. There's no need for specialized skill sets—you can leverage existing vSphere and VMware vCenter Server™ expertise for maximum efficiency.

- Built on vSphere, the industry-leading virtualization platform

- Integrated with VMware vSAN, the only vSphere-embedded storage solution

- Monitor capacity and performance with the familiar, unified vCenter Server

- Automate routine tasks within your data center

- Eliminate software and management tool silos

Seamlessly Integrate vSAN Within the VMware Stack

vSphere vMotion/Storage vMotion vSphere HADRS	**Virtual Desktop** VMware Horizon Instant Clones	**Data Protection** Snapshots vSphere Data Protection vSphere Replication Fault Tolerance
Cloud Ops & Automation vRealize Operations vRealize Automation	**Disaster Recovery** Site Recovery Manager	**Storage Policy-Based Management**

> *"Based on the requirements of uptime, integration of all the different silos and essentially the seamlessness of the architecture, VMware is, as far as we're concerned, the proper choice—pretty much the most solid approach to hyper-convergence."*
>
> — *Mike Feld*
> *Interim CTO, Baystate Health*

Baystate 🏢 **Health**
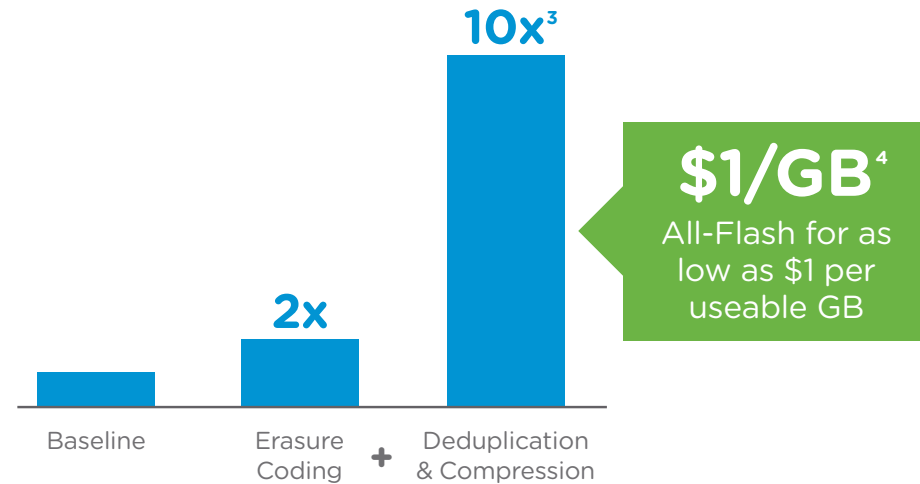
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#2: LOWER TOTAL COST OF OWNERSHIP

Enterprise Performance Without Enterprise Cost

Business users are demanding more, but IT budgets can't keep up without carefully managing costs. HCI software powered by vSAN eliminates the need to buy purpose-built hardware, reduces human error through automation, and leverages existing resources to deliver big savings.

- Lower TCO up to 50% versus modern storage arrays[1]

- Deploy all-flash VMware HCI software solutions at almost half the cost of competing hybrid HCI software offerings[2]

- Increase total space efficiency by up to 10x with deduplication, compression, and erasure coding[3]

- Eliminate the need for purpose-built hardware with industry standard servers

- Pay for only what you need. Tailor your solution without overprovisioning, making a bulk upfront purchase, or buying expensive expansions when you need additional performance or capacity.

vSAN Storage Utilization Improvement

10x[3]

$1/GB[4]
All-Flash for as low as $1 per useable GB

2x

| Baseline | Erasure Coding | + | Deduplication & Compression |

"Now we have one VMware solution as opposed to multiple systems from different vendors. Everything is right there inside the VMware console, so there were no new interfaces to install or learn. And we no longer have to watch the storage allocation constantly, always asking if we still need this server, or if a LUN (Logical Unit Number) is using too much disk space. We don't have to worry about LUNs and provisioning anymore."

— *Carl Shriver,
IT Operations Manager, Wachter, Inc.*

WACHTER

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1. Figure from vSAN TCO calculator
2. Nutanix price list: http://www.peppm.org/Products_asdf09876/nutanix/price.pdf with a 50% discount assumed and vSAN hardware configuration created on SuperMicro reseller website: www.thinkmate.com. Nutanix support includes Hardware + Software support, vSAN support is 3yr production SnS for software while HW price includes HW support—3yr NBD onsite service. December 2015.
3. VMware internal analysis, December 2015. Comparison against vSAN 6.1 results.
4. vSAN hardware configuration created on SuperMicro reseller website: www.thinkmate.com and assumes a 6x storage efficiency based on VMware testing of VDI workloads, December 2015.

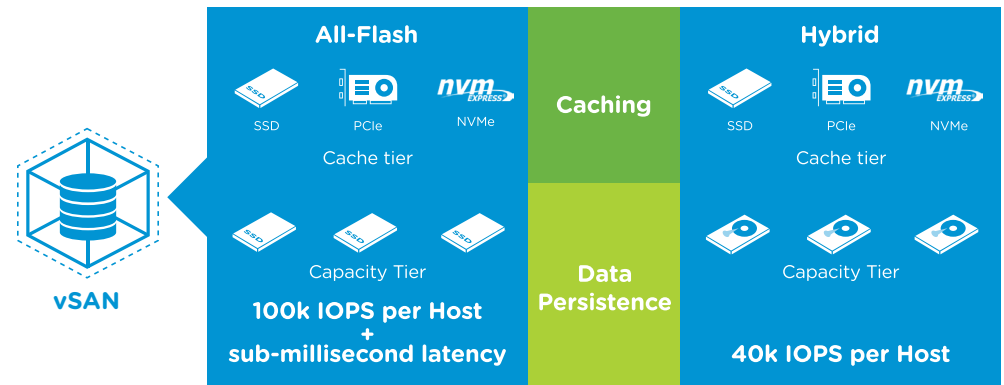# #3: ABILITY TO EVOLVE WITHOUT RISK

Run Mission-Critical Apps with Confidence

The right hyper-converged infrastructure solution will ensure that your data center can handle any application with confidence, including high-performing business-critical apps, virtual desktop infrastructure, private clouds, remote IT, and container-based applications for cloud-native environments, without any gaps in performance as usage grows.

HCI software powered by vSAN is the only solution delivered directly from the hypervisor—resulting in performance you can count on for any virtualized application or desktop. Furthermore, with enterprise-class availability, and built-in failure tolerance, you have peace of mind—even when the unexpected occurs.

- Kernel-embedded for optimized I/O path

- Optimized for all-flash storage capacity

- Up to 100K IOPS per node with sub-millisecond latency

- Enable space efficiency with minimal impact on CPU and memory overhead

- Five-nines (99.999%) availability with advanced data protection

Tiered All-Flash and Hybrid Options

"What used to take our users 30 to 45 minutes to accomplish in the old environment, now takes less than 5 minutes. That frees up valuable time for our teachers that they can use to help students."

— Kenny Wilder
Director of Network Infrastructure, Fulton County Schools

Read the case study >

#4: SCALABILITY FOR TOMORROW

Prepare Your Data Center for Future Applications

Technology will continue to evolve, and your data center should evolve right along with it. HCI software powered by vSAN provides maximum flexibility that allows you to adapt to changing needs. No matter what happens next.
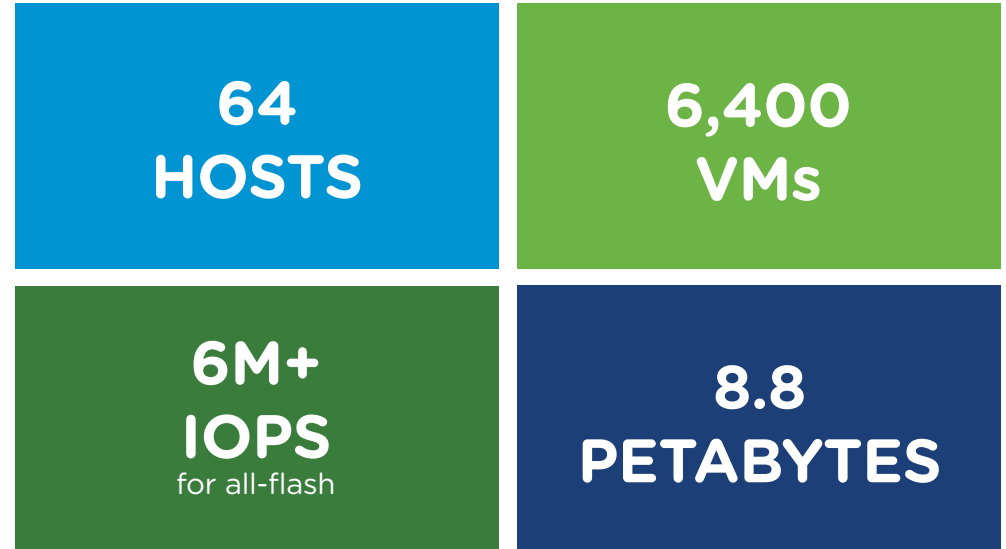
VMware HCI software solutions are designed for both enterprise apps and new cloud-native apps, allowing you to keep pace with the latest and greatest. It also aligns with your DevOps initiatives, so that you can bring apps to market faster. And since HCI software powered by vSAN supports your choice of applications, backup solutions, hardware platforms, and operating systems, you can make decisions that are right for your business without being locked into a particular solution set.

With VMware, you can be confident that you're choosing a vendor with a proven track record and a robust ecosystem—one that will be around for the long term.

Choose the solution that prepares you for the future:

• Built for Any App, at Any Scale

• Designed for today's applications as well as future cloud-native applications

• Delivers granular scaling, and scale-up/scale-out capabilities—eliminating costly overprovisioning and large upfront capital expenses

Maximum Scalability per vSAN Cluster

64 HOSTS	**6,400 VMs**
6M+ IOPS for all-flash	**8.8 PETABYTES**

> *"Our customers are surprised by the speed and responsiveness of their applications. Cloud Carib now has the ability to host any demanding application a customer wants to run."*
>
> *— Stelios Xeroudakis*
> *Founder and Managing Director, Cloud Carib*

Cloud Carib
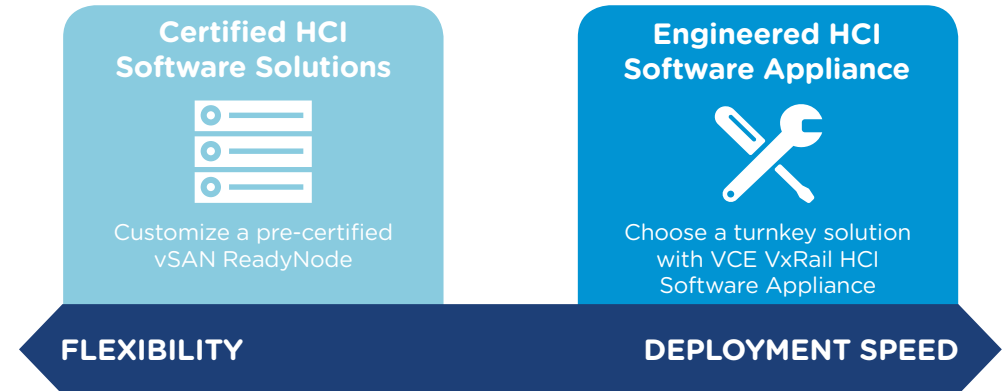
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#5: DEPLOYMENT FLEXIBILITY

Respond Quickly to Changing Business Demands

Rather than locking you into a specific vendor, VMware lets you configure an HCI software solution any way you want it. The building-block approach gives you the ultimate flexibility to choose the tools that work best for your specific needs—while eliminating hardware silos.

• Broadest set of deployment options, ranging from a turnkey appliance to more than 100 pre-certified vSAN ReadyNodes™ from all major server vendors

• Enables a building-block approach with scale-out capabilities

• Provides a path to a complete Software-Defined Data Center (SDDC)

HCI Software Deployment Choices

Certified HCI Software Solutions

Customize a pre-certified vSAN ReadyNode

Engineered HCI Software Appliance

Choose a turnkey solution with VCE VxRail HCI Software Appliance

FLEXIBILITY   **DEPLOYMENT SPEED**

"In the past, we had no ability to add storage or scale to meet our growing needs. Today with vSAN, I can add more disk on the fly without even thinking about it, and memory upgrades have become a breeze."

— Caleb Holmstrom
Network Administrator, Agropur Ingredients

Read the case study >

Head into the Digital Future with Confidence

An HCI software solution is crucial to achieving success across IT and the business. In addition to lowering CapEx, OpEx, and TCO, HCI software also enables faster app and infrastructure delivery, and doesn't require specialized skill sets. But not every HCI software solution is created equal. To get the best results, you have to invest in the best solution—one with demonstrated customer success and market leadership.

HCI software powered by vSAN stands out from the competition because it includes:

- **vSphere:** the market-leading hypervisor

- **vSAN:** radically simple, enterprise-class storage

- **vCenter Server:** a unified and extensible management solution

Together, these components provide the simplest, most efficient, and highest-performing hyper-converged infrastructure software solution on the market. Even better, the familiar interface that VMware offers means that you can get up and running fast, using all the knowledge you already have to start seeing the benefits of HCI software.

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Choose the best solution for your hyper-converged infrastructure software

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Learn more about HCI Software powered by VMware vSAN >

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